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Urbanisation and counter-urbanisation in Greece in a context of crisis

Urbanisation et contre-urbanisation en Grèce dans un contexte de crise

Phd Thesis / Thèse de Doctorat de l'Université Paris 1 Panthéon-Sorbonne

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Introduction

It probably seems a paradox that the current literature and research have not dealt with the impact of the global capitalist crisis of 2008 on urbanisation systematically. Moreover, contemporary studies about space are rarely based on a comprehensive theoretical perception of the crisis, its character, and its objective function. The motive of the present thesis has been to contribute to filling this gap.

The present PhD thesis is, thus, an attempt to explore the hypothesis of a crisis of urbanisation that is currently unfolding in Greece parallel to, and in the final analysis due to, the global capitalist crisis and its extreme manifestation in the country.

Although the hypothesis that an important number of large city dwellers have reacted to the crisis by moving to the countryside is quite widespread in the public discourse, apart from sporadic papers, no systematic effort has been made to examine whether this has been a real trend and, if so, to address questions like:

- What geographical scales does this trend manifest itself at?
- What geographical patterns does it follow?
- How has this trend evolved over time?
- How is it related to the preexisting features and tendencies in urbanisation?
- What social strata does it involve? and
- How is this trend connected to the global capitalist crisis and its manifestation in Greece?

The usefulness of such a study is multiple. Firstly, it can highlight an important aspect of the crisis itself, thus being a contribution to the probably most crucial political question of our time, which is how this crisis and its repercussions could be overcome and what type of social structure could and should succeed the present one. Secondly, understanding the current tendencies in urbanisation is an indispensable prerequisite for any kind of relevant spatial policy to be planned and applied. Thirdly, the present crisis might shed light on the relation between economic growth and urbanisation, as well as to its historical evolution. Greece is not just a random example since the country has attracted attention worldwide due to the extreme intensity of its crisis. The conclusions of the present study, therefore, may have international significance.

Methodology and structure

Our approach has involved bibliographical research, theoretical analysis, quantitative analysis of published data provided by the Hellenic Statistical Authority (ELSTAT) and other sources, quantitative analysis of unpublished data provided by ELSTAT through a personalised special convention, as well as primary data collected in the context of the National Morbidity Survey (EMENO), where the author has been personally involved.

The methodology of our study is reflected in its structure, which is the following:

A. Theoretical part.

1. Our approach begins with a review of the current international literature regarding the crisis and space, which is found to be only limited and inadequate. The issue of the crisis and its interconnections with urbanisation has not been among the main preoccupations in the disciplines of geography, regional studies, and urbanism.
2. A theoretical framework for understanding the crisis in general is developed. We adopt the position that it is about a crisis of overproduction/overaccumulation, the objective function of which is to destroy capitals and productive forces. We also examine the various theories of cycles or waves in capitalist growth, following the approach of Ernest Mandel about the long waves of capitalist development. The present crisis, with its enormous proportions, is viewed as the conclusion of the depressive long wave initiated in the 1970s.
3. We examine the interconnections between urban/geographical space and crises in general, as well as the interrelation between the rhythms of economic growth and the rhythms of urbanisation, in particular. Indications are provided for the existence of long waves in urbanisation parallel to the long waves of capitalist development. The argument is made that the contemporary economic crisis is also a crisis of urbanisation.
4. The history and content of the concept of counter-urbanisation is explored. An approach is proposed that sees counter-urbanisation neither as a predetermined stage within the life cycle of each individual city, nor as a defined era in the history of urbanisation in general, but as a process of a crisis in space, which can unfold under the circumstances of broader capitalist crisis. We thus speak of a counter-urbanisation of crisis. Counter-urbanisation has a demographic, a residential, and an economic dimension. Definitions are provided for terms such as counter-urbanisation, de-urbanisation, de-metropolisation, and exurbanisation, as perceived in the context of the present study.
5. We provide an outline of the crisis in Greece, as well as of the evolution of the class stratification under the conditions of the crisis. It is substantiated that Greece should be viewed as a weak link within the developed capitalist world, and not as a Third World country. This is a crucial issue since both the long wave theory and the various approaches of counter-urbanisation pertain to developed capitalist countries. The purpose of this section is to prove that those theories can be applied in the case of Greece.

6. We examine the historical evolution of urbanisation in Greece and its specificities. Evidence is provided for the existence of long waves of urbanisation within the Greek national territory at least since the late 19th century. It is important to put the current crisis of (counter)urbanisation, which constitutes our main hypothesis, within the context of the long waves, because this can indicate the significance and scale of this process, as well as the fact that it is expected to combine the intensification of preexisting phenomena of deceleration in urban accumulation with the emergence of new ones.

B. Empirical part: the examination of our hypothesis.

The structure of this part follows the available data to elaborate, in their logical sequence, instead of a typical distinction between demographic, residential, and economic urbanisation/counter-urbanisation.

1. We first try to detect possible indications of counter-urbanisation at the national level, by comparing the findings of the censuses of 2011, 2001, and 1991, with respect to the proportions of the urban and the rural population as well as the distribution of the incoming population between more and less urbanised areas.
2. Subsequently, we monitor the evolution of the population throughout the crisis, according to the tables of the annual estimates of ELSTAT at the level of former prefectures (NUTS3 regions).
3. We especially examine the hypothesis of de-metropolisation, which stems from the indications derived from the previous section. An attempt is made to trace possible features and mechanisms of the counter-urbanisation of crisis at the top level of the urban hierarchy, i.e. in Athens and, to a lesser extent, in Thessaloniki, by analysing the findings of recent surveys. It is argued that there is a dual process of de-metropolisation, with one leg being production-led or job-led (mainly towards the islands and tourist areas) and the other one being reproduction-led (mainly towards peri-metropolitan areas, that is areas surrounding the metropolitan ones).
4. The economic development of the former prefectures of the country is compared on the basis of various series and indices. The demographic developments indicated before are now correlated with certain economic and social data by NUTS3 region. At this level of analysis, it is also possible to monitor economic urbanisation and counter-urbanisation.
5. We study the apparent migration, by correlating the ELSTAT population estimates with the recorded natural population changes (natural population growth). In order to deal with the problem that our conclusions in the previous chapters are mainly based on statistical estimates and opinion surveys, we then resort to the published data of the 2011 census, namely the question about the place of residence 1 year and 5 years before the census. We thus obtain a picture of the incoming population by former prefecture in 2011. We check whether the tendencies detected are compatible with the population

estimates. We replicate the correlation between socio-economic data and the incoming population as well.

6. Since the published census data do not permit to calculate the balance of internal migration by former prefecture, nor to directly correlate internal migrants with their labour status or occupation, we have applied for additional unpublished data. A special convention was signed with ELSTAT, and further data were delivered in special tables. In this chapter, we process the data and highlight population exchanges between the former prefectures of the country over the period 2010-2011, as well as the professional and social characteristics of internal migrants. Compared to the population estimates, those figures have the disadvantage to cover only a short period, but they also have the advantage to be based on census data instead of estimates.
7. We then examine the developments in construction throughout the crisis, both nationwide, according to various series, and by former prefecture, based on the annual tables of the building permits issued by the local planning authorities around the country. We thus obtain a picture of residential (“material”) urbanisation under the conditions of the crisis.
8. Based on the conclusions drawn in the previous chapters, a specific analysis of the de-urbanisation (de-metropolisation) process in Athens is made, including the timing of each one of its aspects (residential, demographic, economic) and its possible incentives. Subsequently, we proceed with an examination at the intra-regional level, trying to correlate certain phenomena of the crisis with the preexisting tendencies in the interior of the region of the Capital city. Special attention is paid to the distinction between exurbanisation and de-metropolisation.

Our partial conclusions are gathered after each chapter. The basic ones are reviewed in the concluding chapter, where the relevance of our initial main hypothesis is confirmed and the answers to our research questions are recollected. Finally, we indicate directions and questions for further research, highlighting the future significance of the present thesis.

A large number of charts and tables have been inserted in the text, especially in the second part of the thesis. Large tables and maps are attached after each chapter, so as to avoid to interrupt the continuity of the text too much.

PART 1

CHAPTER 1

Urbanisation and the crisis in the current Geographical Discourse

Introduction

It is undeniably difficult to examine and describe a phenomenon which is still underway. Therefore, there is an intrinsic difficulty in studying the global capitalist economic crisis. Since the explosion of the sub-prime mortgage bubble and the bankruptcy of Lehman Brothers in 2008, the crisis has passed through various phases and undergone several transformations: a meltdown of housing and construction, a credit crunch, stock market collapses, a recession in the production, public debt alarms, and bail-outs. At the same time, it is commonly known that the crisis has almost instantly spilled over the vessel of the economy. The political and cultural spheres were contaminated. Homelessness, massive unemployment, riots, strikes, government overthrows, economic and military rivalries, the rise of racism and of fascist currents: these are but some of the contradictory and complicated elements associated with the economic crisis.

In this liquid situation, there is always the risk that whatever is written and said miss latent tendencies, streams, and factors, or goes obsolete the very next moment of its articulation. If this is true regarding economists, let alone geographers and urbanists, who try to capture the repercussions of a manifested as a quasi-abstract world, the economy, on what is generally perceived as a material ground, geographical space and the city. “Of late, the geographical study of financial markets has started to look like a fox hunt. The target is not only moving but also appears to be a master of disappearance and disguise” (Lee, Clark, Pollard, & Leyshon, 2009, p. 723). We should probably add that we are not even sure if we are after a fox or something else.

The situation gets no simpler as contemporary urbanisation is generally deemed rapidly evolving, transforming and moving: “urbanisation has become a type of weather – stirred globally but with specific local consequences (Lerup, 2014, p. v)”. Whether consistent with reality or not, this conception makes most analysts reluctant and suspicious.

In order to be able to take any kind of position about the perspectives of the geographical and the urban space amid and after the crisis, it is first necessary to clarify one’s view about the global economic crisis in itself. A critical overview of the recent debate among economists is attempted in the chapter to follow. However, we still need to list down the basic questions that geographers seem to be asking themselves regarding the crisis in general.

Basic questions

First of all, we need to know where we stand. By the time when these lines are written, is the crisis over or not? No matter what the shape of the evolution of economic activity they expect to look like, V, W, U, or L, most geographers and academics seem to reckon that the crisis is definitely not over. A few years after the 2008 meltdown, Manuel Castells and his work team still stated that the crisis is “still unfolding and will unfold under different forms in the coming years (Castells, 2011)”. Assessments like this still appear from time to time in most of the journals in the discipline. Despite this general estimation, though, it seems that dealing with the crisis indeed is rather declining. The initial interest in the issue has deflated quite quickly (Lee, Clark, Pollard, & Leyshon, 2009, p. 739), which is a hint that academics in the field of geography were rather appeased by the virtual re-stabilisation, celebrated by leading political boards and the mass media a couple of years after the crunch happened.

The second issue regards the character of the crisis: is it conjunctural or “structural”? It is quite clear that most geographers dealing with the crisis consider that it is not just due to coincidental facts or even a handful of malicious actors (speculators or golden boys), but that it reflects deeper malfunctions or a deeper pathology of the previously existing economic structure. It is a common (and definitely not unfounded) idea to blame financialisation and, in particular, the disproportionate rise of financial activities to a level that exceeded by far what is generally accepted as “real economy”. However, the real question comes after that: is the crisis primarily financial? Or let us rephrase in the following way: is financialisation really the “underlying cause” (Kliman, 2011) of what some have called a new Great Depression or is it, in its turn, a symptom of an even deeper cause?

David Harvey points out that we can't hope to explain real facts, as is the current crisis, just based on the general laws of the capital (Harvey, 2012, p. 37), however, he himself certainly pays attention to those laws. In his analysis, the interconnected growth of both housing and financial activities where in fact a means to overcome previous capitalist crises. His approach is rather a combination of (or a compromise between) over-accumulation and under-consumption Marxist theories. He states that he disagrees with trying to explain the current crisis by means of a falling profit rate theory, but nevertheless his work can be perfectly consistent with such theories. On the other hand, Hall, Massey, and Rustin claim that neoliberalism has ensured higher profit rates than the ones achieved in the post-war period of state interventionism (Hall, Massey, & Rustin, 2013, p. 9). This brings them closer to underconsumption theories.

Nonetheless, there are only a few more examples of geographers and urbanists who try to deal with such questions. Most radical and Marxist geographers (let alone others) don't appear willing to participate in the debate that Marxist economists have relaunched about the “underlying cause” of the crisis: overaccumulation, underconsumption, falling profit rate, structural imbalance of the economy, exacerbated competition etc. In that sense, the allegation that the mainstream political discourse undervalues the depth of the crisis sounds even more relevant with regard to the geographical discourse (Hall, Massey, & Rustin, 2013, p. 8). We will come back to that later.

A more specific question, which is nevertheless of particular importance in order to conceive the broader historical framework of the crisis and, even more, to elaborate any possible way out, is whether the crisis reveals shortage or, on the contrary, overabundance of money and capitals. According to the dominant policies marshaled against the credit crunch, on the basis of the bail-outs and of public spending for liquidity inflow to the banks, one could say that the market has run out of money. This is indeed the mainstream position. On the other hand, this interpretation seems contradictory with the concept that financialisation has been an adventurist reaction to the suppression of profitability in the sectors of the so-called real economy, i.e. production, the field where surplus-value is actually extracted before it is distributed to the whole range of economic activities. Guy Burgel supports that, as a tool to explain the housing crisis, both concepts, liquidity shortage or overabundance of capitals, are mistaken, as everything depends on the local correlation between supply and demand (Burgel, 2014). With a different argumentation, Neil Smith had similarly considered this dichotomy incorrect (Smith, 2012).

However, it is not simple to conciliate both views. Again, the issue at stake is not just what may have been the immediate cause in any particular situation, but what is the underlying cause. At a certain moment, banks may find themselves in a position of inability to fulfill their obligations because of inadequate liquidity. However, this does not explain why the wholesome of debt obligations, the fictitious capital, has risen to such a precipitous height. Why have all these capitals been obliged to turn to such precarious and risky activities, if not because they could not achieve a proper rate of profit in an already saturated production, being, in this sense, “excessive”? It seems that overaccumulation acts as a kind of diabetes, provoking a circumstantial sugar shortage just because of a mechanism that entails permanent sugar excess.

The real dilemma regards what is expected to happen as the crisis is unfolding. If the main problem had been a lack of capitals, a massive mobilisation of capitals, including public investments, would have to be expected. If, on the contrary, it is the saturation of the economy with capitals, then, before any massive investment is feasible, a process of “constructive destruction” is presupposed. David Harvey has long been well aware of the “Schumpeter’s gale”.

Doreen Massey feared that “the shape of the crisis remains ‘economic’. There are so far no major political fractures, no unsettlings of ideological hegemony, no ruptures in popular discourse” (Hall, Massey, & Rustin, 2013, p. 8). Before we put this assumption under scrutiny, we have to remind ourselves of the non-economic aspects of the crisis. It is absolutely true that the global capitalist crisis involves also political turmoil, ideological conflicts and transformations, environmental risks, changes in gender relations. The questions of the interconnection of all these factors has been a subject of inquiry since decades. In any case, accepting that economy is the determiner “in the final instance” does not necessarily mean that we need to separate the above-mentioned aspects. On the contrary, economic, political, and ideological features are tightly interwoven in what seems to be the constant in most geographers’ works,

at least among radical ones: neoliberalism. Whether a dominant economic theory, a current political orthodoxy, a mode of management or governance, a regime of accumulation, a social structure of accumulation, or whichever way neoliberalism has been described, it is obvious that it contains economic, political, and ideological aspects at the same time. In fact, in the literature of geographers and urbanists, “neoliberalism” is usually referred to as a subjective factor, the role of the objective economic background being left to “globalisation”. Although such a distinction is far from indisputable, it highlights the fact that neoliberalism cannot be discussed from a strictly economic viewpoint.

As the US and other governments rushed to save the banking system, in some cases even by nationalising banks, many commentators spoke about the return of state interventionism. Stiglitz and Wallerstein have been among them, just to name two prominent cases. Massey, Hall, and Rustin have spoken of an “implosion of neoliberalism” (Hall, Massey, & Rustin, 2013, p. 19). In the course of the following developments, though, it was rendered clear that capitalist governments and leading economist boards were trying to cure the disease by the very medicine that caused it: neoliberalism. In most countries, the fiscal pressures created by the heavy bleeding of public funds, so as to secure the banking system, led to large-scale austerity plans and privatisations. What has remained of the so-called welfare has further disintegrated. The attempt to re-regulate, at a certain extent, financial markets and transactions of capital is not enough to challenge the fundamentals of neoliberalism, much less since nothing like a new Bretton-Woods treaty for an international financial system has been yet discussed. Of course, the policies implemented until now did not manage to bring normality and steady growth rates back, but this failure does not automatically lead out of the realm of neoliberalism. Recalling Antonio Gramsci, Hart notes that crises don’t necessarily induce political shifts (Hart, 2009, p. 119). Therefore, the reversal of neoliberalism is mostly a matter of relation of forces.

Neil Brenner et al. claim that expectations that neoliberalism would disintegrate after the credit crunch were based on a false perception of what neoliberalism actually is. In a geographically emphasized definition, they themselves describe neoliberalism as “a variegated, geographically uneven and path-dependent process”, consisting of three dimensions: “regulatory experimentation, inter-jurisdictional policy transfer, and the formation of transnational rule-regimes” (Brenner, Peck, & Theodore, 2010, p. 327).

However, it is undeniable that, if not straightly challenged yet, the fundamentals of neoliberalism have been under discussion even by mainstream economists and politicians. The case of Greece has recently fueled a new international debate about austerity, which seems to be questioned, at least in its extremes, not only by radicals or anticapitalists. In face of the crisis, both the Obama and the Putin administration, of course for their own reasons, have seemingly distanced themselves from the euro-zone leadership and its ultra-restrictive policies. On the other hand, a series of mass movements such as the revolts in the Arab countries, the so-called Indignados in Spain and Greece, the Occupy movement, and, maybe less spectacular but definitely not less important, workers’ strikes and demonstrations in various countries have testified a mounting popular confrontation to austerity. Austerity is generally considered to

be the core of neoliberalism. This means that the idea that neoliberalism is undermined and may be marching to its end is not unfounded, even if it must be taken carefully. In this sense the (somewhat Shakespearean) formula which Neil Smith has borrowed from Habermas, in his case utilised to describe modernity, sounds convincing: liberalism is dead but dominant (Smith, 2012). In their delicate examination of neoliberalism, Neil Brenner et al. conclude by profiling four different possible scenarios regarding the future of regulation: zombie neoliberalisation, disarticulated counter-neoliberalisation, orchestrated counter-neoliberalisation, or deep socialisation (Brenner, Peck, & Theodore, 2010, p. 340).

Is also globalisation under questioning? Some authors have foretold a possible intensification of the political and economic role of national borders (Skoufoglou, 2013, pp. 48-54). It has been written that “the geopolitics of underwriting recovery is likely to prompt a long-term realignment of states’ powers and their place in the world” (Lee, Clark, Pollard, & Leyshon, 2009, p. 734). Michel Foucher spoke of a certain “re-territorialisation”, drawing the outline of a new geopolitical dynamic that gives a revitalized role to the ground, in sharp contrast with theories that consider national states defunct (Foucher, 2011). Nevertheless, amplification of national borders has been only one of the features attributed to globalisation. Besides, even the actuality of this feature is debatable, not only by theorists who reject the very notion of globalisation (Hirst & Thompson, 1999) but also among those who have no objection in adopting the term.¹ A possible relative return of nation-state interventionism does not in itself mean the end of the “era of globalisation”, since, after all, some of the countries that have profited most by the most recent phase of globalisation, like China and Brazil, have never abandoned their own economic interventionism. As Mittelman argues, globalisation is “not a single, unified phenomenon, but a syndrome of processes and activities” (Mittelman, 2000, p. 4). As a syndrome or as a universal economic and geographical layout, globalisation is generally deemed something objective and rather irreversible, despite sporadic attempts to undermine it by means of an “ethics of the local” (Gibson-Graham, 2003).

Is the crisis a “missed boat” for geography?

Whatever may be their position about the causes of the crisis and its connection with globalisation, in fact when dealing with the current crisis geographers and urbanists have paid limited attention to factors other than finance, as already mentioned. This is even worse, if the remark that geographers have displayed a “neglect of money and finance, associated in part, perhaps, with the traditions of interest within Economic Geography in the material landscapes of economy” is correct (Lee, Clark, Pollard, & Leyshon, 2009, σ. 724). It has also been claimed that “the credit crisis opens up opportunities to locate the study of financial services (not only manufacturing) at the heart of research in economic geography” (Engelen & Faulconbridge, 2009, σ. 589). However, if it is true that geographers were left behind in studying financialisation, and if we accept that the latter has been the immediate cause of the current crisis, then trying

¹ See for example (Woods, 2003).

to make up for this delay is trying to examine an already obsolete situation. It sounds like a Post Christum prophecy. Of course, retrospective reflection is not pointless, provided that it is utilised in order to explore present conditions and perspectives. However, this does not seem to be the case, if we consider how few remarks one can collect, in the pertinent literature, regarding the repercussions of the crisis on the now existing situation and on financialisation itself. In most scientific publications in the discipline, there is the impression that the crisis is addressed as an incident that revealed reality, which is financialisation, rather than determining it. It is not a coincidence, therefore, that what is associated with contemporary developments in the geographical space and in urbanisation is still in most cases financialisation, globalisation, or neoliberalism, and not the crisis.

Edward Soja has accused the School of Chicago of having been trapped into studying the classical type of industrial city in a period when major industrial cities had already evolved into modern metropolises, displaying a typical dichotomy between urban and suburban space. Respectively, he has blamed contemporary authors and academics for being left behind in the scheme of the metropolis, whereas a new spatial pattern, regional urbanisation, has already prevailed, establishing a new type of continuum between city centres and suburbs (Soja, 2011, p. 680). This description of obsolescence disturbingly reminds of the present attitude towards the phenomenon of the crisis, as mentioned above. Even Soja himself didn't seem to wonder whether the crisis can alter the condition of "regional urbanisation", and in which way.

Under such circumstances, the worry that the crisis can be geography's "next missed boat" (Engelen & Faulconbridge, 2009) is not unjustified. Kuniko Fujita sounds convincing in criticising the "lack of the crisis perspective in contemporary urban theories" (Fujita, 2013, p. 5), which he partly attributes to the fact that "contemporary urban theories have been greatly influenced by following globalisation myths" (Fujita, 2013, p. 23), including the notion of global cities. The most well-known proponent of the global city theory, Saskia Sassen, has pinpointed a return of the city "as a lens for social theory" (Sassen, *A Sociology of Globalization*, 2007, p. 100). Having indicated a revitalized interest in geographical space against the long reign of historicism, Soja saw a "spatial turn" (Soja, 2011, p. 687). Following an analogous path, Storper has written of a New Regionalism (Storper, 1997). If all these are correct, it will be a double shame to miss the boat.

Even taking into account the difficulty to make any absolutely confident judgment about something that is still underway, as already admitted in the beginning, there is still surprisingly limited literature about the connection between space, urbanisation, and the crisis. Browsing the issues of the *Journals of Geography, Urbanism, and Regional Planning* since 2008, one can only find sporadic papers or a handful of special issues dealing with the repercussions of the crisis on space and urbanisation in particular. The same is obvious also regarding books. Most authors and scholars seem to be doing business as usual, mostly working on case studies without any visible change in their methodology or any ambition to elaborate a broader scheme to describe, explain, and try to predict the overall evolution. All this, although not few of them would agree that this is a "very geographical crisis" (Engelen & Faulconbridge, 2009, p. 588).

Main subjects in the current literature

Apart from case studies in various locations and with various subjects, the current literature includes a whole range of works about the environment and climate change, issues of gender studies, energy, globalisation networks, the prolonged social and alimentary crisis in the Third World, the rise of China and newly developed countries, the role of symbolic and cultural capital (in the line of Pierre Bourdieu), information and new technologies, gentrification. Of course, all this literature may be of great value, but it is rarely associated with the crisis.

A notion broadly adopted by radical geographers, in particular, is justice, as originated from John Rawls's *A Theory of Justice* (Rawls, 1971) and the contributions of the current of Analytical Marxism. After the outbreak of the crisis, Susan Fainstein (Fainstein, 2010), Edward Soja (Soja, 2010), and Danny Dorling (Dorling, 2010),² among others, have published books about justice. However, in radical thought, the problematic of justice follows a different genealogy than the crisis, apart from particular exceptions of overlapping, like David Harvey's works. For example, in 2010, in her work that explicitly derives from a certain version of the Rawlsian notion of justice, Fainstein would still start stating that "deindustrialization and globalization have dramatically changed the fortunes of cities in the United States and Western Europe" (Fainstein, 2010, p. 1), leaving the ongoing crisis out of the factors determining those fortunes.

Among the limited papers and studies concerning the crisis indeed, the most common subjects discussed have been:

- Housing, principally in the particular cases of the USA, the UK, Ireland, and Spain. Housing is a junction between finance and construction. Hence, it is the most solid proof that the financial crisis is not something autonomous from the so-called real economy, i.e. production. Although this fact is not always valued as high as it should, it is often correctly noted that "the distinction between the real and the financial economy is untenable" (Engelen & Faulconbridge, 2009, p. 589). Harvey has stressed the paradox that most analysts have not noticed that the link between the current meltdown and housing is not at all unprecedented. As he argues, all previous major crises were all the same triggered by urbanisation crises (Harvey, 2012, p. 31). Construction has long been a massive industry for the extraction of surplus-value (Smith, 2012). Moreover, there is a debate about which would be the appropriate scale to study housing at. Various geographers underline the international dimension and implications of the housing bubbles. Aalberg's study about the fierce consequences of the American credit crunch to the Norwegian city of Narvik has attracted quite a lot of attention (Aalbers, 2009). On the other end of the spectrum, the emphasis is sometimes put on the sub-national level, as it is considered that "it hardly makes sense to talk of a 'national' housing market so much as regional markets or even local markets nested within regional markets" (Lee, Clark, Pollard, & Leyshon, 2009, p. 729). In one of the most elaborate contributions

2 Dorling has also written extensively about inequality, another concept very much discussed among both economists and geographers, as we shall see.

about the spatial and geographical aspects of housing bubbles, Ron Martin provides maps of “the geography of recession across the USA” (Martin, 2011).

- Leverage and its international interconnections, including public borrowing and the exposition to government bonds. A cartography of borrowing and lending, as difficult as it is, would be a challenging project. Lee et al. provide some interesting reflections about the different reasons why Anglo-American sub-prime loans and toxic financial derivatives have attracted capitals from the USA, from continental Europe and from Southeastern Asia respectively (Lee, Clark, Pollard, & Leyshon, 2009, p. 731). A particular fact that has been extensively commented on is the overtaking of Japan by China as the primary lender of the USA.
- Governmentality and its transformations,³ particularly within urban centres. A special family of such approaches regard the ecology of fear and the rhetoric of security.⁴ This is a legitimate problematic, as the accentuation of inequality is interwoven with “security-obsessed urbanism” (Davis, *City of Quartz: Excavating the Future in Los Angeles*, 1990) and the ideology upon which it is founded. Mike Davis (Davis, 1992) and Stephen Graham, with his theory of a New Military Urbanism (Graham, 2007), belong to those authors who have drawn dystopian pictures of the urban future, a pessimism that does not necessarily sound dissonant now, amid the global crisis.
- Social movements and the city, on the line entrenched mostly by the early work of Manuel Castells (Castells, 1983) and other radical geographers.

Finally, it is sometimes attempted to draw the outline of a possible new urban policy, in accord with the new conditions that have arisen in the current period, whether these conditions are attributed to the crisis or not. In some cases, a leading role in the overall economic recovery is reserved for cities.⁵ Katz and Bradley deem that cities are the clue: “metropolitan areas in the United States are able to generate innovations and be engines of economic prosperity and social transformation” (Katz & Bradley, 2013). Vice versa, it is often expected that the crisis may eventually wreak or signal an invigoration of urban planning or a “change of paradigm” in it (Taveau, 2013).

There are liberal (or neoliberal) approaches who rely on the removal of urban regulations, allegedly restricting free and natural progress by limiting available choices for individuals. Glaeacer suggests that cities should try to turn into “urban theme parks”, providing variegated locations, forms, and activities which “smart inhabitants” can take advantage of. “At the heart of economics is the belief that businesses work best by competing furiously in a market that the government oversees as impartial umpire. The same is true for cities” (Glaeacer, 2011). This neoliberal doctrine is actually no more than a new version of the Tiebout hypothesis (Tiebout, 1956), and it has to be acknowledged that after the 2008 crunch the idea of mainstream policies

3 An outstanding contribution in this category, clearly based on a foucaultian notion of governmentality, has been made by a non-geographer, Patrick Joyce (Joyce, 2003).

4 For a relevant view in Athens in the period of the crisis see (Arapoglou, 2013).

5 See for example (Barber, 2013).

suffering from excessive regulation sounds weird.

In contrast with this idealization of innate ability of contemporary large cities to secure progress, David Harvey has spoken of a “crisis of planetary urbanisation”, referring both to the crisis of economic activities associated with urbanisation and to the fact that “the urban experience under capitalism is turning barbaric as well as repressive” (Harvey, 2014b). The conditions of living in large cities are interwoven with the urban revolts of our times, from Tunis, the Tahrir Square in Cairo and the Gezi Park in Istanbul, to the squares of Athens or Madrid, the riots in Bosnia, London or Sweden, the mass protests in Brazil and the Occupy Wall Street.

A specific case of an author that has changed his mind about the trajectory and the potential of cities, due to the crisis, is Richard Florida. Quite a few years after the outbreak of the crisis, Florida would publish a new version of his *The rise of the creative class* (Florida, 2012), where he repeated his concept of a “creative Age” and his optimistic vision of the leading role that a new “creative class”, residing in large city centres, can play in securing economic growth. For Florida, the crisis indicated a contradiction between a new economic order that had already emerged and an obsolete social order, which had to adapt to the creative economy (Florida, 2012, p. xi). Since he considered cities as the means to overcome the crisis, he didn’t feel obliged to mention the consequences of the crisis over space and the city. Five years later, though, he would admit a deep systemic urban crisis, different than the “hold in the donut” crisis back in the 1960s and 1970s, as it now affects both urban cores and the suburbs (Florida, 2017). Florida attributes this urban crisis to the rising inequality and housing prices, racial segregation, spatial inequality, and poverty in cities. Although he doesn’t specifically indicate the link of this urban crisis with the global capitalist crisis in 2008, and although he still believes that, if the crisis is urban, so is the solution, the case of Florida shows that it is not too late for geographers to adapt their views in face of the crisis.

Radical approaches

Most visions for a new urban policy come from radical or critical geographers. It is not the place and time for a detailed overview of those visions and proposals, so we will confine ourselves in a few rudimentary remarks. As already mentioned, a large part of these approaches is inspired by a Rawlsian or post-Rawlsian perception of Justice. Don Mitchell’s *The People’s Geography Project*⁶, Antipode’s *Institute for the Geographies of Justice*⁷, and the bilingual review *Justice Spatiale/Spatial Justice*⁸ are some prominent examples. In other cases, democracy is seen as the key, and attempts for urban-scale democratic reforms, encouraging citizens’ participation, are praised.⁹ Negri’s and Hardt’s notion of “Commons” (Negri & Hardt, 2009) forms the background of a category of alternative strategies against commodification in urban space. David Harvey has reshaped the notion of Commons in more Marxist terms (Harvey,

6 <http://www.peoplesgeographyproject.org/>

7 <http://antipodefoundation.org/institute-for-the-geographies-of-justice>

8 <http://www.jssj.org>

9 Such an example is, among others, the Swedish city of Falun (Marsh, 2013)

2014b, p. 73). Guy Burgel favours a rather classical socialdemocratic strategy of cooperation between private capital and the state, for the benefit of the latter (Burgel, 2014). Alain Bourdin envisions a “regulative urbanism” (Bourdin, 2010). On the contrary, Neil Smith has taken an anti-capitalist position, promoting an alternative that will not be exclusively urban and will challenge the very foundation of private property (Smith, 2012).

Sometimes social and functional mixture is projected as the appropriate solution, as zoning and segregation are blamed for the crisis of urban space (Taveau, 2013). This demand might sound legitimate; however, it is not clear why the current crisis can be attributed to zoning more than any other among the previous ones. Moreover, are really zoning and segregation the causes of urban pathology, or are they a symptom of deeper economic and social processes?

Simultaneously, Marxist authors like Harvey and Massey (Harvey, 2012, p. 83; Massey, 2004) have questioned the role of the local level in a strategy for emancipation. Besides, several other analysts have detected a late turn of neoliberalism itself to the local, in a process described by Mohan and Stokke as “revisionist neoliberalism” (Mohan & Stokke, 2000). If this is true, then the Local may be actually part of the Ethics of the dominant class, rather than an appropriate strategy of the oppressed against the system.

No matter how much reflection has been made about the future, however, few concrete hypotheses regarding the effect of the global capitalist crisis on the evolution of space, urbanisation, and regional development, even by those who think that nothing will be the same anymore. Manuel Castells, for example, has spoken of a “historical divide in the continuity of economies and societies in Western Europe and the United States” and of “the end of a particular model of a speculative capitalism, what I call informational capitalism”. Along with his partners, he has created the Aftermath Project in order to study the social consequences of the crisis in detail.¹⁰ And still, he admitted “not trying to predict too much” (Castells, 2011). In a comparative study of production and dynamics in the regions of France, Davezies has forecasted a regional crisis, due to the restriction of public spending, which would hit the countryside harder than Paris (Davezies, 2012). This is an interesting hypothesis, especially if associated with the debate about metropolisation and de-metropolisation, even if different national contexts may alter the picture (for example in Greece there is a common belief that Athens is more affected by the crisis than the countryside, which we will examine in detail later).

Hypotheses

Brenner et al. have summarised some of the proposed scenarios about the future of global geographical space as follows:

Will it be increasingly China-centric, as Arrighi (2007) predicts? Will it be grounded on a multipolar world order, as Amin (2009) hopes? Will it entail an archipelago of progressively oriented inter-urban or inter-regional networks, coupled with new forms of worldwide

¹⁰ <http://www.aftermathproject.com>

sociospatial exclusion, as Scott (1998) anticipates? Or will it entail some other, yet-to-be-envisioned formation of uneven spatial development? (Brenner, Peck, & Theodore, 2010, p. 342).

Trying to respond to the present situation, Lee et al. have posed three critical research questions: what the geographies of asset creation and destruction will be like; what the implications of the financial crisis for the regulatory geographies are; and what the political and geopolitical consequences of finance are going to be like (Lee, Clark, Pollard, & Leyshon, 2009, p. 740).

However, and in accord with what has been already argued about the current status of Geography in face of the economic crisis, most authors and scholars seem to still be dealing with hypotheses formulated in periods prior to the crisis. Of course, since the crisis has occurred in a specific material background, these hypotheses are by no means useless, even if some of them may be obsolete and although only a few among them have been investigated under the new light of the crisis. It is necessary, therefore, to retrace older hypotheses, before being able to evaluate which of them are relevant today. This can provide a first group of research questions for study.

Major theories and hypotheses formulated in the last thirty years include: the emergence of World Cities, proposed by Friedman and Wolff (Friedman, 1986); Global Cities, introduced by Saskia Sassen (Sassen, 1991); Counterurbanisation, coined by Berry (Berry B. , 1976); Polarisation Reversal, that is a shift of growth at the expense of metropolitan areas and in favour of middle size towns (Richardson, 1980); Differential Urbanisation (Geyer & Kontuly, 1993); Informational City (Castells, 1989); Regional Urbanisation and Post-metropolis (Soja, 2000; Soja, 2011); re-urbanisation (Klaassen & Scimeni, 1981); the revenge of cities (Burgel, 2006); intensified segregation; centripetal urbanisation (Glaeacer, 2011); urbanisation without industrialisation; proliferation of Slums (Davis, 2006); Gentrification, a term coined long ago by Ruth Glass (Smith, 1999); Privatopias (Mackenzie, 1994) etc. Some of these theories may well fuel relevant questions and assumptions today.

It is a well-documented fact that urbanisation has been a major mechanism for mobilising and absorbing overflowing capitals, thus potentially being both a lever of capitalist crises and a strategy to overcome them (Harvey, 2012, pp. 5-11,30-34). Apart from housing, big urban and infrastructure modernisation projects have repeatedly played such roles. Baron Haussmann in the 19th century Paris and Robert Moses's project in the post-War USA give two prominent examples. Given the double role of urbanisation as a sparkle and a remedy to crises, what are we to expect amid or in the aftermath of the current crisis: intensification or amplification of the rates of urbanisation?

Graham and Marvin observe that the previously dominant ideal of a universal coverage with urban infrastructures (an ideal never applied to most Third World Cities, though, as also carefully illustrated by Mike Davis) has been being undermined since the late 1970's in favour of ad hoc private or corporal arrangements (Graham & Marvin, 2001). If Harvey's hypothesis

is correct, could this tendency be reversed, for example by means of public investments in infrastructure, meant to function as a stimulus for economic recovery?

An additional issue is about the patterns of urban expansion and sprawl. Urban areas across the globe have swollen to an extent that is unprecedented in human history, far beyond traditional urban cores and even the previously existing suburbs. New terms have proliferated in order to describe these changes: edge cities, outer cities, exopolis, peripheral urbanisation, postsuburbia, technoburbs, metroburbia (Soja, 2011, p. 684). Soja indicates that suburbs tend to converge with urban cores in terms of density. In his perception of the so-called Regional Urbanisation, this negation of the distinction between metropolises and suburbs is associated with an accentuation of economic disparities and erosion of homogeneity in the suburbs. If this is correct, should we expect that, by accentuating inequality, the crisis will further accelerate Regional Urbanisation? This assumption seems inconsistent with empirical data showing that “the poorer, the denser”. Angel et al. provide claim to have found out that a doubling of per capita income entails a 40 percent decline in average density (Angel, Parent, Civco, & Blei, 2011, p. 17). A similar argument has been utilised against Glaeser’s centripetal and core densification strategy (Muscat, 2012). All this undeniably depends also on whether land prices are falling faster within urban cores or outside them. There may be also substantial differences between donut-patterned North American cities and saucer-patterned cities in other areas of the world. Restructuring of the production and collective or individual reactions to the restriction of shelter will definitely play some role as well.

It is often commented that cities in the era of globalisation have witnessed a growing amount of divisions, distinctions, and exclusions. Pieterse has written of “a dualistic urban system: the globally connected infrastructural enclaves in the city versus the informal, almost disconnected and abandoned city, where the urban poor are subjected to inhumane living conditions” (Pieterse, 2008, p. 37). Castells’s notion of the Dual City, in his case regarding primarily access to information, is not much different (Castells, 1989, pp. 226-227). While Castells refers mainly to the metropolis in the developed world, other authors emphasize on the fragmentation of cities in developing countries (Balbo, 1993). Anyway, the hypothesis of an accentuation of segregation and marginalisation in urban areas definitely makes sense. Apart from confirming this general assumption, it would be important to map the geographical distribution of divisions, and not only in the higher ranks of urban hierarchy (Petsimeris, 1998, p. 449).

Johannes Fiedler has distinguished between several different contemporary urban processes or features: abstraction, brazilianisation, convergence, dispersion, expansion, gentrification, hegemony, modernisation, privatisation, regulation, segregation, erosion of urban space, vitality (Fiedler, 2014). All these spatial processes function in parallel, overlapping, complementary, or even opposing ways. No matter what one thinks of the actuality of each process, examining the crisis and its effects with such a parametric methodology is tempting, although it is not clear how it could lead to specific conclusions.

Apart from previous hypotheses who would have to be reexamined under the light of the crisis, there are various other assumptions or predictions, which were not, if only occasionally,

proposed by scholars and academics, but still make an organic part of the public discourse about cities, the regional layout, and space in general. These predictions include real estate and bank financial forecasts, positions expressed in the press or in the mass media, even views that are just common among people. They may be adopted, rejected, or ignored by Geography and Urban Theory, depending on the circumstances; however, they are by no means of no value, even if their use will be to be refuted. As long as they are not put under scrutiny, they form a ground of uncritical beliefs or superstitions that, even if luckily correct, distort understanding of the actual situation and its perspectives. It is unavoidable that we limit ourselves to what is said and written in Greece, as we don't have an overall view of the daily press and of everyday debates in other countries. Besides, Greece is our research field.

Assumptions in the context of Greece

It must be noted that in Greece there are relatively more frequent texts (including the ones in the press) about the crisis, the public debt, the recession in production, and space, although Geography as a discipline has had a rather poor tradition in the country. This is, of course, because the crisis has been long in the epicentre of all kinds of discussions, as Greece lies close to, if not in, the centre of gravity of the global economic crisis. Apart from what prevails in Geography and Urban Theory internationally, papers and studies in Greece include subjects as: the extreme decline in construction, in terms of actual activity, contribution to the GDP, and employment; housing and homelessness; home repossessions and auctions because of indebtedness; privatisations of public land and infrastructure; new legislation, institutions, and tools for urban and regional planning. We shall not attempt an overview of the relevant literature in Greek here, since we will examine it throughout the next chapters, as our theoretical study and empirical research unfolds.

An important part of the radical (but not exclusively radical) approaches are obviously inspired by David Harvey's work and his formula of "accumulation through dispossession". In a recently published and apparently influential book, Kostis Hadjimichalis has examined privatisation project and plans, fast-track projects and other planning innovations, real estate ambitions and banking activities, auctions and transactions, all of them through this very lens (Hadjimichalis, 2014). Moreover, the radical journal *Γεωγραφίες* (Geographies), apart from hosting David Harvey's interviews, has dedicated a special issue to housing in Greece, in comparison with the rest of the South European countries, the sometimes-called PIGS (Geographies [Γεωγραφίες], 2013).

We can conclude this chapter by recollecting some of the assumptions that are common both in the relevant literature and the public discourse in Greece:

- The hypothesis of a metropolitan exodus. It is widely believed that, as small or middle-size towns offer a cheaper living plus the protection of family networks (a large part of the population who live in Athens and Thessaloniki maintain their links to their regions of

origin), it is rational to expect that people will leave the two major cities and move back to the countryside. In geographical terms, this means a possible reinforcement of lower and middle-rank levels or urban hierarchy at the expense of upper levels. However, to my knowledge, no systematic study over this issued has been made yet.

- The hypothesis of the reduction of home-ownership. The rate of home-ownership (owner-occupancy) in Greece is relatively high. As home owners are threatened by repossession due to their debts towards banks, the state, or insurance funds, scenarios of concentration of immovable property in the hands of big owners, banks, and real estate companies sound plausible, although the situation is often more complicated than what one would expect, because of the contradictory interests of the banks themselves but also because of social resistance to evictions and auctions.
- The hypothesis of a massive privatisation of formerly public lands for building big private projects, often in a fast-track mode. Real estate and construction also covet areas that previously were not commodified, such as small islands, the foreshore (for touristic and leisure activities), forests (for golf facilities or mining, for example), or mountain ridges (for wind power plants). A further assumption is that there is, or going to be, also international interest for massive investments due to the reduced land prices and wages.
- The proliferation and intensification of violence in urban areas. This refers to crime, police repression, and also fascist and racist aggression, which seems to be flourishing during this crisis, as happened with crises before it.
- The hypothesis of further segregation and/or social polarisation within cities. Segregation may be based on social classes, on ethnic groups, or on both. It may also follow variegated patterns, such as major spatial divisions, surrounded enclaves etc.

Of course, it is impossible to explore, or even comment on all those assumptions throughout this study. Our emphasis will be put to the urban (or metropolitan) exodus hypothesis and other related issues. Before formulating our assumptions in more detail, though, we should first determine the theoretical framework of this study.

Conclusions

Most authors in the disciplines of Geography, Urbanisation, and Urban Planning have avoided tackling the question of the global capitalist crisis that outbroke in 2008 and/or adapting their reasoning and tools to the conditions of the crisis. The existing literature on geographical space, urbanisation, and the crisis remains limited and rather attached to previous questions and methods. The same also applies among radical geographers, who should expectedly be more interested in exploring the crisis, as a concrete manifestation of the inability of capitalism to be sustainable in the long run.

Therefore, only a few studies, analyses, and predictions have been carried out about the repercussions of the global capitalist crisis in urbanisation as an overall process. Most of the

numerous previously existing hypotheses about contemporary urbanisation have not been put to the test of the new conditions of the crisis, and new ones have been relatively limited and rather abstractly formulated until now.

Neither in Greece, despite the extraordinary intensity of the crisis, have specific hypotheses about the relation of the crisis with urbanisation been systematically examined, partly due to the weak tradition of the relevant disciplines in the country. References to the crisis are probably more frequent here because the crisis is something impossible to ignore in the specific context of the country. However, a comprehensive study and debate about the concrete developments in urbanisation, in general, under the conditions of the crisis hardly exists.

Of course, all this does not imply that the current work of geographers and urbanists, especially the radical ones among them, is irrelevant or meaningless – on the contrary, it can form a solid ground for understanding the crisis at the level of urbanisation. However, a shift is needed in the research questions, and probably in the methodology too, so that the crisis does not become the next “missed boat” for Geography. We do not pretend that the present study in itself can change the principal research questions and methodology in the field, but we do hope it can be a modest contribution to this cause and an example of an approach different than the mainstream one.

CHAPTER 2

Understanding the global capitalist crisis

The outbreak

September 14, 2008, was an exceptional day: Lehman Brothers, the fourth largest US investment bank, declared bankruptcy. This date is often considered as the conventional beginning of the 2008 crisis, but in fact, it was not. Just one day before, the previously mighty financial service firm Merrill Lynch, being on the brink of a total collapse, agreed to be absorbed by Bank of America. A few months earlier, in March 2008, another big US investment bank, Bear Stearns, had already failed and was bought out by JP Morgan. Just one day before that, Carlyle Capital Corporation had also collapsed. IndyMac followed, going bankrupt in July 2008. Although there is definitely some basis for considering the global crisis as originating from the US, its first clear symptoms actually happened elsewhere.

As early as August 2007, the French bank PNB Paribas suffered the first case of liquidity evaporation, although not yet with the disastrous effects that its successors came up against. Next month, the British Northern Rock underwent a bank run, to be nationalised in early 2008 and re-sold to Virgin Money in 2011. Stock markets had been facing constant downward pressures ever since autumn 2007.

But it is undoubted that the Lehman Brothers case signified a new phase, a phase of rapid downturn. Contrary to the previous cases, this time economic policymakers didn't try to rescue Lehman Brothers, probably estimating that the effect of its collapse would be manageable, while the cost of a possible rescue would have been comparatively unbearable. Be that as it may, the bankruptcy put in motion an avalanche that brought down the US stock market. Stock markets all around the globe followed immediately, and thus the Great Recession was officially inaugurated. A couple of weeks ago, the Paulson plan was enacted amidst a whirlpool of criticism, only to be the first of a series of bailout operations meant to provide extra liquidity to the banking systems of various advanced capitalist countries. The UN has estimated that in a period of approximately 9 months, its member states have mobilised 18 trillion US \$ to recapitalise banks and another 2.7 trillion \$ for fiscal stimulus plans (United Nations Department of Public Information, 2009). It has been contended that the total public aid to private banks has outreached the aggregate debt of all "Third World" countries towards foreign banks, the cancellation of which was never considered at all (Toussaint & Millet, 2010, p. 89). It is

impressive, anyway, how private institutions, who so fiercely opposed state interventionism before the meltdown, hastened to ask for such colossal state economic interventions as soon as the meltdown occurred. The details of this story are quite well documented in the press and in the pertinent literature, therefore there is no need to repeat them here. One need only stress that, despite having prevented a chaotic collapse of the private banking sector, all these gigantic state interventions were by no means sufficient to eliminate the crisis, which means that it was not merely a liquidity crisis, as initially presented.

At the time, everybody, including those who had previously underestimated the risk for long, seemed to recognise that it was all about the burst of a large bubble (or several large bubbles). In particular, the meltdown was triggered by the US housing bubble, while similar bubbles have also swollen and subsequently burst in the UK, the Spanish State, and other countries. The most farsighted analysts could foretell this outcome.¹ However, such warnings were not enough to avert a process with deep economic roots, which we will discuss later.

Apart from being a fundamental phenomenon spread in different countries, the burst of the housing bubble automatically transformed into a credit crunch and into a stock market crash, because all three were part of the same vicious circle. The practice of easy and cheap credit for purchasing or building houses, particularly from 2004 on, has been pushing up the demand for individual residence, even among poor social layers that never before had this possibility; the rise in the demand for housing entailed a continuous rise in house and land prices; this, in turn, made real estate investments appear attractive and lending for housing appear safe, as the value of the mortgaged property was constantly appreciating; mortgage-based financial products were thought to be ever more secure; and banks and non-bank financial institutions involved in lending directly or indirectly, by holding or trading mortgage-based financial products, saw their profits and thus their stock market value raise. Very low “teaser” interests for the first two years, along with the promise that, before this transitional period expired, the price of the residence that served as a collateral for the loan would have raised greatly, thanks to the general real estate boom, made borrowing very tempting. In the worst-case scenario, borrowers expected that they could then refinance their loan based on the new, higher price. Borrowing was growing faster than incomes, but still, debts were growing slower than asset prices.

Meanwhile, a large portion of social surplus value was distributed to various stakeholders, through ever more complicated structures. The profits derived from lending were not just acquired by the institution that provided the loan in each case. They were transformed through securitisation and sold further as Asset-Backed Securities, in the same way as corporate debt. The practice of pooling, that is grouping many different securitised loans of differing levels of risk into Residential Mortgage-Backed Securities (RMBS) and distributing the gains from the

¹ Robert Shiller is an often-cited example – see e.g. (Shiller, 2007). Nouriel Roubini is also praised for having foreseen the housing bubble. In 2011, Wall Street economists made a retrospective research, according to which “the earliest prediction among the experts came from Dean Baker and the most accurate predictions came from Med Jones. Nouriel Roubini’s predictions lagged behind the other experts and Peter Schiff’s predictions were the most bearish” (Wall Street’s Instablog, 2011).

loan paybacks to all RMBS holders, was particularly popular. Each RMBS pool was subdivided into “tranches” of different levels of risk and, accordingly, of yield: the riskier a category was, the more profitable it would be. On the other hand, the less risky ones were paid first, and thus they appeared perfectly safe, even if a risky tranche failed due to a loan default. It would take a simultaneous default of a huge amount of loans to threaten the prime category. At the same time, new financial products such as the well-known Credit Default Swaps (CDS) were supposed to provide insurance in case of failure. In that context, even extremely insecure loans were accepted in, the so-called subprimes. Gradually, the structure became more and more refined, as the lower tranches of such RMBS pools could be detached to form new, combined pools or Collateral Debt Obligations (CDOs), more profitable but still considered quite secure, as they combined different pools that seemed unlikely to collapse altogether. Such was the over-confidence in this system that the lower CDO tranches could be separated even further to form second-grade CDOs (CDO2) – and yet it was considered almost impossible for this structure to fail, until it did exactly so.

The problem with such vicious circles is that when they fail, they don't just break: they start rotating in reverse order. After house and land prices reached a peak, they started going down; mortgage defaults started, as owners could not take advantage of the continuous rise of their property prices anymore (in some cases it was not even worthy to keep your own house, as depreciation tendencies made it less valuable than the rest of the loan), and as interest rates went up; the demand for residences started shrinking; all these, in turn, induced a further fall in house and land prices; defaults and the decrease in prices made mortgage-based financial products depreciate, as investors' demand for them was vanishing; banks and non-bank financial institutions suffered massive losses and thus liquidity shortage.

This particular link with housing made architects, urbanists, and geographers think of an exceptionally space-based crisis, which would make their scientific domain highly competent to monitor and analyse it. This is both correct and incorrect. On one hand, one cannot neglect the fact that housing, and thus urbanisation, was indeed right in the middle of the process that triggered the global capitalist crisis. From the coasts of the Iberian Peninsula to the suburbs of North American cities, a breathtaking number of ghost residential complexes testify to that. A massive international wave of evictions does so too. On the other hand, it is not at all the first time that housing has had a close relation to a major crisis, as we shall see later. Besides, residential loans were nothing but a means to an end for investors and financial institutions, such that any other asset or product could have been. From the viewpoint of capitalist profitability, it is indifferent what is traded in particular, and this is why bubbles can easily shift from dot-com firms to housing, ABS, shares, raw materials, food prices, or whatever. The real problem with most architects, urbanists, and geographers, though, was neither that they overestimated nor that they underestimated the spatial aspect of the crisis but that they didn't really address most issues that the link between space and the crisis raise, as already noted in the previous chapter.

Meanwhile, the price of oil nearly tripled in the year during which the crisis was germinating

(2007-2008), and several commodities skyrocketed as well. The period 2006-2008 was, besides, a period of a sharp food crisis, as food prices rose beyond any expectation, at least partially due to speculative financial activities on basic goods such as wheat.² The short-lived food price bubble has been one of the attempts of mighty financial investors (the most distinguished being Goldman Sacks) to find a way out from the impasse of the sub-prime mortgage financial market. Different bubbles at a different timing revealed a deeper cause or systemic disease, which we will come back to afterwards.

As everybody feared, the financial meltdown contaminated production and the so-called real economy at once, inducing a prolonged economic recession. According to UN data, after a very modest 2% in 2008, the rate of growth of the world gross product fell to a negative -2% in 2009. These figures are even more impressive if one considers that the group of developing economies maintained a positive contribution in the year 2009, although the growth rate of their combined GDP shrank from 8% to 3%. Indeed, developed countries presented a negative growth rate of nearly -4%, whereas economies in transition (South Eastern Europe, Commonwealth and Georgia, Russian Federation) displayed a shocking almost -7%, representing a fall of 12% in just one year (United Nations, 2016, pp. 1-2). According to the International Labour Organisation (ILO), official global unemployment raised from 5.5% in 2007 to 6.2% in 2009, corresponding to nearly 30 million newly unemployed people, in spite of the small decrease recorded in developing countries as a total (International Labour Organisation, 2016, p. 12). This number may well be underestimated. In 2013, the gap between the projections implied by the pre-crisis trends and the actual situation of global employment was more than 62 million jobs (International Labour Organisation, 2014, p. 17). Commodity prices have displayed downward tendencies, especially after 2011, global trade flows presented the worse perspectives since the 1930s, investments and fixed capital formation shrank sharply, and so did labour productivity (United Nations, 2016, pp. 14-22). Any possible anticipation that the financial meltdown would be a brief episode stood no chance at all.

What was the cause of the crisis?

There is no dispute over the fact that the triggering event of the global crisis has been the housing bubble, interwoven with excessive lending and the diffusion of sub-prime mortgage-based financial products. This was the immediate or proximate cause. Being over-exposed to sub-prime loans and products based on them, banks and non-bank financial institutes risked running out of money, or did so indeed, as soon as the bubble burst. Thus, in the beginning, the crisis manifested itself as a crisis of liquidity, demanding huge injections through government bailouts. However, the situation was too critical to be considered as the outcome of a random factor or malfunction. Maybe some thought that the bubble was a haphazard incident indeed. But the vast majority among analysts, economists, and politicians, throughout a broad range of theoretical and political positions, realised that there were deeper roots to be explored. Hyman

² See (De Schutter, 2010).

Minsky's warnings about the innate instability of finance and about the endogenous to financial markets speculative bubbles were depressingly confirmed. But maybe there was something even more fundamental than innate financial instability.

Ben Bernanke, the chairman of the US Federal Reserve at the time of the outbreak of the crisis, is probably the most competent executive to speak about the crisis from the viewpoint of mainstream economic policies. If there was such thing as an official account, it would be arguably represented by his position. Besides, it was during his term and under his authority that the Federal Reserve engineered its policy in response to the crisis. In Bernanke's own words:

The proximate cause of the crisis was the turn of the housing cycle in the United States and the associated rise in delinquencies on subprime mortgages, which imposed substantial losses on many financial institutions and shook investor confidence in credit markets. However, although the subprime debacle triggered the crisis, the developments in the US mortgage market were only one aspect of a much larger and more encompassing credit boom whose impact transcended the mortgage market to affect many other forms of credit. Aspects of this broader credit boom included widespread declines in underwriting standards, breakdowns in lending oversight by investors and rating agencies, increased reliance on complex and opaque credit instruments that proved fragile under stress, and unusually low compensation for risk-taking (Bernanke, 2009).

This criticism (or self-criticism) may not be particularly bold; however, it admits that there has to be a distinction between what initiated the crisis and the more fundamental cause that made it possible. The blame is put on a more general credit boom, which is not associated exclusively or necessarily with housing. The background of this boom is a lack of control and a decline in the standards of financial activities and transactions. Bernanke had to recognise that, although afterwards he would state that "lenders may have gone a little bit too far on mortgage credit conditions" (Fox News, 2014), referring to his failure to refinance his own mortgage. Even Alan Greenspan, Bernanke's predecessor in the Federal Reserve and a long-time dedicated enemy of regulation, in a famous statement before a congressional committee in 23 October, 2008, declared himself "in a state of shocked disbelief" and admitted having been "partially" mistaken in fully trusting the ability of the self-interest of banks to safeguard the stability of the system without any substantial intervention by authorities (Clark & Treanor, 2008).

There can be little doubt that the lack of regulation, which permitted every kind of high-risk speculative transaction, formed a context that was absolutely prone to a general collapse like the one that actually happened in 2008. It is often claimed that the abolition of the Glass-Steagall Act, which had restricted affiliations between banks and security firms, and separated banks into commercial and investment ones since the 1930's, in 1999, has helped cultivate this volatile environment. More generally, inadequacies of the framework regulating banking (such

as the international accords Basel I and Basel II) as well as an underestimation of financial risks are universally recognised, including by leading economic policymakers, such as, for example, the OECD.³ A last-minute attempt of the Bush administration to somewhat regulate mortgage markets with the Housing and Economic Recovery Act, introduced in July 2008, had no significant effect. Other factors often blamed are the mark-to-market accounting method, which estimates asset values according to their current market prices instead of their historical costs, thus permitting substantial distortions, or the practice of transferring credit risks by making use of financial products such as the CDS, thus creating the illusion of safety.⁴ Objective factors might be highlighted as well – it has been argued, for example, that new technologies and global digital networks have multiplied the momentum effect in the economy, accelerating the diffusion of negative events and restricting mechanisms that could absorb them (Roeder, 2011). But for most mainstream economists, analysts, and policymakers, all factors are, in short, attributed to the fact that regulators were “asleep at wheel” (The Economist, 2013) and “investors had turned a blind eye to warning signs” (European Commission, 2014).

Nevertheless, all this wisdom is only brought forward a posteriori. Given this fact, it sounds justified to say that “while few predicted the financial catastrophe, almost everyone has an explanation as to why it happened”. The aphorism belongs to the front-page of the special section that the YaleGlobal, an online publication of the MacMillan Center for International and Area Studies at Yale, has dedicated to the causes of the crisis. Paul Krugman has also since long accused economists for their striking lack of predictive power. In his view, the core problem has been the “malign neglect” of the risk that “non-bank banks”, constituting a “shadow banking system”, represented. It has not been so much about de-regulated institutions as about institutions that had never been regulated in the first place (Krugman, 2009, pp. 152-164).

The introduction to the section of the YaleGlobal about the causes of the crisis fairly summarises the most frequent (mainstream) interpretations of the crisis:

Too much foreign money was flowing into the US from the Asian countries, especially China. The availability of easy credit meant that too many people borrowed to buy properties that they could not afford. The bankers bundled up these loans and sold them to investors that could not understand the complexity of these bundles and the risks inherent in them. Once US borrowers started defaulting on their mortgages, they lost their houses and investors all around the world, including banks and hedge funds, lost their investments. For the critics of Bush administration, the government failed to regulate the activities of the banking behemoths. For the Fed critics, the crisis resulted from Alan Greenspan’s policy

3 Summarising some “ideas and issues that are part of the ongoing reflection at the OECD,” Blundell-Wignall, Atkinson and Lee impugn the “very poor regulatory framework” prior to the crisis and highlight 2004 as the year when four specific factors, crucial for the subsequent financial crisis, came into play (Blundell-Wignall, Atkinson, & Lee, 2008).

4 According to Michel Aglietta, a prominent theorist of the Regulation School, these are two of the three ingredients of the explosive mixture that provoked the crash, the third one being a new way of credit risk assessment, based on statistics rather than an individual evaluation of each borrower’s capacity to repay his or her debt (Aglietta, 2008).

of keeping the interest rates low for an extended period of time. Given the ongoing nature of the crisis, many complicated explanations will surface in the years to come. Yet the root of the economic depression might very well lie in one fundamental human instinct: greed (YaleGlobal Online, n.d.).

Greed, indeed, determines the line of another family of explanations. Without necessarily being labelled with such a moral term, the idea that investors or at least a certain layer among them have gone too far with making profits through speculative operations is quite popular. A notion often related to this idea is that of “parasitism”, denoting a distinction between healthy, productive economic activities, on one hand, and adventurist, non-productive ones, on the other. The second, malicious category grows at the expense of benevolent economic activities, just like a leech sucks the blood out of a bigger animal. Not only parasites consume the vitality of an otherwise healthy organisation, but they also contaminate it with their own diseases. No matter how it may sound, this kind of criticism doesn’t necessarily come from radicals. Various Keynesian or post-Keynesian economists would certainly share this view. Actually, it is one of the earliest points of criticism that arose among the capital’s own ranks. Hobson, the first economist to systematise a critique of imperialism in his influential titular study back in 1902, made the distinction between industrial and financial capital, associating the latter with imperialism, which he denounced as immoral. In his opinion, it was financial capital that determined actual policies at the time, in what he called a “pivot of financial policy” (Hobson, 1902, pp. 100-117). To describe the forces behind imperialism, he used exactly the term “economic parasites”. In order to prevent the capital from undertaking adventurist financial and imperialist operations, Hobson proposed a redistribution of wealth in favour of the poor strata, thus reinforcing their consumption power and consequently the demand for domestic industrial production. In that, he preceded John Maynard Keynes.

A quite similar logic can be also found in modern think-tanks, for example in the Levy Institute. Michael Hudson is one of the most well-known adversaries of “financial parasites,” who “destroy global economy” (Hudson, 2015). His language is indeed the culmination of biological metaphors. No matter how old the general denunciation of parasitism may be, it is rather difficult to deny the fact that a multiplication of financial activities has taken place in the previous decades, conventionally since the 1980’s, although there is some debate on whether it constitutes something unprecedented or a recurrent phenomenon in capitalist history. This trend has been often called “financialisation”, and it is regularly blamed for the current global capitalist crisis, which is not unfounded. In the last decades, “the economy could not live without financialization and it could not in the end live with it” (Foster & Magdoff, 2009, p. 19). Again, this has not to be a particularly radical criticism. In an extensive UN publication, the previously mentioned distinction between proximate and ultimate or structural causes of the crisis is made clear, and three main factors are classified to the latter: global trade imbalances, growing income inequalities, and financialisation (plus misleading dominant ideology) (Priewe,

2010, p. 20).

It is no coincidence that in such a balance sheet, which may be considered official, in a certain sense, financialisation and income inequalities are jointly included among the underlying causes of the crisis. The two notions are closely related in the view of many analysts, especially among Keynesian or post-Keynesian economists. Being a staunch opponent of deregulation, Joseph Stiglitz has named his 2012 book *The Price on Inequality* (Stiglitz, 2012). The idea is definitely not new: growing inequality means lower incomes for the majority of society, and this, in turn, means a lack of domestic demand and, thus, a slowdown in economic growth. A fairer distribution of wealth would simultaneously increase economic efficiency, fairness, and opportunities, and this is what Stiglitz's proposals are intended to secure. According to this viewpoint, a more equal distribution of wealth is both fair and economically profitable. We shall see that this Keynesian idea, too convenient to be true as it may sound, is also shared by certain Marxists.

It is also shared by some leading policymakers, even in a rather modest version. The American Recovery and Reinvestment Act (ARRA), a massive stimulus pack introduced in February 2009, included aid to low income workers and the unemployed, public investments in infrastructure, and welfare provisions, even if their actual size was fairly criticised as inadequate. But apart from the Obama administration, most governments seemed to detest even this timid version of Keynesianism. Instead, they stuck to austerity, compressing wages and social welfare even further in order to ensure some level of profitability. EU governments were, and still are, particularly devoted to austerity policies, especially after the big public bailout programmes made government budget deficits and the debt grow disproportionately. In the eyes of those who identify inequality with the underlying cause of the crisis, austerity should look like trying to cure a disease by the very substance that provoked it.

Deeper under the surface

Bitter words such as greed, adventurism, parasitism, probably sound justified given the extent of the disaster. However, greed is not a human defect that came about only lately. Neither were adventurism and parasitism unknown before our times. As a matter of fact, it may well be the case that there have been even greedier times in history. The real questions are: why has greed been such a decisive factor at this specific period? And under what circumstances have adventurism and parasitism been nurtured at this scale?

There is no doubt that the real estate and credit boom was self-destructive. But what made this insane edifice possible, or maybe even inevitable? There has to be an even deeper root behind all this. The crisis was neither a coincidence, nor a distortion of an otherwise perfect, or at least stable, mechanism. It reveals structural contradictions of the very basis of the economy, which is the capitalist mode of production. "The true barrier to capitalist production is capital itself" (Marx, 1991 (1894), p. 358).

However, referring to the Marxian theory does not resolve the problem in itself. There were

many different interpretations of Marx's theory in general and of his theory of capitalist crises in particular, and most of them can claim originality by citing certain extracts from *Capital*. It might be maintained that Marx has avoided or been incapable of providing a consistent crisis theory, as in different parts of his work one can find different factors associated with the creation of a crisis: restricted consumption of the masses, excessive production or capital accumulation, anarchy in the production, or the tendency of the profit rate to fall; on the other hand, this is probably exactly the supremacy of Marx's method, which dialectically involves different factors and different forms that the same phenomena can take, thus rejecting simplistic mono-causal and mechanistic interpretations. There is a common core in every crisis of the capitalist mode of production, but each case in history reveals itself in a unique way, according to the specific circumstances of its times. But again, the structural core of capitalist crises is something to only be extracted from particular observed phenomena, not something to be found in a hypothetical original form or pure essence in history. It is highly improbable, therefore, that there will ever be a final verdict about what is the official crisis theory of Marx.

Nevertheless, this is not to imply that the debate that has taken, and is still taking, place about how to explain crises in general and the current one in particular, based on a Marxist theoretical framework, is meaningless. On the contrary, it is probably the most fruitful debate, entailing crucial theoretical as well as political consequences.

As already mentioned, certain Marxist theorists attribute the crisis to the relatively shrinking income of the working class. According to the *Monthly Review* current, based on the now classical *Monopoly Capital* (Baran & Sweezy, 1966), capitalism in its monopoly stage is characterised by a constant shortfall of demand relative to the offer, actual or potential, due to the weakness of the growth of mass (primarily workers') consumption. This entails a permanent surplus, which capitalism is obliged to export to non-capitalist or underdeveloped areas or to consume in more or less artificial ways, e.g. military equipment. After World War II, this surplus has never ceased growing. In an up-to-date version of this theory, John Bellamy Foster and Fred Magdoff have distinguished a new stage or sub-stage of capitalism, where monopoly capital has evolved into finance-monopoly capital, always under the weight of the growing tendency of the surplus (Foster & Magdoff, 2009, pp. 63-76). There is no doubt that a tendency towards capital overaccumulation exists indeed, both theoretically and empirically, however, the distinction between the classical notion of surplus-value and the Baran-Sweezy notion of surplus remains unclear. It is confusing rather than clarifying. Moreover, the allegation of the proponents of the *Monopoly Capital* School that prices are no more determined by the mechanism of offer and demand, but arbitrarily defined by monopolies, thus feeding into the surplus, apart from overestimating the actual level of monopolisation that capitalist economy may achieve in practice, also rejects the law of value. However, the crisis can be exactly described as a call of the economy to order by the law of value (Mandel, 1982, p. 202).⁵

According to a different version, it has been contended that since the 1980s, which is more

5 Mandel E. (1982), *Η τελευταία οικονομική κρίση [La Crise 1974-1978. Les Faits, Leur Interpretation Marxiste]*, Athens: Οδυσσέας, p. 202.

or less since the introduction of neoliberalism, the share of wages in the GDP of most countries has decreased so much as to radically restrict the ability of the working class to consume (Husson, 2009). The suppression of wages and indirect workers' incomes (welfare) has been the core of the neoliberalist project as a reaction of capitalists to the crises of the 1970s. This suppression may also be deemed the fruit of globalisation as a capitalist project to exploit international competition in order to lower wages in the name of competitiveness (Screpanti, 2014, p. 148). The outcome is all the same: a subsequent suppression of demand, which was addressed by means of credit expansion, stimulating consumption, primarily of luxurious goods (Tombazos, 2010, p. 104).

These views share a lot with Keynesian approaches, with the School of Regulation, as well as with approaches based on the concept of inequality. In a recent highlighted "social justice" approach, without particularly referring to neoliberalism, the social-democrat Thomas Piketty has attributed the crisis to growing inequality, which stems from the tendency of the rate of return on capital to exceed significantly and for long the rate of growth of income (wages) and output. His proposed solution is, thus, a progressive annual tax on capital (Piketty, 2014, pp. 571-573). The work of Piketty is a common reference among progressive, and sometimes Marxist, thinkers, including geographers.

The underconsumption hypothesis is related to the legacy of Hobson as well as with certain 19th-century economists, such as Malthus and Sismondi, who as one of the first critics of classical economics. In contrast, leading figures of classical economics, such as Adam Smith, James Mill, and David Ricardo, have denied the theory of underconsumption. The debate has been taken over, within a different framework, by Marxists, in one of the most highlighted controversies ever, a real classic of the sort. The Narodnik Danielson, Kautsky, Roza Luxembourg, and others sided with the underconsumption hypothesis, whereas Bulgakov, Tugan-Baranovsky, Hilferding, Bukharin, and Lenin opposed it, although with quite different argumentations.

Underconsumption theories were initially meant to question the supposed inherent sustainability of the capitalist mode of production. Since internal demand tended to be inadequate, preventing surplus value to be realised, as no buyers for all produced (or potentially produced) commodities could be found, the capital would end up in an impasse, unless it sought for external markets. Hence the tendency towards imperialist expansion. However, such theories tend to neglect the capital's ability to create its own demand within the circuit of production. A capitalist firm does not necessarily produce commodities for massive consumption; it may as well produce commodities for consumption by the upper strata and the capitalist class itself; or it may produce commodities that are "productively consumed" by other firms, such as raw materials or means of production (machines). It may even happen that complete circuits exist without any intervention of mass consumption at any phase: for example, an iron mine may well provide raw material for steel industries that, in turn, provide steel to a factory producing mining machine tools. Of course, there have been times when the limited purchasing ability of the masses did indeed play a key role in a crisis. Despite being a factor the importance of which cannot be denied, though, mass consumption doesn't seem

convincing as the ultimate or underlying cause of crises in general. In capitalism, production is what matters.

It can be also maintained that underconsumption, or overproduction compared to a shrinking level of demand, is a manifestation rather than the cause of capitalist crises. In that case, underconsumption would have emerged after the financial collapse of 2008 and not before that. This is consistent with the fact that wages have indeed declined amid the crisis because of both austerity policies and the sharp rise in unemployment, which restricts the bargaining ability of workers and salaried employees. On the other hand, a proponent of the theory of underconsumption would probably argue that underconsumption represents a self-reinforcing cause, which was present before the crisis only to aggravate after that. Contrary to most analysts, Andrew Kliman provides statistics according to which the real share of workers in the national income has not shrunk substantially since the 1980s in the USA,⁶ which is not only the leading economic power on Earth but also exactly the country where the crisis started. To confirm or reject the statistics is far beyond the capacity of this thesis. However, the counter-argument can be raised that, even if it has not decreased in the years before the crisis, the share of wages in the USA alone is not a sufficient measurement, as the country's economic performance depends also on its relations with all other countries. In a certain sense, USA may be considered a unique case which has been drawing finance from all around the globe through various mechanisms (Chesnais, 2002, p. 113).

It would anyway sound paradoxical to deny that the neoliberal era has had a negative impact on the income of working classes. Otherwise, why would it exist in the first place? However, this doesn't necessarily mean that this suppression of incomes is also the ultimate cause of the crisis. According to Robert Brenner, in the last two decades before the crisis, the prices of industrial products have been decreasing faster than labour costs (and wages), because of the accentuation of international competition (Brenner R., 2009). This means that the overproduction traced by Brenner was an outcome of the dynamic in production itself (in particular, of the falling profit rates) rather than a symptom or underconsumption. To attribute overproduction to international competition may be questionable,⁷ however, the relevance of the rest of the argument remains: it is possible for the suppression of wages to have existed, without being the major cause of the crisis.

At first sight, there is a political advantage in interpretations of the crisis based on underconsumption: they virtually combine scientific explanation with a moral rejection of capitalist aggressions against labour. Not only is the suppression of wages socially unfair, but it is also self-destructive from the viewpoint of capitalists as a class. The working class bears no

6 More specifically, Kliman estimates that the decrease in the share of wages has been outweighed by increases in the non-wage compensations and in net government social benefits (Kliman, *The Failure of Capitalist Production. Underlying causes of the Great Recession*, 2011, p. 154).

7 "...the degree of competition or monopoly in individual sectors affects only the distribution of the total amount of profit among those sectors; it does not affect the total amount of surplus value or the general rate of profit" (Moseley F., *The Decline of the Rate of Profit in the Post-war United States: Due to Increased Competition or Increased Unproductive Labour?*, 1999, p. 139). The idea to put the blame for falling profitability to competition is not new. In fact, it can be found in the works of Adam Smith already.

responsibility for the crisis. On the contrary, the capitalist mode of production is failing because of its own voracity. Inequality is socially destructive, as it suppresses social wealth as a whole: in the words of Samir Amin, when wages shrink, “the entrepreneurs do not recover everything that the factors lose” (Amin, 1976, p. 224). However, there is a fault in this view. If an increase in workers’ incomes would also be for the benefit of the capitalist class, then a common interest between those two classes would exist. It would be then reasonable to advocate a political strategy of class collaboration in order to overcome the crisis. However, we are witnessing fierce class confrontations instead.⁸ It is rather obvious that, against the backdrop of the crisis, the working class can only win what the capitalist class loses and vice-versa. A really radical approach would promote a strategy of class independence instead of collaboration.

Of course, we can’t assess here a scientific hypothesis according to political criteria. However, there is also a factual fault in the underconsumption hypothesis. If the suppression of wages is really so self-destructive, it would be difficult to explain why capitalist classes insist on it. An answer could be that the interests of individual capitalists are different, or even contradictory, with the collective interests of the capitalist class: an individual earns profits when squeezing wages, even if this harms the overall ability of the working class to consume and thus hinders the realisation of surplus value and the overall profits for the capitalist class. This paradox exists indeed, but what is actually observed nowadays is that not only individual businessmen, but also collective organisations and, above all, states are devoted to a policy of austerity. Maybe there are some rudimentary elements of Keynesian redistribution in the US ARRA, as already mentioned, but this is obviously only an exception, and, besides, it is still a long way from anything resembling a new New Deal.

For all the above-mentioned reasons, in search of an ultimate or underlying cause of the crisis, it is more appropriate to look towards the opposite direction, that is supply. It is rather the excessive accumulation of capitals that forms the background of the periodic shocks following the capitalist mode of production since its birth. This tendency to overaccumulation may take the shape of overproduction of goods, idle production capacity, or a recourse to alternative outlets of valorisation. Overaccumulation (or capital overproduction) is interwoven with the tendency of the profit rate to fall, although the relationship between these crucial notions must also be explored.

However, the distinction between overaccumulation and underconsumption is not absolute (Mandel, 1982, pp. 196-200): capital accumulation appears as excessive only in comparison with the total demand available in a specific period, even if this demand doesn’t only regard consumer goods. In fact, a Marxist theory of capitalist crises would be an alternate position both to the approaches of Sismondi and Riccardo, that is between the idea that underconsumption represents an insuperable final limit to the realisation of capital and the idea that there is an innate equilibrium that guarantees the sustainability of the system in the long-run: “a unique

⁸ It is never useless to recall the famous cynical dictum of Warren Buffet, the 3rd richest man in the world in 2016 according to the Forbes World’s Billionaire list, and 1st at the time of the outbreak of the crisis: “There’s class warfare, all right, but it’s my class, the rich class, that’s making war, and we’re winning”.

synthesis of the views” of both (Rosdolsky, 1977, p. 459).⁹ It is the periodical destruction of capital that permits the capitalist mode of production to survive and reproduce, and this is the objective function of crises. We will see later that this notion of destruction is instrumental to the theoretical approach adopted in the present study.

The role of the profit rate

Despite they are interwoven with the outbreak of the global capitalist crisis of 2008, neither financialisation nor the decline of wages as a share of the GDP constitute an adequate and satisfactory explanation for it. The great volume of capitals that have been allocated to financial activities, to a large extent highly risky and adventurist, is indeed what created the wobbly edifice of credit that collapsed in 2008, but the real question is still why capitals had to resort to such activities. On the other hand, the stubborn assault on wages, while the dangers of shrinking demand were well-known, should express strong inner pressures in the production and the economy. It seems reasonable to assume that both the credit boom and the neoliberal depreciation of labour were a reaction to already existing problems. Financial bubbles were a means to a double end: exploit capitals that could otherwise find no way to be profitably invested, and reinforce social demand by loans. Whether planned or instinctive, it was a strategy to prevent a creeping recession or crisis. The current crisis is, in a sense, a crisis of this strategy to avoid (or postpone) this creeping crisis.

According to the approach adopted in this study, the core of the problem, that is the ultimate, underlying, or distant cause of the crisis, is a long-term downward tendency in profit rates. From a Marxist perspective, this fall may be described as a manifestation of the “law of the tendency of the rate of profit to fall”, formulated by Marx in the third volume of *Capital* (Marx, 1991 (1894), pp. 317-338).

According to Marx, the rate of profit, which is the ratio between surplus-value, and the sum of constant (means of production) and variable capital (labour power) [$r=s/(c+v)$], tends to fall, because the organic composition of capital (the ratio between constant and variable capital,) tends to grow historically as a consequence of the ongoing development of social production. This can be better understood if the function giving the rate of profit is transcribed as:

$$r = \frac{\frac{s}{v}}{\frac{c}{v} + 1}$$

The nominator gives the rate of surplus-value. The law is an expression of the tendency of capitalist industrial production to substitute living labour (workers) with dead labour (constant capital, machines), as capital accumulation accrues. The very tendency that makes productivity and the exploitation of labour power increase, marshaling ever more modernised machinery,

⁹ In the 7th Part of Rosdosky’s work, the classic Marxist debate on underconsumption/overproduction is summarised in the framework of a very interesting presentation of the dispute over Marx’s reproduction schemes (Rosdolsky, 1977, pp. 445-505).

tends at the same time to pressure the rate of profit, as equipment costs grow. An intrinsic contradiction comes to light: while technological innovation is a means to raise the rate of surplus-value, it simultaneously entails to a rise in the denominator of the function giving the rate of profit.

In the above functions, it is already evident that there is an inner factor that counteracts the tendency of the profit rate to fall: a possible rise in the rate of surplus-value, that is an intensification of exploitation. Marx mentions another six such counteracting factors (“influences”): a reduction of wages below the value of labour power, relative surplus population, a cheapening of constant capital elements, capital flows towards countries and sectors with a lower organic composition of capital, an increase of stock capital, and an increase in the quantity of surplus-value (Marx, 1991 (1894), pp. 339-348). These factors may be very useful in an attempt to identify what have possibly slowed down the fall of the profit rate after the latter manifested itself in the 1970s. The question here, though, is whether such counteracting factors contest the validity of the law itself. Indeed, this allegation has been made by certain Marxists. According to the theorem of Okishio, formulated in 1961, when a new technique reducing the unit cost of output is introduced in an individual industry, the general rate of profit in the capitalist economy gets eventually higher rather than lower (Okishio, 1961). This contradicts Marx’s view that innovations having an initially positive effect on individual industries lead, when generalised, to a tendential decline of the overall profit rate, as their capability of securing technological monopoly surplus profits vanishes leaving behind an increase in constant capital. Michael Heinrich has rejected the law, which he considers indeterminate, right because a rise in the organic composition can be overridden by a progress in the rate of surplus-value, and is moreover empirically unsubstantiated (Heinrich, 2013).¹⁰ David Harvey has also questioned the validity of the law (Harvey, 2014),¹¹ considering that it is only functional under “draconian assumptions” and that his adherents are accountable for a monocausal, over-deterministic, and teleological explanation of capitalist crises (Harvey, 2015).¹² The position that the prediction of falling profitability, which derives from the law, is proven historically wrong has been also supported (Piketty, 2014, p. 52).

On the other hand, a big amount of counter-arguments and calculations in support of the law’s theoretical and empirical validity have been submitted to this debate (Roberts M., 2015). A dispute over statistics can be virtually endless; however, there is a crucial theoretical objection to the above arguments against the law: there is a certain natural limit to the ability of the surplus-value rate to increase, namely the length of the working day, whereas there is no particular limit to the rise of the organic composition of capital (Carchedi & Roberts, 2013). Therefore, in the long-run, the former cannot compensate for the latter.

Marx had already pinpointed that the law doesn’t manifest itself in the form of an absolute fall of the rate of profit, but rather as a long-term tendency, exactly because of the effect of the counteracting factors. It is a law-tendency, perceived in a dialectical framework, not in a

¹⁰ See also (Heinrich, 2004, pp. 149-154).

¹¹ The same volume includes an answer by Michael Roberts (Roberts M., 2015b).

¹² The article is an answer to Kliman’s critique (Kliman, 2015; Kliman, 2015b).

positivist, mechanical manner. This is, besides, the reason why, once the general existence of the law is accepted, there is still a lot to be discussed about when and how it has revealed itself in what preceded the current crisis. It is theoretically legitimate to leave the validity of the law intact while denying that the rate of profit was falling prior to the crisis. Indeed, this point is made by several Marxist analysts.

There is a broad debate over the trajectory of the rate of profit in the last decades. In general, there are two approaches. According to the first approach, after having suffered a sharp decline in profitability in the 1970s, the capitalist mode of production has managed to restore the general rate of profit¹³ through the project of neoliberal globalisation, which has been, in the final analysis, a project to depreciate labour and suppress interest rates. However, this only led to new contradictions such as a low rate of capital accumulation, a high rate of financialisation, and reduced mass consumption capacity. These contradictions led to the crash of 2008. According to the second approach, despite the neoliberal reaction, the general rate of profit remained low and/or declining throughout the entire period after the crises of the 1970s, and this is the real cause of the current crisis.

It is not at all easy to adopt a position about the development of the rate of profit, because there is no such thing as an official measurement of the rate of profit. Statistics differ according to the source, including possible falsifications for one reason or another: for example, artificially lowered profit rates may serve as an excuse for layoffs or cuts in wages in a firm; on the other hand, artificially increased figures may serve to increase credibility for borrowing and/or to help shares appreciate in the stock market, which is absolutely crucial in a period of propagated financial activities.

Furthermore, the definition of the rate of profit as a measurable quantity is also a matter of conflict. The data provided by companies and by statistical authorities are not directly compatible with the Marxian notions of surplus-value, constant capital, variable capital etc. An interpretation is needed for them to apply in the formula, and this is not a simple or unambiguous task.

Among other issues involved in the calculation of the rate of profit, Andrew Kliman highlights the significance of the way that the value of fixed capital is estimated. Fixed capital (machinery, plants) comprises the largest part of the constant capital and is, thus, decisive in determining the denominator of the function that gives the rate of profit. The question is whether one has to estimate fixed capital assets according to their current cost, which is the money it would take to replace them at the time of the calculation, or to their historical cost, which is their cost when they were actually bought, inflation taken into account. Most economists use current costs, but Kliman argues that this is nonsense (Kliman, 2011, pp. 114-117), since investors are only interested in what their real past investments have yielded, and not in what they would have

13 Although he is not the only one to contend a raise in this period, Husson provides maybe the most optimistic calculations, recording a sharp increase between 1982 and 2007, which had allegedly restored the rate of profit to the levels of the late 1960s (Husson, 2010, p. 2). However, most authors who admit a raise in the profit rate provide much more modest calculations, speaking of an only partial recovery – see for example (Moseley F., 2003, p. 214).

yielded if they were made at some other time. Based on the method of calculation according to historic costs, Kliman records an overall decline in the rate of profit in the American economy throughout the period 1982-2007. A calculation according to current instead of historic costs undervalues profit rates in times of inflation and overvalues it in times of disinflation - and the years prior to the crisis were times of disinflation indeed (Kliman, 2011, p. 113). In Anwar Shaikh's words, "Since there is no particular reason why a thirty-year-old plant should have the same profitability as a new one, the overall rate of profit represents the average of the rates of profit on the various vintages still in operation" (Shaikh, 2016, p. 65).¹⁴ All this is convincing. However, others would support that the question is not significant, as the rate of profit has experienced an overall fall, not just regarding historic costs or exclusively in the American economy, which Kliman provides his elaborated data about (Roberts M., 2011).¹⁵

The apparent level of the rate of profit is not an insignificant issue. However, even if a restoration (mild anyway, as most would argue) since the 1980s was to be accepted, it would not necessarily suffice to contradict the role of the falling rate of profit as the ultimate or underlying cause of the crisis. If the cost for temporarily restoring the rate of profit was a slowdown in capital accumulation, meaning less investment, or a frenzy of financial speculation, it would mean that the previous fall in profitability during the 1970s (which nobody denies) is indeed a serious and persisting sickness. Moreover, it can be claimed that both of the above problems are actually a symptom or a deuteropathy stemming from the primary disease, which is the decline in the rate of profit.

As most Marxists would argue that the rate of accumulation is determined by the rate of profit, and in this sense, a decline in the former is a manifestation of a decline in the latter (Kliman, 2011, p. 4; Shaikh, 2016, p. 6). More specifically, according to Marx (as well as to Keynes, in a different terminology), the driving force for active investment is the "profit-of-enterprise" (return on capital), defined as the difference between the general rate of profit (corresponding to the Keynesian notion of the "marginal efficiency of capital") and the base interest rate (Shaikh, *The first depression of the 21st century*, 2010, p. 46). On the other hand, if capitals can't achieve an acceptable level of profitability in industry and production in general, they are directed towards financial activities. Simultaneously, low margins of profitability were the incentive for the capitalist classes to try to raise the rate of surplus-value by massively attacking wages, who were growing slower than productivity during all this period. However, "in reality none of this, given the high level of existing investment in means of production relative to labour costs, was enough to restore a high level of profitability" (Mattick, 2011, p. 59).

According to Anwar Shaikh (Shaikh, 2010), the crisis of profitability of the 1970s, reflecting the

14 Shaikh admits a partial restoration of the rate of profit since the 1980s, however at a level overwhelmingly lower than the one in the immediate post World War II era.

15 Kliman provides an additional argument in support of his view that the rate of profit has actually declined during the period 1982-2007: even if the before-tax rate of profit displays a marginal increase, this is overridden by the decline in the income-property rate of profit, which is the most relevant to the Marxian notion of surplus-value. Thus, "we can say that the rate of profit trended downward during this period, but that corporations were able to keep a larger share of the relatively shrinking pool of profit for themselves as the share that they turned over to their creditors and tax authorities declined" (Kliman, 2011, p. 78).

tendency of the rate of profit to fall due to the unproportionate increase in the constant capital employed in the production, was addressed by a double strategy, to suppress wages and interest rates. The spectacular reduction in interest rates had a double effect: cheap borrowing provided funds so that private consumption would not collapse, and, more fundamentally, the profit-of-enterprise enjoyed a boost, even of a limited proportion. But there was an intrinsic constraint to this strategy: as soon as the rate of profit-of-enterprise fell below a certain limit, it did not longer suffice to service the accumulated debts. Therefore, interest rates began to rise, squeezing further the profit-of-enterprise and thus investment, leading to the prolonged depression that capitalist economy is still going through.

Therefore, the deeper problem revealed by the global economic crisis is not just a problem of distribution of wealth or of a certain structural order of global economy, a mode of regulation (neoliberalism), or a regime of accumulation (post-Fordism, flexible accumulation, Toyotism), to use the terms of the Regulation School. There is an even more fundamental reason than neoliberalism, globalization, and financialisation. It is a fault in the capitalist mode of production: the tendency of the general profit rate to fall, which at some point prevails over all counteracting factors. This is an expression of the tendency of the organic composition of capital to rise. In the final analysis, “declining profitability results from the decline in labour employed relative to capital investment as a whole” (Mattick, 2011, p. 51).

The crisis in the broader framework of the capitalist economic evolution

In order to understand a phenomenon or process that is underway, it is reasonable to turn to history and past experience, all the more so as crises have proven to be a periodically recurring phenomenon throughout the history of capitalism, no matter what the illusions and ambitions of apologists of the market economy were. It is self-evident that historical analogies may only be relevant, as each historical circumstance only happens once. However, analogies do matter, as certain processes repeat themselves, reflecting inner features of the dominant mode of production.

That being said, it is not easy to decide which crisis and which historical period would be the most appropriate to draw a parallel with. This choice depends on a broader view of temporality in capitalist history, regarding, in particular, the periodicity of booms and crises. The current crisis has to be placed in its historical context.

Recent or relatively recent crises such as the dot-com bubble, the crisis in Argentina at the turn of the century, the East-Asian crisis of 1997, the black Monday of 1987, or the US savings and loan crises from the mid-1980s to the mid-1990s may serve as examples to draw parallels and make comparisons with. However, it is evident that the current crisis is of a much larger scale than all of them. No matter how interesting partial conclusions may be drawn by examining all these smaller crises, only genuinely global crises in the past can offer the ground for a proper comparison. The last such period dates back to the 1970 and the so-called oil crises. Indeed, some would see the predecessor of the present situation at that time,

particularly in the years 1975-76. According to this view, the current collapse may put an end to a certain stage (neoliberalism), the same way as the crisis of the 1970s put an end to the post-war boom. Moreover, a generalised military confrontation like the one that ensued after the crisis of the 1930s doesn't appear on schedule today, which makes the 1970s more relevant a period to place side by side with the present one (Katz C. , 2009, p. 91). However, whereas the 1970s crises put an end to a boom indeed, the crisis of 2007-2008 came at a time of prolonged difficulties in the accumulation of capital and of constant downward pressures on profitability. The latter case certainly recalls the situation back in 1929, when the economy had already been going through a period of stagnation for 14 years, in sharp contrast with the previous boom between the mid-1890s and the eve of World War I.

The financial crisis of 1914, a crisis not very well-known as it is overshadowed by the concurrent outbreak of the World War, has been also proposed as an alternative example to compare the present situation with. Richard Roberts draws an analogy between Austria-Hungary's ultimatum to Serbia and the bankruptcy of Lehman Brothers as triggering events of the respective crises (Roberts R., 2013, p. 231), although such a comparison sounds a little bizarre. Arguments in favour of this position include the general complacency that preceded both crises as well as an allegedly similar reaction by the authorities (King, 2013, p. viii): a policy of immediate state intervention to save banks, without something like a "New Deal". The first objection to this view comes from the same argument raised against a possible parallel with the crisis of 1929, regarding the war, only that the 1914 crisis took place while a world war was already starting, not a decade before it. Additionally, Roberts himself admits that the financial crisis of 2014 didn't transform into a crisis in production, because of the demand that the war stimulated. Finally, the last objection to the analogy with the crises of the 1970s applies also here: the crash of 1914 put an end to a long economic boom instead of being the conclusion of an era or stagnation.

It thus appears much more suitable to compare the current crisis with the crisis of 1929, which went on unfolding throughout the whole next decade, and this is indeed what most economists actually do.

Some years before the crisis, Gérard Duménil and Dominique Lévy described the crisis of 1929 as a crisis of the exit from the structural crisis of the late 19th century (Duménil & Lévy, *Une nouvelle phase du capitalisme? Trois interprétations Marxistes. Introduction à la discussion*, 2002, p. 143). In their view, the 1929 crisis was an atypical one, inscribed in an era of otherwise climbing economic performance. On the contrary, the crisis of the 1970s was a typical structural crisis again, the response to which has been a new turn to financial speculation (emanation speculative) and neoliberalism. The predominance of finance is a common feature of all periods succeeding a structural crisis. According to the schema of Duménil and Lévy, one would expect that a possible crisis at the beginning of the 21st century would resemble the crisis of 1929 in that it would constitute a crisis of exit (and exit strategies) from a previous structural crisis. Indeed, Duménil and Lévy consider the current crisis as a "crisis of neoliberalism" (Duménil & Lévy, 2013), that is a crisis of the systemic response given to the structural crisis of the 1970s. It

may sound a little paradoxical to call the crisis of 1929 atypical since it constitutes the example that everybody refers to when speaking of capitalist crises, however, the schema provides a strong analogy between that crisis and the current one.

The approach of Duménil and Lévy belongs to a family of interpretations of the crisis as a crisis of transition. According to a certain version, for example, it is about a crisis of transition from post-colonial to global imperialism (Screpanti, 2014, p. 126). Another narrative could be extracted by drawing a parallel with the crisis of the 1930s seen as a crisis of transition to the hegemony of the USA (Joshua, 2002, p. 11), if one assumes that the US is nowadays in the process of being replaced by a new centre of global capital accumulation, namely China and East Asia, although certain signs may be suggesting that even this new centre is already exhausting its dynamic (McNally, 2011, pp. 50-57).

However, the above-mentioned approach also belongs to those interpretations seeing a structural or systemic crisis in the current situation. A proponent of the School of Regulation would speak of a “structural” crisis that is putting an end to a certain regime of accumulation, whereas an advocate of the Social Structure of Accumulation theory would prefer the term “systemic”, likewise determining a crisis that signifies the end of a certain institutional form of capitalism. There are differences between the two theories; however, their common point is that they both expect a major restructuring of the system. The present regime or social structure of accumulation is thus about to end and a new one is about to be born,¹⁶ as happened in all the crises of the sort: 1970s, 1929, 1914, 1890-1896, and so on. In this sense, the current crisis assimilates any of the ones just mentioned. However, according to the theory of the same name, social structures of accumulation are divided into liberal and regulated ones, the one succeeding another. Since we are obviously coming from a non-regulated era, that is the era of neoliberal globalisation, a restructuring towards a new regulated form is to be expected (Kotz, 2009, p. 306). The last time that such a shift happened was in the 1930s, when the liberal model adopted after the 1914 crisis was gradually replaced by the regulated Fordist version of capitalism prevailing after World War II. Again, the proper example to compare the 2008 crisis with is the crisis of the 1930s.

According to the previous approaches, in crises like the current one, it is a whole historical form, structure, regime, mode, or version of capitalism that fails. The following question, though, is what determines the alternation of those versions. In the final analysis, it is the ups and downs of the general economic development. In general, liberal arrangements are specific to stagnant or declining periods in capitalist economy, whereas regulated ones appear in phases of growth. However, this observation only applies to relatively long periods and not to the short-living business or industrial cycles. So, are there cycles other than the classic ones in the development of the economy?

Different kinds of cycles and periodicities have been observed in the course of the capitalist economy, indeed. The classic business cycles, named also Juglar cycles after Clement Juglar,

¹⁶ Like Duménil and Lévy, David Kotz, a prominent supporter of the Social Structure Theory, speaks of a crisis of neoliberalism (Kotz, 2015).

who was the first to describe them in the 1850s, regard the overall dynamic of economy stemming from the evolution of the total amount of investments in constant and variable capital. They can be detected in the GDP. The pattern is a matter of common knowledge: expansion – boom – recession – depression. This is the elementary basis of the periodical crises that appear in the capitalist mode of production every 7-10 years. After a crisis has depreciated enough capitals and pulled down wages, profitability raises, stimulating investments, firstly in manpower (variable capital) mainly. As expansion spikes, investments multiply, increasingly directed at machinery (constant capital), wages tend to grow because of the expanding demand for labour, and capitals tend to get saturated again. A slowdown in investments and a consequent depression ensue again.

Joseph Kitchin has distinguished even shorter business cycles of an average duration of 3,5 years (Kitchin, 1923, p. 10). The Kitchin cycles regard the degree of employment of the fixed capital, that is of the existing production capacity, responding to the short-term oscillations in the supply and demand for commodities as reflected in the inventories of firms. According to the author, they are to be attributed to “psychological causes” (Kitchin, 1923, p. 14).

But, since the current crisis can only be compared to situations that occurred decades ago, it is the possible existence of longer cycles that concerns us here. Not all economists agree on that issue. In 1930, Simon Kuznets contended that 14 – 20 years long cyclical fluctuations occur in economic activity. He associated these fluctuations particularly with construction and demographic movements, having detected similar historical fluctuations in internal and external migration in the US (Kuznets, 1958).¹⁷ Among other authors, Moses Abramovitz provided extended empirical data in support of the hypothesis of long swings in the historical evolution of the aggregate construction in the USA (Abramovitz, 1964) - although some years later he would argue that the Kuznets swings had been rendered obsolete (Abramovitz, 1968).

According to some authors, the “Kuznets swings” are reflected in real estate prices (Hanke, 2010). Thus, they may also be considered as real estate cycles. To the extent that they concern house prices (and provided that they actually exist), the Kuznets swings reflect spending behaviours rather than the profitability of capital, which is why, according to Michael Roberts, they don’t coincide the ups and downs of cycles associated with profit (Roberts M., 2013, p. 10). This observation might be important in exploring the conjunction between the crisis and space. David Harvey has attempted to put the Kuznets swings in a broader perspective: “The rhythm is dictated in part by the rhythms of capital accumulation and in part by the physical and economic lifetime of the elements within the built environment” (Harvey, 1985, p. 19).

However, the hypothesis that has provoked most of the debate regarding possible long-range cycles is that of long waves. The notion has a Marxist origin, which can be traced in the works of Parvus, Van Gelderen, Kautsky, and Trotsky, but it has been particularly associated with the name of Nikolai Kondratieff. It was also adopted by non-Marxist economists like Schumpeter

¹⁷ For a comprehensive review of the research and debate over cycles in construction, see (Barras, 2009).

and Dupriez.¹⁸ Long waves are supposed to be long-term oscillations in the economy, including an upward and a downward phase, of a varying overall duration of approximately half a century. None of those phases eradicates the 7-10-year business cycles; however, they modify their dynamic: during upward phases, business cycles tend to present briefer and less sharp crises, whereas expansion and boom periods tend to be more vibrant and to last longer; during downward phases, the picture is the inverse, with deeper and longer cyclic crises and shorter and more anaemic expansionary periods. Several economists have denied the existence of long waves, whereas others have provided extended empirical evidence of them.¹⁹

As already mentioned, in mainstream economics, long waves are usually called Kondratieff Cycles, although the version of Nikolai Kondratieff is neither the only one nor identical to the rest. In fact, at least four different approaches may be distinguished:²⁰ a. Kondratieff's approach, according to which long cycles can be observed in wholesale commodity prices, interest rates, wages, foreign trade, and several other series, including the physical output and consumption of certain products, and are to be attributed to "causes that are inherent in the essence of the capitalist economy" (Kondratieff, 1935, p. 115), and particularly to massive investment in long-lived capital goods; b. Schumpeter's theory, which sees long waves as the result of clusters of innovations (Schumpeter, 1939); c. the works of Dupriez (as well as of other authors), who claims that Kondratieff cycles are closely associated with major wars, especially with their inflation effects and the reactions that they provoke in the monetary and credit policy (Dupriez, 1947, p. 222); and d. the approach of Marxists such as Leon Trotsky and Ernest Mandel, according to which long waves are attributed, in the final analysis, to the tendency of the rate of profit to fall. To this taxonomy, one could add certain attempts to found long waves on cycles in spending due to demographic developments (Dent, 2014) or on changes in the global political leadership (Modelski, 1987).

The theory of Ernest Mandel, as well as the brief writings of Trotsky on this issue, differ from other approaches not only in that they are Marxist, but also because they combine economic causality, that is the effect of the intrinsic laws of the capitalist economy, with non-economic factors. Unlike classic business cycles, "large segments of the capitalist curve of development (fifty years) ... their character and duration are determined not by the internal interplay of capitalist forces but by those external conditions through whose channel capitalist development flows" (Trotsky, 1941 (1923)). Long waves, thus, obey to no strict economic rule neither are they a predictable outcome of exclusively economic processes, although their basis is a Marxist economic law-tendency. This is why Trotsky has insisted that the term "cycle" is not appropriate to describe the curve of capitalist development – an idea shared by Mandel as well.

18 A very comprehensive summary of the introduction and the diffusion of the idea among Marxist and non-Marxist economists, as well as on the debate on it, can be found in the 4th chapter of Ernest Mandel's *Late Capitalism* (Mandel, 1972, pp. 108-146). Another good introduction may be found in Goldstein (Goldstein, 1988).

19 Among the various essays trying to empirically prove the existence of Long Waves, see the ones of Rostow (1980), Solomou (1987), and Korotayev & Tsirel (2010).

20 This classification is derived from Robert Went (2000, pp. 68-71).

Mandel provides an elaborate schema, according to which upward (“expansionary”) long wave phases come to a “natural” end at some point, as the dynamic that has initiated them is exhausted. The turning point is the outcome of the inner mechanisms of the capitalist economy itself. After this turning point, economic performances start declining in general, and the rate of profit suffers strong downward pressures, having entered a “depressive” long wave phase. As time goes by, this downward spiral reaches its nadir, and a major crisis, of the extent that would make other currents to speak of a “structural” or “systemic” crisis, breaks out. This time, though, there is no inherent economic mechanism that can secure economic recovery. Non-economic developments are needed now in order to restore a high rate of profit: big technical breakthroughs, a sudden access to much cheaper raw materials, a massive export of capitals to fields or countries with low organic composition of capital, a massive capital destruction and/or big defeats of the working class so that the rate of exploitation can raise abruptly. The post-war upward phase was feasible, in the last instance, only due to the fascist repression and World War II, which makes perspectives in downward phases look really dark.

Therefore, the two subsections of a long wave, the upward and the downward one, are not symmetrical: the zeniths are turning points that may be explained by the laws of motion of the capitalist mode of production by themselves, whereas the nadirs cannot. But this is not the only point where non-economic factors are involved in the schema. The length of the wave and the specific conditions under which it unfolds are also subject to the relation of forces between social classes, i.e. they depend not only on the economic but also on the political and the ideological level. In the final analysis, long waves are specific historical periods – therefore, they can’t be proven or described merely by means of statistics, and strict economic determinism doesn’t apply:

The long waves are not just empirically demonstrable. They do not simply represent statistical averages for given time spans. There is nothing “formal” or “conventional” (i.e., in the last analysis, arbitrary) about them, as there obviously is in the famous Kuznets long-term trends. They represent historical realities, segments of the overall history of the capitalist mode of production that have definitely distinguishable features. For that very same reason, they are of irregular duration. The Marxist explanation of these long waves, with its peculiar interweaving of internal economic factors, exogenous “environmental” changes, and their mediation through sociopolitical developments (i.e., periodic changes in the overall balance of class forces and intercapitalist relationship of forces, the outcomes of momentous class struggles and of wars) gives this historical reality of the long wave an integrated “total” character (Mandel, 1995, p. 76).

Therefore, unlike other long-wave theory proponents, Mandel did not apply trend-cycle decomposition, since this would assume interdependence between the phenomena examined and the principle of structural causal stability, which cannot apply in the actual historical capitalist

development (Louçã, 1999).

What is interesting in this approach is that it provides a general historical pattern to situate the current crisis in, a pattern that is quite well-defined and quite flexible at the same time. Every long expansionary phase is destined to come to an end at some point and give way to a depressive phase – this is what permitted Ernest Mandel to foretell the end of the post-war boom quite a few years before the crises of the 1970s. And every long depressive phase is doomed to end up in a major catastrophic crisis, sooner or later. None of these phases is neither of a fixed duration nor homogeneous, not excluding temporary slow-downs or reversals of the predominant trends - and yet the pattern exists anyway. There is a whole historical trajectory that renders the present crisis so deep and serious and, moreover, makes it comparable to particular examples in the past, and not with just any crisis that has ever happened.

We saw that, according to the approach dealt with just before, no absolute statistical documentation of long waves can be given. However, economists do use some facts and figures in support of their arguments. The fluctuation of the average profit rate is the field where the existence of long waves is most commonly thought to be reflected. But it is not the only one. Other authors would seek them elsewhere: in commodity prices and interest rates, in the GDP etc. Anwar Shaikh traces them both in prices and in accumulation, but, as already mentioned, he considers the latter as stemming mainly from profitability.²¹ However, Shaikh's approach is different from Mandel's in that he deems long waves in general as a reflection of a secular fall in the rate of profit – according to his calculations, the post-war boom was not a period of climbing profit rate, but only of an augmented mass of profit. Mandel had criticised this position, arguing that upward long wave phases represent the temporary dominance of the Marxian counteracting factors over the law of the tendency of the rate of profit to fall (Mandel, 1995, pp. 117-119). In any case, we should accept that the development of the rate of profit is indeed the decisive aspect of long waves, even if statistical findings in this field don't always confirm it in an apparent way, as we shall see.

Michael Roberts agrees that long waves are associated with periods of climbing and of declining profitability, only with a significant difference: each Kondratieff Cycle, which is, in his analysis, a cycle of prices, does not include one upward and one downward phase in respect of the rate of profit, but two of each (Roberts M., 2013, p. 8). Thus, a profit cycle takes half the time of a Kondratieff cycle. This schema becomes even more sophisticated, as Roberts, based on the studies of other economists, introduces two additional sorts of cycles: stock market cycles and credit cycles. Both of them seem to have the same duration as the profit cycle, more or less, however, they don't coincide it. The first one seems to lag a couple of years behind the profit cycle: profits start climbing or declining first, and stock market prices follow after a while. The credit cycle follows a completely different trajectory, though, which rather tends to be upward while profitability declines and vice-versa. Combining all cycles, from the Kitchin to the Kondratieff ones, Roberts constructs a complex model of different periodicities. All those

21 “Long waves are not merely price waves. We shall see that they are also waves in growth (i.e., in accumulation). And the latter, I will argue, is primarily driven by the rate of profit” (Shaikh, 2016, p. 65).

cycles have their own turning points and times of crisis, the effect of which multiplies when two or more of them happen to coincide. It is not unjustified to suppose that major crises like the present one reflect such a coincidence.

From the 1970s to date

With the assistance of the long wave theory, a solid analogy can be substantiated between the crisis underway and the Great Depression of the 1930s. The latter marked the nadir of the depressive long wave phase inaugurated in the 1910s. Likewise, today we are experiencing the final outcome of quite prolonged economic trouble. However, a different kind of link may also exist between the present global capitalist crisis and the “stagflation” crises of the 1970s (first oil crisis in 1973, recession of 1974-1975, second oil crisis in 1979): if the crisis of 2008 is the ending of a downward long wave phase, its roots can be traced already in the turning point that terminated the last expansionary wave. The remaining question is: are the 1970s and the present period the two ends of the same line indeed?

Since, in the approach adopted here, the rate of profit is the decisive factor associated with long waves, the question is interwoven with the way this rate is calculated. This issue was raised above, where it was pointed out that no unanimity exists on that. Based on the apparent, at least to some, recovery in the average rate of profit after neoliberalism was established, certain economists distinguish a new long wave since the 1980s. David McNally, for example, sees a new expansive wave starting in 1982, which is now exhausted, giving way to an expectedly prolonged slump (McNally, 2011, p. 26). The subsequent schema is, thus, more or less the following: the post-war expansionary wave (“sustained expansion” in McNally’s terminology) expired in the late 1960s or early 1970; it was followed by a “short” depressive long wave (“world slump”) phase of a decade or so; then, a recovery took place due to the “neoliberal expansion”; and eventually a new slump started in 2007. If this schema is applied to the long wave theory, it means that the present crisis is a turning point from an upward to a downward phase and not a historical nadir.²²

Screpanti also distinguishes between two distinctive periods after the crises of the 1970s: a deflation-stagflation period (1970-1990), which, in his view, started as an investment strike against the rise of anticapitalist struggles at the time, and the globalisation era after 1990. All the same, he detects a decreasing trend in both (Screpanti, 2014, p. 150). Michael Roberts provides a different theoretical solution, based on his schema of each Kondratieff Cycle including two profit cycles. He also admits a recovery of profitability from 1982 on, as the organic composition of capital fell, and investment growth slowed down; however, this is nothing but the inauguration of the second profit cycle in the post-war Kondratieff Cycle. Unlike the assumptions of the previous economists, though, this recovery was exhausted as soon as 1997, being afterwards

22 Claudio Katz also implies a new expansionary wave since 1982. It is, thus rather, expected to consider the current crisis as an equivalent of the crises of the 1970s (Katz C. , 2009, p. 91). In the same volume, Joel Geier states: “The current crisis is a product of the contradictions of the twenty-five-year long neoliberal boom, which started in 1982”. Yet, as he doesn’t adopt a long wave problematic, Geier sees the proper example to compare the current situation with in the crisis of the 1930s (Geier, 2009, p. 104).

succeeded by a new slump in profitability. The profit cycle entered its downward phase again, which Roberts expected to reach its bottom around 2014; this would be, at the same time, the end of the post-war Kondratieff Cycle (Roberts M., 2013, p. 11). The difference of this version with other long wave approaches is that it puts the turning point of the Kondratieff Cycle in 1982 instead of the crises of the 1970s.

The latter approach has the advantage to incorporate the reported temporary recovery of the rate of profit into a coherent schema comprising the whole post-war era. However, it also has the same deficiency as all the previous: very few economists would deny that the recovery of the profit rate in the 1980s, if any, was only partial, anaemic, non-sustainable, and came at a high cost in terms of accumulation and growth. It thus barely suffices to support the idea of a new expansionary wave unless an atypical “low” long wave is assumed, following an also atypical “short” downward long wave phase between the 1970s and the early 1980s.

The question, then, would be what has been the turning point to render the “low” long wave feasible. An obvious idea would be the collapse of the Soviet Union and the consequent expansion of the capitalist mode of production; however, most analysts who assume a new expansionary long wave after the crises of the 1970s place its starting point in the early 1980s, which is nearly a decade earlier. We are left, therefore, with the option of neoliberalism; however, according to what has been previously maintained, a policy or mode of regulation would not be enough to initiate an expansionary wave, the same way that the post-war boom cannot be attributed to Keynesianism, as much as it has been interwoven with it. An additional theoretical complication is that it is difficult to determine a new techno-economical paradigm on which the new expansionary wave could have been founded, since automation, informatics, and nuclear power had already been the basis for the post-war expansion; it is a question whether information technology could have constituted a similar technological revolution in the 1980s, no matter how much it has been praised.

Besides, the assumption of an intermediate expansionary long wave would not correct the timing. It has been already mentioned that it would imply an exceptionally short depressive phase in the 1970s; moreover, if the crisis of 2008 is deemed the end of the alleged long wave inaugurated in the early 1980s, this means that the overall duration of this wave would have only been 25 years, which is half the standard duration of long waves. Therefore, it wouldn't only be a “low”, but also a “short” long wave. The only remaining solution is to accept that the current capitalist crisis has marked the end of the expansionary and not of the depressive phase of the long wave of the 1980s, and thus of the long wave itself – which is what McNally contends. However, a turning point from an expansionary to a depressive phase would hardly justify the extreme intensity and duration of the present crisis.

It thus seems more theoretically cohesive and consistent with the empirical facts to assume an atypical, extended downward phase of the post-war long wave culminating in the present crisis: the depressive long wave phase that started in the 1970s has been of an extraordinary duration, due to particular historical circumstances. Such an exceptionally prolonged duration may sound inconvenient; however, it is adaptable to the view of long waves as not exclusively

determined by strict economic laws. Besides, a temporary increase in the rate of profit, such as the one that several authors claim to have happened in the 1980s, is not necessarily discrepant in the context of a downward wave.²³

The 1970s marked the shift to an era of declining economic performances. Capitalist classes have reacted to this trend by activating a series of countervailing factors to the “law of the tendency of the rate of profit to fall”, subconsciously or consciously: an increase in the level of exploitation by means of labour depreciation (suppression of wages) or/and intensification, the expansion of capitalist markets to the former Soviet Union and the Eastern Block (whatever theoretical formula may be employed to describe them) that enabled a rise in the mass of profit, the industrialisation of certain geographical areas where a low organic composition of capital prevailed (China, Eastern Asia in general), an attempt to speed up the circuit of money-capital (to accelerate the capital turnover time) by means of credit and new techniques in the sphere of circulation. However, the achievements of all these strategies were not spectacular and proved to have an expiry date. A crisis even deeper than the ones in the 1970s could not be postponed forever, because the core problem was never healed. From this perspective, it might be indifferent whether this prolonged period of finally failed strategies to avoid a catastrophic crisis is described as an extended depressive long wave or as an atypical anaemic expansionary wave followed by a new depressive one. Even if the crisis of 2008 is considered to be the starting instead of the ending point of such an intermediate “low” long wave, this would only mean that an even more catastrophic crisis is to be expected in a few years.

The reason of the long-term tendency of the rate of profit to fall is the gradual increase in the organic composition of capital or, in other words, an inadequate increase in employment relative to fixed capital investments. This means that, in the final analysis, extended capital destruction is indispensable in order for the capitalist mode of production to enter a new long wave phase of growth. The crises of the 1970s destroyed only an insufficient amount of capitals.²⁴ During the following decades, periodic global crises, which were hardly visible in the first post-war years, did come back; however, the destruction of capitals was again limited and controlled:

What occurred through these decades was a process of recurrent “restructuring through crisis” on an international scale. However, it was only a limited return of the old mechanism for clearing out unprofitable capitals to the benefit of the survivors (Harman, 2007).

In this sense, the current crisis is the conclusion of a long period during which this necessary destruction was postponed:

23 It has been argued that on the eve of the 1929 crisis, the rate of profit was not declining either (Duménil & Lévy, 2013, pp. 267-270).

24 Ernest Mandel had diagnosed that very early (Mandel, 1982, p. 97).

...since so much less capital value was destroyed during the 1970s and early 1980s than was destroyed in the 1930s and early 1940s, the decline in the rate of profit was not reversed. And because it was not reversed, profitability remained at too low a level to sustain a new boom (Kliman, 2011, p. 3).

What does this mean? Firstly, that extended capital destruction is eventually inevitable. Secondly, that the crisis is partially an extreme escalation of tendencies that already existed before, at least in latent forms.

What perspectives?

If the roots of the crisis are so deep, it is easy to understand why it is so difficult for the capitalist mode of production to overcome it. Policymakers, investors, mainstream economists, states, and international institutions of all kinds have a very hard time putting together a coherent strategy to drive the system out of its crisis because all the dilemmas they face seem to be lose-lose situations.

The free market has obviously failed to secure stability through its supposed inherent self-regulating ability. However, regulation had already failed before. If the crisis of 2008 can be considered a crisis of deregulation, the crises of the 1970s marked the impasse of the post-war mode of regulation. If what triggered the present crisis was the lack of virtually any kind of regulation in housing loans and the financial products based on them, the “savings and loans” crisis of the 1980s in the US where the provoked by rigid regulation, which proved incapable of resisting the high rates of inflation (Kliman, 2011, p. 191).²⁵ Besides, a process of re-regulating financial transactions, at least partially, did take place as a reaction to the 2008 crash – and yet economic turbulence and recession persist. The appeals for control over financial activities by economists like Krugman, Soros, Rubini, or Stiglitz are too easy to be the solution, and too good to be true. Deregulation played a role in the outbreak of the crisis indeed, and re-regulation may be eventually imposed in the context of a possible recovery, but regulation in itself is not what can bring recovery.

Similarly, the suppression of demand through the restriction of wages undeniably creates big difficulties for the surplus-value to realise. Even if it constitutes no absolute obstacle to the extended reproduction of capital, as we saw, shrinking mass consumption indeed poses a limitation to capitalist production. On the other hand, given the pressures on the rate of profit that were described above, raising wages is not an option for the capitalist classes, since it is not a secret that their only incentive is profits. To reinforce social demand for capitalist goods means to further restrict profits and vice-versa. It is a vicious circle.

Therefore, neither to try to fix financialisation, nor a revival of Keynesianism is the way out of this vicious circle.²⁶ Of course, there is no absolute historical limit to the reproduction of the

²⁵ For a testimony that can't be accused of Marxist bias, see Ferguson (Ferguson, 2011, pp. 251-255).

²⁶ On top of the fall of profit, interest rates are already at their floor, thus depriving states from a key economic incentive they normally possess: to lower interest rates (Shaikh, 2016, p. 17).

capitalist mode of production. Unless a breakdown theory of capitalism is adopted, which is not the case here, it is reasonable to assume that, expect in the case of a radical challenge to the very system by the exploited strata of society, economy and production will restabilise at some point. The real question, though, is by which means, and at what cost. And since a process of massive destruction is structurally needed, then massive destruction it will take, with heavy consequences for the working classes and the most deprived layers. Think tanks such as the Levy Economics Institute may envision a “new democratic capitalism” as much as they want (Bresser-Pereira, 2010, pp. 32-36), but it is well-known that capitalism offers democracy only as long as it can afford it.

This inevitable process of destruction may take one or another form, and less or more time. Based on his very elaborate model of cycles in the capitalist economy, Michael Roberts has predicted the beginning of a new expansionary period at some point between 2014 and 2014 (Roberts M., 2013, p. 12). He risked such a deterministic estimation because he deemed the idea that non-economic developments are necessary for a new upward long wave phase to begin absurd. In fact, this is the most significant deficiency in his otherwise very interesting approach. There is no way to predict how long the current slump will last and what exactly will come after that. But there are real tendencies that can be tracked down in the spheres of economy, politics ideology – as well as in space and urbanisation.

Conclusions

While its triggering event has been the housing bubble and its proximate cause can be fairly considered to be excessive and risky financial activities, the global capitalist crisis should be attributed to a deeper, underlying cause. Conventional analyses identifying this deeper cause with speculative greed, parasitism, inherent financial instability, the lack of effective control and/or mounting inequalities are insufficient to explain its nature and role. Likewise, despite their ostensible advantages, underconsumption theories are not capable of explaining the crisis either, being both theoretically inadequate and inconsistent with the empirical facts. In the classic debate, the theory of overproduction or overaccumulation is more convincing.

According to the approach adopted in this study, the ultimate or underlying cause of the crisis is a long-term tendency of the rate of profit to fall. This tendency, highlighted by Karl Marx as a law, is rooted deep inside the function of the capitalist mode of production. The global economic crisis is thus a crisis of the capitalist mode of production itself, and not just a crisis of neoliberalism or globalization – ever if it does bear the marks of both too.

From our perception of the current crisis, it derives that the most appropriate past global crisis to draw a parallel with is the crisis of 1929 (the “Great Depression”), although partial analogies can be also made with other global crises (in the 1970s, in 1914 etc.). The current global capitalist crisis is better understood if put in a framework of long waves in the capitalist economy. Such long waves can be observed in history in the development of the average rate of profit and, probably, in other series too, but their essence is not subject to strict statistical documentation. They rather represent distinctive overall “historical realities” of an accelerating

or decelerating long-term dynamic in the capitalist economy. Short term fluctuations in the economic performance (business cycles, other types of periodic oscillations, as well as singular economic and non-economic events) are inscribed in this general long-wave dynamic.

The crisis of 2008 has thus been the culmination of the depressive phase of the post-war long wave. This depressive phase was inaugurated in the 1970s. Its duration has been exceptionally long due to certain strategies employed by the states and capitalists to avoid a catastrophic crisis. Those strategies, though, have only managed to enable short-lived periods of recovery in the rate of profit and to postpone the forthcoming catastrophic crisis, but not to finally avert it.

Under such circumstances, neither a further intensification of the rate of exploitation of labour, nor a boost in demand by means of a redistribution of incomes and wealth can resolve the current problems of the capitalist economy. Seen in its historical perspective, the objective function of the crisis, and the prerequisite for a sustainable recovery, is the massive destruction of capitals and productive forces. This process of destruction is also reflected in space and, particularly, in urbanisation.

CHAPTER 3

Crisis and space

“...in the midst of the accidental and ever-fluctuating exchange relations between the products, the labour-time socially necessary to produce them asserts itself as a regulative law of nature. In the same way, the law of gravity asserts itself when a person’s house collapses on top of him. The determination of the magnitude of value by labour-time is therefore a secret hidden under the apparent movements in the relative values of commodities” (Marx, 1976 (1867), p. 168).

In this quite famous quote, Karl Marx likens the way that value reveals itself as a quantity defined by the socially necessary time to produce a certain product to the way that gravity manifests itself when a house collapses on top of the head of its owner. The socially necessary labour time is the centripetal force that determines the value and attracts the oscillating price of a certain commodity, just as gravity determines weight and attracts all objects to Earth, even if this is not observable before an object actually falls. Unlike prices, value is not determined by the ever-changing relationship between supply and demand. It is a social attribute of every commodity, which, in the capitalist mode of production, appears as natural as a physical property.

It has been already mentioned that the crisis is a call of the economy to order by the law of value. It is a violent way to remind prices that they are bound to values, and fictitious capital that it is bound to “real” capital, that is capital involved in the extraction of surplus-value; similarly, the collapse of a house reminds the roof that it is bound to the ground, and not to heaven. Given that the global capitalist crisis of 2008 started as a crisis of mortgage-backed assets, that is of loans for housing, and thus of housing itself, it is a happy coincidence that Marx uses this metaphor. Houses did not literally collapse on the heads of their owners; however, they did collapse on their wallets – and on the bank accounts of investors. In the relevant chapter, we have examined how this happened. Now we will seek links between space and capitalist crises in general.

Because these links are definitely not a novelty of the present crises, as already mentioned in passing in the previous chapter; on the contrary, they are evident in more or less all major crises in the history of capitalism, on various levels and under various forms. Paul Mattick

observes that, already in 1837, the American depression began with a collapse in inflated real estate values (Mattick, 2011, p. 50). Though not with housing in particular, the global panic of 1873, signaled by the collapse of the stock market of Vienna, was also associated with space, as it was closely linked with land speculation and overproduction of infrastructure (railways, docks etc.), especially in the USA and in Germany and Austria-Hungary of the period that has been named “Gründerzeit”. The bankruptcy of railroad companies was also an instrumental part of both the 1857 and the 1893 international crises. Despite being usually left out of the scope of most studies, a feature of the 1930s Great Depression has been that it revealed how much the US development model was based on urban investment (Ferguson, 2011, p. 242), the previous housing boom, especially in Florida, having played a key role in creating the conditions for the crisis (Fujita, 2013, p. 6). And we have already seen that the roots of the particular conditions in housing and urbanisation that led to the 2008 meltdown trace back to the crises of the 1970s.

A conjunction of circuits

Henri Lefebvre considered land and housing as constituting a secondary circuit of capital (Lefebvre, 2003, p. 159). David Harvey defined the secondary circuit of capital as “the totality of processes whereby capital circulates through fixed capital and consumption fund formation and use”, wherein “we must accord a certain priority of place to fixed capital” (Harvey, 2006, pp. 235-238). This means that, when capital cannot ensure a profitable investment in production, namely in industry (more accurately, in manufacturing), which is its leading sector, it turns to investments in land, landed property, and housing. We have admitted a period of constant downward pressure upon the average rate of profit, primarily in industry, since the early 1970s. During this long wave of recession, it was getting ever more difficult for investors to find their way out in the traditional productive activities, so they were seeking for new fields or paths to utilise their funds in a profitable manner. It has been already mentioned that, as a result, financial activities have swollen disproportionately all around the globe – but they were not the only alternative circuit.

In this context, land and housing represent, in fact, a conjunction of four, rather than just one, alternative (to manufacturing) “circuits of capital”, according to four different economic functions and sources of income:

- Rent on landed property, which is fundamentally the fruit of a monopoly of the owner over a particular piece of land or structure on the land, and thus it has a pre-capitalist origin.
- Speculation on land and house prices, as well as on other related assets, which is sometimes, but not always, combined with income from rents (just like speculation in the stock market is not necessarily combined with income from shares). Speculation is a totally capitalist invention.
- Residential loans, which is an essential banking activity.

- Housing construction, which is a circuit inside the industrial sector itself, where surplus-value is extracted and not just redistributed from other sectors.

The distinction between all those activities or functions is of course not strict, neither in terms of their operation in practice nor in terms of the investors engaged in them. However, it is theoretically solid and analytically helpful.

We have dealt with the second and third circuit in the chapter regarding the outbreak of the global capitalist crisis, where the functions and consequences of financial products based on house mortgages were described. House rents tend to move in the same direction as land prices and interest rates. There is no evidence that activities associated with rents have been a factor of a weight similar to the one of loans or of speculation on land prices in the context of the crisis, despite the fact that financial innovations, combined with certain processes of concentration, and maybe monopolisation, of home-ownership, may render it feasible for rents to also play the role previously played by mortgages in backing adventurist activities.

What deserves some specific attention at this point is the fourth circuit. Construction belongs to the secondary sector of the economy, which is the industrial sector, which sometimes tends to be forgotten by analysts and authors. However, construction has a particular feature in comparison with the rest of the industrial sector, which is due to its low level of automation: its relatively low organic composition of capital compared to other branches of industry, i.e. a high proportion of variable capital (wages) compared to the constant capital (means of production). That is to say, an investor needs to spend less money per worker for machines, tools, and raw materials in construction than in other branches. This enables a bigger rate of profit even if the surplus value per worker in a relatively backward branch is lower than average.

If the advantage of cheaper constant capital outweighs the disadvantage of the lower rate of surplus value in construction, capitals flee from manufacturing or energy production towards construction. This process was highlighted by Henri Lefebvre. In this context, an analogy between the role of construction within the framework of a developed country and the role of colonial (or post or neo-colonial) countries is legitimate, even if it sounds absurd at first. The reason why capitals tend to leave the developed countries in favour of the Third World is indeed, apart from lower wages, exactly the lower organic composition of capital which prevails there. Moreover, as a series of theorists (Emmanuel A. , 1972; Frank, 1969; Amin, 1976) have claimed, colonies and post-colonies are a conjunction of capitalist and pre-capitalist elements, which is also true about construction. There is plenty of evidence that, in face of the long-term problems revealed in the crises of the 1970s, not only have capitals fled developed countries to settle in countries with a lower average organic composition of capital, mainly in Asia, but they have also fled manufacturing (as evidenced by the decelerated rates of accumulation) to settle in real estate and construction. The capitalist mode of production has further colonised, in this particular sense of the word, land.

A shift to land?

This practice was particularly obvious in the years prior to the crisis. Not only large speculation on prices, loans, and mortgage-backed assets, but also an actual overproduction of housing had taken place and manifested itself on the eve of the crisis of 2008. The increase in prices (a real price rally) was not based on some type of shortage; on the contrary, it was interwoven with an ever-growing supply of housing. The alternative circuit did work for some time: construction enjoyed remarkably high rates of profit at the same time when the respective rates in manufacturing were low and declining. This did not only happen in the period between the dot-com crisis (2000-2001) and the global capitalist crisis of 2008 but also throughout the whole 1990s, at least in the USA and a group of top developed countries (Brenner R., 2009, p. 32).

As is also true about the roots of the historic capitalist crisis of 2008 in general, the role that housing has played in its context also dates back to the crises of the 1970s. The housing bubbles of the 1980s were not merely a spontaneous reaction of the investors to those crises, but very often also the outcome of conscious state economic policies.¹ The period was marked by a strategic turn to private home-ownership, as the economic and political project for “home-ownership democracy”, already in progress in the USA since the 1930s, was generalised (Ferguson, 2011, p. 241). This was about something much broader than just securing easy lending for building or buying a private residence. It extended as far as granting property rights (individual titling) to informal and/or illegal housing, squats, and slums. What could, at first sight, appear as a radical progressive populist policy was actually an official, mainstream policy orchestrated by the World Bank and the 1976 UN-Habitat conference in order to find a way out of the urban crises, which accompanied the 1970s capitalist crises. It is not a paradox, therefore, that the project was embraced, and in fact devised, by mainstream liberal economists, as it incorporated large new sectors into the market economy and signaled a departure from public housing. Mike Davis has described the practice of individual titling as a peculiar convergence of McNamara’s World Bank Presidency, the “amalgam of anarchism and neo-liberalism” promoted by the architect John Turner, and Henrando Se Soto’s obsession with private property (Davis, 2006, pp. 70-72).

Contrary to a wide-spread idea, therefore, neo-liberalism is not about taking houses away from people, at least not primarily or to start with. It is not interwoven with the idea of rented housing, although there is some ground for assuming the latter. Because, if a shift to land, landed property, and construction took indeed place as a reaction to the falling rate of profit, revealed in the 1970s crises, it also involved a process of property centralisation, that is monopolisation, which is contradictory with the process of spreading small-scale individual property. Contradictory, but, nevertheless, existing. In the very same book as above (*Planet of Slums*), Mike Davis detects a tendency to create urban latifundia rooted in the 1970s crises

¹ Raphie De Santos distinguishes three stimuli for the UK housing bubble in the 1980s: the entry into the European Exchange Rate Mechanism; the policy of the Central Bank to cut interest rates; and the government policy of selling out council houses. All three were scheduled ways to create alternative avenues for investments as a reaction to the massive overproduction of goods in the 1970s (De Santos, 2009, p. 64).

(Davis, 2006, p. 82). The pursuit of monopoly super-profits, that is profits above the average, is exacerbated as average profit rates are squeezed. Land is limited by its own nature, thus making any kind of property over any piece of land a monopoly. To concentrate land is in fact to further monopolise a monopoly, which can be particularly profitable. Therefore, land has long been the object of capitalist aspirations, or of those processes that have been named “accumulation by dispossession” or “continuous primitive accumulation”.² This terminology usually refers to the expropriation of public lands or “commons”, usually in legal though scandalous ways; however, it could also apply to cases where small-scale property is concentrated in the hands of large-scale capitalist firms. There is little doubt that processes favouring rented housing develop amid the crisis, through various routes, such as foreclosures of mortgaged houses, takeovers of houses along with the debt of their owners, sale and leaseback operations etc.³ It is not the place here to get into details in this field, nor to risk any prediction about whether this tendency can override the longtime liberal emblem of a private residence. Anyway, the picture is almost definitely not only contradictory but also different among different countries. However, it is important to reflect on the different paths that a possible turn to land, as a reaction to a capitalist crisis, might follow.

Because, as a matter of fact, it has been maintained that a shift to land has taken place again after the collapse of Lehman Brothers (Hadjimichalis, 2014, p. 40), which is astonishing if one considers that real estate activities were at the same time a major triggering factor of the crisis itself. In their post-traumatic shock after the meltdown, and in face of the agriculture and food crises of the years 2007-2008, capitals have turned to lands in South-Eastern Asia, Africa, and Latin America, to large-scale developments in tourist infrastructure in various countries etc. But, in quite a lot of cases of developed countries, they were soon engaged in new housing bubbles. There is quite a lot of evidence that, by the time these lines were written, prices were overvalued in the United Kingdom, Australia, New Zealand, Canada, Sweden, or Austria. However, according to the OECD calculations, such a tendency was not at all universal: in countries such as Italy, Spain, Greece, Portugal, and Russia prices were still collapsing, whereas it was assessed that, in the USA, the recent rise in prices reflected real values correctly – even if the very notion of “real value” is indeterminate.⁴ In any case, the proportion of countries manifesting rising real house prices, despite being higher than the one in 2008, was still much lower than before the outbreak of the crisis, and so was the average level of prices in the

2 For a brief juxtaposition of David Harvey’s notion of accumulation by dispossession and of Massimo deAngeli’s version of the scheme of continuous primitive accumulation see Hadjimichalis (2014, pp. 27-28). The author sides with Harvey’s approach.

3 An issue that is currently discussed a lot is the newly introduced legislation that allows banks in Greece to sale their residential loans (including those concerning main residence) to financial institutions of a special purpose, often referred to as “distress funds.” These enterprises buy non-performing loans from banks for a small percentage of their nominal value (so that banks can confine their losses) and then try to collect as many of the debtors’ obligations as possible or, else, confiscate mortgaged assets. If this works in practice, it is feared that large sectors of immovable property will be concentrated in the hands of such institutions.

4 According to Marx, land has no value, since it is not the product of human labour. Its price is only a claim deriving from the monopoly of the owner over a piece of the surface of the Earth. Houses are products, and thus have a value, but their price is determined not just as if they were portable objects or built in the air, since it is also determined by land rent

OECD, European Area, and European Area 14 aggregates.⁵ Under these circumstances, and according to this specific criterion, no general turn to land after the outbreak of the crisis is documented, or at least no turn of the extent that would make up for the losses due to the crisis. Henri Lefebvre had written that “capitalism has found itself able to attenuate (if not resolve) its internal contradictions” only “by occupying space, by producing a space” (Lefebvre, 1976, p. 21). At this point, though, and given the objective function of the global capitalist crisis, which has been analysed in the relevant chapter, space in itself does not suffice to bring capitalist economy out of its crisis. Because the alternative “circuits of capital” associated with space are in crisis as well; and so is urbanisation, at least in some countries and on some levels, as we shall see next.

As a branch of industry, construction is subject to the fluctuations of the capitalist economy, following its business cycles but also its long waves of expansion and contraction. We saw that building and/or real estate (or Kuznets) cycles may be detected as well. According to Gottlieb, in the USA, nationwide building cycles of 20 years approximately appear as a coalescence of local cycles of residential and non-residential building construction that tend to move in a coincident fashion because they are bound together by common economic inter-linkages (Gottlieb, 1976, pp. 218-219). These cycles don't necessarily coincide profit cycles or business cycles, being of an intermediate length between the two. For example, according to the OECD data, real estate prices both in the USA and the aggregate of OECD countries were at their lows during the 1991 business cycle bottom, but they were raising at the time of the 2001 business cycle bottom, to reach a historic high in 2007; and they started collapsing as soon as the 2008 crisis broke out, to reach a trough in 2012, about 3 years after the largest GDP negative annual changes (until now) were recorded.

Crisis and urbanisation

Construction and, more particularly, the production of housing are both an indicator and a causal factor of urbanisation. This is why Richard Barras has spoken of waves in urbanisation: “Given the pronounced cyclical nature of the investment process [...] it is apparent that urban accumulation does not follow a steady-state growth trajectory. Rather, it proceeds through successive waves of development” (Barras, 2009, p. 120). Again, Barras associates those cycles in urbanisation with housing cycles of three different scales, the largest one coinciding more or less the 14-20-year Kuznets swings (Barras, 2009, p. 77).

However, construction and housing are definitely not the only indicator or factor of urbanisation, although they have attracted most of the interest, partly because are much easier to monitor than other aspects of urbanisation. The question here is, therefore: does urbanisation, in general, follow trajectory analogous to long-term progress of capitalist economy? More particularly, does it follow long wave patterns?

Our study will be focused on the long waves instead of the Kuznetz swings, for various reasons: firstly, because there is much more literature and discussion about long waves in

⁵ The OECD data and estimates can be found at: <http://www.oecd.org/eco/outlook/focusonhouseprices.htm>

economy; secondly, because very few attempts have been made to associate the long waves with urbanisation while the Kuznets swings provide an obvious link with urban development; thirdly, because I am not entirely convinced about the existence of Kuznets swings and, above all, about their international outreach; and fourthly, because even if both kinds of cycles do exist, the long waves reflect more precisely the general dynamic of the capitalist mode of production and are more instrumental in its history, including its non-economic aspects. Of course, this will not have a dramatic effect on most of the conclusions about the repercussions of the current crisis on urbanisation since, if a long wave comprises two Kuznets swings, we are currently going through a trough in both cycles.

If a hypothesis of long waves in urbanisation was to be verified, not only could we find analogies with previous times of crisis, but we could also attempt projections to the future. If urbanisation follows similar tendencies or shares common features with the capitalist economy, it is rational to expect to witness negative urbanisation tendencies aggravate in the context of the global capitalist crisis. This doesn't necessarily mean an inversion of population flows from the countryside towards urban centres or something as spectacular as that, as much as this shouldn't be excluded either. It may well mean reduced rates of (still positive) net urbanisation. Besides, even in the field of economy, the crisis doesn't imply continuous recession, i.e. negative rates of growth. In fact, negative rates didn't last for more than 1 or 2 years, depending on the country, but the anaemic positive rates following in the years after 2009 bore all the same witness to the continuation of economic trouble.

Theoretically, there is definitely some ground for this analogy, and not only because an important proportion of investments are already employed in activities associated with urbanisation.⁶ Urbanisation, in the modern sense of the word, is an inextricable process in the framework of the capitalist mode of production, corresponding to the accumulation of capital on the level of economy. It is a sort of spatial accumulation or accumulation in space, a spatial analogue of the accumulation of capital.

Of course, this does not mean that urbanisation can be reduced to accumulation alone, not even from the viewpoint of the capitalist mode of production: it is a complex phenomenon involving all aspects of production, circulation, and reproduction. Moreover, there is no one-to-one correspondence between capital accumulation and spatial accumulation, as there is no such correspondence "between the social and spatial concentration and centralisation of capital" (Smith, 2008, p. 160). For example, some of the largest cities worldwide are in countries with a weak, or relatively weak, accumulation of capital; and in certain periods and countries, times of economic depression may be accompanied with a massive influx of residents into large cities.⁷ However, there is a structural similarity between the two processes, stemming

6 It has been contended, for example, that nearly half the GDP of China in 2013 was taken up by urbanisation (Harvey, 2014b).

7 In a previous work, I have distinguished between two different contemporary processes of urbanisation, one driven by economic activities and the other one driven by despair (Skoufoglou, 2013, pp. 114-116). Certain conclusions of the present research may thus not apply to the so-called Third World countries, and maybe neither will they to certain "developing economies". We shall come back to this issue in a following chapter.

from their common socio-economic source, which is the driving force of the capitalist mode of production: the accumulation of capital is also “accumulation of the proletariat in certain places of production” (Smith, 2008, p. 166); understandably, this also means accumulation of population in certain places of living.

It is not, therefore, unreasonable to expect fluctuations, accelerations, and decelerations of urbanisation similar to the ones observed in the accumulation of capital, reflecting a “conversion of temporal into spatial restraints to accumulation” (Harvey, 2006, p. 416). Cycles resemble the past and future ones, but they are never identical with each other, as historical conditions are never the same, the material background evolves, and the historic weight of past accumulation gets bigger and bigger: “reproduction is a process which includes simultaneously linearities (chains of cause and effects) and cycles (results which recreate their own conditions)” (Lefebvre, 1976, p. 9).

Fluctuations in the rate of accumulation and in the rate of profit, which is, according to the view adopted here, its determinant factor, don't negate the secular trend towards ever higher absolute levels of accumulation of capitals; similarly, cycles of accelerating and decelerating rates of urbanisation don't negate the long-term historical advancement to ever higher levels of urbanisation, although there may be a certain historical limit to this secular trend as well. If the secular trend in the capitalist mode of production towards ever higher degrees of urbanisation coexists indeed with cyclical oscillations of this process, those cycles should be expected to be observable in the rates of urbanisation rather than in the urban population (as a percentage of the total population) per se. Thus, faster or slower rhythms of urbanisation may alternate at an ever higher overall volume of urbanisation, due to the historic urban accumulation. Within this framework, however, it is absolutely reasonable to expect crises or urbanisation in the most literal sense of the word, i.e. processes of urban deconcentration – or deaccumulation – like the ones observed in the economy. In such crises, an absolute and relative decline of the urban population, at least on some certain levels of the urban hierarchy, is not at all out of the question – although this wouldn't mean a reversal of the secular upward trend in the long run.

The actual historical progress of urbanisation may be even more complicated, as it is possible that the secular trend towards advancing urbanisation is, in turn, slowing down, as the potential for expansion is being saturated. Speaking about the USA, Simon Kuznets has indeed contended:

“...a secular swing in the rate of urbanization, in the sense that the proportional additions to urban population and the measures of internal migration that produced this shift of population probably increased for a while - from the earlier much lower levels; but then tended to diminish as urban population came to dominate the country and as the rural reservoirs of migration became proportionally much smaller” (Kuznets, 1955, p. 19).

Indeed, it is a classic assumption that the history of urbanisation follows an S-shaped logistic

growth curve (Barras, 2009, p. 122).

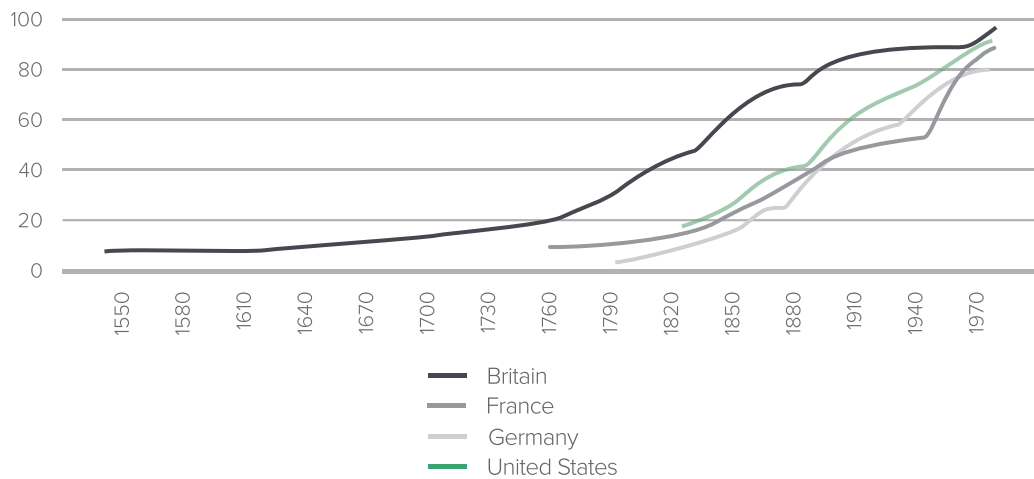
Such a coexistence of a secular swing pattern with long waves and shorter cycles is not unknown among economic theories as well. Michael Roberts advocates a combination of the “breakdown theory” concept,⁸ as formulated by Henryk Grossman and others, with the long waves and the cyclical theories of capitalist crises in general (Roberts M., 2013, p. 12). As the capitalist mode of production matures (or over-matures), it tends to exhaust its historical potential for accumulation and growth, although it still proceeds in cycles of “boom and slump”. In this sense, oscillations in the capitalist development (and, if the above is correct, also in urbanisation) are not imprinted around an upward linear trend line of historical progress, but around a curve that is upward during the youth of the capitalist mode of production, and downward during its old age. Mandel and other Marxist long-wave theorists would not deny this. We shall not examine this secular curve in detail at this point; however, we should keep it in mind.⁹

The next question is whether all this can be also empirically verified. We have already noted in passing that the 1970s economic crises were also accompanied by urban crises, particularly pronounced in the USA but also observable in most economically and industrially developed countries. The urban crisis *grosso modo* coincides with the beginning of the long wave of contraction (Burgel, 2007, p. 53), fueling the counter-urbanisation hypothesis at the time, as we shall see later. This is already very interesting, but it gets even more interesting if a post-date observation of Brian Berry, the leading proponent of the counter-urbanisation hypothesis in the 1970s, is considered: according to Berry, there is a “long-wave rhythmicity” of urban growth, of about 55 years, which corresponds to industrial growth circles of the same duration (Berry, 1990, p. 107): “each wave of economic growth has produced a wave of urbanward migration” (Berry, 1988, p. 249). These circles are revealed in the urban-ward migration component of urban growth, and not in its natural growth component. In a chart provided by Berry, showing the development of urbanisation in 7 countries (USA, UK, Germany, France, Netherlands, Japan, Korea) over the period 1450-1980 (Berry, 1990, p. 105), it is pretty evident that a certain pattern can be distinguished since the 19th century in most of the cases, notably in the most characteristic cases of the USA, the UK, France, and Germany: periods of higher rates of urbanisation are succeeded by periods of lower, though still positive, rates in more or less frequent intervals (Chart 3.1). The changes in the tangent of the lines are clear, and so are the turning points between dynamic and non-dynamic periods and the breaking points (which means, more abrupt changes) marking the transition from each period of low urbanisation rates to each new dynamic urban growth period. We define dynamic periods as periods when the rate of urbanisation is higher than the secular trend, i.e. when the angle of inclination of the

8 In their purest version, breakdown theories suggest a universal tendency of gradual decay of modern capitalism, thus rejecting any other type of periodicity, apart from business cycles. This is why we have left those theories out of the scope of this essay.

9 Let's only comment in passing that the possible existence of a secular swing in urbanization might be able to explain the different type of urbanisation observed in Third World countries, if it is assumed that those countries are on a different point of this secular curve. On the other hand, it is not given that the same curve applies to all types of urbanisation.

Chart 3.1: Historical series of Urban Population, according to Berry



Source: Berry 1990, p. 107

tangent is bigger than the one of the linear trend line, and vice-versa non-dynamic periods as periods when the rate of urbanisation is lower than the secular trend.

The resemblance with the long wave model of Ernest Mandel is impressive, with turning and breaking points in most countries almost coinciding: the most recent troughs are recorded in the last years of the 19th century and in the 1940s, whereas the last turning points from high to low urbanisation rates appear in the 1870s, on the eve of World War I and in the 1970s. The most visible divergence is that the crisis of urbanisation of the late 19th century probably shows up some years before the crisis of 1895.¹⁰ However, such divergences are not harmful to our hypothesis, given the approach of the crisis adopted in the present study. As demonstrated before, the global capitalist crisis is not an accidental fact or an abnormal situation, but a result of the intrinsic laws-tendencies and contradictions of the capitalist mode of production, which, right because of them, is subject to periodical crises. Capitalist crises are, thus, rooted in the conditions that prevail in pre-crisis periods. To the extent that they actually exist, urban crises or crises of urbanisation seem to be rooted in the very same conditions.

In addition, it does seem that the peaks and troughs (turning points and breaking points) of the long waves of urbanisation more or less coincide with the nadirs of the Kuznets swings (though the inverse may not be true, as not all Kuznets swing nadirs necessarily coincide with such turning or breaking points). As already mentioned, some years after he introduced the concept, Simon Kuznets himself associated his swings with demographic movements (Kuznets, 1958), stressing the impact of population growth on the investment in fields that are population sensitive, such as housing or commuting infrastructure. In this way, (urban) population growth acts back on economic performances. It has been also attempted to fully reverse the direction of causality between demographic and economic cycles, by attributing long swings of population

¹⁰ On the other hand, the positioning of the beginning of the last upward wave of urban growth rates in the USA preceded the one in European countries by some years is perfectly consistent with the fact that the last expansionary long wave started in the USA already as soon as 1940, some 8 years before it happened in Europe.

growth to endogenous demographic factors, which later influence economic developments. We have already mentioned Harry Dent, the neoliberal investment consultant who has tried to explain the long waves in economy by demographic cycles. Before him, Kelley had noted that:

There are two connections between demographic and economic change at the aggregate level. First, the age-composition of the population influences the level of economic activity through its impact on average savings, average productivity of investment, and labor force size. Second, demographic change affects the stability of economic growth by altering the balance between the growth rates of long-run supply (savings and labor force additions) and long-run demand (new residential construction) (Kelley, 1969, p. 642).

Actually, there are more than two – for example, relative over-population tends to pull wages down and relative population shortage creates the opposite tendency. However, it is difficult to imagine that demographic factors can themselves be independent from the economic conjuncture. For example, natality is influenced by prosperity in various manners. On the other hand, major developments that deeply alter demographic structures, such as wars, have also deep economic causes, especially if the long wave theory is accepted. In our view, Tylecote sounds more convincing to contend that demographic developments can accelerate or decelerate long waves instead of explaining them in the first place.¹¹

However, the question is not to interpret possible cycles in urbanisation rates and patterns as a determined outcome of the oscillations, booms, and crises of the capitalist economy or the inverse. In the final analysis, the level of economy is determining, but this is only in the final analysis. Besides, in Marxist terms, the content of the term “economy” is not restricted to the indices, activities, and figures that are classified as economic according to official accounts, but it rather refers to the production and reproduction of all material conditions of human life, in the given framework of each historically specific mode of production. Population and labour force can’t be subtracted from the fundamental level of economy, defined as above. It is sufficient for our purpose, therefore, to assume and consequently try to confirm that long wave oscillations not only exist both in the capitalist economy (fundamentally in the average rate of profit) and in urbanisation, but that they also move in a parallel manner and are based on the same general conditions.

This hypothesis has a lot of implications. The obvious one is that the current global capitalist crisis should be accompanied by some kind of urban crisis or crisis of urbanisation.

A crisis of urbanisation does not necessarily mean negative net urbanisation rates or an urban exodus; nevertheless, even such tendencies have been reported by certain researchers: for example, in 2009, Art Hall, executive director of the Center for Applied Economics at the KU School of Business, claimed to have found out that, in the USA, “people are moving out from

¹¹ More specifically, Tylecote notes that “population feedback works, in the circumstances of the twentieth century, to accentuate the long wave pro-cyclically. In the different circumstances of the nineteenth century it had, by contrast, a “spoiling”, counter-cyclical effect” - (Tylecote, 1992, p. 101).

major metropolises to smaller cities” (University of Kansas, 2009). A different but nevertheless relevant aspect is international migration, regarding which it has also been maintained that we are witnessing the biggest turnaround since the Great Depression, as many migrant workers in advanced countries have been compelled back home due to business failures (Krase & Shortell, 2013, p. 192). However, changes don’t necessarily have to be as spectacular as that in order to be meaningful.¹² Milder and more relative, though not less meaningful, phenomena might appear instead. We shall later see that different definitions can be given to the concepts of urbanisation, de-urbanisation, or counter-urbanisation.

Moreover, certain observations or assumptions regarding the economy may also have their equivalent in urbanisation processes.¹³ Following the long wave schema, the re-urbanisation or re-metropolisation phenomenon that was ascertained by most geographers and urbanists in the early 1980s may be considered as the equivalent of the temporary relative recovery of the rate of profit, which was contended by many (but not all) economists. In this case, a latent urban crisis may have been concealed throughout the whole period ever since, just like the capitalist crisis was being nurtured under the surface of an ostensibly progressing economy. It makes sense, therefore, to expect not only ruptures and discontinuities with the period prior to the crisis, but also an intensification of features and phenomena that were present even before the outbreak of the crisis of 2008, rooted in the long-term tendencies of the downward long wave phase of which the crisis appears to be the historical conclusion. Could it be the case that every end of a long wave demands some kind of urban destruction, something like an equivalent of the destruction-devaluation of capitals, which we have seen that constitutes the objective function of capitalist crises, being at the same time the material precondition for a new expansionary period to be inaugurated? In this case, would we be entitled to assume that this process of “urban destruction” has been artificially postponed, just as the necessary destruction-devaluation of capitals was postponed in various ways and through various strategies since the 1970s, maybe thus explaining the short duration of the phenomena that have been labeled de-urbanisation or counter-urbanisation at the time (which we shall examine later)?

Of course, it is impossible to further examine this very complex hypothesis on the global level in the present study. Apart from the vast amount of data that such an attempt would demand, it is almost certain that the situation is quite different among different countries, and especially among the groups of developed countries, the Third World, and intermediate levels. Instead, we will put under scrutiny Greece in particular. It may be thought that Greece is an untypical case, as it has suffered an extremely acute version of the global capitalist crisis. On the other hand, however, it is sometimes through their extreme manifestation that phenomena

12 We should take the warning seriously to not “exaggerate about the desertification of the countryside in the same way that a return to the village is alleged through some isolated examples” (Burgel, 2008, p. 110).

13 For example, in one of the few studies that attempt to investigate the connection of the current global crisis with urbanisation, Kuniko Fujita has concluded that urban inequalities in the city of Tokyo have raised due to the crisis, and not preceded it, just as, according to the author, social inequalities in general have been an outcome rather than the cause of the crisis (Fujita, 2013, p. 35).

of a universal scope can be better understood. The positioning of Greece in the international division of labour and its level of economic development renders it a very interesting example rather than an exemption that doesn't lend itself to any kind of generalisation.

Conclusions

Virtually all major crises throughout the history of capitalism were connected, one way or another, with space and urbanisation. Wherever a major economic crisis emerges, one will almost certainly find a crisis of urbanisation of some type too. Short-term causalities between the two processes have not always been the same, neither was the succession of the two in time. However, there is definitely a link, founded on the role that land, housing, and urbanisation play within the framework of the capitalist mode of production.

Land and housing represent a conjunction of four "circuits of capital" alternative to the investment in industry: rent on landed property, speculation on land and house prices, loans for housing, and construction. All these activities have at times constituted the triggering event for major crises or the reaction to such crises in pursuit of alternative sources of profit – sometimes, both. It is a well-known fact that this conjunction of alternative circuits spurred the current global capitalist crisis, although it has not been its deeper cause. On the other hand, despite the housing bubbles that reappeared in several countries a few years after the crisis, no universal "turn to land" after the outbreak of the 2008 crisis can be substantiated. Space in itself does not suffice to bring the capitalist economy out of its crisis.

Nevertheless, real estate and its related activities are only one aspect of the link between crises and space. The hegemonic spatial process in capitalism is something broader: urbanisation. Urbanisation is a spatial equivalent of the accumulation of capital. Although no one-to-one correspondence between the two processes can be substantiated, urban and capital accumulation have a common root in the capitalist mode of production.

It is therefore theoretically reasonable and, at least partly, empirically confirmed that urbanisation also follows cycles and, particularly, long waves like the ones discussed regarding the capitalist economy. Long waves in urbanisation coexist with an upward secular trend, which is why they are detected in urbanisation rates rather than in the urban population. However, in times of major crises, a reduction in the absolute and/or relative numbers of the urban population may occur as well. A process of destruction is inevitable at this level too.

The current global capitalist crisis should be thus expected to be accompanied by a crisis of urbanisation, at least at a certain level. If this assumed crisis of urbanisation is, like the crisis in the economy, the historical conclusion of a depressive long-wave phase, some of the phenomena associated with it will represent an intensification of already existing tendencies rather than novelties, while other processes will represent clear-cut shifts. Greece is an interesting example to study urbanisation under the conditions of the crisis, exactly because of the intensity of the crisis and its related phenomena. An extreme case can highlight tendencies otherwise latent.

CHAPTER 4

The hypothesis of counter-urbanisation or de-urbanisation

The debate on counter-urbanisation

Are people leaving Athens and the other large urban areas in the Greek urban system because of the crisis and its effects? There is a widespread sense that the huge rates of unemployment, especially among the youth, the massive loss of income, poverty, inability to pay for housing rents, indebtedness, homelessness, and insecurity are driving parts of the population, poor and working-class strata in particular, back to the countryside. In scientific terms, this would be equivalent to an urban exodus. Objectively, this assumption brings back to the forefront notions such as counter-urbanisation and de-urbanisation, thus triggering again a debate that has been put aside for several years. Before proceeding into checking the above-mentioned, mostly informal and not necessarily scientifically articulated, assumption by examining the existing data, we must briefly retrace that debate.

The hypothesis of counter-urbanisation as a universal trend in the patterns of urban evolution, formulated in the mid-1970s, has been more or less abandoned a few years later. According to the initial formulation of Brian Berry (Berry, 1976), counter-urbanisation was meant to be the inversion of the three essential features characterising “urbanism as a way of life”, as defined by Louis Wirth in the 1930’s (Wirth, 1938). That is, counter-urbanisation was supposed to be a phenomenon of shrinking population, falling densities, and declining heterogeneity in the big urban areas of developed countries. Berry indicated this phenomenon in the big cities in the USA, which were apparently bleeding in favor of smaller-scale settlements.

Meanwhile, different definitions were given to the term by other authors (Petsimeris, 2002, p. 164). More sophisticated versions were provided, as the counter-urbanisation hypothesis had to incorporate a whole range of differentiated data under differing conditions and in different locations. Fielding described counter-urbanisation as “coincident with a significantly negative relationship between net migration rate and settlement size” (Fielding, 1989, p. 60). Between the mid-1970s and the early 1980s, counter-urbanisation trends were detected, at varying extents, in more or less all the countries of Western and Northern Europe (the UK, Belgium, the Netherlands, Western Germany, Denmark, Sweden, Austria, Switzerland, France, Northern Italy), as well as in Canada, Australia, and Japan. Even if those countries still represented a small percentage of the global, and even of the European, urban system, it seemed reasonable

that they also represented the future of the rest. After all, these areas had already foretold the evolution of the rest of the world (or, more accurately, the rest of the developed world) in the previous stages of massive post-war urbanisation and of the subsequent suburbanisation.

Among others, Champion has adopted Fielding's definition in his case studies (Champion, 2001, p. 150). However, he had eventually to admit that, as soon as the mid-1980s, a general trend towards counter-urbanisation could no longer be verified. In many cases, even in the initial epicentre of the phenomenon, the USA, the trend had faltered or even been reversed. Large cities (cities with a population over 1,000,000 people, according to the most common classification) seemed to recover in comparison with middle-sized and small ones. On top of that, their centres came back to positive rates of growth, although in most cases lower than the ones in the outer rings. Some attempts to attribute this turnaround to particular conditions that rendered the 1980's an atypical decade could not stand the test of time as, apart from some scarce indications of new decline in certain urban areas in the early 1990s, no general trend alike the one in the 1970s has reemerged afterwards, at least not to our knowledge.

A similar conclusion was drawn, for example, by Cochrane and Vining, on the regional scale (Cochrane & Vining, 1988): in the 1980s, the core regions in the countries of the developed world were apparently attracting positive net internal migration once again. This meant a reversal of the facts observed 10 years earlier, as well as a revision of the position that "the century-long migration towards the high-density region is over", which at least one of the above authors shared at the time (Vining & Pallone, 1982, p. 339).

Facing this situation, two explanations remained. Either counter-urbanisation has never actually existed, or it had already run its course. The first position had already been supported back at the eve of the 1980s. According to Gordon, for example, counter-urbanisation cannot be distinguished from suburbanisation or it stands for an overspill of urbanisation into new future metropolitan areas (Gordon, 1979). Other geographers would side with the second position, arguing, more or less, that the original phenomenon in the 1960s and 1970s was no more than a brief interval, before a new phase of urban concentration came about, therefore it can't be considered to be a substantial phenomenon (Burgel, 2007, pp. 79-81).

However, it is not that easy to ignore the evidence provided in the studies that endorsed the counter-urbanisation hypothesis at the time. On the other hand, Champion is convincing enough in questioning the assumption that counter-urbanisation could have run its course in itself over a period of a few years (Champion, 2001, p. 152). He observes that the phenomenon had expired far before it could effectively bridge urban and non-urban areas in terms of population or density, so it couldn't be assumed that it has undermined itself, in the way that urbanisation had undermined itself by over-concentrating people and activities a couple of decades earlier. It should be added that theories trying to inscribe a phase of counter-urbanisation into a "cycle of life" that would be common for more or less all cities, despite being able to easier accommodate both the phenomenon and its subsequent containment or inversion in a uniform schema, were not much better fortified in the face of this argument.

Models of urban evolution

Another approach would be to assume that counter-urbanisation does not represent a particular historical phase in urbanisation, but a stage in a predetermined scale of urban evolution, which all cities (or at least all major ones) go through, in different times. Even before the introduction of the term “counter-urbanisation”, in the early 1970s, Peter Hall had remarked that, in very big metropolitan areas (London and maybe Manchester at the time, in the case of the UK, where his study took place), a new phase of overall urban decline, including both centres and urban rings, was underway (Hall P., 1971, p. 122). He incorporated this phase in his model of the evolution of metropolitan areas, which was based on the fundamental processes of absolute centralisation, relative centralisation, relative decentralisation, and absolute decentralisation. This general urban decline constituted the fourth stage in his model, after the stages of metropolitan centralisation (approximately in the period 1850-1900 for most English cities), relative centralisation (1900-1950), and relative decentralisation towards urban rings (1950-1970). This new stage, however, was still in its very first steps and, therefore, uncertain.

Klaassen et al. appended one more stage in the model: re-urbanisation (Klaassen & Scimeni, 1981). Thus, the model turned into a cycle as, after a phase of urban decline, the whole sequence would start all over from the beginning. A group of authors, including Klaassen himself, worked further on this model, distinguishing between four different stages: urbanisation, suburbanisation, desurbanisation and re-urbanisation, themselves further subdivided into 2 phases each (Van der Berg, Drewett, Klaassen, Rossi, & Vijverberg, 1982, p. 36). These sub-phases were based on the classification of Hall into successive phases of absolute/relative centralisation/decentralisation. Desurbanisation was more or less equivalent to counter-urbanisation.

Counter-urbanisation, this time under this very term, was also incorporated as a stage in a different model, elaborated by Geyer and Kontuly, under the name “differential urbanisation” (Geyer & Kontuly, 1993). This model was applicable in the inter-urban rather than the intra-urban level, and it was again cyclical. The formulation took advantage of the notion of “polarisation reversal”, introduced by Richardson (Richardson, 1977). According to the model, the first stage of urbanisation saw people concentrate in the primate city of a certain urban system. This stage was succeeded by a stage of deconcentration, consisting in its turn of two phases: polarisation reversal and counter-urbanisation. That is, in the beginning the primate city starts to decline in favor of intermediate level cities (polarisation reversal), whereas, after some time, even those cities are overridden in terms of attraction of population by small cities. A new round of metropolitan concentration in the primate city is to be expected afterwards, even if Geyer and Kontuly foretold that the following cycles would be briefer and with fewer disparities in migration rates.

Hall rejected the idea of re-urbanisation (Petsimeris, 1989, p. 17). However, the re-urbanisation hypothesis seemed consistent with the re-emergence of metropolitan areas found out since the mid-1980s. There is, of course, the objection that this re-emergence favored suburbs more than it favoured city centres (Champion, 2001, p. 154). In this sense, it might have been more

appropriate to speak of re-suburbanisation rather than of re-urbanisation.

Similar evolutionary models have been proposed for the economy as well. Rostow, for example, has contended that “it is possible to identify all societies, in their economic dimensions, as lying within one of five categories: the traditional society, the preconditions for take-off, the take-off, the drive to maturity, and the age of high mass-consumption” (Rostow, 1960, p. 4). Those categories constitute universal “stages of economic growth”. A parallel could be drawn between the stage of maturity in the economy, which follows the “take-off” stage and constitutes a period of deceleration, and the stage of counter-urbanisation, which follows a period of rapid urbanisation. Rostow recognizes that his proposed succession of stages is only an optimal pattern for a sector or country to follow; in practice, deviations from this optimal pattern give rise to business cycles and longer-term oscillations. However, it remains hard to imagine why all sectors or economies (or urbanisation processes) should follow a predetermined pattern at different times and under different conditions. The debate on underdevelopment in the 1970s as well as, before that, the debate on imperialism in the early 20th century have highlighted the fact that, having already been integrated with their given socio-economic structure in the international division of labour and the rules of capitalist production and commodity exchange, underdeveloped countries can’t and won’t go through the same stages as the ones followed by the developed countries in the past.

Apart from this general theoretical and methodological objection, a basic question that remains unanswered by models seeking to integrate counter-urbanisation in a global line or cycle of urban evolution is why the stage of counter-urbanisation had to be so brief. And, if it has really been so brief, wouldn’t it be indeed theoretically safer to ignore it or attribute it to a series of specific historical circumstances?

A different approach to counter-urbanisation

In the context of the present approach, what is proposed is to examine counter-urbanisation neither as a historical phase in the global urban evolution, taken as an independent process, nor as a predetermined stage of a universal pattern that would be applicable in each and every city or urban system. The solution to the limits and contradictions of the above approaches is not to confine ourselves to the numerous case studies, albeit useful, refraining from any attempt for generalisations. What is interesting for this study is counter-urbanisation as a possible actual process, which can be activated or deactivated, triggered, halted or reversed, according to the historical, economic, social, and political conditions. This does not mean necessarily rejecting any type of periodicity, not at all. But it means that, if there is any periodicity to be found, it has to be sought for in a broader or different sphere than urban evolution in itself, with its internal laws, trends, and contradictions.

The objection to formalist cycle or stage models of urban evolution goes deeper than recognising possible deviations in the model or even accepting alternative models to describe cities in different parts of the world. Quite an extensive discussion has taken place, for example,

about the distinction between S-shaped and J-shaped curves of (secular) urban population growth, the latter having been proposed as more appropriate for “developing” countries, as opposed to the developed ones, which seem to be subject to the former one (Chen, 2012). Such distinctions would obviously alter evolutionary models as well. But this is not all. What the present approach advocates is that, no matter how important internal mechanisms may be, the determining causes of urbanisation lie outside urban evolution as a supposedly autonomous procedure and as a scientific territory that would have its own history and internal laws. They are to be found in the general historical tendencies of the capitalist mode of production, which basically, but not exclusively, economic. This is a fundamental matter of methodology.

Therefore, expansions and contractions in urbanisation rates, including counter-urbanisation processes or tendencies, must be inscribed into broader tendencies, cycles, or fluctuations in capitalist development. It has been already noted that attempts to associate the evolution or urbanisation with such broader socio-economic trends are relatively rare. It is somewhat better with political trends, but again “politics” is most frequently taken for urban politics in particular. This is the price of being confined to a strict discipline.

In line with the conclusions of the previous chapters about capitalist crises and their links with space and urbanisation, we can try to put counter-urbanisation in the framework of the long wave theory. Brian Berry himself felt obliged to examine the long wave hypothesis. Soon after the already-mentioned study where he inferred the existence of long waves in urban growth, he published a whole book about “long-wave rhythms” in both economic development and “political behavior”, which he has tried to prove by means of a complex method of mathematical elaboration of statistical data. In this case, his focus was not urbanisation, but rates of growth of wholesale prices and real-growth rates, identifying the former with the Kondratieff waves and the later with the Kuznets swings (Berry, 1991). It is more than probable that his interest in long waves, in general, stemmed from his studies upon urban growth as well as transnational urban-ward migration (Berry, 1993). It is also probable that an incentive to study long waves has been to explain why the counter-urbanisation hypothesis was seemingly disproved by the facts observed in the 1980s. It is therefore rather surprising that Berry did never systematically try to organically reintegrate the concept of counter-urbanisation in his long-wave models, although, of course, he did realise that a long-wave approach could give counter-urbanisation a new meaning and it was, in fact, the key to understanding the “shorter-term statistical swings”, where he now placed counter-urbanisation, pleading “*mea culpa*” for his former view of the concept as a long-term trend (Berry, 1988, p. 245). It is also surprising that his understanding of long-wave rhythms was not effective in preventing Berry from expressing (along with his contempt for Marxist alternatives) his confidence in “the information age” and in transnational enterprises as effective means for collective security against periodical crises (Berry, 1991, p. 197), thus joining the big club of intellectuals whose trust in the system was bitterly shaken in 2008.

In the framework of the current approach, counter-urbanisation is viewed as a manifestation or aspect of the crises of urbanisation that are linked with the overall major capitalist crises

marking the peaks and troughs (turning points) of the long waves of capitalist development. This is in contrast with the widespread, and rather dominant in the anglophone literature, perception of counter-urbanization as a process of wealthier people and/or the “service class” moving to rural areas (Halfacree, 2008, p. 479).

The same way as economic crises give rise to restructurings of the economy, counter-urbanisation phases should come with urban restructuring projects. Since, according to the approach adopted here, long waves are general historical periods, and not a strict model to determine the future, the exact timing or form of counter-urbanisation crises (crises of urbanisation) can't be foretold. However, they are to be expected in times of major crises. The 1970s, when the counter-urbanisation tendencies were detected, was indeed a time of global economic crisis and of a subsequent restructuring. Additionally, a series of urban crises broke out after the outburst of the first oil crisis, among which the most well-known has been the fiscal crisis of New York in 1975. Of course, the World War II, which was the conclusion of the mid-war depressive long wave phase, stands for the largest urban in the recent history, at least in Europe.

Moreover, we have already seen that, according to the long wave theory, the crisis of the 1970s represented a turnaround from the upward (expansionary) to the downward (depressive) phase of the post-war long wave. On the contrary, the current crisis would represent the bottom end of the oscillation, a nadir, which would require extra-economic developments to escape, expectedly dramatic. It could be fairly assumed that, in the present context, a counter-urbanisation crisis would be deeper than the one in the 1970s.

Soja provides a very interesting schema, dividing urban evolution into four historical phases: mercantile city, competitive industrial city, corporate monopoly city, state-managed Fordist city (Soja, 1989, p. 174). This is not about stages in a formalist pattern which all cities are supposed to follow but about phases corresponding to the distinct historical periods that the capitalist mode of production has gone through: commercial capitalism, freely competitive capitalism, classic imperialism, and late capitalism respectively. The pattern is explicitly based on Ernest Mandel's periodicity of capitalism, including the idea that the transition from one stage to another is marked and determined by big historical restructuring processes. Indeed, long waves are a particularly tempting pattern to relate the evolution of urbanisation with (Petsimeris, 1989, p. 17), especially since it permits special attention to be paid on crises and restructuring periods. If the periodicity of Soja (or something similar) is correct, one should expect that the present crisis should finally give rise to a new historical phase in urban evolution, to a new city, the way that it should also give rise to a new stage of capitalism – unless the vicious circle of the long waves in capitalist development is interrupted by an overthrow of the capitalist system itself.

It may well be the case that the hypothesis of a counter-urbanisation process in the context of the present crisis is only valid in the type of urbanisation prevailing in developed countries,

and not in the so-called Third World or in intermediate cases.¹ Berry's conception of counter-urbanisation was not supposed to apply in every country, anyway. Moreover, even among developed countries, counter-urbanisation might appear in a clear form only in the "weak links", that is the countries most affected by the capitalist crisis. Or it might be overshadowed by other spatial processes. It is impossible to examine all those issues here. However, we can test the hypothesis of counter-urbanisation in Greece and substantiate why the case of this country might be interesting for other developed countries too. In order to do that, we shall first examine the manifestation of the economic crisis in Greece and show that the country should be considered as belonging to the group of developed capitalist countries, although being a "weak link" among them, and it should thus be expected to follow their long wave patterns. Secondly, we shall try to demonstrate that long waves have indeed existed in the historical development of urbanisation in the country, largely coincident with the international waves of capitalist development.

Terminology

In order to conclude the present chapter, we should clarify the content of some terms that will be used throughout the discussion of our subject, according to the approach adopted in the study.

We have already referred to counter-urbanisation as a process of a crisis of urbanisation linked with an overall major capitalist crisis. Counter-urbanisation is only one aspect of urbanisation crises, and not of all urbanisation crises. However, in this study, we will examine urbanisation mainly as a process of concentration of population, economic activities, and housing/construction² in urban areas, and not from the viewpoint of its morphological, ecological, or "behavioural" aspects.³ In this sense, it is reasonable to use the terms "counter-urbanisation crisis" and "crisis of urbanisation" interchangeably, unless defined otherwise.

Counter-urbanisation is defined as a relative or absolute decline in the process of concentration of population, economic activities, and housing/construction in urban areas in general or above a certain size class (according to the definition of urban settlement in each particular framework).

Proceeding in further detail, counter-urbanisation may take two distinctive meanings. It might be considered as a long-term pressure on urbanization rates manifested as a tendential "negative relationship between net migration rate and settlement size", according to the definition of Fielding. This corresponds to the long-term pressure exercised on profitability

1 At this point, one should note a difference between economic crises and possible crises of urbanisation. Leading capitalist economies account for the major part of the global GDP, so a crisis of them is automatically a global economic crisis. On the contrary, leading economies do not account for the majority of the world population, or of the world urban population, and thus, even if they suffered a generalized crisis of urbanisation, this wouldn't suffice to speak of a global crisis of urbanisation.

2 Since housing accounts for the greatest part of construction, this material aspect of counter-urbanisation may be called residential counter-urbanisation.

3 Ron Johnston has proposed a three-dimensional model of any spatial system, making the distinction between an economic/structural, a demographic, and a behavioural category (Johnston, 1973).

during depressive long wave phases, and it is thus not a continuous process, but a chronic trend that in certain periods may be outweighed by countervailing factors. On the contrary, the counter-urbanisation process that we have assumed to unfold in times of major crisis is a situation of more apparent and acute “negative relationship between net migration rate and settlement size”, which can culminate in a decline in urban population, population densities and heterogeneity in cities, that is in a process complying with the original definition of Berry. This is more likely to happen in cases of urban systems and countries with a larger mass of past urban accumulation. When using the term counter-urbanisation, we will refer to this counter-urbanisation of crisis;⁴ if mention should be made of the longer-term pressure or urbanisation rates, we shall use the term tendential counter-urbanisation.

De-metropolisation is a process of counter-urbanisation manifested on the top level of the urban hierarchy, which is a process of relative or absolute decline in the concentration of population, economic activities, and housing/construction in metropolitan areas. This might reflect a general counter-urbanisation process or a “polarisation reversal”, which is a relative or absolute of intermediate levels in the urban hierarchy of a certain spatial system.

Exurbanisation is a process of residing in settlements that are not contiguous with the built-up area of a city but remain within its commuting field and functionally dependent on it.

Whereas counter-urbanisation is a process defined on the level of a whole spatial system (normally a country), we define de-urbanisation as the equivalent process referring to a specific city or urban area. We may thus say “de-urbanisation of Attica” or “counter-urbanisation in Greece”.

What is more difficult to define is what is a city or an urban area. This is not only due to the undeniable heterogeneity of the structure and form of cities across the globe; it is also because distinguishing urban from non-urban areas is getting ever more difficult, given the diffusion of urbanisation beyond any particular boundary. Capitalism has been interwoven with the dominance of cities over the countryside; however, this came at a cost. By dominating the countryside, the city has lost its own distinctive character: “...the boundary line does not divide city and country but cuts across the urban phenomenon, between a dominated periphery and a dominating center” (Lefebvre, 2003, p. 113). While it was relatively easy to come up with a definition of the pre-modern city, at least of the occidental city, it is nowadays easier to define urbanisation as a process than “urban” as a quality. Nevertheless, when we see a city, we normally know it is a city and not something else, the way that when we see a living organism, we can recognise it although it is extremely difficult to define life.

We will not deal with attempts to define the meaning of urban here, neither from a theoretical nor from an elaborate spatial or statistical point of view. We will confine ourselves to the conventional classifications of the censuses, according to the population threshold set in order for a settlement to be characterized urban. Of course, this can't be accurate; however, it allows comparisons with previous times, provided that the same thresholds are used. An

4 Gkartzios has written of a contemporary “crisis counter-urbanisation” process, to make the distinction with the “life-style migration” to rural areas (Gkartzios, 2013, p. 158).

increase (or a reduction) in the total population of settlements above a certain population limit would reflect a progress (or a decline) in urbanisation, even if some of those settlements were not actually urban, or some actually urban settlements had been excluded. We shall see that in the specific context of Greece, conventional limits don't create much confusion about the classification of settlements.

Similarly, we are in no need for a global definition of the metropolis that would probably lead to contradictions, since in Greece only two cities are even close to this category: Athens and Thessaloniki. Whereas Athens is a metropolis beyond any doubt, this is not the case with Thessaloniki, which has a population of less than one million. However, given its extended range of influence as a pole of urbanisation and its much bigger size than the third largest city in the country, we will consider Thessaloniki as a metropolitan settlement as well. In the context of Greece, thus, de-metropolisation as a possible phenomenon refers to both Athens and Thessaloniki. Nevertheless, when speaking of metropolisation and de-metropolisation throughout this study, our main focus will be on Athens.

Methodological remarks

As already suggested before, there is not a single definition of the terms counter-urbanisation or de-urbanisation. Consequently, there is not a defined set of criteria or method of metrification to measure those processes. Different aspects will have to be taken into account, without necessarily being possible to guarantee that none will be finally left outside. However, this problem is not of paramount importance, as the intention here is not to thoroughly investigate the notion of counter-urbanisation in itself but to explore actual spatial, geographical, and urban phenomena taking place in real time.

The three criteria of urbanisation according to the classic formulation of Wirth (population, density, heterogeneity) are, of course, a basis to start from, since they have the advantage of simplicity and they have been already the basis of numerous previous studies, including the classic contribution of Berry on counter-urbanisation.

We have mentioned that counter-urbanisation or de-urbanisation may appear in relative or in absolute terms - or in both. In relatively mild situations, when the national population still grows, even marginally, a relative decline in the population of a city, or of urban/metropolitan settlements in general, wouldn't necessarily mean also absolute depopulation. The latter condition would represent a graver case of counter-urbanisation. The reverse is true in times of a general population decline, as we shall see happening in Greece amid the crisis. In this case, an absolute decline might still mean a relative progress (a growing share in the national population), and this is why relative depopulation is more meaningful a criterion to describe counter-urbanisation.

A possible decline in the population of cities would also mean decreasing densities since already built-up areas will not get any smaller. The reverse is not true: decreasing densities could also be combined with an increase in the urban population, suggesting a process of suburbanisation.

The criterion of heterogeneity is linked with the spatio-social divisions (of class, on income, of ethnicity, of land values) within the urban space. From this point of view, a possible tendency towards the equation of urban residents would be a rough measure of counter-urbanisation and, the other way round, an increase in inequality would be a rough measure of the opposite. In the present study, it is not our intention to focus on segregation, and thus we will not deal with heterogeneity thoroughly; however, the analysis of the empirical data will provide some remarks on the issue.

On the other hand, it is disputable if Wirth, by defining the three “sociological preconditions” (Wirth, 1938, p. 10) of “urbanism as a way of life”, also meant to set them as quantitative measures for calculating the degree of urbanisation. We shall thus not confine ourselves to the three criteria suggested by the three sociological conditions of Wirth.

The criterion of Fielding (the relationship between net migration rate and settlement size) is relevant as well. Throughout this study, a broader range of data and measures regarding internal migration will be examined, including balance sheets (net migration) but also incoming population rates (indicating how attractive an area is), shares, location quotients etc.

Besides, there are also non-demographic aspects of urbanisation and counter-urbanisation that can't be ignored in this study. This includes the possible relocation of economic activities and of housing/construction and the changing geographical patterns of economic performances. But it also includes other possible phenomena that could be identified as counter-urbanisation tendencies. For example, a shift back to the primary sector of the economy would be a sign of economic counter-urbanisation, a possible return to areas where traditional networks are stronger could be considered a counter-urbanisation trend as it tends to reduce heterogeneity and the alienation involved in the urban experience etc.

Finally, a decision must be made regarding which scales would be appropriate in order to put the hypothesis of counter-urbanisation in Greece in the present situation under scrutiny. Urbanisation and counter-urbanisation can be defined and examined on at least three levels:

- on the national level, regarding the general rate of urbanisation
- on the inter-urban/inter-regional level, regarding the flows among urban centres of different positions in the urban hierarchy within the urban system of the country and, accordingly, among regions of different degrees of urbanisation. In this study, we shall mainly focus on the top level of the urban hierarchy (Athens and Thessaloniki) and its evolution compared the lower levels.
- on the intra-urban level, regarding the sprawl beyond suburbs, into exurbs or peri-urban areas. This will be examined mainly in the case of Athens.

The three scales will be intertwined in our approach, although we will generally follow a course from the general to the particular (top-down). The major part of the analysis will be devoted to the intermediate level, which is also the link between the other two.

Conclusions

The current global capitalist crisis brings (or should bring) again to the fore the hypothesis of counter-urbanisation, which was introduced in the 1970s, to be abandoned some decade later, as, at the time, it seemed to be negated by the observed facts. If the counter-urbanisation hypothesis is to be reassessed and reexamined in the current framework, though, it should also be redefined. In the past, the adherents of counter-urbanisation have defined either as a phase in a global urban evolution or as a predetermined stage in a model of development that was supposed to be applicable in each individual city separately. According to the approach adopted in this study, counter-urbanisation should be considered as a spatial process that could be initiated or halted according to broader historical circumstances. In this sense, a counter-urbanisation crisis is to be expected in the context of the current global capitalist crisis, at least in developed countries where the crisis is manifested in an extremely intensive form, such as in Greece.

Technically, counter-urbanisation is defined as a process of relative or absolute decline in the concentration of population, economic activities, and housing/construction in urban areas in general or above a certain size class. In its essence, it is seen as a process of a crisis of urbanisation linked with an overall major capitalist crisis. De-metropolisation is a type of counter-urbanisation manifested at the top level of the urban hierarchy, which is the level of the metropolis.

If we accept the existence of long waves in urbanisation, counter-urbanisation may take two distinctive meanings, in line with the pattern of the long waves of capitalist development: it can either constitute a long term tendency, recurring despite a number of intermediate periods of recovery, and corresponding to the depressive long-wave phases in economy; or it can be the equivalent of the crises that mark the peaks and troughs of the long waves. We have used the terms tendential counter-urbanisation and counter-urbanisation of crisis respectively to define those two distinct concepts.

The main hypothesis in the current study is, thus, that a process of counter-urbanisation, mostly in the form of de-metropolisation, has unfolded in Greece, in the context of the extreme manifestation of the global capitalist crisis in the country. This process of counter-urbanisation of crisis has succeeded a period of tendential counter-urbanisation, which was underway since the 1970s, in parallel with the depressive wave of the post-war long boom.

CHAPTER 5

The Greek crisis

The IMF, the EU, the European Central bank, and the European Stability Mechanism, i.e. the international economic institutions who have been monitoring economy in Greece throughout the crisis, as well as most international systemic think-tanks, Greek bourgeois political parties, governments, banks, and employers' organisations, attribute the Greek crisis to the specific features of the economic structure of the country, namely its supposed backwardness and dependence on the state. The neoliberal agenda, which is currently unanimous and undisputed among them, dictates both their analysis and their policy. According to this mainstream approach, the crisis in Greece is the penalty for extravagant government spending, a disproportionately big public sector, high wages and pensions, low labour intensity, a regime of labour relations that is supposedly over-protective and inflexible, over-taxation of capitals and few incentives to invest etc. As ridiculous as it may sound in a country where welfare has been always extremely underdeveloped, not a few analysts have blamed a fictional Greek socialism¹ and spoke of "socialist mayhem" (Novac, 2015), a "socialist death spiral" (Hayward, 2015) etc. Overtly racist statements by EU and other officials may have provoked justified anger, but in fact, they are not fundamentally different than what Greek officials have been claiming about Greeks living beyond their capacity.² The unanimous answer is, thus, austerity, deregulation, massive privatisations, in short, the standard answer that neoliberalism has given to each and every crisis worldwide since the 1970s. The recipe remains unaltered, although not only has it induced disastrous social repercussions, but it has also apparently failed to drive Greek capitalism out of its crisis.

On the other hand, there are protectionist and neo-Keynesian approaches that attribute the Greek crisis to the inability of a country with a relatively low productivity of labour to protect itself from the international competition because of its participation in the euro-zone, which means that neither tariffs on imports nor a currency devaluation are possible. Joseph Stiglitz and Paul Krugman are probably the most well-known economists who have repeatedly claimed that Greece should leave the euro-zone and issue a national currency.³ Several heterodox

1 For a random example see Moore (2015).

2 "You cannot spend all the money on schnapps and women and then ask for help", Jeroen Dijsselbloem, 20 March 2017. "We ate all together", Theodoros Pangalos, 21 September 2010.

3 See for example Stiglitz (2015) and Krugman (Krugman, 2015). Let's remark, though, that the approaches of Stiglitz and Krugman can be considered Keynesian only in a certain, limited sense, as they both accept the goal for primary government budget surpluses.

Greek economists, analysts, and activists have similarly blamed for the crisis the euro and/or the tertiarisation of the economy, counter-proposing a process of productive reconstruction based on a model of self-sufficiency. While those approaches reject austerity, they still have something in common with the neoliberal orthodoxy: they tend to attribute the Greek crisis to inner causes, i.e. to inherent features, specific conditions, or certain policies characterising Greece in particular.

While specific conditions and features are definitely connected with the extraordinary intensity of the crisis in Greece, though, they can't explain the crisis itself. According to our approach, the Greek crisis represents a particularly sharp manifestation of the global capitalist crisis, due to various reasons. Greece has proven to be a weak link in a universal process. In order to clarify this position, we will need a brief overview of the Greek crisis.

The background of the crisis

Greece entered the euro-zone and adopted the euro currency in 2001. Contrary to narratives presenting it as a passive submission to the interests of Germany, the euro has been a very aggressive and ambitious strategy of the capitalist class of Greece, accountable to its own interests. The Greek capitalist class exposed their capitals to the international competition with countries of a higher productivity, "competitiveness", and level of capital accumulation, i.e. with the core of the European Union, on purpose.⁴ If the specific advantages that the admission into the euro-zone offered the Greek capitals are not understood, it is impossible to explain the stubborn insistence of Greek entrepreneurs, systemic economists, political parties, and policymakers on the euro.

First of all, the admission into a much larger pool of a common currency offered access to much more funding as well as reduced interest rates for borrowing, which in the early 2000s were actually lower in Greece than in the core countries of the euro-zone, because of the higher inflation rates in the country.⁵ A remarkable inflow of foreign capitals effectuated a strongly positive balance of financial transactions and stimulated domestic demand. Simultaneously, cheap borrowing encouraged Greek foreign investments in the Balkan and elsewhere. Secondly, a stronger and more stable currency offered the Greek banks the opportunity to expand their activities in the Eastern Mediterranean and, particularly, in the Balkan peninsula, where Greek banks were, in fact, able to control a major part of the banking sector, before this success was questioned by the global capitalist crisis. The euro currency favoured Greek economic imperialism. Last but not least, participation in the euro-zone, with its particular neoliberal regulations and under the conditions of an open international competition of capitals, permitted the Greek capitalist class and political staff to restructure production, administration, and labour relations so as to improve profitability. Improved profitability attracted even more foreign capitals, which drove interest rates even lower. The 2004 Olympics in Athens were an

4 For an extensive elaboration of this argument see Milios & Sotiropoulos (2010).

5 For a comprehensive comparative presentation of the evolution of the basic indicators and macroeconomic data in Greece and in selected European countries see the database of the Crisis Observatory of the Hellenic Foundation for European and Foreign Policy (ELIAMEP): <http://crisisobs.gr/en/database/>

additional huge occasion for business, which proved to be not only socially unnecessary, or even harmful, but also economically non-viable,⁶ but nevertheless offered substantial private profits at the time. While remaining comparatively weak, before the crisis the Greek capitalist economy could take pride in rhythms of accumulation and rates of growth in competitiveness higher than the EU average.

Then, why would Germany and the other countries of the European core (France, the Netherlands etc.) tolerate Greece and other relatively weaker economies (Portugal, Ireland, Spain and, to a certain extent, Italy) in a common currency that favoured the capitalists of those weaker countries? It was because the core countries derived their own benefits from such a union. The leading countries had now at their disposal a strong and wide-spread currency that could compete with the dollar in international financial markets much more effectively. The enhanced demand in southern countries was absorbing German exports. Bankers and investors from the leading countries could take advantage of the higher rates of growth in the weaker EU economies by means of foreign investments. And, probably the most important, free international competition was an instrument to impose neoliberal reforms and to suppress the cost of domestic labour in their own countries, in the name of competitiveness.

While the economy in Europe could neither achieve rates of growth anywhere near the ones in China or in the other so-called Newly Industrialised Countries nor avoid the downward pressures of the depressive long wave in the long run, the euro strategy seemed mutually beneficial for capitalists both in more and in relatively less developed countries. However, this situation did not stand the test of time and, principally, of the crisis. Mutual benefits could only stand as far as profits were enough to be distributed among all. As any capitalist crisis has ever done, the 2008 global crisis triggered rivalries among capitalist classes of different countries, as well as among the domestic bourgeois class in each country separately. In this process, the relative advantages of relatively weaker countries, such as Greece, turned into severe disadvantages, due to the innate contradictions of the dominant development strategy.

Indeed, by stimulating domestic demand, the surplus in financial transactions nurtured a trade deficit, and thus a current account deficit. The Greek economy was more and more based on private consumption and specialised in tourism, services, and construction, sectors that proved very vulnerable to the crisis.

In fact, private borrowing did never reach the extraordinary levels of other countries: in 2008, it was 126% of the GDP, whereas it was 224,5% in the United Kingdom, and 161% in Germany. The debt of households, in particular, was hardly more than 50% of the GDP in 2008 while the respective rate for the EU exceeded 59%.⁷ However, those levels proved critical for the Greek banking system in the outbreak of the crisis. Between June 2008 and January 2013, the Greek state dedicated a calculated amount of 243 billion euros to prevent banks

6 In 2013, the Ministry of Finance reported that government spending for the 2004 Athens Olympic Games, including both infrastructure and organisational costs, reached the amount of 8.5 billion euros.

7 Data retrieved from tradingeconomics.com

from collapsing (Metaxas, 2016, p. 172)⁸ - for a comparison, the GDP was 182 billion euros in 2013. Of this, 28 billion were provided by the government in 2008, before the involvement of the IMF and constituting one of the causes for this involvement, while the rest was offered at different points after the introduction of the Structural Adjustment Programmes. Of course, the largest part of the government support to the banks was in the form of guarantees and thus didn't mean an actual disbursement of an equivalent amount of money. However, according to official sources, support to the banks has had an effect of 22,6 billion euros on the general government in the period 2009-2014. Moreover, the recapitalisation programme of 2012-2013 absorbed 45,9 billion euros of European funding,⁹ thus raising the future financial obligations of the country. The Greek state spent some 25 billion euros at the time, to gain control over the so-called systemically important banks. In autumn 2014, not only had the price of those shares collapsed to hardly more than 1 billion in total, but, in the context of the third recapitalisation programme, the state also lost majority in all four systemically important banks, which private investors were able to gain control over with no more than 5 billion euros. It is obvious that the above processes have contributed to the current non-viable level of the government (sovereign) debt to a non-neglectable degree, although they cannot entirely explain it.

Greek banks were not severely exposed to toxic, extremely risky financial products, and thus appeared rather unaffected during the first phase of the crisis, in 2007 and 2008. Therefore, it was at first thought that the country would escape the crisis. Of course, this has been a poor and short-sighted prediction, which underestimated both the depth of the global capitalist crisis and the degree of interconnection among capitalist economies. The effect on the Greek banks appeared soon and proved heavier than expected.

Two specific factors deteriorated the position of the Greek banks further. The first one was their increasing dependence on contemporary methods of funding, by means of wholesale banking, short-term interbank borrowing, and private placements (Michalopoulos, 2011, pp. 230-234). As already mentioned, during the period 1999-2007, the Greek banks have been engaged in a process of rapid modernisation and expansion, gradually abandoning their traditional method of funding, which was almost exclusively based on client deposits. But the new methods of funding were heavily dependent on external markets: 80% of the EMTNs (Euro Mid-Term Notes) of the Greek banks were held by foreign investors, which fostered their contamination after the crisis outbreak. Interbank borrowing and wholesale banking were greatly restricted due to the crisis, and thus the Greek banks were obliged to turn back to traditional methods of funding; but it was too late.

The second factor has been the international expansion of the activities of the Greek banks, especially in the Balkan Peninsula and in South-Eastern Europe in general. Subsidiaries were dependent of the parent banks in Greece and absorbed a large amount of their available liquidity (Michalopoulos, 2011, pp. 236-237). As interbank borrowing became more difficult for

8 Metaxas has calculated that the Greek banks received another 50 billion euros from the PSI (Private Sector Involvement) in 2012, where they themselves had contributed 28 billion.

9 Both numbers are derived from Triantopoulos (2015, pp. 7,9).

those subsidiaries, parent banks were obliged to cover for them. It is interesting that both factors that aggravated the position of Greek banks had been an advantage for their rapid development before the outbreak of the crisis, which turned into a disadvantage after that.

The 2008 rescue plan for the Greek banks maybe didn't create the government debt but it certainly exacerbated the strategic deficit of the years 2008 and 2009, which have been the occasion for the introduction of the bail-out and Structural Adjustment Programmes starting from 2010. The government debt was higher than 100% of the GDP before the crisis but it had been almost stable for more than a decade. Therefore, its level alone can't explain the Greek government debt crisis of 2009-2010. Neither can its subsequent rapid increase be attributed to public expenditure in general. In fact, it was only after the implementation of the Structural Adjustment Programmes and the massive austerity measures that the government debt exploded, reaching an unprecedented 180.1% of the GDP in 2014 (both because of the new loans and of the contraction of the GDP).

The pre-crisis debt was mostly due to already accumulated loans, and to the interests paid for them, but it was also fueled by a permanent and relatively high government deficit, which rose to a peak of 10.2% of the GDP in 2008 and of 14.2% in 2009. Those numbers were, in fact, the product of a revision of the previous much more moderate estimations regarding those same years. The revision was performed by the social-democratic government of PASOK, which was elected in October 2009, and was later questioned and denounced as purposely fabricated, in collaboration with the EU authorities, to justify an involvement of the IMF. This is what the Truth Committee of the Greek Parliament concluded in 2014 (Truth Committee on Public Debt, 2015, p. 18). There is quite a lot of evidence that some falsification or at least purposeful calculation of the deficit may have happened indeed. But such a conspiracy couldn't explain the intensity of the Greek crisis. Why would the whole international capitalist system scheme to attack Greece, which doesn't represent but a very small portion of the EU market? Besides, the country had been in an Excessive Deficit Procedure since April 2009 already.

Approaches tending to explain the Greek crisis as an attempt by foreign capitalists or states to speculate at the expense of the country are not convincing. Of course, any occasion is an opportunity for certain entrepreneurs or speculators to profit, and this has also happened in this case. However, in accordance to our view of the crisis as a process of destruction and as a fight for the distribution of this destruction, we should perceive the Greek crisis mostly as an effort to avoid costs rather than to gain profits. Creditors have sought to get rid of the burden of a debt that was unlikely to be paid off. National governments have sought to protect their own banks from this risk, the EU has sought to safeguard the European banking system, and the Greek government has sought to transfer the burden to the working class and the poor strata. Until now, they have all been effective enough; however, contradictions and pressures persist.

The already existing deficits were exacerbated by the rescue plan for the banking system, as well as by the slowdown and, consequently, decrease in the GDP because of the global capitalist crisis. Artificially exaggerated or not, those extraordinary deficits fostered the fear that the Greek government was going to default on their loans. A government debt that was not

at all an obstacle to lending before the crisis constituted a lethal danger in the eyes of banks after 2008. Foreign banks and investors did not trust the Greek government to both secure its domestic banks and pay off its debts. Therefore, they were not willing to lend neither the state nor Greek banks anymore, and thus a bail-out by the IMF and the EU institutions was imposed. The background of this crisis of credibility was not false numbers but the awareness of the fact that Greek capitalism has been following a very aggressive and ambitious strategy of development in contrast with (and often taking advantage of, in order to attract capitals) its relatively low level of accumulation and development in comparison with the leading EU countries.

Attempts to attribute the Greek crisis to high wages, few working hours, low retirement ages and/or a disproportionate public sector are ideological and not consonant with real facts. In terms of average wages, Greece ranked 25th among the OECD countries in the beginning of the crisis already, exceeding only 10 other countries.¹⁰ Reality is in even sharper contrast with the conservative myths regarding the average work hours per employed person: in 2008, they were 2106 per year in Greece, 1792 on average in the OECD countries, and 1418 in Germany.¹¹ By the time of the outbreak of the crisis, 9.05% of the employed workforce belonged to the public sector, which was well below the EU average (9.69%) and not substantially higher than the average in the euro-zone (8.35%). In fact, both the actual percentage and the gap with the euro-zone average would be lower, if one also factored in the black economy, which is private-sector economy, and accounts for an estimated 29% of the Greek economy as opposed to an estimated average of 14% in the EU.¹² Private entrepreneurship is far from suppressed by a supposedly large public sector: according to the Global Entrepreneurship Monitor (GEM), in 2007, Greece ranked first among all European countries that GEM provides data about in terms of Established Business Ownership (13.31%).¹³ As for retirement ages, they may have been relatively low in the past, but they are currently the highest in Europe, for both men and women¹⁴ – and yet, this didn't help at all to overcome the crisis. The source of the crisis should be sought for at the other end of the spectrum, which is the capitalist class.

Government budget deficits were closely interwoven with the late development strategy of Greek capitalism. Corruption is often blamed for that, and indeed there is corruption, but it is highly improbable that it has been the determinant factor in creating the present government debt.¹⁵ On the other hand, the introduction of the euro signaled an extreme intensification of scandalous incentives to capitalists, including low taxation, tax exemptions, and poor monitoring

10 OECD data - <https://data.oecd.org/earnwage/average-wages.htm>

11 OECD data - <http://stats.oecd.org/Index.aspx?DataSetCode=ANHRS>

12 ILO and IMF data, elaborated by the author, in Petrakis (2013).

13 The Established Business Ownership index provides the percentage of the population between 18 and 64 years old who are owner-managers of a business for more than 42 months. Data derived from GEM, <http://gemconsortium.org/data> (accessed 23 Aug 2017).

14 <https://tradingeconomics.com/country-list/retirement-age-men?continent=europe> and <https://tradingeconomics.com/country-list/retirement-age-women?continent=europe>

15 Metaxas has calculated that all major scandals since the beginning of the century didn't involve more than 30 billion altogether, that is less than 10% of the current public debt (326 billion or 179% of the GDP in 2016) (Metaxas, 2016, p. 178).

of the payments for social security contributions, income taxes, and VAT by employers. An estimated 2/3 of the extensive tax evasion in the country is due to the richest 10% of the Greek citizens (Giannitsis & Zografakis, 2016, p. 48). At the same time, while public sector investments in production remained very low, the state has been planning and financing big public works in infrastructure (highways, Olympic Games facilities etc.) that were undertaken by individual contractors or by public-private partnerships. In short, the Greek state has been massively subsidising private profits, directly or indirectly. Reality is in sharp contrast with the mainstream view of the public sector being a “mechanism to expropriate wealth from the private sector” (Giannitsis T. , 2013, p. 101).

At the same time, the influx of foreign capitals and cheap borrowing provoked overheating in the domestic economy, which has been the Greek equivalent of the global process of overaccumulation and overproduction. We shall see that, even before the outbreak of the global crisis, this was particularly evident in the construction sector, which had skyrocketed until 2006 before starting a sharp and prolonged decline. Following the outbreak of the global capitalist crisis, industry and the other sectors of economy suffered a decline. Squeezing profits suppressed investments and the GDP. The fear that the public debt crisis could contaminate the so-called “real economy” ignored that, in the final analysis, the real problem stemmed from the later in the first place.

What provoked the crisis in Greece was the global capitalist crisis. What provoked the extreme intensity of the capitalist crisis in Greece was a strategy to promote private profitability and escape the international pressures on the rate of profit (of enterprise), which eventually failed. This strategy contributed greatly to the high government deficits, but the debt itself did not create the crisis. It was the outcome rather than the reason for the fundamental underlying cause of the crisis: the falling tendency in the rate of profit. Making use of a modified version of the Cambridge equation, Stravelakis has demonstrated that high fiscal deficits and the high sovereign debt are a consequence of low profitability (Stravelakis, 2017). The overambitious strategy of the late Greek capitalism has failed to sustain profits under the conditions of a global economic crisis, and its particular features have made things much worse than average. In sharp contrast with what conservatives and pro-capitalist analysts argue, the cause of the extraordinary intensity of the Greek crisis has been no imaginary Greek socialism, but overambitious capitalism.

During the overheating period of the early 2000s (more concretely, after the 2001 business cycle crisis), and given the gains from the introduction of the euro, Greek capitalism could distribute some of its profits to broader social strata, and thus maintain a certain level of consensus and social peace. The crisis rendered this impossible, as reflected very vividly in the massive and persisting social struggles since 2010.

A brief retrospective of the main events of the crisis in Greece

The first clouds over the Greek economy appear in the first months of 2009. In January, standard and Poor’s downgrades Greek government bonds to A- according to its credit rating.

Government bond spreads start climbing. Following a decision of the ECOFIN, Greece officially enters an Excessive Deficit Procedure in April. In August, an IMF report concludes that Greece is particularly vulnerable to the global economic crisis and should thus introduce structural reforms and reduce government deficits. Besides, 2009 is the first year when Greece will record a nominal reduction in the GDP.

The elections in October bring to power the social-democratic government of PASOK, which replaces the right-wing government of New Democracy. While the new government is elected with the slogan “there is money”, it immediately changes its jargon and stresses the need for cuts and structural adjustment. Government bonds suffer consecutive downgrades by all credit rating agencies, and spreads skyrocket. In February 2010, the government introduces the first austerity package, freezing salaries in the public sector and cutting bonuses and overtimes. In March, a second austerity package is introduced, freezing pensions, cutting public sector spending, increasing the VAT etc. While inflicting the first shock, those measures are nothing in comparison with the ones that would be imposed during the following years. Anyway, they don’t have any effect at the time; bond spreads are still climbing; and the government officially asks for EU and IMF aid on April 23. Standard and Poor’s downgrades Greek bonds to the category of “junk”. On May 2, an agreement with the EU, the European Central Bank, and the IMF (the so-called “troika”) is announced. The agreement is known as the first memorandum. According to the agreement, Greece will receive a loan of 110 billion, while undertaking the obligation to introduce austerity measures of 30 billion euros.

The new austerity package is devastating: salaries in the public sectors and pensions are cut, the VAT rises further, the age for retirement raises to 65 for everybody, privatisations are scheduled, the labour legislation is reformed to permit easier layoffs etc. Social reactions are immediate and strong. On May the 5th, a general strike is accompanied by very massive demonstrations. In Athens, the demonstration is attacked by the police. Three people are killed in the fire of Marfin bank; the government tries to exploit their death to discredit the movement. Despite the massive mobilisation and the clashes, the Parliament votes for the memorandum. The measures are unprecedented – and yet, they will be followed by an incredible number of 11 more austerity packages until May 2017.

Despite their harshness, the austerity measures don’t offer any way out of the Greek crisis. The country has no access to bond markets anymore and the government debt is growing rapidly. After the prediction of the troika that growth will come back in 2011 is completely ridiculed by the facts, a new austerity package is agreed with the Greek government, which is announced in April 2011. Inspired by the Indignados in Spain, the Squares’ Movement appears in May. It starts from Athens to spread around the country very soon. The Syntagma Square in Athens will remain under occupation until late July and host demonstrations and people’s assemblies every day. At their peak, demonstrations on the Square gather some 500,000 people. People’s assemblies are also founded in other cities and in neighborhoods of the Capital city. Despite an initial hostility to trade unions, which was fostered by the most conservative parts of the movement, the Squares soon join with the organised workers’ movement. A general strike

on June 14 is followed by a two-day general strike on June 28 and 29. In both cases, massive workers' demonstrations end up in Syntagma Square, where they are met with the squatters. Strikers and squatters are confronted with massive police repression. Despite this explosive situation, the Parliament approves the new, fifth austerity package under the name "Medium-term fiscal strategy programme 2012-2014", including measures of 28.3 billion euros.

However, it is obvious that the government is preparing even more measures. September and, particularly, October probably constitute the culmination point of the mass movement against austerity in the country. University student strikes and demonstrations are organised in September. Workers' and employees' strikes follow very soon. It is indicative that, in 40 days between the middle of September and the end of October, one can only find 3 without any workers' strike. A general strike takes place on October 5 and a new two-day strike on October 19 and 20. Again, massive demonstrations end up in clashes, and a demonstrator is killed on October the 20th. At the same time, town halls and ministry buildings are occupied by workers and employees.

The government is seriously weakened, as several deputies have withdrawn their support already since June. It finally manages to get a marginal majority in favour of the measures in the Parliament, thus opening a period of negotiations for a new bailout of 100 billion euros and a haircut of the debt through the so-called PSI (Private Sector Involvement). Measures include further cuts in the salaries of civil servants and in pensions, an immediate removal of 30,000 civil servants, cuts in the budget for education, which mean that hundreds of schools are closed, and a tax reform that affects very low incomes. However, the social-democratic government has already suffered a lethal blow. After announcing a referendum, which he has to cancel immediately after an ultimatum by the governments of Germany and France, the Prime Minister, Papandreou, resigns on November the 6th. A few days afterwards, a provisional coalition government is formed, with Lucas Papademos, a "technocrat" and former banker, serving as the Prime Minister. The government is supported by PASOK, New Democracy, and the extreme right party LAOS.

The new government makes it clear that it has a very specific mission to accomplish: to achieve a new agreement (a second memorandum) with the troika and impose further austerity measures. The requirements of the second memorandum are extremely harsh: a decrease of 22% in the minimum wage, additional cuts in pensions, total abolition of holiday wage bonuses and a radical decrease of jobs in the public sector, massive privatisations, cuts in public health infrastructure and services, new legislation that permits easier layoffs and de facto abolishes national and sectoral collective bargaining. A two-day general strike on February 9 and 10 and a demonstration of half a million people on February 12, which ends up in extended rioting and fires in the centre of Athens, proves again insufficient to prevent the Parliament from voting for the measures. The second memorandum is approved.

February 2012 has been a watershed in the political evolution of the country. A period of political instability is inaugurated, characterised by the complete collapse of social-democracy, the rapid growth of SYRIZA, who at the time presented itself as a left alternative to austerity,

but also the emergence of the neo-nazi party Golden Dawn. This destabilisation is reflected in the election of May 2012, which results in a failure to form any government and in a second election in June. Ever since, short-lived coalition governments are the rule, in a country with a strong tradition of one-party governments. On the other hand, mass movements did continue to unfold, but, until these lines were written, they never reached the massive scale and the level of combativeness of the period 2010-2012 again. Disappointment from the failure to prevent the first and second memorandum as well as the promise of SYRIZA for an easy solution by voting for a left government undoubtedly played some role in this wave of relative passivity. The working class was discouraged. But this is another topic, out of the scope of the present thesis.

The elections of June 2013 bring to power a coalition government consisting of three parties (New Democracy, PASOK, and the centre-left Democratic Left), under the right-wing Prime Minister Antonis Samaras. The new government engages in a new round of negotiations for additional measures. In November, a seventh austerity package increases the retirement age to 67 years for everybody and imposes further cuts in pensions. In spring 2013, another package introduces massive layoffs of teachers and other public-sector employees. All major strikes at the time are confronted with civil mobilisation. However, all this comes at a high cost for the government: several deputies withdraw their support to it, and the Democratic Left leaves the Coalition in June 2013. It is evident that the two-party government will not last long, although it manages to secure a close vote in favour of another minor austerity package in April 2014. The claimed “success story” of Samaras, based on the marginal primary budget surplus recorded in 2014 and on a short-lived return to the financial markets in April, is far from convincing. In the stress-tests of October 2014, the major Greek banks fail to meet the standards of the ECB. New measures start to be discussed, but the government is too weak to undertake their implementation. After having failed to elect a new President of the Republic,¹⁶ the government is obliged to resign before the end of the year.

SYRIZA, who describes itself as a radical left party, wins the elections of January 2014 and forms a coalition government with the right nationalist party Independent Greeks (ANEL) and Alexis Tsipras as Prime Minister. The new government is elected on the basis of a programme of “social salvation” and with the promise to repeal the memoranda and austerity packages. The main idea of SYRIZA is essentially Keynesian: abolishing austerity would mean an increase in the income of the working class and the poorest strata of the society, which would, in turn, reinforce domestic demand. Increased domestic demand would favour economic growth, and would thus also be beneficial for the Greek employers and entrepreneurs, in the final instance. But then, why didn’t the Greek capitalist class consider this solution? According to the SYRIZA officials, it was because of their neoliberal dogmatism, their subordination to the European bankers and governments, and their short-sighted logic. However, as already explained in the relevant chapter, a willful Keynesian redistribution of wealth can’t be the solution to the capitalist crisis, as capitalist classes are not willing to accept a further reduction in their already

¹⁶ In Greece, the President of the Republic is elected by the deputies of the Parliament and has limited powers.

restricted profits. Indeed, both domestic capitalists and European and international institutions immediately make it clear that they won't tolerate any relaxation of austerity. SYRIZA bitterly realises that there is no common ground between the interests of the mass and the ones of the capitalist class, and that they must take a side. Siding with the working class and the poor strata would require a break with the official institutions and the rules of capitalist economy. But this was unthinkable for SYRIZA. Therefore, through a process of negotiation that lasts for some months, SYRIZA sides with the system.

The Eurogroup agreement has been a turning point demonstrating the real intentions of the new government. The Greek authorities refrain from any unilateral decision and "reiterate their unequivocal commitment to honour their financial obligations to all their creditors fully and timely" (Eurogroup, 2015). The way is open for a third memorandum (bailout and economic adjustment programme) but negotiations will take several months, because the institutions don't trust SYRIZA yet and, moreover, the leadership can't fully control the party yet. On June 25, the European Commission, the IMF, and the ECB make their final proposal about the terms of the new programme, which the Greek government doesn't accept at the time, although its own proposals are not very different. On June 27, Prime Minister Tsipras announces a referendum on July 5 and calls the people to reject the terms of the troika. A bank run is provoked and, consequently, harsh capital controls are imposed to prevent a collapse of the banking system. Individuals are only permitted to withdraw 60 euros per week and international transactions are radically restricted. The referendum of July the 5th takes place within a context of extreme economic pressure and intimidation by the mass media and international institutions, and yet a 61.3% rejects the proposals of the troika and the new austerity package. The working class and the poorest economic strata vote overwhelmingly against the agreement, while the upper strata vote in favour.

However, the next morning after the memorandum it is already evident that the government doesn't know what to do with this vote against austerity. The leadership of SYRIZA may have wanted to exploit the vote to improve its negotiating power, which proved a delusion; or they may have wanted to lose the referendum so as to justify their capitulation and acceptance of a new memorandum, as the Minister of Finance at the time, Varoufakis, later suggested (Varoufakis, 2015). Be that as it may, a week after the referendum the Greek government accepts a memorandum which comes with terms and conditions even harsher than the ones rejected in the referendum. The Parliament approves the third memorandum on July 14, among demonstrations that are attacked by the police violently. The left wing of SYRIZA votes against, and SYRIZA can only get a majority in the Parliament with the help of the parties who had imposed the previous austerity pacts, PASOK and New Democracy.

The first austerity measures of the new memorandum include a further increase in the VAT and further cuts in pensions. Before the government resigns due to the loss of the majority in the Parliament, it introduces another austerity package in August, containing among other things tax increases for farmers and freelancers. Among massive disillusionment, disappointment, and abstention, SYRIZA manages to win the new elections in September and form a second

coalition government with ANEL. The government is determined to apply the agreement with the troika (EU, IMF, ECB), which has now turned into a quartet, with the addition of the European Stability Mechanism (ESM) in the new programme. In October 2014 pensions are cut anew and a law reform opens the way for massive home foreclosures and evictions due to debts towards the state, insurance funds, or banks. A radical pension reform in May 2016 provides even lower pensions and increases insurance contributions for working people, while the VAT and other forms of indirect taxation are also increased again. And in May 2017, the Medium-term Fiscal Strategy Framework 2018-2021 imposes further cuts, reduces tax exemptions for the very low incomes, and prepares a range of immediate privatisations of infrastructure. This has been the 14th austerity package since 2010.

The government took pride in a primary government budget surplus in 2016, after the turbulent year 2014. But this new “success story” can’t conceal the heavy social repercussions of austerity, neither the fact that no solution has been given to the problems of Greek capitalism - and thus more austerity is about to come.

In August 2018, the third memorandum was formally over, and the SYRIZA-ANEL government was celebrating the alleged end of the age of austerity. However, the Greek economy will be still under strict monitoring for the years to come, and the government has already undertaken the obligation to implement further measures and maintain a primary surplus of 3.5% until 2022 and of 2.2% until 2060. It is easily understandable that this commitment means austerity in the long run and, moreover, it is unsustainable since it is impossible for any country to avoid crises and periods of depression for 45 years under any circumstances, let alone under the present circumstances of the global capitalist economy.

Social repercussions

The crisis and the Structural Adjustment programmes have obviously had heavy social repercussions. This fact doesn’t really need any kind of scientific or statistical proof. Official unemployment reached a peak of 27.5% in 2013 while it was 58.25% among the youth. Real unemployment is even higher, as official measurements don’t include part-timers who would wish to have a full-time job, disappointed long-time unemployed who have abandoned active search for a job, or persons who are in search of a job but are not ready to take up a post within two weeks, as the conventional statistical category “unemployed” requires. Poverty has risen greatly, according to any definition.¹⁷ Between 2008 and 2013, more than one million jobs have been lost, representing a reduction of 23.7% in the employed workforce.¹⁸ Income losses for the mass were caused not only by the measures already described but also by the extreme rate of unemployment, which restrains the negotiating ability of the workers and employees in the private sector, and, moreover, means that the employed have to cater for the unemployed too, given the absence of any welfare. Meanwhile, consumer prices are not only currently

17 For a statistical measurement of poverty and inequality in Greece during the first years of the crisis see Papatheodorou & Missos (2013).

18 ELSTAT data, Labour Force Survey 2013

falling far slower than the average income, but they have even been rising as late as 2012 (Giannitsis & Zografakis, 2016, p. 143).

The crisis has not only reduced employment but also the labour force in general. This is not only due to the general decrease in the national population, which we will examine in the relevant chapter, but also because of the increase in retirements during the first years of the crisis. A considerable number of employed people retired soon after the crisis outbreak because of the (justified) fear that retirement would soon get more difficult and disadvantageous, because of transitional provisions in pension reforms and/or because of special incentives to retire, particularly in the public sector. Indeed, after some years of relative stability before the crisis, the number of pensioners of the public sector has risen by almost 20%, or by some 77,000 persons, between 2008 and 2014. A part of those new pensioners must have moved to their place of origin, i.e. towards the countryside. However, after the pension reforms, ages and requirements for retirement have increased greatly, which means that the waves towards retirement, as well as the respective geographical mobility, will be restricted radically.

Loans from the IMF and the EU, as well as the haircut of the debt in 2012-2013, have been effective in turning the debt to private creditors into debt to states. This didn't only secure the national and international banks but also provided guarantees for the repayment of the debt since states and international organisations are much more efficient in demanding their money than private banks.¹⁹ Capitalist states are not basically interested in the profitability of each particular enterprise but in the stability and reproduction of the whole capitalist system, which is what they achieved with the bailouts, although certain banks may have suffered losses rather than profits throughout this process. Despite having averted an immediate further collapse, though, the bailouts didn't resolve the deeper problem of the capitalist mode of production, in general, and of Greek capitalism, in particular.

The global crisis meant that the already pressured rates of profit of the depressive long wave phase before 2008 evolved not only into a further sharp decline of the average profit rate but also in a contraction of the mass of profit. According to a research by Maniatis and Passas, after World War 2, the rate of profit in Greece has followed a trajectory similar to the one in the USA (Maniatis & Passas, 2015, p. 112): a first post-war period of high rates, followed by a period of sharp fall in the 1970s; an only partial recovery in the "neoliberal period" of the 1980s and early 1990s, accompanied by low rates of investment and output growth as well as by slow productivity growth (Maniatis & Passas, 2015, p. 109); and a new decline afterwards, that grew much sharper at the eve of the crisis of 2008. Similarly, Tsoulfidis has demonstrated that Greek capitalism has been following a general pattern of falling rates of profit since the 1970s, or even since the 1960s, if the expansive years of the early 1970s are excluded (Tsoulfidis, 2014, p. 11). Between the mid-1990s and the mid-2000s, a mild rise in the average corporate rate of profit is recorded; however, this is largely due to the low interest rates of the time. This explains why the general average rate of profit appears stable or even declining in that same period, especially if the rate of utilisation of the productive capacity is taken into account. The

¹⁹ An additional reason for that is that the new loans are subject to the English Law.

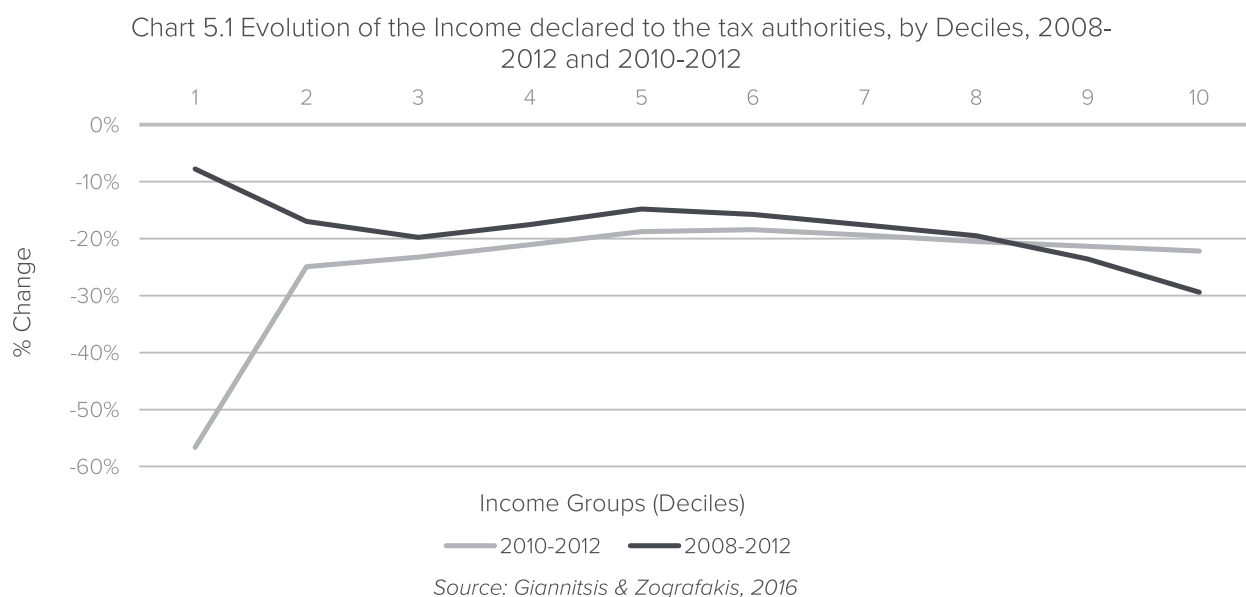
fact that the average rate of profit is seemingly recovering slower than the average rate of profit adjusted to the level of utilisation of the productive capacity is an indirect reflection of the primary objective function of the crisis, which is to destroy accumulated capitals, since over-accumulation is the basic reason for the long-term pressures on profit rates. This objective function is crucial in order to conceive the specific social implications of the crisis.

If the crisis is, first of all, a process of destruction of capitals and productive forces, one should expect that it would affect (at least at first) mostly those social groups who are involved in the capitalist production the most, which are capitalists/employers, on the one hand, and those who depend on the activities of the former, that is the working class, on the other. This means squeezing the two ends of the socio-economic spectrum while affecting the strata in the middle relatively less. Of course, as the crisis expands to the whole spheres of production and distribution, the middle (petit-bourgeois) class will be soon affected too; and as the objective function of the crisis is accomplished and the capitalist mode of production is being restructured and “revolutionised”, a new process of social polarisation will unfold. However, it is theoretically justified to assume that the first repercussions of the crisis will be inflicted on the capitalist and on the working class. This is in contrast with the widespread idea that the crisis destroys the middle class first and foremost.

Nevertheless, as far as incomes are concerned, the main pressure seems to have been placed initially on the ends of the spectrum indeed. According to the calculations of a research group, based on data derived from the European Union Statistics on Income and Living Conditions (EU-SILC), the two lowest and the top decile in terms of income recorded a decline in their shares in the total income in the country between 2007 and 2014 (Andriopoulou, Karakitsios, & Tsakoglou, 2017, p. 24). Consequently, indices of inequality who are sensitive to very low incomes show a substantial increase in inequality, whereas this is not the case with indices more sensitive to changes in the middle of the distribution (Andriopoulou, Karakitsios, & Tsakoglou, 2017, p. 8).

The findings of a study by Giannitsis and Zografakis based on the examination of personal income tax returns rather confirm this picture (Giannitsis & Zografakis, 2015).²⁰ The authors have calculated that, in 2012, the average income of the lowest 60% in the country was 18.1% lower than the income of the respective group in 2008, the top 10% earned 26.9% less than in 2008, while the income loss for the intermediate 30% was relatively lower, 16.1% (Giannitsis & Zografakis, 2015, p. 102). The top 0.1%, particularly, has suffered a reduction of 58.1%. A closer look to the 10 deciles would give a distribution where it is clear that the middle (5th and 6th decile, mainly) has been compressed less than the two ends of the spectrum (Chart 5.1.) (Giannitsis & Zografakis, 2015, p. 29). The only exception appears to be the lowest decile (and partly the second lowest), where, however, the apparent resilience of income is entirely due to a minimum imputed income imposed on tax returns meanwhile. In reality, therefore, the reduction in the lowest decile has definitely been much sharper – and thus the above-mentioned reduction in the income of the lowest 60% has to be somewhat underestimated as

²⁰ The findings of this research have been also the basis for a book in Greek (Giannitsis & Zografakis, 2016).



well. Besides, this irregularity in the lower end of the spectrum completely disappears if the period 2010-2012 is examined instead of the period 2008-2012.²¹

The authors report that income inequality in the Greek society has decreased until 2010 and started increasing afterwards, but only at a slow pace due to the general impoverishment (Giannitsis & Zografakis, 2015, p. 106). Decreasing inequality doesn't mean that the decline of the upper incomes has to be accompanied by an increase in the incomes of the poor; it just means that, while the income in both ends of the spectrum is declining, there is a certain natural limit to the fall of the income of the poor (namely 0). Of course, the authors of the essay are right to remark that, under the conditions of an economic contraction, even steady inequality indices mean, in fact, increasing inequality, as the wealthy strata have entirely different means to resist this contraction in comparison with the poor ones. It should be added that there are many legitimate reservations about the information that these inequality indices provide: statistical indices are too abstract to tell us a lot about the actual situation in the society, income tax declarations don't give an accurate picture of incomes due to the high level of tax evasion, which, besides, is not at all the same for different professions and social categories etc.

The authors also observe that, normally, the comparatively sharper decline in high incomes should have reduced inequalities, but this didn't happen due to the tax reforms that have burdened the lowest incomes much more than the high ones. Indeed, between 2008 and 2012, taxes on the poorest 50% increased by an estimated 337.7%, whereas the respective increase for the richest 50% was no more than 9% (Giannitsis & Zografakis, 2016, p. 62). This is one more indication that the effect of the intervention of the state is to maintain the socio-economic hierarchy that the crisis tends to undermine.²² Taxation is not the only means to achieve that.

21 This is something that the authors have not highlighted because, although they also provide data for the year 2010 in some tables, they base their conclusions exclusively on the changes between the years 2008 and 2012.

22 The authors have avoided to stress enough this obvious conclusion, which is probably a reflection of their political prejudices, who blame particular social groups for the weaknesses and distortions of the Greek economy, such as civil servants and farmers, although there is hardly any evidence for this.

Indeed, in a paper investigating the quantitative implications of the various adjustment policies in Greece (restriction of the government consumption and of public investments, increases in indirect taxes and the VAT, increases in income tax rates, cuts in wages and in social and unemployment benefits) by means of a static computable general equilibrium, Zografakis and Sarris have concluded that “among all households it is the poorest that exhibit the largest decline in disposable income, while those at the top the lowest. The model thus suggests that the policies implemented have been largely regressive” (Zografakis & Sarris, 2015, p. 41). Of course, if you live in Greece, you don’t need a model to know that.

As regards the professional status, according to the data of the Labour Force Surveys of the Hellenic Statistical Authority, it is clear that the crisis has reduced the number of employers rather radically (from 8.2% of the employed population in the 2nd quarter of 2008 to 6.1% in the respective quarter of 2014). The percentage of the employees has recorded a modest overall decrease, divided into a somewhat sharper decrease in the first years of the crisis and a partial recovery afterwards (65.31% in 2008, 63.11% in 2013, and 64.57% in 2014). On the contrary, the number of the self-employed has increased considerably, from 20.64% in the second quarter of 2008 to 24.77% in the second quarter of 2014. Pre-crisis tendencies have been reversed in all three fields. The reduction of employers reflects the collapse in investment and the destruction of capitals, while the relative contraction of employees is also connected with those processes, which entail layoffs, company closures, and fewer jobs in both the private and the private sector. On the other hand, the relative (because no category can resist the general decline in absolute numbers) increase of the self-employed must have been fueled by both sides: by former employers who cannot afford hiring employees anymore, and by former salaried employees who have lost their job and have been forced to resort to small-scale necessity-driven entrepreneurship.

Indeed, necessity-driven entrepreneurship has risen rapidly compared to opportunity-driven entrepreneurship (IOBE-GEM, 2013, p. 38), thus retaining the country in the first place among all European countries in terms of established business ownership. Of course, the number of unpaid family workers, that is family members who serve as assistants in small businesses, has reduced from 5.85% of the employed population in 2008 to 4.56% in 2014. This is a countervailing factor to the rise of the self-employed, as family assistants should be considered members of the petit-bourgeois class and thus a category close to the self-employed. However, their reduction can’t outweigh the increase in self-employment. The reduction of family assistants has been attributed to the fact that, due to the crisis, all family members are forced to search for a paid job. However, it could be equally assumed that high unemployment, especially among the youth, would favour a shift to unpaid assistance to family businesses. In any case, the reduction of this category was already a trend before the crisis and therefore doesn’t represent a reversal.

At the same time, the total compensation of employees (salaries plus social contributions) has declined by 36,7% between 2009 and 2013, which is much larger than the respective fall in the average gross earnings (23,6%) (Giannitsis & Zografakis, 2015, p. 35). At the same

time, salaries declared to the tax authorities have declined by 27.4% between 2008 and 2012, exceeding the decrease both in the GDP (19.8%) and in the total income declared to the tax authorities (22.6%) during the same period (Giannitsis & Zografakis, 2015, p. 37).

Table 5.1 Class Stratification in Greece, according to the Labour Institute of the General Confederation of Greek Workers

Social Class (%)	2006	2007	2008	2009	2010	2011	2012	2013	2014	2008-2014
Capitalist class	1.32	1.37	1.37	1.18	1	1	1.18	1,28	0.94	-0.43
Traditional petite bourgeoisie: self-employed without any employee	21.36	21.05	20.64	20.91	21.77	22.74	24.4	25.32	24.77	4.13
Middle bourgeois class	6.13	6.11	6.3	6.62	6.31	6.17	5.6	5.2	4.95	-1.35
Unpaid assistants to the traditional petit bourgeoisie and the middle bourgeois class	5.92	5.89	5.3	5.3	5.18	5.29	4.62	4.58	4.32	-0.98
Grey zone between the middle bourgeois and the capitalist class	1.43	1.38	1.43	1.37	1.18	1.13	1.12	0.99	0.73	-0.7
High ranking state bureaucracy	0.28	0.31	0.28	0.25	0.24	0.21	0.21	0.21	0.27	-0.01
New petite bourgeoisie	19.37	19.63	19.71	19.73	20.41	21.13	21.92	22.28	21.61	1.9
Working class	20.08	20.01	20.48	19.42	18.78	18.26	18.63	18.95	20.22	-0.26
Fake working class	13.46	13.21	13.96	14.83	14.75	14.25	12.86	11.6	12.92	-1.04
Grey zone between the working and the fake working class	7.93	8.39	8.17	7.87	7.89	7.74	7.13	7.17	7.07	-1.1
Lowest salaried level	2.71	2.64	2.36	2.52	2.48	2.07	2.33	2.41	2.21	-0.15

Source: *Labour Institute of the General Confederation of Greek Workers (INE-GSEE), 2014*

Developments in the class stratification

Estimations are more difficult as far as social classes are concerned, first of all because defining social classes is a complicated theoretical issue. This thesis is definitely not the place to attempt something like this. We will confine ourselves in discussing briefly the two most thorough works about the developments in the class stratification in Greece in the context of the crisis. The first one is a collective essay of the Labour Institute of the General Confederation of Greek Workers (GSEE) (Economakis, Zisimopoulos, Katsoridas, Kollias, & Kritikidis, 2015) and the second one is a study by Sakellaropoulos (Sakellaropoulos, 2014).

The Labour Institute essay is based on the distinction between three different modes of production: the hegemonic capitalist mode, simple commodity production, and a so-called hybrid mode of production. Whereas the first two modes of production are universally accepted, at least among Marxists, the third one is rather an innovation of the authors, used to describe small businesses where employees who don't own any means of production coexist with employers/owners who also have to work themselves, i.e. who are only partly exempted from the use of their own means of production. The latter are established as a distinct social class

under the name “middle bourgeois class”, while the former are also considered as a separate class called “fake working class” (Table 5.1). Unpaid family workers/assistants are often found in such businesses as well. As it is statistically impossible to discriminate between unpaid family assistants who work in traditional petit-bourgeois businesses with no employees from those who work in the small businesses of this hybrid mode of production, family assistants are also classified in a separate class.

At this point, another difficulty emerges: there is no firm statistical way to distinguish businesses with employees where the employer also works from those where he or she doesn't, but only administrates. The authors try to resolve this problem by resorting to the size of the business according to its workforce, considering conventionally that businesses with 2-5 employed belong to the hybrid mode of production. However, there is no particular reason why a business with 6 or 7 employees could not belong to the same category. Acknowledging this fact, the authors classify businesses with 6-10 employed in an intermediate category, which they call “grey zone between the hybrid and the capitalist mode of production”. They have thus no other choice but to append two more layers in the class stratification, representing the grey zones between the middle bourgeois class and the capitalist class, and between the fake working class and the working class respectively – however, they don't feel it is necessary to make the same distinction regarding family assistants.

Another specific issue in the essay is that it considers productive labour as the criterion to define the working class: workers are only those who don't own or have control over any means of production, who sell their labour force and produce surplus value. In the third volume of *Capital*, Karl Marx maintains that activities associated with the sphere of circulation, such as commerce, services etc., are not productive, but the authors evoke the formulations of Marx in the *Grundrisse* (Economakis, Zisimopoulos, Katsoridas, Kollias, & Kritikidis, 2015, p. 30), where he suggests that those activities may create surplus value. They can thus avoid excluding employees in the commerce from the working class, however, a lot of restrictions remain. Since the extraction of surplus value is an absolute requirement for belonging to the working class, no civil servant can be a worker, according to the authors of the essay, because the apparatus of the state is not an enterprise. For the same reason, it is not possible to classify chief state officials to the bourgeois class. Therefore, another two separate layers are added: the high-ranking state bureaucracy and, in the other end of the spectrum, the “lowest salaried level” of the state apparatus. Surprisingly, the authors classify all intermediate layers, i.e. the vast majority of the state apparatus, in a category of the capitalist mode of production, the new petit-bourgeois class, leaving the criterion of surplus value aside, in this case.

If the classes of the capitalist mode of production (the capitalist class, the working class, and the intermediate new bourgeois class, which includes salaried employees with no ownership of means of production who nevertheless have some control over them or over the process of production, such as foremen, supervisors, engineers, lower managers etc.) and of simple commodity production (the traditional petit-bourgeois class) are added, we end up with twelve social classes. As a consequence, the working class appears extremely underestimated in the

essay: 20.48% of the employed in 2008 and 20.22% in 2014, having fallen meanwhile to a record low of 18.26% in 2011. In the conclusion of the essay, the authors regroup all social classes into three categories: the upper classes, the middle ones, and the working and popular classes. The middle classes comprise the majority of society and are the only ones that are growing throughout the crisis: 53.38% of the employed in 2008, 56.37% in 2014, having recorded a peak of 58.38% in 2013, again.

It is not at all easy to avoid thinking that there is a political reason behind this extreme underestimation of the working class and the respective overestimation of the middle classes. Indeed, a large middle class may well serve as an excuse for both the shrinking membership of the General Confederation and its very conservative policy. But there are also serious scientific reasons to question the essay. We already referred to a few striking contradictions. The middle bourgeois class of the so-called hybrid mode of production can hardly be distinguished from the lowest layers of the bourgeois class of the capitalist mode of production (or, according to other approaches, from the upper strata of the traditional petit-bourgeois class). The size of a business might be an indication, but it offers no safe information about whether the employer is involved in the production or not. Things are even worse with the “fake working class”, who has all the characteristics of the working class, except that its employer may also work, while still extracting surplus value from the utilisation of the labour of the rest. It doesn't make sense to define a social class based on the characteristics of another social class that happens to exist in the same enterprise – even if their employer was really a hybrid, there would be nothing hybrid about the workers of a small business themselves, as this fact would not change their condition at all. In our opinion, the concept of the hybrid mode of production obscures rather than it illuminates things and should thus be abandoned. This would dispense as from the problematic “grey zone” as well. There are hybrid situations and grey zones everywhere in a class structure, anyway, but this is no reason to create special classes out of them.

To consider productive labour as a prerequisite to classify somebody in the working class is also problematic. In this respect, the argumentation of Sakellariopoulos is more convincing (Sakellariopoulos, 2014, p. 206). There is no indication that, for Marx, the purpose of making the distinction between productive and non-productive labour was to define the working class. In our view, Sakellariopoulos is right to support that certain civil servants should also be included in the working class, although they are not involved in the production of any commodity and thus don't create any surplus value, because surplus labour is still extracted from them since their salary reflects the value of their labour force (and it is not exchanged with their work) and is correlated with salaries in the private sector (Sakellariopoulos, 2014, p. 243).

Given all these defects, the essay of the Labour Institute still offers useful information. Even if middle classes are artificially inflated, it is nevertheless interesting that, in terms of employment, they have seemingly resisted the crisis better than the two basic poles of the class stratification, i.e. capitalists and the working class. It is particularly interesting that the traditional bourgeois class, which is the self-employed, constitutes the social class that has suffered the smallest reduction of all (-8.42% between 2008 and 2014) (Economakis, Zisimopoulos, Katsoridas,

Kollias, & Kritikidis, 2015, p. 181).²³ Therefore, its share among the employed of the country has risen considerably, from 20.64% in 2008 to 24.77% in 2014. Again, the peak year has been 2013, with 25.32% (Economakis, Zisimopoulos, Katsoridas, Kollias, & Kritikidis, 2015, p. 179). This finding reinforces the indications given by the examination of the development of incomes and of the professional status: it seems that the crisis has affected the ends of the social spectrum more than the middle, at least until 2013. The year 2013-2014 provides some evidence of a possible beginning of a new process of polarisation in favour of the extremes and at the expense of the centre, which is however very early to confirm.

The reduction in the number and share of employers is the most characteristic reflection of the fight among individual capitals, which is a fight to distribute the burden of destruction. As already suggested, the essay divides employers into three categories: the capitalist class, which comprises employers in businesses with 10 or more employees (and also managers and chief executives in businesses with 50 or more employees); the middle bourgeois class, referring to employers in businesses with 2-5 employed persons (including the employer); and an intermediate “grey” category where employers in businesses with 6-10 employed (including the employer) are classified. Sakellaropoulos confines the bourgeois class to the first category while classifying employers of the next two categories in the petit-bourgeois class, along with the self-employed, with the argument that in small businesses there is no expanded reproduction of capital (Sakellaropoulos, 2014, p. 227). But the business size is again an insufficient testament to whether there is simple or expanded reproduction – for example, very small but rapidly growing businesses are not a rare phenomenon. In our opinion, it would be more appropriate to consider all three categories as parts of a unique bourgeois class, making an auxiliary distinction of the upper layer which could be labeled big bourgeois or capitalist class.

However, the classification of the Labour Institute essay permits an interesting observation. During the crisis, the three categories of employers are the top three among all the social classes of the essay in terms of relative decrease. Between 2008 and 2014, capitalists have been reduced by 47.39%, the “grey zone” of employers (running businesses with 6-10 employed persons) have declined by an impressive 61.31%, while employers of small businesses, i.e. the middle bourgeois class according to the terminology of the essay, have suffered a contraction of 39.97%, which is still big but visibly less sharp than in the other two categories. In the upper two layers, it seems that capitalist competition favours bigger employers, as is the general rule anyway. However, small-scale employers, who are polarised towards the petit-bourgeois class, seem to share with the latter a somewhat better ability to maintain their numbers. In the interior of the bourgeois class, therefore, we find the inverse pattern that in the entire class stratification: strata in the middle are declining faster than the two ends of the spectrum. One could suppose that the relative resilience of the category of small employers is due to the crisis of the category of medium-sized ones, who fire a part of their employees or workers and thus demote to the

²³ It has to be noted that, in the essay, all social classes appear to have decreased very sharply, because the authors exclude the unemployed from their classification.

lower category. This may indeed be the case in several cases, however, it contradicts the general trend indicated by the fact that the numbers of the working class have declined less than the ones of the employers in all the respective categories. This reveals an increase in the average number of workers or/and employees per employer: between 2008 and 2014, the average ratio in big businesses rose from 14 to 21.5,²⁴ in medium-sized businesses from 5.7 to 9.7, and in small businesses from 2.2 to 2.7. This is evidence of a process of centralisation that escapes attention when only the general class stratification is examined. Indeed, as already mentioned, the centralisation of capital is a process that goes hand in hand with the destructive function of a capitalist crisis.

The crisis has a contradictory effect on the working class. The competition among the employers doesn't aim to eliminate the working class but their competitors. A process of class polarisation would mean an increase of the working class. However, the process of destruction means closing enterprises, which, in turn, means that workers are losing their jobs. On the other hand, the competition in the interior of the bourgeois class is combined with an even more fundamental rivalry, which is the rivalry between opposing social classes. In times of crisis, while fighting each other, capitalists try to put the burden for the crisis on the working class and thus destroy a part of it altogether. Therefore, the crisis creates both factors tending to reinforce and factors tending to diminish the numbers of the working class. As a matter of fact, regarding this issue, the conclusions of the two studies under consideration are contradictory.

A basic difference between the study of Sakellaropoulos and the Labour Institute essay is that, contrary to the latter, Sakellaropoulos estimates that the working class has grown considerably throughout the crisis while the petit-bourgeois has shrunk (both studies agree on the contraction of the bourgeois class). First of all, Sakellaropoulos gives a broader definition of the working class and thus estimates it at 49.1% in 2009 and 55.3% in 2014 (Table 5.2). He correctly avoids a distinction between workers in small and in big businesses and yet the numbers he gives for the working class exceed the sum of the working class, the "fake working class", and the intermediate zone together in the Labour Institute essay (44.65% in 2009, 42.42% in 2014). As already mentioned, Sakellaropoulos also includes a part of the employees in the public sector, in particular teachers in elementary and high schools. In our opinion, there is no reason why one could not also include other lower civil servants who carry out routine work, with no control over the state apparatus or the process of labour. It is also questionable why a certain layer of salaried employees which belong to professions classified by Sakellaropoulos in the new bourgeois class altogether (such as engineers or lawyers) could not be considered as members of the working class. In this case, the Labour Institute essay is rather correct to remark that Sakellaropoulos tends to deduce the social class from the nature of the work performed rather than from the labour relations that it is subject to. In this sense, it is probable that, even according to Sakellaropoulos, the size of the working class is, in fact,

²⁴ Let's remind that, in the case of big businesses, the denominator in the ratio includes not only employers but also managers and chief executives, and therefore it would be more accurate to speak of ratio of workers per capitalist or member of the bourgeois class. It should also be reminded that this ratio doesn't coincide with the ratio of workers/employees per business.

Table 5.2 Class Stratification in Greece, according to Sakellaropoulos

Social Class (%)	2009	2014	2009-2014
Bourgeois class	3.2	2.8	-0.4
Wealthy farmers	0.7	0.6	-0.1
Traditional petit-bourgeois class	7.3	6.9	-0.4
Middle-class farmers	1.9	1.3	-0.6
New petite bourgeoisie	29.5	25.3	-4.2
Working class	49.1	55.3	6.2
Poor farmers	7.4	7.1	-0.3

Source: Sakellaropoulos, 2014

underestimated rather than overestimated – in our opinion, we should estimate it closer to 60% of the society, although going into a more thorough calculation is beyond the intentions of the present study, and besides it is not decisive for our conclusions at this point. Let’s also note that the fact that Sakellaropoulos considers self-employed scientists (as well as practically all scientists, apart from teachers) as members of the new petit-bourgeois class and not of the traditional petit-bourgeois class is the main reason why the size of the latter class appears very small in his estimations.²⁵

Sakellaropoulos’s broader definition could explain the higher proportion of the working class but it couldn’t fully explain the sharp rise of this proportion during the crisis. The main reason for this apparent rise is probably that Sakellaropoulos, unlike the authors of the Labour Institute essay, includes the unemployed in his class stratification. This seems a fair choice. The unemployed are not for the moment subject to any labour relations but, nevertheless, social classes are categories with some endurance. It would be weird to suggest that workers that are fired, who constitute the Marxian “reserve industrial army of labour”, are no longer members of the working class only because they are fired. Therefore, if the share of the working class among the unemployed is considerably higher than its share among the employed, and given that unemployment has been increasing greatly year by year throughout the period 2009-2014, the rise in the proportion of the working class can be explained indeed.

The problem, though, is that it is much more difficult to classify the unemployed than the employed. Regarding this issue, Sakellaropoulos makes a very questionable choice: he classifies all the unemployed with no university degree to the working class and all those with a university degree to the new bourgeois class (Sakellaropoulos, 2014, p. 307). There is nothing prohibiting a person with no degree to run a business, and Sakellaropoulos does recognise that his criterion is not absolute, but he deems exceptions to the rule statistically negligible. But, in this way, all other social classes (the bourgeois class, the traditional petit-bourgeoisie, farmers of all levels) disappear among the unemployed. According to his criterion, the working

²⁵ Another reason is that Sakellaropoulos classifies farmers separately, into three categories, a rich, a poor and an intermediate one.

class should represent 75.8% of the unemployed at the beginning of 2009 and 80.01% in the fourth quarter of 2014.²⁶ In the same years, the proportion of former salaried employees among the unemployed with some previous activity was 93.47% and 87.38% respectively. Given that the working class is the majority of the salaried employees, the trend here is the reverse of the one appearing in the estimations of Sakellaropoulos. Besides, according to the author as well as to the Labour Institute, the new petit-bourgeois class represents a remarkable 1/3 of the salaried employees approximately, which would almost disappear if we accepted that, in 2014, the working class represented an overwhelming 91.5% of the former salaried employees.

In our opinion, in fact, the previous employment status would be more adequate a criterion to determine social classes among the unemployed, even if it wouldn't be applicable to the young unemployed with no previous occupation, where some other statistical technique should be deployed. Again, such an elaboration is neither possible nor absolutely necessary here. However, since the share of former salaried employees among the unemployed is much bigger than the share of currently active salaried employees among the employed, it is very reasonable to suppose that the working class represents a larger proportion of the unemployed than of the employed. This means that Sakellaropoulos is probably right to assume an increase of the working class, even if this increase is milder than he estimates, and even if the Labour Institute essay is right to maintain a small reduction of the share of workers among the employed.

According to the above reasoning, the picture that should be closer to reality is that, in the years of the crisis:

- a. The bourgeois class has shrunk, reflecting the destructive objective function of the crisis and a process of capital centralisation
- b. The petit-bourgeois class has grown among the employed population, because of the rise in necessity-driven small-scale entrepreneurship, which means without enjoying any particular economic privilege
- c. The working class has shrunk mildly among the employed population, due to business closures, layoffs etc., but grown among the entire population.

This reflects a situation where a future process of polarisation is nurtured beyond the current situation of what we could call counter-polarisation, in the sense of a relatively more effective resistance of the middle in relation with the two ends of the social spectrum. In other words, a new reversal is incubating under the present social conditions of the crisis, which could be also reflected in a future reversal of spatial phenomena developed during the crisis. An indication for that is a recorded tendency, ever rather weak and unstable, of the share of the self-employed to decrease slowly in favour of the shares of both the employers and the employees since 2014. However, since the crisis is far from over, this tendency can only be restricted for the time being. However, based on a theoretical understanding of the objective function of capitalist crises, it is reasonable to expect that a post-crisis period of recovery would mean a relative decline for the petit-bourgeois strata, despite their gains in absolute terms.

²⁶ Hellenic Statistical Authority (ELSTAT) data, personal elaboration.

Conclusions

The Greek crisis is not a phenomenon that should be attributed to the specificities of the country and its economy. It is a particularly sharp manifestation of the global capitalist crisis, due to various particular features and circumstances in Greece. What features and circumstances have been decisive, though, is a subject of controversy.

Neither corruption nor the level of the public and/or the private debt in Greece before the crisis alone can explain its particular intensity. On the other hand, attempts to attribute the crisis to high wages, few working hours, low retirement ages and/or a disproportionate public sector are tendentious and unfounded. To blame foreign speculation or the malice of other countries would not provide any meaningful conclusion either. As explained in this chapter, the reason for the particular intensity of the crisis in Greece was an over-ambitious strategy for capitalist development and expansion, based on the euro currency, the infiltration into the Balkan, the Olympic Games of 2004 and the subsidisation of private profits by the state. This strategy was effective in securing profitability before the crisis but fell apart after its outbreak. The public debt skyrocketed because of the crisis and the sinking rates of profit, and not vice versa.

Despite their heavy social repercussions, the massive austerity measures introduced by the Greek governments and by international institutions (IMF, EU, ECB) since 2010 did not resolve the problem of Greek capitalism, neither have they rendered the Greek government debt sustainable. In the throes of an international situation marked by the incapability to sustainably escape economic depression, the country has entered a prolonged period of sharp crisis, political turbulence, and social struggles, which transformed, and was still transforming as these lines were written, the socio-political landscape in the country.

Since the crisis constitutes a process of destruction of capitals and productive forces, it affects first and foremost the two ends of the socio-economic spectrum, the capitalist class and the working class, instead of the middle strata, which tend to be less directly involved in large-scale capitalist production. This is empirically confirmed by the examination of the evolution of incomes, the professional status among the employed population, and the class stratification within the Greek society. Despite all theoretical and statistical difficulties for defining social classes, there is evidence that, under the conditions of the crisis, the bourgeois class has shrunk numerically, the petit-bourgeois class has grown, and the working class has declined among the employed population but increased among the total population. In the interior of the bourgeois class, there is seemingly a reverse process, with the strata in the middle declining faster than the two ends of the spectrum, which suggests a process of capital centralisation. In general, both our theoretical approach of the crisis and certain empirical findings suggest that the current situation of social counter-polarisation incubates a future process of polarisation anew. This particular situation should be reflected in space and urbanisation too, although there is no automatic way to determine the mechanisms of this process and the spatial patterns it will give rise to. This is the question to be tackled in the second part of this study.

CHAPTER 6

The historical background of urbanisation in Greece

Where should Greece be classified?

In the previous chapter, it has been argued that the crisis in Greece has been an extremely sharp manifestation of the global capitalist crisis in a country where the ruling class had been following an overambitious strategy of capitalist development and expansion, which secured remarkable profits before the crisis but proved particularly vulnerable to the crisis afterwards. The previous analysis already suggests that the case of Greece should be examined within the framework of the developed capitalist countries and not of the so-called underdeveloped, less developed, or dependent countries, as some suggest.

Of course, such classifications constitute a serious and complicated theoretical issue, and it is not our intention here to put theories about imperialism, underdevelopment etc. under scrutiny. However, it is necessary to take a position about the country under examination because this will also determine whether it is appropriate to associate the evolution of urbanisation in Greece with the respective evolution in the developed capitalist countries or not.

Since the outbreak of the crisis and the imposition of the IMF, ECB, and EU programmes, a discourse presenting Greece as turning into a colony of Europe (or of Germany particularly) or shifting to the Third World has developed largely. But, in fact, the widespread idea that Greece is a dependent country is much older. This idea reflects the hegemonic presence of foreign capitals and states – for the most part, Britain from the creation of the Greek state until World War II and the USA after that - in the economic and in the political history of the country respectively. In presenting the country as poor and underdeveloped, the right-wing parties ruling during most of its history have found an excuse for refraining from any serious obligation of welfare measures and benefits towards the working class and most of the population, who were poor indeed. For a large part of the left, on the other hand, to speak of a dependent country has been traditionally a way to denounce the collaboration of the dominant class with the leading imperialist countries, who, besides, have assisted the right-wing to defeat the left in the Greek civil war (1946-1949) and were afterwards involved in the military dictatorship of the period 1967-1974. This situation created the paradox of a left that, while starting from the division of society into opposing social classes, called for national unity and fought in the name of democracy, rather than of socialism or communism. Simultaneously, the dominant left accused the post-

war right of “halting any attempt for economic, political and social renewal, any modernisation of the life of the country” (Svoronos, 1994, p. 147).¹ It is maybe not a coincidence that the most recent modernisation process of Greek capitalism, initiated in the 1980s, was performed under the leadership of a theorist of dependency, the social-democrat Andreas Papandreou.

However, the political defects of the perception of Greece as a dependent country are not the subject here. There are several factual objections to the idea too. Greece is recognized as a country of the capitalist core by all relevant international institutions and is included in the first level according to their classifications: it is a high-income country according to the World Bank, a developed country according to the United Nations, and an advanced economy according to the IMF. It is also a member of the OECD, of the EU, and of NATO, although it is not a member of the so-called Paris Club, the G-8, or the G-20. Despite the specificities of its economic and production structure as well as the obvious weaknesses that the crisis has revealed beyond any doubt, Greece can be classified neither as a Third World country (a “Least Developed Country”, according to the politically correct term of the UN) nor to the categories of Developing or Newly Industrialised countries. Indeed, we shall see that both the general economic development and the development of urbanisation (which is of our special interest) resemble the levels, tendencies, and patterns of a developed country better than the ones of a middle or low-income country.

Moreover, Greece has never literally been a colony or semi-colony. The foundation of the Greek state in 1830 reflected an already developed Greek bourgeois class that played a dominant role in commercial and shipping activities in the interior of the Ottoman Empire but also outside it. The capitalist mode of production has been hegemonic quite early. Of course, there were specificities about that Greek bourgeois class, which was the intermediary in the commerce between Western and Central Europe, on one hand, and the Eastern Mediterranean, on the other, and was scattered around in several countries² – in fact, the biggest, wealthiest, and most modernised part of the Greek bourgeois class remained outside of the Greek state at least until the last 30 years of the 19th century (Mantouvalou, 2007, p. 57), and it took much effort and tensions to gradually introduce it in the Greek territory (Tsoulfidis, 2014, p. 15).³

Domestic capital accumulation has been historically slow and relatively weak, and the economy has been outward-looking and largely rural at least until the early 1920s. However, a first partial turn to industrial capitalism in the period 1870-1908 (Milios, pp. 177-182) and,

1 In 1947, amid the Civil War, Dimitris Batsis, a member of the Communist Party, wrote an influential book, where he argued that Greece fulfilled all the requirements for a multi-faceted industrial development (Batsis, 1947). The conclusions of this book were in sharp contrast with the well-known Varvaessos report of 1952, at the request of the Greek government of the time. Varvaessos, a former governor of the Bank of Greece and a minister in several previous governments, concluded that Greece would remain a poor country, where industrial development was impossible (Varvaessos, 1952). The Varvaessos report was accused by the left for reflecting the views of Paul Porter, head of the American Economic Mission to Greece after World War II, and it was also criticised harshly by non-Communist, bourgeois economists, including Xenophon Zolotas, who had served as a joint governor of the Bank of Greece along with Varvaessos for one year (afterwards, Zolotas served again as the governor of the Bank of Greece for many years).

2 In his groundbreaking research, based on French archives, Maximos highlights the processes that gave birth to Greek capitalism in the 18th century (Maximos, 1973).

3 For further detail on this topic, see Vergopoulos (1978).

afterwards, two periods of rapid economic growth in the 20th century, i.e. the period of industrialisation in the 1920s and the “economic miracle” of the late 1950s and early 1960s, have gradually made the country part of the so-called First World or, according to another terminology, of the imperialist core. There were serious setbacks in this process, a major one being the extended destruction that the productive base underwent during World War II and the civil war – however, the Greek bourgeois class was compensated for these losses by getting admitted into the western camp during the Cold War and receiving financial support (the Marshall Plan) and protection by superior imperialist countries, above all the USA. Throughout its history, the Greek bourgeois class had developed its own imperialist ambitions and activities in the Eastern Mediterranean and Europe, from the Balkan Wars (1912-1913) and the Greco-Turkish War of 1919-1922, to the already mentioned economic and financial expansion of the 1990s and 2000s.

According to the approach adopted here, therefore, Greece should be viewed as a country of the capitalist core, although not one among the leading powers. Greece is more developed than the big majority of the countries worldwide, but it is still nothing to compare with the top capitalist countries. It could be described as “the periphery of the core” or as a “weak link of the imperialist chain”. As already argued, this specific position contributed to an extremely hard manifestation of the global capitalist crisis in the country. The numerous proclamations of systemic economists, policymakers, and technocrats for a forthcoming alignment of Greece with the most developed capitalist countries have been bitterly denied (or, if you like, ridiculed). Nevertheless, despite the undeniable fact that the international position and impact of Greek capitalism has been demoting recently, due to this extreme intensity of the crisis in the country, its basic structure did not, and could not, change fundamentally overnight.

A peripheral or semi-peripheral pattern of urbanisation?

In correspondence with the dominant ideas about the position and role of the country, its urbanisation patterns are explained usually as the expression of an underdeveloped or intermediate economy and social structure, in terms of a distinction between the North and the South or between the core and the periphery. Most contemporary theorists realise that the gap between Greece and the Third World, both in their economic fundamentals and in urbanisation rates, is far too big to ignore. Therefore, they tend to classify Greece in the intermediate category of “semi-periphery” (Leontidou, 1990, p. 30),⁴ which combines features of both developed and underdeveloped countries.

Among radical and critical geographers, this intermediate classification is often combined with an ambivalence towards the specificity of the Greek case. On one hand, it is correctly indicated that the specific spatial features in Greece, such as small family ownership, are not traditional or pre-capitalist remainders, let alone anti-capitalist elements; on the contrary, they are organic ingredients of a specific historical process of transition to the capitalist mode of

4 According to Leontidou, Greece upgraded to the semi-periphery after World War II, having been a peripheral country before that.

production and a respective specific present-day capitalist structure (Leontidou, 1990, p. 5; Hadjimichalis, 2014, p. 71). Therefore, they will persist. Since they represent contemporary capitalism no less than the characteristics of the developed countries, those features couldn't and shouldn't be idealised. On the other hand, however, other and, sometimes, the very same authors often tend, if not to idealise, at least to consider those "semi-peripheral" features as socially progressive: "Mediterranean labouring people have their own ways of opposing capitalism and confronting poverty and exploitation" (Leontidou, 1990, p. 2).⁵ Hadjimichalis fairly criticises romantic support to small private ownership and "micro-dispossession of land" (Hadjimichalis, 2014, p. 130) – and yet he shows a similar ambivalence when he praises the "radical and particularly flexible" societies of Southern Europe (Hadjimichalis, 2016, p. 159).

Apart from the political issues that such an ambivalence raises, it is probable that it also obscures the actual situation, establishing inappropriate comparisons with other countries. There are indeed certain similarities between Greece and other countries in Southern Europe and the Eastern Mediterranean, but it is doubted if such similarities can also be established with countries that are considered semi-peripheral or dependent elsewhere.

In fact, comparisons are usually made with Latin American countries and cities, which is unsurprising for authors who draw from dependency theories, since those latter theories originally developed in studies about Latin America. In her influential book *The Mediterranean city in transition*, Leontidou detects strong structural similarities between Southern European cities (and Athens in particular) and Latin American cities, on the basis of an "inverse-Burgess" pattern, with the wealthier strata remaining in the city centre and the lower and lowest ones being pushed towards the fringe. However, the author already highlights substantial differences in the processes that created this structure in each case: in Latin America, it was a "dual system" of landed property, which granted private property to European settlers within the cities while maintaining a "native land right" in the rural areas; in Mediterranean cities, it was rather an inflow of internal migrants that had no access to an already dense city-centre. In the former case, the working class and the sub-proletariat have built their settlements in the urban periphery by occupying lands; in the latter, plots in similar settlements were usually legally purchased, although building on them was usually illegal (Leontidou, 1990, pp. 250-251). Besides, the author remarks that the high concentration of working-class inhabitants, rather than of a marginal sub-proletariat, as well as the considerably lower endemic unemployment rates, distinguish the case of Athens from the Third-World type or urbanisation by attracting "masses" (Leontidou, 1990, p. 160).

Those and other differences mentioned by the author are already important. However, there are even deeper divergences. For example, in his critique of the book of Mouzelis, where the author tries to draw a parallel between Greece, Chile, and Argentina (Mouzelis, 1978), Milios has pointed out that, in almost all the territory of the first Greek state of 1830, pre-capitalist social

5 Leontidou also favourably cites Allum's view of a southern "social formation based on feeling, personal relationships and the sharing of private lives" with a northern one, "founded on interest, impersonal relationships and the sharing of external life" (Allum, 1973, p. 5, cited in Leontidou, 1990, p. 3). See also Leontidou (2014).

relations had been already substituted by relations of simple commodity production, which, in turn, were already subject to the dominant commercial capital (Milios, 1993). Therefore, Greece did never know anything like the productive and social relations prevailing in the countryside in Latin America.

It is not our intention to examine this issue more thoroughly here. We will just add that, in the descriptions of underdeveloped and dependent “satellite” countries that Andre Gunder Frank made in his groundbreaking *The Development of Underdevelopment*, one can hardly see Greece. It is sufficient to mention one key hypothesis in Frank’s analysis: that “satellites experience their greatest economic development and especially their most classically capitalist industrial development if and when their ties to their metropolis are weakened” (Frank, 1969, p. 10). As a sequence, “when the metropolis recovers from its crisis and re-establishes that trade and investment ties which fully incorporate the satellite into the system ... the previous development and industrialisation of these regions is choked of...” (Frank, 1969, p. 11). It has been already stressed that the ambitious and, for some years, successful development strategy of Greek capitalism in the period before the crisis was based exactly on a purposeful strengthening of the ties with the “metropolis”, that is the most developed core of the EU. Moreover, in one of the few studies aiming to monitor long waves in the economic development of Greece, it has been demonstrated that the Greek economy has been responding to the economic tendencies among developed capitalist economies, and thus to global booms and crises, already since the 19th century (Tsoulfidis, 2001, p. 330).⁶ Even if one doubts the synchronisation of the Greek economy with the previous long waves of capitalist development (as, for example, the Greek capitalism has been able to exploit the mid-war crisis to improve its position, despite a default of the government on its loans in 1932), it is difficult to deny its modernisation after World War II and its subsequent participation in the depressive long wave recorded in the developed economies since the 1970s (Mavroudeas, 2010, p. 94). It is evident that this picture contrasts the hypothesis of Frank.

It is an interesting question whether these observations reveal deficiencies of the Underdevelopment/Dependency theory altogether. Nonetheless, correct or not in other cases, this theory doesn’t seem suitable for describing Greece. According to the approach adopted here, even a “semi-peripheral” or “intermediate” category is not theoretically helpful in our case, as it groups the country under examination with countries of a completely different history, socio-economic structure, and place in the international division of labour.

If it was necessary to make these brief clarifications, it was because interpretations of the position of Greece in the international division of labour and in the various typologies of countries according to the level of their capitalist development also affects the way that urbanisation and its historical evolution are perceived. This issue is essential for proceeding with our hypothesis since both the theory of long waves in capitalist development and the assumptions regarding

6 The turn to industrial capitalism in the last decades of the 19th, which was indicated by Milios and mentioned above in this thesis, could possibly be the starting point of this synchronisation with the long waves in capitalist development.

the historical trajectory of urbanisation mentioned in this thesis basically refer to developed countries. The distinction between developed and non-developed capitalist countries is, in fact, more important for examining long waves in urbanisation than in the economy. In the second instance, to consider tendencies observed in the developed countries as concerning the global capitalist economy is justified since a few countries of the top level of economic development account for an overwhelming part of the global GDP. In the case of urbanisation, though, generalisations across the different categories of countries are much more difficult, if not impossible. This is because, as already mentioned in passing, while non-developed countries represent only a negligible portion of the global GDP, the same is not true about their share in the global population or in the global urban population particularly. But is also due to additional reasons: the different (historical and present) social and natural conditions, the inertia of urban forms and structures and, mainly, the fact that the developed and the Third World countries do not represent subsequent steps on the staircase of a hypothetic universal evolution, but constitute interdependent categories following divergent trajectories within the framework of a determining mode of production and socio-economic system, which is capitalism. Those different conditions, historical levels of urban accumulation, paths of integration in capitalism, and positions in the international division of labour give rise to different types of urbanisation.

The specificities, differences and comparative disadvantages that the above and other authors indicate about the case of Greece exist and should be taken under consideration seriously, but their meaning can be understood only in the context of the developed core of the capitalist world. Therefore, to include Greece in a category of “weak links of the imperialist chain” seems more appropriate from the viewpoint of the sciences of space too. We shall later see that an examination of the evolution of both the GDP and the urbanisation rates provides empirical data in support of this position. At this point, let’s try to sum up some of the specificities in the Greek case.

Historical and present specificities

According to a study by Allen et al., housing systems in Southern Europe are characterised by four distinctive aspects: “high rates of home-ownership coupled with sparse social rented housing; high level and significance of secondary housing; relationship between access to housing and family structures; role of self-promotion and self-provision in supplying housing” (Allen, Barlow, Leal, Maloutas, & Padovani, 2004, p. 190). Of course, those aspects reflect certain historical processes and features and they are, in turn, reflected in broader spatial structures.

Indeed, we can find all those features in the case of Greece. Home-ownership/owner-occupancy rates have been traditionally higher than in Northern or Western Europe, although lower than in Eastern Europe. Another interesting fact is that, unlike Northern and Western Europe, in Greece, the percentage of home-ownership is approximately the same between the working and the middle class (Emmanuel D., 2014, p. 169). Historically, there have been ups and downs in that: according to Dimitris Emmanuel, in the 1950s, the working class had a higher rate of home-ownership than the middle class; from the mid-1970s to the late 1980s, the

respective rates where more or less the same; afterwards, the middle class had the lead until the early 2000s, when easy borrowing bridged the gap again, despite leaving the general rate, which had risen in the 1990s, rather unaffected (Emmanuel D. , 2014, p. 171). As a consequence, the rate of home-ownership in big cities tends to follow a concentric pattern, increasing as one moves away from the city centre, and not the class division of space, which in the three biggest cities of the country (Athens, Thessaloniki and Patras) follows a pattern of sectors instead of circles (Maloutas, 2000, p. 67). Of course, the rate is bigger in the countryside than in the cities.

In the specific context of Greece, the high rate of home-ownership is an indirect indication of the relatively low level of capital concentration and centralisation, which is more clearly reflected in the high percentage of self-employment and small businesses in comparison with the average in developed countries. It is also an expression of a relatively high proportion of small immovable property. Inequality in property, although high, is lower than the average in developed countries: in 2012, the poorest 40% (according to their income) owned 25% of the total immovable property while earning 11.6% of the total income in the country; the respective ratios for the OECD average were 3% of the total property and 20% of the total income (Giannitsis & Zografakis, 2016, p. 151). The diffusion of small-scale property applies not only to housing but also to rural property: 25% of the farmers in Greece own less than 5 hectares while 17% own more than 50 hectares; at the same time, the EU average is 7% with less than 5 and 66% with more than 50 hectares (Hadjimichalis, 2014, p. 65).

There are several historical reasons for this high proportion of small-scale immovable property. In rural areas, one can evoke factors like the existence of the “national estates”, that is former ottoman properties which, for various reasons, were not sold to big land-owners after the liberation but remained in the hands of the Greek State and were partially sold out, distributed, or intentionally left to the usurpation of small or relatively small owners from time to time (Hadjimichalis, 2014, p. 64); the land reforms and re-parcelling that various governments have implemented from time to time, with the prominent example of the reform of the Venizelos government in the early 1920s (Mantouvalou, 2007, pp. 70-71);⁷ the distribution of lands to the refugees of the Greco-Turkish War of 1922; the splintering of larger properties due to a tradition of splitting one’s property among all the heirs etc.

In urban areas, though, there are additional factors, related to the specific system of housing that has developed over time. The housing problem, created by a process of generally quick urbanisation until the 1970s and aggravated, from time to time, due to specific historical circumstances (refugees of the Greco-Turkish War in the 1920s; the massive rural exodus due to the destruction of the countryside in the Civil War and the persecutions against communists), was usually addressed in an unplanned manner and by resorting to the private initiative. Social housing has always been extremely underdeveloped indeed. Therefore, the incoming population in large cities, most of all in Athens, usually obtained their residence in one of the following two ways: either in the suburbs, by building without any permit on plots that they bought at relatively low prices (thus the “role of self-provision in supplying housing”);

⁷ For further analysis on this issue see Vergopoulos (1975).

or in central residential areas, by renting or, more often, buying an apartment in a multi-family multi-storey residential dwelling that, as a rule, was built according to a particular system called “antiparohi”.

In general, the working class and the popular strata tended towards the first solution while middle and upper classes were oriented to the second, at least in the beginning. In the largest cities, the historical background has been indeed an inverse-Burgess pattern. In the 1920s, refugee settlements were installed far from the city centres and popular illegal residences developed around them. Similar illegal working-class residential areas were soon created around small or large industrial units. In Athens, such districts developed principally in the western sector, and something similar happened in Thessaloniki. Just like it was the case in most large cities in Southern Europe, as already mentioned, lower class illegal settlements were in fact only semi-illegal, in the sense that they used to develop with no approved city plans and no building permits but, nevertheless, on lands that were legally purchased and not occupied. Popular housing was therefore always commercialised. As a rule, those areas were legalised and appended to the city plans a few years after their creation. This system resulted in a chaotic expansion of urban areas but it was, all the same, perpetuated for decades because it offered a double advantage to the governments: it allowed them to refrain from any obligation to provide social housing; and it helped them attract electoral support, since the legalisation of previously illegal areas was a promise that could be fulfilled at no cost.

The system called “antiparohi” contributed to the diffusion of small-scale private immovable property in a different way. The system is based on the exchange of an existing plot or small building (of one or two storeys) with partial ownership over a new multi-storey building. The owner of such a plot or building agrees to give it to a contractor, who undertakes the construction of a mixed-use multi-storey building with separately owned apartments (like a condominium). The owner is not remunerated in cash but takes in return one or more apartments and/or shops on the ground floor after the completion of the building. This arrangement benefits small-scale contractors, as it reduces radically the required initial capital to be invested in a construction. The “antiparohi” system has contributed greatly to the prevailing situation in the Greek city centres, which is characterised by densely built relatively high buildings of a small area, attached to each other so as to form continuous fronts along the perimeter of the blocks, leaving very limited green or open spaces.

As a matter of fact, the distinction between the working-class suburbs in the periphery and the middle and upper classes districts in the city centre was not that strict and, besides, evolved over time. The suburban phenomenon in Greece was initiated by the working class and the popular strata instead of the bourgeois class and the wealthy, as happened in Northern American cities, for example. However, the upper classes started creating their own garden cities already in the mid-war period. The popular semi-illegal suburbanisation phenomenon peaked in the 1950s and 1960s but it was afterwards succeeded by a partial turn of those social strata to the city centres, which was assisted by the densification of centres by virtue of the “antiparohi” system as well as by the stricter controls gradually imposed on building

without permits in the urban periphery. As a reaction, upper classes started abandoning the city centres by the mid-1970s and moving to growing rich suburbs (Maloutas, 2000, p. 47). A gradual over-densification of the city centres resulted in degradation and, subsequently, depopulation processes (Leontidou, 1990, p. 211; Hadjimichalis, 2014, p. 215), already evident in the 1980s, and resulted in new suburbanisation tendencies, now pertaining to almost all social classes.

Secondary housing is also quite common in the country, and there are specific reasons for that as well. A major one is the relatively recent historical process of rapid urbanisation, which means that most inhabitants of large urban areas have a rural background that is rarely more than one or two generations old. Thanks to a dominant family structure that fosters strong family bonds, most city dwellers tend to maintain links with their place of origin, including preserving their family properties and homes as well as performing seasonal activities there, most usually related with agriculture or tourism. Moreover, a housing system and a political tradition that encouraged illegal building affected not only the sprawling suburbs where the working class dwelled but also areas by the coasts, on islands, in landscapes of natural beauty etc., where holiday houses were built with no permit. The working-class suburbs and the areas of holiday homes have been phenomena and spatial structures with a completely different social meaning, however, they were both favoured by the same type of (de)regulation. In fact, though, holiday housing was not so much the outcome of a lack of state control as of an active encouragement by the legislation of the state itself, at some point: its rapid expansion followed a law introduced by the military dictatorship (1967-1974), which allowed the erection of ready-made houses in small parcels of agricultural land thus promoting a new type of urban sprawl (Leontidou, 1990, p. 211; Hadjimichalis, 2014, p. 73).

The importance and strength of the family, as an institution, is not only reflected in the bonds of city dwellers with their place of origin in the countryside but also in the way that housing is organised and, what's more, financed. In fact, the family is an instrumental ingredient of the above-mentioned systems of housing production and acquisition. Traditionally, home-ownership was funded less through borrowing and more by private savings and, very often, family assistance. It has been estimated that, in the late 1980s, nearly 50% of the owner-occupiers have acquired their homes from their family, one way or another (inheritance, family gifts, cash contribution, free use) (Emmanuel D. , 1994, p. 179). Of course, bank loans for housing have risen considerably in the following two decades; however, they never reached the same levels as in Western Europe or in North America.

As resulting from the above, the description of Allen applies in the case of Greece. Again, urbanists and geographers, including radical ones, are often ambivalent towards the specificities described in brief. It is contended that small-scale property and the related features favour vote-catching and governmental policies to incorporate the masses and appease the dissatisfaction of the oppressed, as well as that they inhibit urban and regional planning (Mantouvalou, 2007, p. 66). However, other aspects of the same spatial features are sometimes considered progressive. The fragmentation of the immovable property is often associated with a mix of

land uses in the cities, which also implies a social mix, thus not allowing a social segregation as intense as the one observed in many other developed countries. It has been contended that the prevailing model of urban development, despite all its defects, resists strict zoning, which proved to be a disaster in Western and Northern cities, that it favours social cohesion and prevents the creation of ghettos, even that it helps resist crises better (Mavridou, 2004) - although this latter assessment is being sorely tested by the extremely hard manifestation of the 2008 crisis in the country. In a rather extreme approach, the Hellenic Participation in the 8th Architecture Biennale of Venice praised the unplanned, spontaneous, and private initiative-based way that Athens develops for the new urban forms it brings to the forefront (SADAS-PEA, 2002).

It is, of course, true that a large part of the usual critique to the lack of planning in spatial development in the country originates from a technocratic viewpoint, envisioning a capitalist rationalisation and modernisation of the urban and regional space. To a certain extent, this is the ideological equivalent of an attempted urban restructuring that, according to Leontidou, aimed to restore the control of the state over the “popular control of peripheral urban land” (Leontidou, 1990, p. 211; Hadjimichalis, 2014, p. 6). On the other hand, if a critique in the name of rational planning is an invitation to a technocratic restructuring, the approach in the 8th Biennale may well constitute a tribute to the unregulated liberal free market. A critical distance from an imperative demand for order is justified, provided it doesn’t lead to an idealisation of traditions that are based on commercialised processes and private interests, representing a different, but equally capitalist, model. In this sense, other authors are correct to underline the poor living conditions that standard commercial multi-storey buildings provide and the cultural retrogression and destruction of the historical memory that they provoke (Karidis, 1991, p. 331); the individualisation of the building unit, which corresponds to the individualisation of urban dwellers (Karidis, 1991, p. 336); or the scandalous unaccountability of contractors (Sarigiannis, 2000, p. 156).

Besides, some of the alleged advantages of the “southern” spatial model are in fact questionable. It has been contended that, despite a relatively limited socio-spatial polarisation, the intensity of social segregation in Athens doesn’t fall short of most European megacities (Maloutas, 2000, p. 47). In general, it has been highlighted that the mainstream approach, where spatial segregation tends to be considered the measure of social segregation, is not appropriate in cases such as Athens, where a considerable level of social segregation coexists with rather mixed neighbourhoods (Maloutas, 2018, p. 70). At the same time, the absence of strict administrative zoning in land uses doesn’t at all exclude a real-life zoning, imposed by the rules of free market (Karidis, 1991, p. 337). The specific features of the Greek version of capitalist development and of its corresponding spatial patterns should be neither demonised nor romanticised; they should be understood.

Apart from the above, there are certain specific features in the broader geographical structure of the country that also interact with urbanisation across its territory. Among them, one should mention the following:

- A disproportionate size and population of the Capital city, Athens, which accounts for more than 35% of the total population of the country and constitutes the only real metropolis within the Greek geographical space, although we shall see that, in recent years, it has not been growing anymore.
- The heavy dependence on road transports, as the railway network is seriously underdeveloped – actually, the active network is smaller today than it was 100 years ago.
- The very unequal distribution of the transport infrastructure, which is situated almost exclusively along the eastern coastline of the mainland. Its spinal cord has historically followed the axis Athens-Thessaloniki, extending as far as Patras to the South-West and to the borders with Turkey to the North-East. This axis coincides with a “fertile crescent”, afterwards extended to a “fertile S”, in terms of economic development and urbanisation. Only very recently have modern highways been constructed in Western Greece, which, nevertheless, still lacks any railway.
- A large proportion of tourism and maritime activities and a development pattern following the coastlines, which has important spatial repercussions.
- A clear economic and social advantage of coastal zones over the inland and, mainly, mountainous areas, and of the eastern over the western part of the mainland, which is divided by a mountain range running diagonally across the country, from the North-West to the South-East. The previously mentioned factors contribute to those relative advantages.
- The shift of most islands from underdeveloped and depopulating regions in the early and mid-20th century to growing areas in the last decades, thanks to tourism.

Long-waves in the historical development of urbanisation in Greece

We have already indicated that, apparently, the Greek economy has been responding to the global long waves of capitalist development for over one century. The question we must deal with at this point, according to our initial hypotheses, is whether long-wave patterns can be also detected in urbanisation throughout the history of the Greek state. Of course, there is a very broad range of indices and measurements that could be used to monitor a process as difficult to define as urbanisation. We have chosen to study two basic indices: the average annual urbanisation rate (rate of growth of the share of the urban population among the national permanent population) between two consecutive general censuses, and the gap between the average annual population growth rate of the urban area of Athens⁸ and the average national population growth rate, between two consecutive general censuses as well.

In the first instance, we will obtain a crude measurement of urbanisation in its most

8 According to the current administrative division of the country, the Athens urban area comprises the peripheral units of Central Athens, North Athens, Western Athens, South Athens and Piraeus. Before 1907, it is defined as the combination of Athens, Piraeus, and Kallithea.

conventional sense by monitoring the evolution of urban settlements. Of course, different settlements will respond differently to economic trends and sociopolitical developments according to their functional specialisation, their location, their access to transport networks etc., and thus urbanisation is never a uniform process; nevertheless, general urbanisation rates, no matter how abstract, should mean something about the dynamic of the urban phenomenon. Traditionally, the threshold for characterizing a settlement as urban was 10,000 inhabitants. Since the 2001 census, when the semi-urban statistical category (2,000 - 10,000 inhabitants) was abolished, the threshold has gone down to 2,000. It has been already pointed out that this minimum conventional criterion doesn't suffice to define an urban settlement; however, it is still statistically important: since the same reservation applies to all censuses, it shouldn't affect the conclusions drawn by the examination of the historical development of their findings. It is true that the semi-urban statistical category lacked any determinate geographical content (Kayser, 1968, pp. 12,22-23): whereas all settlements with a population above 10,000 inhabitants in Greece have always been indisputably urban, and all settlements with less than 2,000 inhabitants are definitely rural, the intermediate category comprises both large villages and small towns, according to their spatial structure, morphological features, facilities, administrative role, economic activities, and political and cultural characteristics. Therefore, after the abolition of the semi-urban category, some settlements that are, in fact, large villages have crossed over to the category of urban settlements. However, this is insignificant if the new and the old urban category (above 2,000 and above 10,000 inhabitants) generally move in the same direction.

In the second case, we can isolate the trajectory of the top level of urbanisation within the geographical territory of Greece, which is the growth of the Capital city (the Athens urban area). This is of particular importance, as Athens has constituted the undisputed vanguard of urbanisation processes for almost all of the two-century history of the Greek State. By monitoring the gap between the population growth rate of Athens and the national population growth instead of the growth rate of the Capital city alone, we have removed the secular trend of metropolisation and thus ended up with a line oscillating around a horizontal axis. This is something legitimate – Kondratieff himself has also used mathematical techniques to isolate waves from secular trends (that is, to monitor trend deviations) in certain series.

For our purpose, we have used the official data of the Hellenic Statistical Authority (ELSTAT), taking also into account the elaborations of Leontidou (1990), Kotzamanis & Androulaki (2009), and Tragaki, Bagavos, & Dounas (2015). In both cases, we have used the average annual change between two consecutive general population censuses. Regarding the comparative development of the Athens urban area, in particular, a special adjustment of the numbers was needed, because of three facts:

- The current boundaries of Greece were not set until 1948, which means that, for 120 years, new areas were annexed from time to time, thus abruptly raising the national population. In four general censuses, a large part of the recorded population growth is due to such annexations (the Ionian islands appear in a census for the first time in

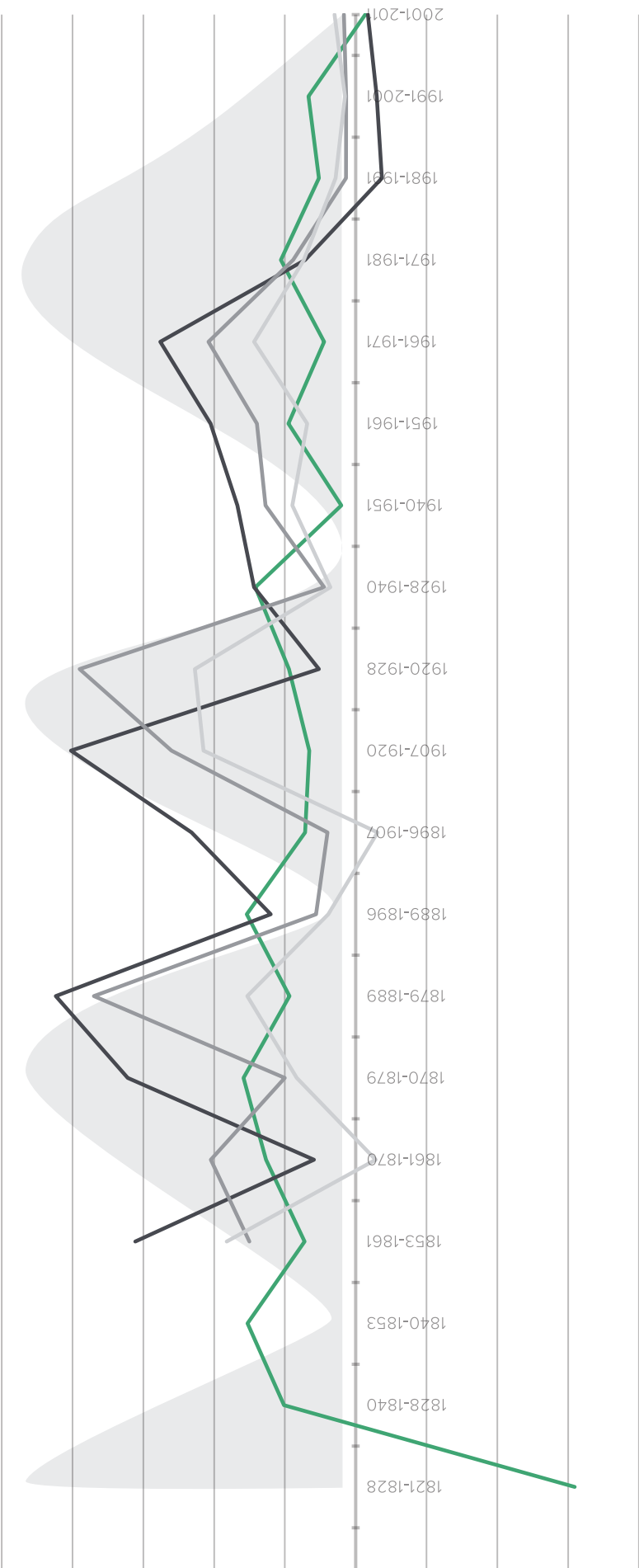
1870; Thessaly and Arta in 1889; Creta, southern Macedonia, Thrace, and the North Aegean islands in 1920; and the Dodecanese in 1951). Because of those newly annexed areas, the difference between the rates of growth of the Capital city and of the national population appears artificially reduced. To be able to compare the evolution of the two, therefore, we must remove the effects of the annexations. Since we are interested only in relative changes, the solution is quite simple: the population of the newly annexed areas is removed from the final year of periods that included annexations, and added again in the first year of the next period.⁹

- Between the censuses of 1920 and 1928, losses of territories have also occurred: East Thrace and the islands Imroz and Bozcaada (Tenedos) were ceded to Turkey in 1923, and northern Epirus was finally incorporated into Albania in 1922. All those regions had been annexed by Greece in 1920 and already appeared in the census of that year. The solution here is the opposite: to subtract the population of the lost territories from the starting year (1920), when calculating the evolution of the Capital city compared to the rest of the country, so as to avoid an overestimation of the relative dynamic of the former.
- The census of 1928 records a large number of refugees from Minor Asia, who were part of the population exchange approved after the Greco-Turkish War of 1919-1922. In this case, there is also a smaller number of outgoing refugees. To calculate the difference between the average annual growth of the Capital city and of the whole national territory, we must remove the difference between incoming and outgoing refugees from the national population. In the case of Athens, it is sufficient to remove incoming refugees, as the capital was not included among the regions with Turkish population that was supposed to forcibly move to Turkey.

The adjusted data can be found in Chart 6.1. and in Table 6.1, where they are also associated with the upward and downward long waves of capitalist development, according to Ernest Mandel. A pattern of alternate periods of accelerating and decelerating urbanisation is rather clear, both in urbanisation rates in general and in the advantage of the Athens urban area in relation to the rest of the country. Of course, we only have a visual indication of long waves in the chart, and no solid statistical documentation of their existence. However, according to the approach adopted in this study, it is anyway impossible to prove and describe the long waves in strictly statistical terms. If this is the case for long waves in economy, it is even more so regarding urbanisation. Statistics may give indications for processes and tendencies that must be confirmed in the actual historical development. Long waves are merely historical periods

⁹ Annexations also affect urbanisation rates, since the newly annexed regions displayed different levels of urbanisation than the ones in "older" Greece, each time. However, this effect is omitted here. Firstly, because it is not so big as to completely distort the general picture. Secondly, because even if we removed the newly annexed territories in a census, the effect of the different historic starting point in terms of urbanisation would appear in the next census. This means that we would have to exclude annexed territories again. But this would suggest that we only examine the territories of 1828, which is not reasonable, since we are studying the historical evolution of urban growth in Greece as it is now.

Chart 6.1 Average Annual Rates of Population Growth between consecutive general censuses



- Average annual rate of national population growth
- Gap between the average annual rate of growth of Athens and the respective national rate
- Average annual growth rate of the share of urban population (>10,000)
- Average annual growth rate of the share of urban population (>2,000)

Source: Hellenic Statistical Authority. E. Skoufoglou, 2018

with certain features. They can help determine the possibility and the expected dynamics of crises and booms, but cannot they explain them.

According to both criteria, counter-urbanisation tendencies appear as a decrease in the rates of urbanisation, compared to the previous ones, and not as a net or even relative decrease of the metropolitan population of Athens or of the urban population in general. Urbanisation/counter-urbanisation waves on both levels obviously co-exist with a secular urbanisation trend. But, in fact, there is an exception to that: since the decade 1981-1991, the average annual population growth rate of Athens has been lagging behind the average annual growth rate of the national population, suggesting a relative decline of the Capital city (which has recently turned into an absolute population decline, as well). This trend has been in line with a general “tendency for urban diffusion” and a certain decline of the importance of the largest cities compared to the medium-size cities (Schaffar & Pavleas, 2014, p. 97).

We shall later see, however, that, while the share of the Athens urban area in the national population has been declining ever since, the share of the region of the Capital city, Attica, after a short period of decline, practically stabilised after 1991 and started rising again after 2001, until the eve of the crisis. This means a part of the relative decline of the Athens urban area was absorbed by distant suburbs or exurbs within its broader metropolitan area.

If we look closer, we will see that a similar phenomenon can be detected also in the rates of growth of the share of urban settlements of more than 10,000 inhabitants, albeit in a milder form: despite being still positive, rates in the last three decades have approached zero. The marginal virtual increase in the rate in the decade 2001-2011 is far from enough to suggest a recovery. Rates are slightly higher when urban settlements according to the contemporary definition of “urban” are considered (> 2,000 inhabitants); however, they are still marginally positive. The above observations probably testify that the secular urbanisation trend is being exhausted.

The shifts in the trajectory of urbanisation from accelerating to decelerating rhythms and vice versa tend to be reflected in the growth rates of the Capital city before they are reflected in the rate of urbanisation in general. This reinforces the picture of Athens, and metropolitan regions in general, as the vanguard of urbanisation. Historical trends tend to appear in the highest levels of the urban hierarchy before they manifest themselves at the lower and lowest levels.

We shall now attempt to associate the observed cycles in urbanisation with the long waves of capitalist development. A very strict correspondence between long waves in the developed capitalist world and urbanisation/counter-urbanisation (as well as metropolisation/de-metropolisation) trends can't be established, because of many reasons. First of all, there is a technical reason: the years of the censuses don't coincide with the landmark years that conventionally determine the starting points and endpoints of long waves. Apart from that, crises and booms are never perfectly synchronized between different developed capitalist countries, let alone countries that have not always been developed throughout the history of capitalism, such as Greece. Several circumstances have made the timing different - for example,

Table 6.1 Average Annual Urbanisation Rates between consecutive General Censuses, associated with the Long Waves of Global Capitalist Development.

Long-wave	Interval between consecutive general censuses	% Surplus of Athens compared to the national average annual growth rate	Average annual urbanisation rate (>10,000 inhabitants)	Average annual urbanisation rate (>2,000 inhabitants)
	1840-1853			
Expansionary 1848-1873	1853-1861	3,11%	1,50%	1,82%
	1861-1870	0,59%	2,05%	-0,28%
	1870-1879	3,22%	1,00%	0,83%
Depressive 1874-1893	1879-1889	4,24%	3,70%	1,53%
	1889-1896	1,20%	0,56%	0,39%
	1896-1907	2,32%	0,40%	-0,31%
Expansionary 1894-1913	1907-1920	4,02%	2,60%	2,14%
	1920-1928	0,52%	3,90%	2,27%
Depressive 1919-1939	1928-1940	1,44%	0,44%	0,36%
	1940-1951	1,67%	1,27%	0,89%
Expansionary 1945-1973	1951-1961	2,05%	1,39%	0,68%
	1961-1971	2,76%	2,08%	1,43%
	1971-1981	0,71%	0,88%	0,73%
Depressive 1973-	1981-1991	-0,37%	0,14%	0,28%
	1991-2001	-0,30%	0,14%	0,14%
	2001-2011	-0,17%	0,17%	0,30%

Declining rates

Source: Hellenic Statistical Agency, General Censuses. E. Skoufoglou, 2018

the upward long wave of the late 19th century was delayed in Greece, because of the ongoing “currant crisis” and of the lost Greco-Turkish war of 1896; the crisis of the 1930s was manifested in a rather mitigated manner in the country (Tsoulfidis, 2014, p. 1) etc. Finally, urbanisation is also affected by factors that are not directly related to the economic performance. Therefore, any correspondence can only be approximate. This is not a problem, though, since long waves are not perceived as strict algebraic formulas but as particular historical periods, with all the variety of their economic and political conditions and facts.

All this said, a link between the rhythms of urbanisation and long waves in the global capitalist economy is indeed rather evident, at least from the late 19th century to the present. Urbanisation slowed down at some point during the 1880s; it speeded up in the first years of the 20th century; it decelerated again in the mid-war period, especially in the period of “ruralisation” of 1928-1940 (Kayser, 1968, p. 35; Leontidou, 1990, p. 73); to accelerate again after World War II, during the so-called Golden Age, which was a period of rural exodus.¹⁰ Since the crises of the 1970s (that in Greece included a sharp crisis in construction in 1973, by the way), it

¹⁰ For an examination of the rural exodus in Greece at the time, including case studies, see Kayser, Pécoux, & Sivignon (1971).

has been generally very slow. The population of Athens has almost stabilised since the 1980s.

Two specific remarks should be added here.

Firstly, the rhythm of extension of the advantage of Athens compared to the rest of the country is apparently more closely synchronized with global long waves¹¹ than the urbanisation rate in general, whose ups and downs tend to follow some years later, at least before World War II. This is in line with what has been maintained before, and it constitutes no surprise: it is rational that the capital responds to the fluctuations of the global economy earlier, since its economy is connected much closer with the global market than the one of the countryside, especially in its past stages of backwardness. On the other hand, there is little differentiation between urbanisation rates according to the old (>10,000 inhabitants) and according to the contemporary definition (>2,000 inhabitants), apart from the fluctuations in the latter being milder, which is again an indication that urbanisation trends tend to be clearer in the upper rather than in the lower levels of urban hierarchy.

Secondly, it is evident that the rhythms of urbanisation tend to synchronize more accurately with global long waves as time proceeds. During the depressive long wave of the late 19th century, urbanisation rates in Greece were generally high, which probably suggests a type of urbanisation not yet related to industrialisation, reminiscent of the type of urbanisation with “masses” observed in non-developed countries. During the first decades of the 20th century, urbanisation waves in the country tend to respond to the global long waves, although with some delay. After World War II, the correspondence is almost perfect.

The post-war long wave

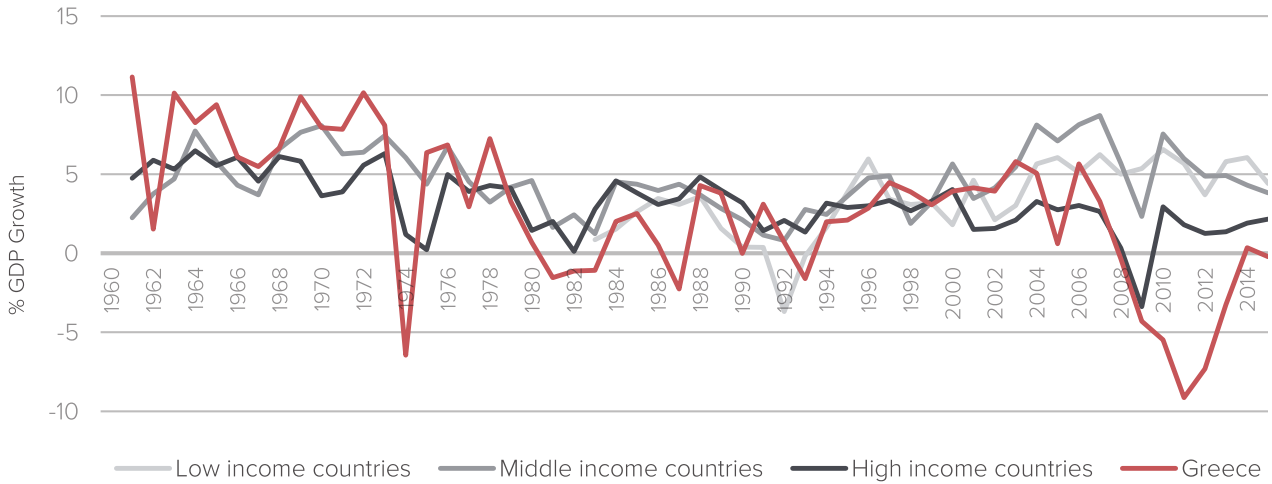
The above-mentioned evolution reflects a gradual modernisation of Greek capitalism and its alignment with the core of the developed capitalist countries. We can witness this fact in Chart 6.2 and Chart 6.3, displaying annual GDP growth rates and annual urban population growth rates for Greece and for the average of high-income, middle-income, and low-income countries respectively.¹² Moreover, in Chart 6.4 one can see the evolution of the urban population (as a percentage of the total population) in the respective countries. The match is generally better with high-income than with low or middle-income countries, which is a good piece of evidence in support of our view of Greece as a developed capitalist country, even though being a weak link among them.

GDP growth rates in Greece have been generally higher than the average in high-income countries (as well as than the world average) from the early 1960s until the early 1970s, which is during the years of the Greek “economic miracle”, and also during the short-lived second “miracle” of the early 2000, which was associated with the admittance into the euro-zone and with the Olympic Games of 2004; and they were lower in the 1980s. It is interesting that, from

11 As it has been already remarked, by “global” long waves, we mean long waves in the developed countries.

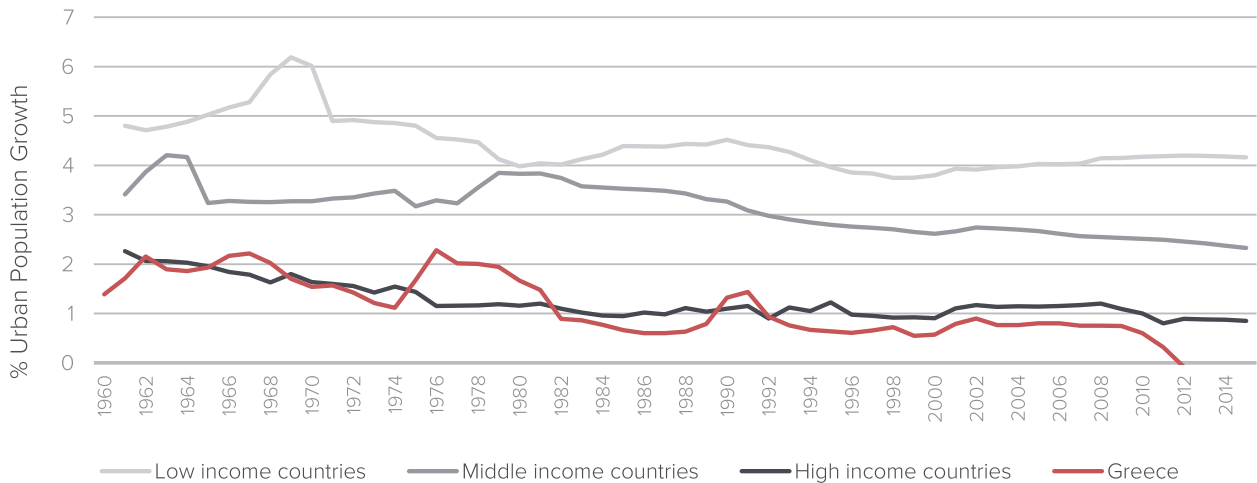
12 The graphs are provided by the World bank, based on OECD data about the GDP and on UN data about urban population growth, and therefore don't exactly coincide with the respective data of the Hellenic Statistical Authority (ELSTAT).

Chart 6.2 Annual GDP Growth



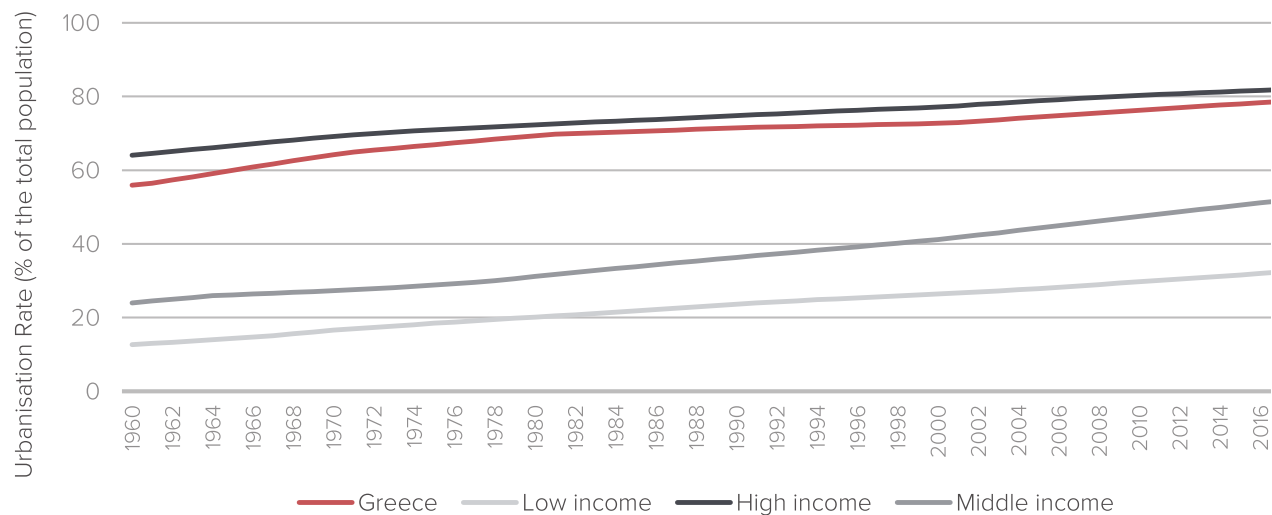
Source: World Bank. E. Skoufoglou, 2018

Chart 6.3 Annual Urban Population Growth



Source: World Bank. E. Skoufoglou, 2018

Chart 6.4 Urbanisation Rate



Source: World Bank. E. Skoufoglou, 2018

time to time, Greece has been following a trajectory closer to the middle-income countries than to the high-income group. This was particularly evident in the late 1960s and early 1970s, and it may also be observed for a few years around the turn of the century. But, anyway, between 1960 and 2000 the groups of high-income and of middle-income countries did not present particularly spectacular divergences in their evolution. It was in the first years of the 21st century, and, particularly in the crisis of 2008, when a real gap between the two categories developed, with Greece clearly following the declining rates of the high-income group.

Things are somewhat different regarding the degree of urbanisation. In this aspect, the fate of Greece is much more evidently linked with the high-income group, which has been steadily recording rates lower than the other two groups. Urban population growth rates in Greece were higher than the average in high-income countries for a few years in the 1960s, and generally lower after 1981, with the exception of a couple of years in the early 1990s, when high rates of urbanisation were probably related to the influx of immigrants from Albania; and they were much higher than average between 1975 and 1981, which represents the segment of the largest deviation in both charts. This deviation is probably an indication of a relatively delayed and milder manifestation of the 1970s crises in Greece; but it is for sure, and probably mainly, an expression of the wave of repatriation of Greek citizens who have migrated during the military dictatorship (1967-1974) or after the civil war (1946-1949), for political reasons, or in between those periods in search of a job in more industrially developed countries.

As would be expected, after 2008, the rates for Greece are worse than the average in both charts. However, the general trajectory of the lines is similar enough to support the hypothesis of an approximate synchronisation of urbanisation rhythms in Greece with the general trends in the economy of the developed (or “high income”) countries.

The existence of this post-war long wave in urbanisation, in parallel, more or less, with the respective wave in most developed capitalist countries, does not only derive from the fluctuation of more or less abstract quantities and indices: it is also consonant with the specific historical development of urbanisation in the country, as perceived by authors in the fields of geography, urbanism, and demography, and as recorded in the people’s collective experience. Again, this specific development has not been determined by the trajectory of economy alone: a whole lot of other factors as well as particular historical events, political or other, have been at times more decisive than economic performances in the short run. However, in the final analysis, those events and factors are not at all irrelevant with the economy, even if they cannot be reduced to it. Moreover, the level of the economy cannot be in turn reduced to formal economic performances alone; according to our approach, economy refers to all aspects of the production and consumption of goods, including the division of labour, the allocation of wealth among the population and the relations of production. It is exactly through those various factors and events, including non-economic ones, that the long waves are manifested as “historical realities.”

It is a historical reality, indeed, that the late 1940s and 1950s in Greece put an end to the “long” decade of ruralisation and marked a period of accelerated urbanisation, with Athens in

its vanguard and Thessaloniki following a little later, to preserve its high rhythms of growth a little further in the 1970s. The rush to the Capital city was largely due to the destruction of the countryside, including small-scale cities, due to the civil war and, mainly, to the devastating persecutions against the defeated, that is the supporters of the Communist Party and the Democratic Army (DSE). In this sense, it might be said that the post-war wave of urban drift preceded rather than followed the post-war economic boom. It even fueled the boom by providing the industry and services in Athens and Thessaloniki with new cheap workforce. In any case, the two phenomena were interwoven and founded on the very same conditions.

Between the civil war and the early 1970s, hundreds of thousands of internal migrants rushed into the Athens urban area, giving rise to the massive semi-illegal working-class and lower-income suburbs at the fringe of a city that was expanding rapidly. The rural exodus reached its highest point during the 1960s. That decade was characterised by impressive growth rates not only in Athens and Thessaloniki but also in the industrial satellite cities around them. Small and medium-sized cities were rather stagnant, except those connected with the boost given to industry at the time (Burgel, 1981, pp. 142-175). The increased urbanisation rates, mostly directed to or around the highest ranks of the urban hierarchy, are clearly connected with the “economic miracle” of the 1960s.

Likewise, the signs of a deceleration in urbanisation in the 1970s (a decade with mixed census findings, since it included years both before and after the crises) were first manifested at the top level of the urban hierarchy. At first, this was expressed as a boost to the second-level cities around the country (Patras, Heraklion, Volos, Larissa, Chania, Rhodes), also fueled by targeted government policies for decentralisation, while the growth of Athens was slowing down. By the end of this decade, the massive flow of internal migrants from the countryside towards the low-income suburbs in the periphery of the Athens urban area, and even beyond it, with its characteristic model of individual small-scale housing without permits, had almost ceased.

In the 1980s, the slowdown in urbanisation was consolidated, affecting not only Athens but also Thessaloniki and practically all large cities at the second level of the urban hierarchy. A crisis in industry had severe implications not only for the older industrial satellite cities around Athens and Thessaloniki but also for the regional poles of industrial activity, around medium to large-scale cities (Patras, Volos, Heraklion, Larissa, Kavala). Those settlements that now seemed to profit were mostly small towns and cities (with a population of 10,000-14,000 inhabitants) around Athens and Thessaloniki, usually falling into their broader metropolitan area and/or their commuting field (Angerinou-Kolonias, 1998, p. 59).

We shall monitor the period after 1991 in detail later in this study. It is a well-documented fact, though, that urbanisation rates and, especially, the growth rate of the Capital city never escaped the depressive pressures that emerged at some point during the 1970s until the crisis of 2008, when those long-term pressures turned into a new situation. A juxtaposition with both the current international situation and the historical evolution of urbanisation in Greece implies a contemporary counter-urbanisation crisis expectedly deeper than in other countries possibly

exhibiting similar tendencies or in other periods in the Greek history. Indeed, Psycharis et al. have concluded that the most urbanised areas around the country are the ones most vulnerable to the economic crisis too (Psycharis, Rovolis, Tselios, & Pantazis, 2014, p. 80). Regarding the depth of this crisis of urbanisation, the long wave theory doesn't suggest anything optimistic: since we are going through a long-wave trough, Greece might find itself in a condition parallel to the "long" decade of ruralisation back in the 1930s and early 1940s. This is what we shall try to examine in the empirical part of this study.

Conclusions

In this chapter, it has been argued that attempts to describe Greece as an underdeveloped, dependent, and/or peripheral country are theoretically unfounded and inconsistent with the empirical data. Accordingly, attempts to associate the historical evolution of urbanisation in the country with dependent, Third World, or semi-peripheral countries are not fruitful. The historical consolidation of the capitalist mode of production, all up-to-date formal classifications as well as several quantities and series demonstrate that Greece should be considered "a weak link" in the imperialist chain, belonging to the developed countries but lagging far behind the top capitalist economies. To assert this is not about a mechanical taxonomy of countries based on conventional criteria; it is a crucial issue in order to determine what countries Greece and its urban evolution are comparable with.

Urbanisation in Greece is interwoven with a number of specific features such as: a relatively high rate of home-ownership/owner-occupancy, distributed quite equally among all social classes; the diffusion of small-scale property; a specific historical dual mechanism for the construction of new housing (illegal building on legally purchased land at the fringe of the city, "antiparohi" within the urban core); a particular importance of family as an institution; a persistence of the bonds of the urban residents with their place of origin in the countryside. While reflecting a comparatively low level of capital concentration and centralisation, the above features are not pre-capitalist or anti-capitalist; they relate to the particular way that the capitalist mode of production has been consolidated and reproduced in the country.

Against this background, a long wave pattern is distinguishable in the historical evolution of urbanisation in Greece from the late 19th century to the present. The pattern can be detected both in urbanisation rates (that is, the population of settlements of more than 2,000 and of more than 10,000 inhabitants as a percentage of the national population) and in metropolisation rhythms, as measured by the gap between the growth rate of the Capital city and the national population growth rate. Of course, such conventional criteria cannot grasp the complexity of urbanisation, and they only provide a visual indication for the existence of long waves. However, the long-wave pattern detected is consonant with the particular historical experiences and trends in urbanisation, as recorded in past scientific studies as well as in the collective memory.

The apparent long waves in urbanisation in Greece tend to coincide with the international long waves of capitalist development. The match is better with the gap between Athens and

the rest of the country than with urbanisation rates in general, which reflects the fact that the Capital city is more closely connected to the global capitalist economy. In general, long waves tend to be illustrated more clearly at the upper rather than at the lower levels of the urban hierarchy. Moreover, the rhythms of urbanisation in Greece have been gradually synchronising ever more accurately with the global long waves throughout the 20th century, resulting in an almost perfect match after World War II. In fact, at least since the 1960s, the evolution of the urban population in Greece is an even more explicit piece of evidence that the country should be included in the group of the developed capitalist countries, and examined against it, than economic series such as the GDP

All this reinforces the hypothesis of a current deep crisis of urbanisation (or what we have called a process of counter-urbanisation of crisis) in Greece in the throes of the global capitalist crisis, which constitutes the conclusion of the depressive long wave in urbanisation as well as in economy since the mid-1970s. This concept enables to grasp the extraordinary intensity of the current crisis in space and provides a suitable historical perspective and framework to examine the current trends in urbanisation in the country.

PART 2

CHAPTER 7

General counter-urbanisation tendencies at the national level

A first overview of empirical data: the census of 2011

The biggest and most credible pool of data available for our research is, of course, the general census of 2011, performed by the Hellenic Statistical Authority (ELSTAT). The elaboration of the primary data has been delayed for several years, to a large extent because of the crisis and the restrictions in the government budget. But, apart from that, there is a more important difficulty because of the timing of the census. The period between the last two general censuses (2001-2011) has been extremely heterogeneous. Over a span of ten years, economic and social conditions in the country have changed dramatically, not just in pace with the already turbulent global conjuncture, but even more sharply, due to specific circumstances. It has been already highlighted that, during this decade, the Greek economy performed a spectacular dive, from a phase of an ultra-ambitious development strategy, linked with the Olympic Games in 2004, the admission to the euro-zone, the infiltration of Greek capitals into the Balkans, and a housing bubble, down to a disastrous fiscal crisis and economic/productive recession.

Many years throughout this decade may serve as benchmarks. 2001 was also a year of international crisis, which first manifested itself under the form of the explosion of the so-called dot-coms bubble one year earlier, in 2000. However, that crisis was nothing to compare with the current one. Despite being also a predecessor of the meltdown of 2007-2008, it was mostly an expression of the industrial (business) capitalist cycle, that induces crises every 7-10 years since at least two centuries. 2004 was the year of the Olympics, that is the peak of a large-scale development project, based above all on construction. As we shall see later, construction continued to rise until 2006 (included), assisted by a certain set of stimuli. 2008 was the year of the collapse of Lehman Brothers, which signaled the eruption of the global financial and economic crisis. The inevitable manifestation of the global crisis in Greece has delayed for a couple of years, only to be of extraordinary intensity when it eventually happened. In 2010, the bail-out and the memorandum with the IMF, the EU, and the ECB were imposed, inaugurating a long period of recession.

This means that the data of the census of 2011 were collected in a period when all repercussions and implications of the crisis were already evident, without having fully developed yet, though. The figures of the census are difficult to compare with the ones of the census

of 2001, because they reflect two different, and certainly opposite in some of their aspects, processes: the general trends that were underway before the outbreak of the crisis; and the consequences of the crisis afterwards. A direct comparison between the data collected in the two censuses would be, therefore, deceptive. Ways must be devised so that more recent tendencies and long-term trends can be juxtaposed. It will be demonstrated that this is feasible in some cases, using different figures provided by the census itself or additional estimates by ELSTAT or EUROSTAT, and that it can highlight phenomena which can fairly be assigned to the crisis.

It should be noted that the findings of the 2011 census are not perfectly comparable with the findings of the previous censuses, not only because of the administrative restructuring of the territory that was carried out meanwhile (adjustments are not particularly difficult regarding that) but also, and mainly, because of a change in the methodology of the census (ELSTAT, 2012). Conclusions should thus be considered with this reservation, although the big picture is unlikely to be significantly distorted.

Tendencies at the national level, 2001-2011

The crudest measure of the degree of urbanisation or counter-urbanisation in the broad sense would be the overall growth of the urban population in relation with the non-urban, that is rural, population. The censuses of 2001 and 2011 had followed the standards of EUROSTAT, according to which a settlement is considered urban when having a population of more than 2,000 people, and respectively rural when its population is below 2,000.¹

According to the censuses, the permanent population of the country has been 10,934,097 inhabitants in 2001 and 10,816,286 in 2011. (Table 7.1) Between the two censuses, the total population of the country was reduced by nearly 120,000 inhabitants, that is approximately 1,08%, a finding that should definitely be attributed to the crisis. Besides, this actual reduction contradicts the previous predictions of ELSTAT: at the time of the census of 2001, the total population in 2011 was expected to be 11,123,392, i.e. to have grown by nearly 190,000 and to have exceeded the threshold of 11 million inhabitants. The ratio of this population decline may seem mild, however, it is significant: it is the first time in the history of the Greek state that a general census records a reduction in the total permanent population in comparison with the previous one – this hadn't happened even in the period between the censuses of 1940 and 1951, which comprised World War II and the Greek Civil War of 1946-1949.

The urban population has been 73.7% of the national permanent population in 2001 and 75% in 2011, which means that it has risen not only in relative terms, but also in absolute terms, displaying a net surplus of 54,000 person approximately or of 0.67% compared to the

¹ To be more precise, urban areas are considered to be the LAU areas (municipal communities, local communities, or small municipalities with no further subdivisions) whose largest defined settlement has a population above 2,000 inhabitants.

Table 7.1: Aggregate Population in Urban and Rural Areas

Population	Total	Urban	Rural
2001	10934097	73.7%	26.3%
2011	10816286	75%	25%

Source: Hellestic Statistical Agency, 2011 Census, 2001 Census. E. Skoufoglou, 2018

Table 7.2: Relocations between Urban and Rural Areas during the last 1 and the last 5 years before the Census, 2001, 2011

Period	Total	Rural to Urban		Urban to rural	
2006-2011	1076260	112370	10.4%	168288	14.6%
2010-2011	341220	33923	9.9%	60779	17.8%
1996-2001	1049819	22261	2.1%	34588	3.3%
2000-2001	447101	14248	3.2%	24172	5.4%

Source: Hellestic Statistical Agency, 2011 Census, 2001 Census. E. Skoufoglou, 2018

urban population in 2001, despite the overall population decrease.² On the contrary, the rural population displays a clear decline both in relative and absolute numbers. The general trend during a decade has been, therefore, a population change in favor of urban areas and at the expense of rural ones. Is this trend consistent with the short-term developments after the outbreak of the crisis?

A clue can be found in another set of data provided by the censuses, referring to the recent population movements. All persons recorded were asked about their place of residence 1 year and 5 years before the census. ELSTAT provides tables summing up the urban and the rural population and the movements in between them, that is the numbers of internal migration towards and away from urban settlements. (Table 7.2).

The table regarding the place of residence 5 years before the census of 2011, i.e. in 2006, covers half of the period between the two last censuses. According to the table, 1,076,260 people, accounting for more or less 10% of the country's population, declared a place of residence in 2006 different from their current one. The major part of movements has taken place between different urban areas. However, 112,370 persons had moved from rural towards urban areas, whereas 168,288 had moved from urban to rural ones. Therefore, the flow from urban to rural areas has exceeded the reverse flow by 55,918 persons or by 50%. If urbanisation

² The figures about the total urban and rural population are derived from the provisional data of the census, because, until the time when those lines were written, ELSTAT hadn't published any relevant updated table. In those provisional data, the urban population might have been a little underestimated. However, this is insignificant since a slightly higher urban population would only be a finding moving in the same direction as our conclusions. Figures in all other chapters throughout the study are derived from the revised data of the census (published in 2014).

was defined as a process of migration from non-urban to urban areas, a net urbanisation of -55,918 would have been recorded, a finding that is not consistent with the long-term tendency of the rural population in the period 2001-2011.

Let's now come to the changes of place of residence in the last year, i.e. since 2010. It should be remarked that this is an important year, as it is the year when Greece entered the IMF programme and the Parliament voted for the concomitant austerity package, having already implemented a series of cuts in the months before that. The census took place in the spring of 2011, so it was exactly one year after the IMF program was inaugurated. This is a beneficial coincidence. During that year, 341,220 inhabitants declared to have changed their place of residence. The greatest part of the flows is between different urban areas again, however, movements from urban to rural areas have risen from 14,6 up to 17,8% as a percentage of the total movements. 60,779 persons left urban areas for the sake of rural ones, whereas only 33,923 did the opposite. As a percentage of the rural-urban movements, urban-rural moves have risen from 140% in the period 2006-2011 up to 179% in the period 2010-2011. The deficit for urban areas within a year has been 26,856, which is slightly less than half of the deficit they have recorded since 2006.

So, the census records a population flow from urban to rural areas, or, in other terms, a process of urban exodus, that, despite not being impressive, is explicitly accelerating. Is this phenomenon unprecedented? An overview of the respective figures in the census of 2001 is required to tell.³

The total amount of internal changes of the place of residence in the period 1996-2001 was, more or less, the same as in the period 2006-2011, that is 1,049,819. A first effortless observation would be that a much larger part of the movements, in this case, has taken place between different urban areas. Movements from urban to rural areas don't stand for more than 3,3% of the total, corresponding to 34,588 persons. This number already exceeds the reverse movement, from rural to urban areas, which is recorded in only 22,261 cases. However, the gap between the two numbers is barely bigger than 20% of the respective gap in the period 2006-2011 (12,327 as opposed to 55,918). Relocations between urban and non-urban areas appear much less dynamic one decade before the 2011 census.

This relation appears a little more dynamic in the last year before the census of 2001 but again it falls short of the period 2010-2011 by far. In the period 2000-2001, 24,172 inhabitants moved from rural to urban settlements, which accounts for 5,4% of the total amount of internal migration in the same period (447,101, a number substantially bigger than the respective one in the period 2010-2011). 14,248 people made the reverse movement, from rural to urban areas. The relation remained negative for urban areas. The gap (9,924) is relatively closer to the one in the period 2010-2011 (26,856) but it still represents only a little more than 1/3 of that.

Therefore, the process of urban exodus is not something that has come about after or

³ The published tables of ELSTAT regarding the census of 2001 divide settlements in 10 categories according to their size, so, in order to come up with the figures for urban and rural areas, one must add everything above 2,000 and everything below 2,000 respectively.

Table 7.3: Natural Population Change in Urban and in Rural Areas

Natural Population Change	Urban areas			Rural areas		
	Births	Deaths	Balance	Births	Deaths	Balance
2006-2011	485149	373457	111702	85132	167349	-82217
2010-2011	94851	76368	18483	14484	33724	-18240
2000-2001	86219	70517	14702	16066	32728	-16662

Source: Hellestic Statistical Agency, 2011 Census, 2001 Census. E. Skoufoglou, 2018

because of the crisis, although there is evidence that it has grown much stronger since the crisis broke out. Is it possible, however, that this urban exodus is outnumbered by other processes, so that we could conclude that the total urban population may still be growing in relation with the rural one, despite this negative flow? And if so, is this the case in all recent periods? In order to confirm or reject this assumption, a glance should be given at two additional procedures: at external migration and at the natural changes of population, starting from the latter. (Table 7.3)

All available data indicate that rural areas exceed by far the national annual average of deaths and fall sharply short of the annual national average of births. This was true back in 2001 and is still true in 2011. Of course, the total number of births and deaths is given by Registry Offices every year, however, it is more appropriate for our purpose to examine the same periods as the ones covered by the available data regarding internal migration. As the number of births and deaths are offered on an annual basis, while the census of 2011 took place approximately at the end of the first quarter of the year, a more accurate approach of the real numbers for the last year before the census (i.e. for the period covered by the figures about changes of place of residence) can be given by combining the figures for 2010 and 2011, multiplying the former by a coefficient of 0,75 and the latter by 0,25 instead of using the figures of either one of these two years. With this method, it emerges that, in the last year before the census, 96,277 births and 75,906 were recorded in urban areas, as opposed to 16,166 births and 33,048 deaths in rural areas. In the first instance, we have a net surplus of 20,371, and in the second one, a deficit of 16,882. This substantial divergence is something predictable, due to the aging of the rural population and to other factors, such as the lower level of health-care in the villages. However, what is of the interest of this study, in this case, is that the population surplus due to the natural population growth in urban areas can't make up for their losses from internal migration towards rural areas (18,486 persons as opposed to 26,856). Similarly, the net population deficit due to the negative natural population change in rural areas doesn't outnumber their surplus due to the incoming flows from urban areas.

The picture is somewhat different when the period 2006-2011 is considered. Again, it is more appropriate to use the same method for the first and the last year of the sequence, that is to add the figures for 2006 by 0.75 and the ones for 2011 by 0.25 and add the two

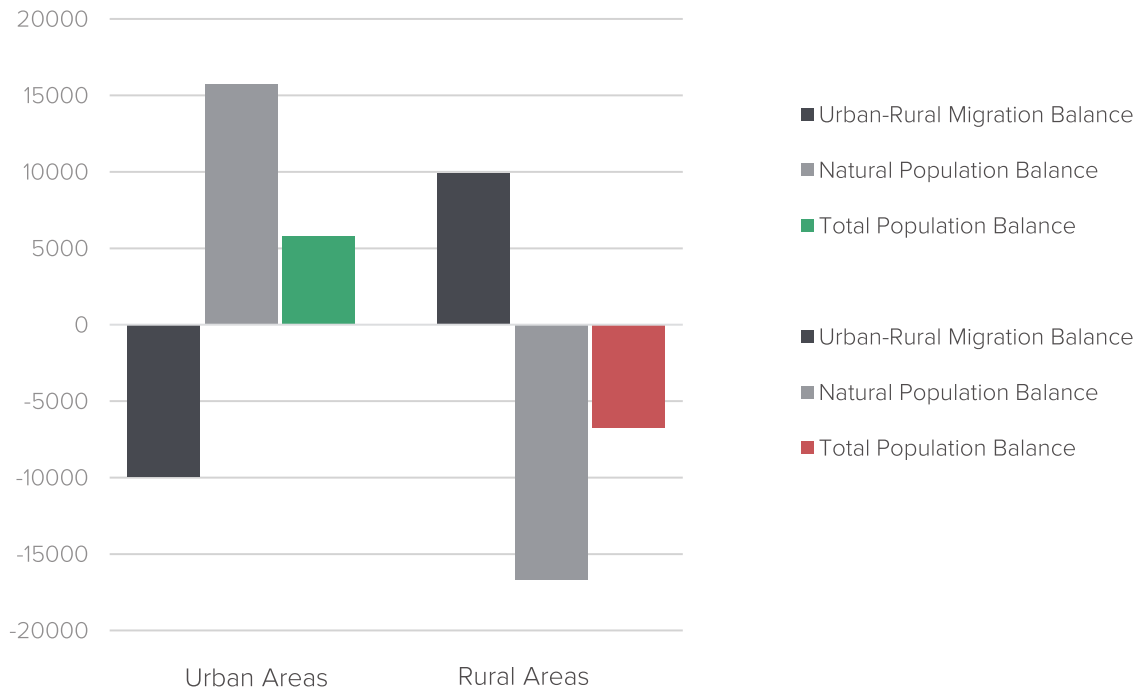
sums. During that period, 485,537 births and 371,996 deaths were documented in urban areas, resulting in a surplus of 113,541. In rural areas, the respective numbers were 85,906 births and 167,433 deaths, which is equivalent to a deficit of 81,527. In this case, the urban population deficit of 55,918 due to internal migration towards rural areas is outnumbered by the net natural population change, and so is the rural population surplus due to internal migration by the deficit due to the negative net difference between births and deaths in rural areas.

The picture is analogous if one goes back to the period 2000-2001. Again, we will use the same coefficients for the figures of the two years, as the census of 2001 took place approximately at the end of March. It emerges, thus, that, in urban areas, 86,303 births and 70,794 deaths were recorded, resulting in a surplus of 14,509. The respective numbers for the rural areas were 16,212 and 33,110, both amazingly close to the respective numbers in the period 2010-2011, although the rural population has meanwhile decreased in absolute numbers. Anyway, the deficit for rural areas in the period 2000-2001 due to the natural population change was 16,898. Again, the deficit of the urban population due to migration towards rural settlements (9,924) is far from enough to eliminate the positive balance of the natural population change in urban areas and, all the way round, the equal surplus for rural areas due to the incoming flows from urban settlements fails to make up for the losses due to the gap between deaths and births.

If we go into further detail, in rural areas, the surplus due to internal migration made up for 58,7% of the deficit due to the natural population change in the period 2000-2001, and this percentage rose up to 68,6% in the period 2006-2011. On the contrary, in urban areas, the negative effect of internal migration corresponded to 64% of the advantage due to the natural increase in the period 2000-2001 but it stood only for 49,2% of the same advantage in the period 2006-2011. Here we have the two sets of data evolving in a contradictory way. What is of the interest of the current study, however, is that only in the period 2010-2011 can we see the situation reverse, so that the effects of the natural population change are less significant than the ones of internal migration between urban and rural areas, so that the advantage of urban areas disappears. One can obtain a comprehensive view of this development by comparing Charts 7.1 and 7.2.

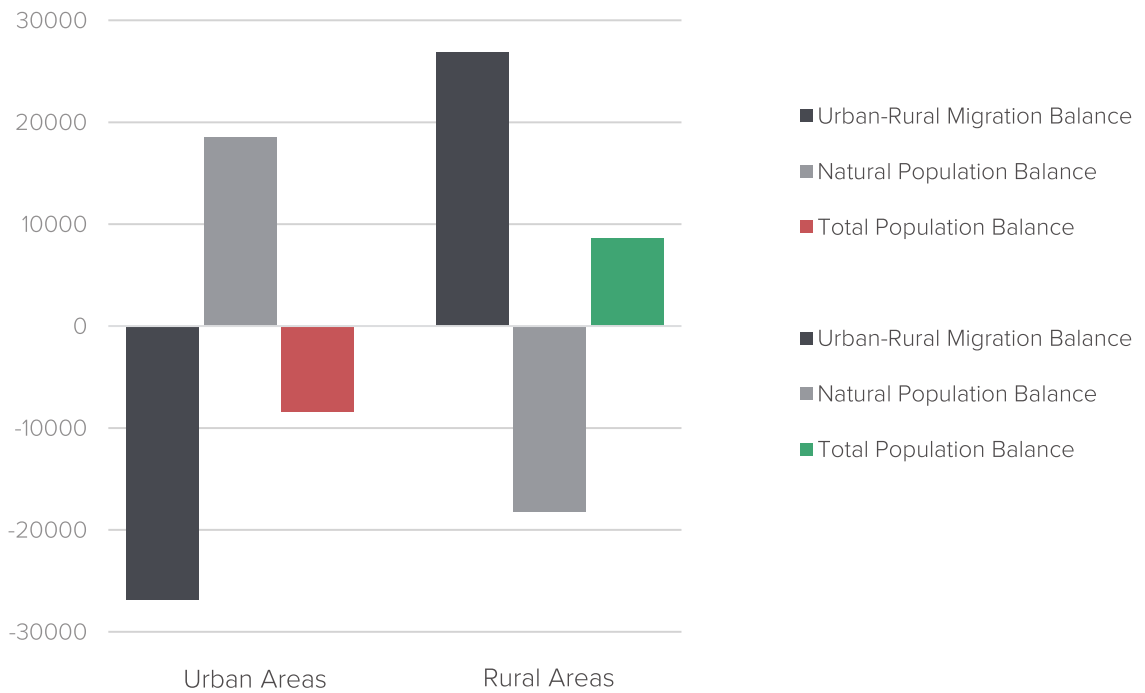
Still, it is not possible to conclude that the total rural population has started rising or that the urban one has started declining, as we miss an additional important factor: external migration. To estimate the effect of external migration is extremely hard. The census provides figures for incoming immigrants, even if it is reasonable to suppose that the actual number of immigrants is higher than it appears, as immigrants without papers expectedly tend to escape statistics. (Table 7.4) The real problem is the very poor data available about emigration. ELSTAT has ceased to collect data about emigration since 1977, and so has the Athens Mission of the International Organisation for Migration since long ago. It does make annual estimates of emigration, based on a combination of techniques, but those estimates are only given for the country as a whole, without any distinction between urban and rural areas or information about regions. In the context of the current study, it is therefore impossible to calculate the overall consequences of

Chart 7.1 Population Balance for Urban and Rural Areas, 2000-2001



Source: Hellenic Statistical Authority, 2001 Census. E. Skoufoglou, 2018

Chart 7.2 Population Balance for Urban and Rural Areas, 2010-2011



Source: Hellenic Statistical Authority, 2011 Census. E. Skoufoglou, 2018

Table 7.4: Immigration towards Urban and towards Rural Areas

Period	Total Immigration	Urban areas		Rural areas	
		Number	Percentage	Number	Percentage
2006-2011	329556	244410	77.2%	85146	22.8%
2010-2011	79554	55742	70.0%	23812	30.0%
2000-2001	67352	66054	98.1%	1298	1.9%

Source: Hellestic Statistical Agency, 2011 Census, 2001 Census. E. Skoufoglou, 2018

external migration and, thus, to estimate whether the total population of urban and rural areas is rising or falling. However, this does not eliminate the value of the previous observations and conclusions.

Nevertheless, it is of some use to examine the effects of immigration in urban and rural areas, which we have data about. According to the census of 2011, as emerges from the same questions about the place of residence 1 and 5 years ago, net immigration in the period 2006-2011 amounted to 329,556 persons, whereas in the period 2010-2011 it totaled to 79,554. Of course, these numbers don't include all immigrants that have entered the country during the respective periods but only those who were still in Greece at the time of the census, while they were still abroad 5 years or 1 year ago, respectively. The numbers don't include only foreigners but also Greek citizens that used to live abroad 1 or 5 years before the census. All these clarified, it emerges that in the quinquennium 2006-2011, rural areas have attracted 85,146 immigrants, which is equal to 22,8% of the total immigration. This rate is lower than the share of the rural population (23,4% in 2011 and apparently higher in the previous years). On the contrary, during the last year before the census, 23,812 external migrants have settled in rural areas, that is 30% of the total immigration. This rate comfortably exceeds the share of the rural population. Another reversal can be therefore noted: immigration from now on favors rural areas more than urban ones. Indeed, during the year under consideration, immigration in rural areas stood for 9,6‰ of the total rural population, whereas in urban settlements the respective rate was only 6,8‰.

This finding seems much more impressive if juxtaposed with the situation by the time of the census of 2001. In the last year before that census, 67,352 persons appear to have moved to the country from abroad, however, only 1,298 were directed towards settlements with less than 2,000 inhabitants. This corresponds to a poor percentage of 1,93% of the total immigration - the same rate that 10 years later would reach 30%. The difference is so overwhelming that, whatever the deficiencies of the available measurements may be, it is absolutely evident that, within a decade, the participation of rural areas in immigration has risen from an insignificant rate up to a substantial percentage.

Changes in the geographical distribution of the population, 2001-2011

We shall now try to determine spatial patterns in the general evolution of the population. The administrative divisions of the national territory, as well as the statistical divisions according to the EUROSTAT, are presented in Table 7.5 and Table 7.6.

Map 7.1 displays population changes by municipal units. Changes are given in relative numbers, as a percentage of the population back in 2001.

A first glance is enough to confirm some of the already mentioned long-standing features of the spatial structure of the country:

- The predominance of coastal zones and the respective handicap of inland areas, above all the mountainous ones
- The relative vitality of the islands, mainly due to touristic activities, although on the biggest islands a strong internal differentiation between coastal and mountainous areas appears again
- The lead of the eastern part of the country over the western one
- The prevalence of the axis Patras-Athens-Thessaloniki, extending further along the coast up to Alexandroupolis and the Greek-Turkish borders, which coincides with the country's transport infrastructure spinal cord.

The shape of the main mountain ranges (especially Pindos, from the North-West to the South-East of the mainland, geologically extending to the Peloponnese and even South Creta) is reflected to a considerable extent in the pattern of the most disadvantaged areas, in terms of population change. Of course, there is no strict accordance between the two. Several lowland areas, in the plains of Thessaly, Central Macedonia,⁴ and elsewhere, exhibit a high degree of population decline as well. On the other hand, certain mountainous regions seem to escape the fate of the rest, being virtually among the most dynamic areas in the country, in relative terms. Of course, it should be also borne in mind that, in some cases of small mountainous settlements, censuses lack credibility, as the population may differ greatly according to the season of the year. Many villages that are deserted in the wintertime may gather hundreds in the summertime. On top of that, it is not a very rare phenomenon to see people rushing back to their village of origin in order to be censused there, as the claimed population of a settlement is connected to certain advantages, such as state or European funds, a higher degree of administrative autonomy etc. All that said, though, it is a fact that certain areas on the mountains (Parnassus, Phokis/Evritania/Eastern Aetolia-Akarnania, Trikala, Karditsa, northern Pindos etc.) have grown, mainly due to winter tourism activities or to the return of pensioners back from the cities.

In the long run, the big picture corroborates rather than contradicts a process of further

4 Not to be confused with the Republic of Macedonia. Macedonia is a broader geographical area divided between Greece, the Republic of Macedonia and Bulgaria, whereas a very small part belongs to Albania too. Throughout this study, when mentioning Macedonia and its geographical definitions (Central, West, East) we will refer to Greek Macedonia.

urbanisation, at least in a certain sense of the term. In order to examine this tendency, it would be helpful to relate the cities within the national territory to the former prefectures of the country (Map 7.2). Geographically 51 and administratively 52, as the region of Attica was divided into two prefectures (Athens and Piraeus), these former prefectures have provided the base for the Regional Units in the current administrative division. The existing regional units (74) are more than the former prefectures, as Attika and the islands have split into several divisions. However, the former prefectures maintain their actuality as geographical entities, not only because they remain the official statistical NUTS3 entities in the EUROSTAT classification but also, and mainly, because they reflect the structure of urbanisation in the country. It is quite telling that among the 51 prefectures, 42 have a single, indisputably leading city, situated either close to the centre of gravity of the prefecture's territory or by a seaport. There are only 8 cases where two competing cities coexist in the same prefecture: Pella, Imathia, Kozani (a special case, as the city of Ptolemais has grown exclusively due to the lignite power plants), Boeotia, Aetoloakarnania (which is, in fact, a joint prefecture), Argolis, Iliia, and Samos, and a single case where three cities of approximately the same size appear: Lasithi in Creta. And there are no more than 4 cases where the Capital is not the biggest city of the prefecture at the same time: Boeotia, Aetoloakarnania, Argolis, and Pella. The uniform typical structure that most of the NUTS3 geographical entities exhibit makes it possible to compare them, omitting, at some levels of analysis, their internal layout, although such a level of abstraction always demands caution. In most cases, when referring to a prefecture, you mostly refer to its primate city. It thus makes sense to speak of more urbanised and less urbanised prefectures or regional units, which is very important for tracking down tendencies in urbanisation and rearrangements in the urban hierarchy without being obliged to go into much detail. We shall see that this can be very useful.

Let's put the cases of Athens and Thessaloniki aside for the moment, as they constitute the only two urban agglomerations with a metropolitan structure, their territory comprising several administrative subdivisions.

In the remaining 49 prefectures, the rule is clearly that the biggest settlements present a positive balance sheet throughout the decade 2001-2011, in contrast with what is the case with the whole national territory. If we also take into account the 9 prefectures where two cities of the same, more all less, size coexist, we end up with a sum of 58 basic urban areas, apart from the two metropolitan agglomerations.⁵ Among these cities, 44 present a positive population change and 14 a negative one. Additionally, among the 14 virtually declining ones, we find cities with an important historic centre, such as Rhodes and Chania. In these cases, the main administrative entity (municipal unit) covers a limited area, corresponding to the

5 These 58 cities do not exactly coincide the 58 most populated urban areas in the country. The criterion here is not merely the population but also the relative gravity of each city or town within its prefecture. Prefectures where two cities are examined are the ones that have a structure comprising two centres of gravity of the same size approximately or, in different terms, two equal or comparable poles of attraction for urbanisation within the region. For example, Aigion is a town of nearly 30,000 people, which makes it larger than quite a few prefecture Capitals in other areas of the country. However, it is located in Achaia, that is the prefecture of Patras, the third biggest city of the country, which Aigion can by no means compete as a centre of gravity.

historic core. This core appears to be declining in terms of population, however, the losses are counterbalanced and even outnumbered by adjacent areas presenting strong upward tendencies. Lastly, there is no city among the 58 to present a sharp population decline or, to put it another way, there is no urban settlement among the areas displaying a sharp population decline between 2001 and 2011 all around the country (Athens and Thessaloniki metropolitan areas excluded again).

What is more important is that the biggest city in each prefecture at the beginning of the period 2001-2011 tends to be also the one to have attracted the major part of urbanisation in the region during the decade. Among the 49 cases, 22 cities appear clearly more dynamic than their adjacent areas, being the explicit epicenter of the urbanisation process in their region. This number is, in fact, more significant than it appears at first sight, as most of the cases where this doesn't happen regard either of the following categories: islands or big cities. In the first instance, it is rather expected to see areas other than the main settlement grow faster, as tourism induces a type of development spreading along the coasts (while not being an island, Chalkidiki should probably be included in the same category, as one of the most important tourist areas in the country, with the same characteristic type of development along its coasts). In the second one, what differentiates the picture is that the city area covers more than one administrative entity (municipal unit), the ones around the primary unit representing suburbs that may be growing faster than the city core. Apparently, this is the case at least with Patras, Larissa, Heraklion, Volos, Rhodes, and Ioannina, that is the 6 biggest cities behind Athens and Thessaloniki (or what we could call the next-6).⁶ With no exception, all these cities have suburbs growing faster than the city core, in relative terms. In these cases, therefore, the relative handicap of the formal city area, which is the municipal unit bearing the name of the city, represents suburbanisation processes rather than a counter-urbanisation tendency, at least of the type of a counter-urbanisation crisis.

The development of the next-6 cities can be distinguished more clearly at the immediately higher level of administrative division, which is municipalities (Map 7.3). The municipalities of all next-6 cities, which comprise the cities along with their suburbs and exurbs, have recorded a population growth between 2001-2011. Moreover, in three cases (Patras, Larissa, Volos), the municipality of the city has been the only one to have grown in the respective prefecture (regional unit). In Ioannina, the municipality of the city comes only second to one other municipality in the prefecture, the two being the only ones with a population surplus. The only exception is Heraklion in Crete, where adjacent municipalities along the northern coast have

6 Of course, it is not a simple task to define the limits of each city, and thus its population. There is no doubt about the four biggest cities apart from Athens and Thessaloniki: Patras, Heraklion, Larissa, and Volos. After those cases comes a group of cities of seemingly similar size, according to the population of their major municipality, ranging from 50,000 to a little more than 60,000 inhabitants. However, in many cases, the actual city spills over the conventional administrative limits. We are based here on the delimitations provided by means of Urban Spatial Analysis Units by the Panorama of Census Data, 1991-2011, launched by the National Centre for Social Research (EKKE) in collaboration with the Hellenic Statistical Authority - <https://panorama.statistics.gr>. However, even if the adopted classification of the Greek cities at this level was to be questioned, this would not be significant for the conclusion of our study, as the "next-6" group is used merely for descriptive reasons.

grown more than the municipality of the city itself – however, most of the southern part of the prefecture has recorded deficits. Besides, Heraklion is an island city, where rules are different.

Let's now return to the examination of the previous map. In 12 more cases among the 49 non-metropolitan prefectures, while not being the leading one, the geographical area of the biggest city is obviously among the most dynamic subdivisions. It is an undoubted pattern, therefore, that the primate city in each prefecture tends to constitute at the same time the main point of population attraction indeed. Urbanisation is directed towards the already most urbanised areas, even if in their periphery rather than in their core. In the mainland, the only parts that may exceed the big or relatively big cities in this aspect are certain areas oriented to tourism, along the coasts (Lakonia, Messinia, Chalkidiki, Kavala etc) or on the mountains, as mentioned before.

A closer look at the next-6 group at the level of municipal units suggests that the picture here is not at all uniform, which is something to expect given the totally different economic structure and geographical position of the cities.

Two out of the 6 cities present a negative balance sheet in their core: Patras and Rhodes, only marginal in the first instance, whereas quite substantial in the second one. In both cases, however, there are adjacent areas presenting quite high rates of growth. There is, therefore, evidence of an urban evolution similar to the one of the big metropolitan agglomerations, with a declining city centre surrounded by much more dynamic periphery (ring) of suburbs. Of course, in the case of Patras and Rhodes, the process is of much smaller scale and less clear, at least according to the picture given by the current administrative division.

The balance sheet in the cores of the remaining 4 cities is positive, although at different rates and within different spatial patterns. Heraklion's core urban area has gained more than 6%, however, it is surrounded by suburbs with much more impressive rates of growth, up to 50%, mostly along the coasts both to the East and the West. Volos presents a somewhat similar structure, only in a much smaller scale, the gains in its central port area hardly exceeding 1,2% and being modest even in the suburbs. Additionally, this time urban sprawl doesn't follow the waterfront but rather climbs up to the mountains and hills to the North-East and to the West. Ioannina exhibits rates similar to the ones in Heraklion, although in a totally different geographical area, nearly 500 meters in altitude and among mountains. Population growth follows a crescent moon pattern to the south of the city centre. Larissa, finally, is the only case where such a reversed concentric structure is not observed. The city centre can take pride in a particularly high population growth rate, exceeding 10%. Apart from an even more dynamic suburban area to the North (Giannouli), the urban core seems to emerge among a broader area of negative population move. The absence of a historic centre of some importance has probably played a role in this pattern. However, it must also be considered that the municipal unit of Larissa covers an unusually large area, which means that it may conceal a different inner pattern.

The reversed concentric structure (inverse Burgess) partly noticed in some cities among the next-6 group is spectacularly highlighted in Thessaloniki and, mainly, Athens. In the central

urban area of Thessaloniki, around the port and the traditional waterfront, a strong decline is apparent, with a population loss of more than 18% during the decade. The adjacent areas exhibit also strongly negative balance sheets, less strong than in the centre, though (with the only exception of Stavroupoli to the North, where a loss of 25% is recorded). All around the broader city centre spreads a series of growing suburbs, extending along the western coast of the Chalkidiki peninsula.

The Athens metropolitan area displays an even more characteristic pattern. The city centre, within the limits of the municipality of Athens, has lost more than 14% of its inhabitants in ten years. A first circle around the centre, what we could conventionally call the first generation of suburbs, has suffered losses as well, although in substantially lower rates. On the contrary, the outer ring of the newest suburbs or exurbs, expanding to the boundaries of the whole Attica region and even beyond them, down to the Corinthian Bay, has increased in population, sometimes in great numbers (nearly 114% for Gerakas). As a general rule, the more distant a suburb or exurb, the most it has grown in relative terms. This almost perfect concentric pattern is a little disturbed around Piraeus, the port city which has been integrated into the Athens urban area for decades. The port presents its own micrography of this reversed cycle, having shrunk by more than 10% itself while being surrounded by districts with less negative or even positive rates of population change. The port of Piraeus constitutes a distinct secondary pole of attraction within the Athens metropolitan area, even much smaller than the Athens city centre.

A comparison with changes over the period 1991-2001

Having examined population changes between 2001 and 2011, we shall now correlate them with certain tendencies recorded in the previous decade, that is between the general censuses of 1991 and 2001. Our examination will be at the level of municipalities, for the sake of simplicity as well as comparability with the developments after the outbreak of the crisis, where data are not available below this level.

Map 7.4 shows the relative change of population by municipalities in the period 1991-2001. A first effortless observation is that, in comparison with the respective map regarding the period 2001-2011 (Map 7.3), positive values (blue areas) are much more. This is reasonable, given the clear surplus in the national population recorded between 1991-2001 (6.95%), unlike the decline in the following decade. This means that, in the former period, a positive population change doesn't necessarily mean a progress in the relative position (share in the national population) of a certain area, while this is the case in the latter period. Vice versa, a negative population change throughout the period 1991-2001 does mean a decline in the share of a certain area, which is not the case in the period 2001-2011.

Anyway, in Map 7.4 one can distinguish three main areas of population increase: one in the North, in Macedonia, including most parts of the Thessaloniki region; one in the eastern parts of Central Greece and the Peloponnese, including most parts of Attica; and the islands.

Almost all islands have seen their population increase, the ones to the South more than the ones to the North. This advantage of the southern islands compared with the northern ones is

maintained in the following decade, when most of the former enjoy population surpluses again (although more modest), while most of the later suffer deficits (although mild, again). In fact, this advantage represents a historical reversal in comparison with some decades ago, when most islands were in a process of depopulation. At the time, the islands better resisting this pressure were the most urbanised ones, most of which happened to be rather in the North (Lesvos, Corfu, Lefkada, Chios, Samos, Cephalonia) (Kayser, 1968, p. 15).

Another important remark is that, apparently, more rural areas with an increasing population can be found between 1991 and 2001 than between 2001 and 2011, despite the suspected counter-urbanisation process that unfolded at the end of the latter decade. This is an indication that urbanisation has progressed between the two decades, although the 1990s were already a decade of slow urbanisation rates (or depressive counter-urbanisation pressures, according to the terminology adopted in this study).

The above conclusion is also confirmed in the higher and highest levels of the urban hierarchy. All cities among the group of the next-6, as well as other relatively big cities (Kavala, Serres, Kalamata, Kozani, Chania etc.) have recorded visibly better population balance sheets between 1991 and 2001 than in the following decade.⁷ As for Athens and Thessaloniki, their core area was already declining in the 1990s, but at a pace visibly milder than the one in the following decade. In short, the map of population balance sheets in the 2000s compared to the one in the 1990s reveals a slowdown in urbanisation.

Developments after the outbreak of the crisis: incoming population by municipalities

The question is whether this slowdown has emerged or been intensified after the outbreak of the crisis. Of course, this is the main subject of the current study, which can't be resolved in this chapter, as much more factors and scales should be considered. What is possible for now is to juxtapose the incoming population during the last year before the last census (that is in the period 2010-2011) with the broader tendencies identified above. Of course, the incoming population can't give the population balance sheet, even if it was combined with the information about the natural population change, since published data regarding the outgoing population are not available. However, it can indicate whether people are moving towards the areas that have been growing in terms of population during the last one or two decades or not. Again, the level to examine will be that of municipalities, since data about the incoming population are not available at more detailed scales. Besides, this would have been rather confusing, as movements from a municipal unit to an adjacent one, which, in fact, might not mean a change in the settlement of residence, would have grouped along with really meaningful movements.

Map 7.5 displays the incoming population (from other municipalities) during the last year before the 2011 census as a percentage of the permanent population above 1 year of age in each municipality at the time of the census. The map has only positive values, which makes comparisons with the previous ones difficult. For this reason, we have also mapped the ratios

⁷ Again, this is not necessarily the case with their shares in the national population.

of the incoming population to the national average (Map 7.6), indicating the ones below 1 with an inverse graduation or reds, so as to resemble the negative values in the previous maps. Positive and negative values have been distributed in quantiles. The classes have thus approximately the same size as the ones on the map of population change between 2001 and 2011, so that a juxtaposition between the two may not be deceptive.

Once more, the islands appear to be among the relatively advantaged areas: nearly all of them exhibit rates of incoming population higher than the national average. This time, the main dichotomy appears to be between West and East, instead of North and South. This doesn't necessarily mean that the advantage of the islands in the South is compromised (we shall see that it is not) but it is, at least in some cases, rather an indication of a larger population "turnover" (increased numbers of both incoming and outgoing population) in the islands of the East Aegean, due to a larger proportion of temporary residents of several categories (military officials and soldiers, doctors, teachers, employed in law enforcement or civil protection agencies etc) in the border regions. This is the reason why large numbers of incoming population are also recorded in Evros, by the land borders with Turkey, and maybe in a few other border regions in the North. Some large islands (Lesvos, Samos, Rhodes) along the coastline of Turkey also have universities attracting new students each year.

A specific finding is a complex of municipalities with high percentages of incoming population. In the North-West, by the border with Albania. This is probably related to the recent construction of a highway offering quick access to the area and the concomitant upgrade of the Igoumenitsa port as a gateway to Western Europe. We shall see that again later. At this point, we are still examining urbanisation in abstract.

Regarding this, the map indicates that 3 out of the 4 mainland cities among the group of the next-6 (Patras, Volos, Larissa) present a percentage of incoming population lower than the national average. Ioannina exceeds the national average but only demonstrates a rate rather moderate compared to other nearby municipalities and less pronounced than the recent growth rates of the city. This fact is even more important as most of those cities (Patras, Ioannina, Volos) have large universities.

Finally, in the two top cities, Athens and Thessaloniki, one can see the previously observed inverse concentric pattern disturbed. While certain municipalities in the first ring of suburbs exhibit low rates of incoming population and tend to be surrounded (though not perfectly) by more distant suburbs presenting rates above the national average, they also fall short of the rates of the city core in both cases. This is because the city centre is the gateway for newcomers to the city. In any case, the rates in both urban cores are still less than the national average. An additional remark is that in both cities, rates in the suburbs seem to follow the traditional distinction between a high-class eastern and a low-class western sector. We will deal with this top level of urbanisation analytically in the following chapter.

A concluding observation concerning the whole national territory is that the traditional pattern of each prefecture being dominated by a single city, and exceptionally by a couple of cities, tends to be obscured. This doesn't change the fact that those cities are still the epicenter

of urbanisation, usually accounting for the major part of the population of their prefecture. However, it constitutes an additional indication of counter-urbanisation tendencies of some type.

Conclusions

In this chapter, we have monitored general contemporary trends in urbanisation at the national level, according to the findings of the census of 2011 as opposed to the censuses of 2001 and 1991. The decade 2001-2011 includes years both before and after the outbreak of the crisis, which means that special computation and techniques are needed to isolate the effects of the crisis. It also means that tendencies associated with the crisis that would otherwise emerge more explicitly appear mitigated when the whole decade is examined.

During the period 2001-2011 the rural population in Greece has declined both in relative and in absolute numbers, whereas the urban population has risen in both. Despite its decreased rates, urbanisation has progressed between the periods 1991-2001 and 2001-2011. Beneath this finding, though, it is possible to distinguish the signs of certain counter-urbanisation tendencies. A slowdown in the rhythms of urbanisation is recorded in the balance sheet of the period 2001-2011 compared with the period 1991-2001, despite the progress in the degree of urbanisation meanwhile. Two less obvious findings are even more telling, though.

Regarding internal migration, a process of urban exodus towards rural settlements was evident even before 2001. On the other hand, the natural population change was steadily positive for urban areas and negative for the rural ones over the whole decade. However, in the period 2010-2011, the balance between urban-rural migration and the natural population change has reversed for the first time, so that the effects of the latter can no longer eliminate the advantage of rural areas due to the urban exodus, which has visibly intensified after the outbreak of the crisis.

Moreover, throughout the period 2006-2011, external migration towards rural areas was significantly higher than in 2001, when it only represented a negligible percentage of the total immigration in the country. At some point during this quinquennial, the rate of immigration towards rural areas has overtaken the percentage of the rural population as a percentage of the total population. During the year 2010-2011, immigration has favored rural areas more than urban areas for the first time.

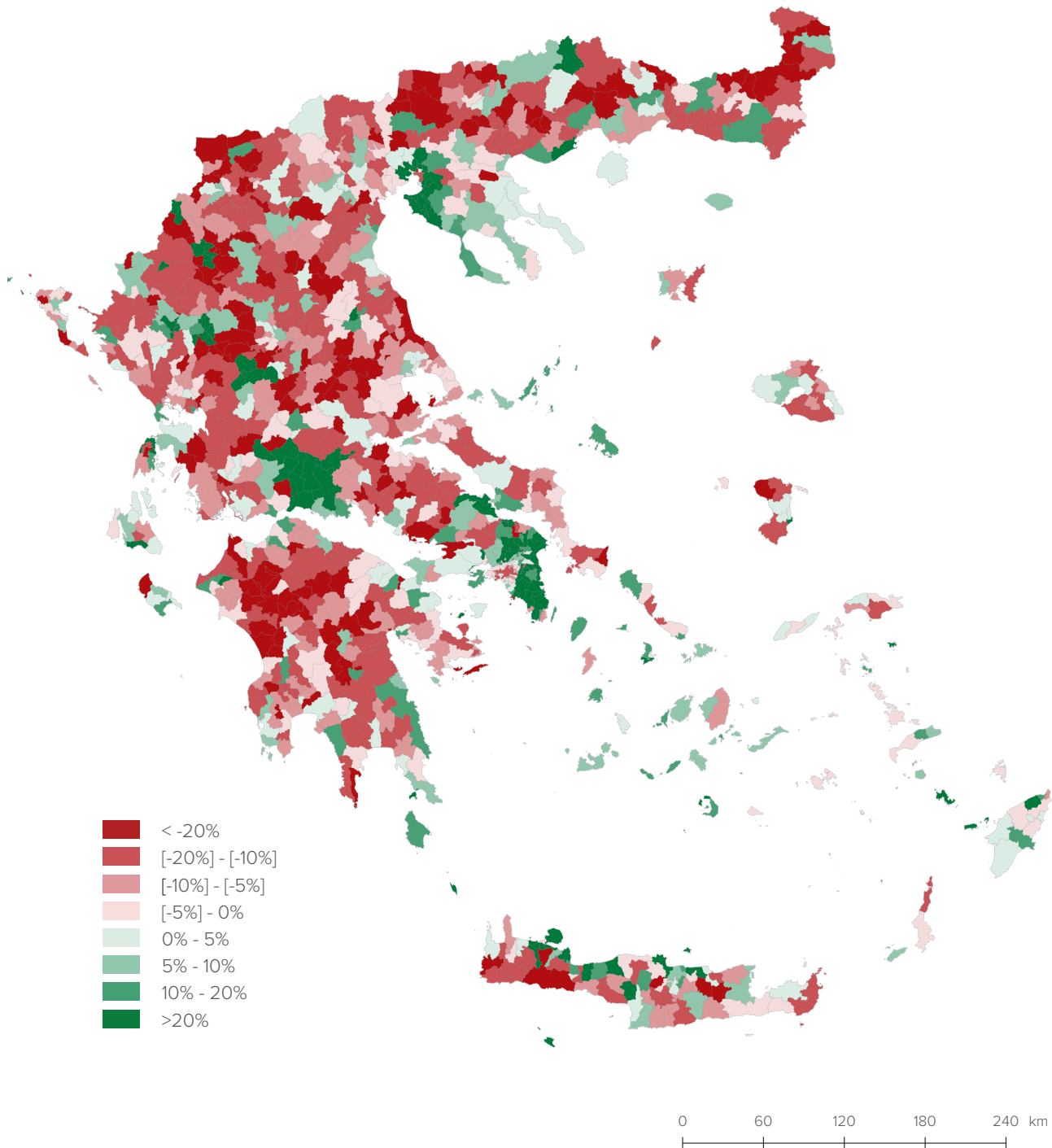
Despite those two above-mentioned significant reversals, it is not possible to estimate whether the rural population has started rising relative to the urban population, due to the lack of data regarding emigration. However, the findings are still meaningful: the evolution of the relationship between urban and rural areas provides a first indication of a process of deconcentration, although rather moderate, which can be considered a certain type of counter-urbanisation.

A first glance at the geographical distribution of urbanisation reveals that, as a rule, the biggest settlement in each one of the 49 non-metropolitan prefectures (NUTS3 regions) presents a positive balance sheet over the decade 2001-2011. Throughout this, the biggest city or cities

in each NUTS3 region have generally attracted the major part of urbanisation in the region. On the contrary, when the incoming population between 2010 and 2011 is examined, this pattern of prefectures dominated by a single city tends to be obscured. Despite their previous high rates of growth, major mainland cities don't seem to be the main pole of attraction of urbanisation at the time of the 2011 census. Despite they were already depopulating in the 1990s, the urban cores of Athens and Thessaloniki declined even sharper during the 2000s.

More generally, Thessaloniki and Athens have followed an inverse concentric pattern, with a centre of shrinking population, a first circle around it that is declining less and successive circles of more dynamic suburbs as one proceeds to the exterior. A micrography of this same pattern appears around the port of Piraeus. All 6 biggest cities behind Athens and Thessaloniki (next-6) have recorded clear trends of suburbanisation throughout the decade 2001-2011 too. We shall later see, though, that suburbanisation cannot fully explain the decline of most urban cores around the country, most prominently in the case of Athens: it also reflects counter-urbanisation.

Map 7.1 Population Change by Municipal Unit, 2001-2011



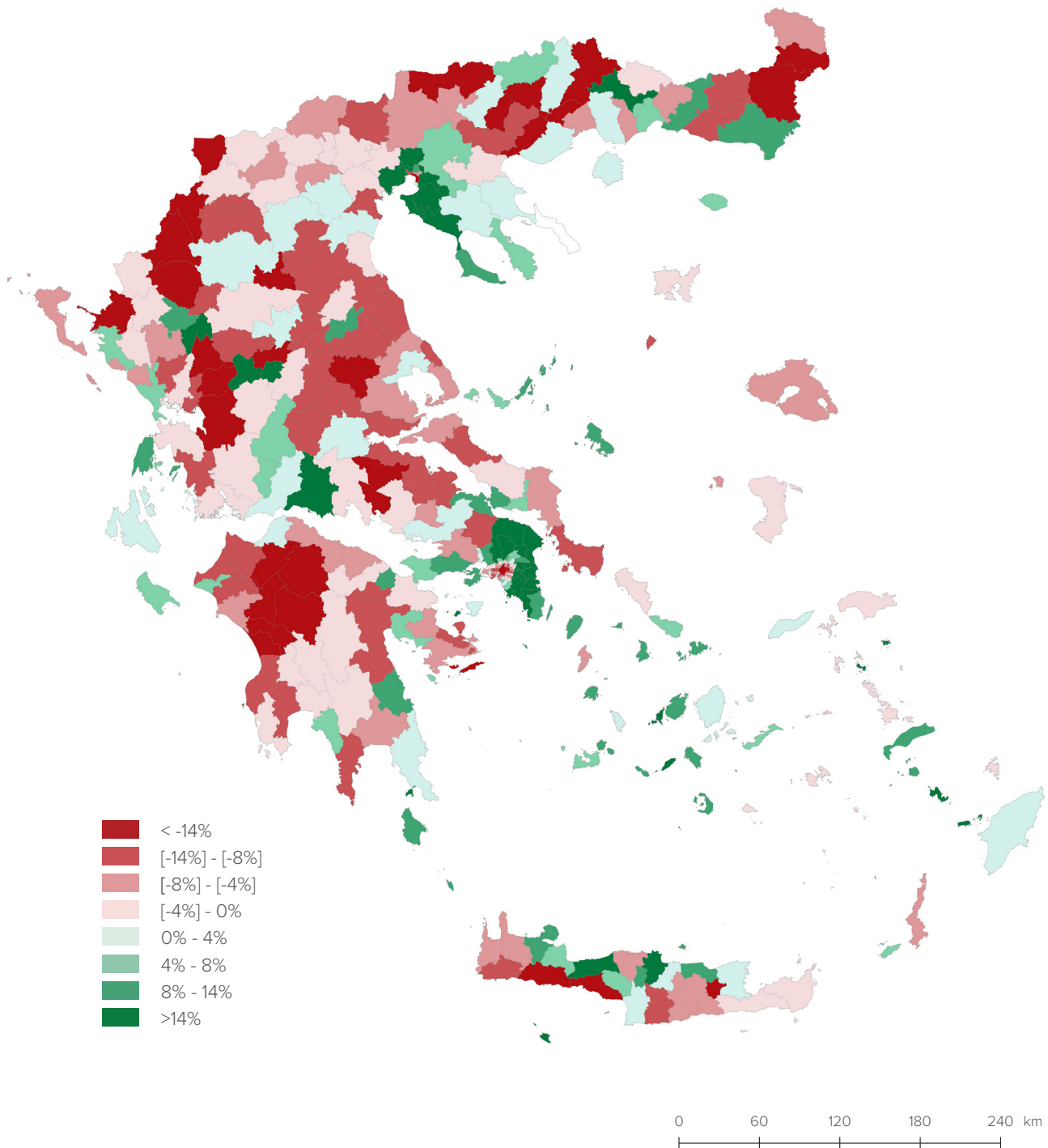
Source: Hellenic Statistical Authority, 2011 Census, 2001 Census
E. Skoufoglou, 2018

Map 7.2 Capital Cities of the former Prefectures of Greece (NUTS 3 Regions)



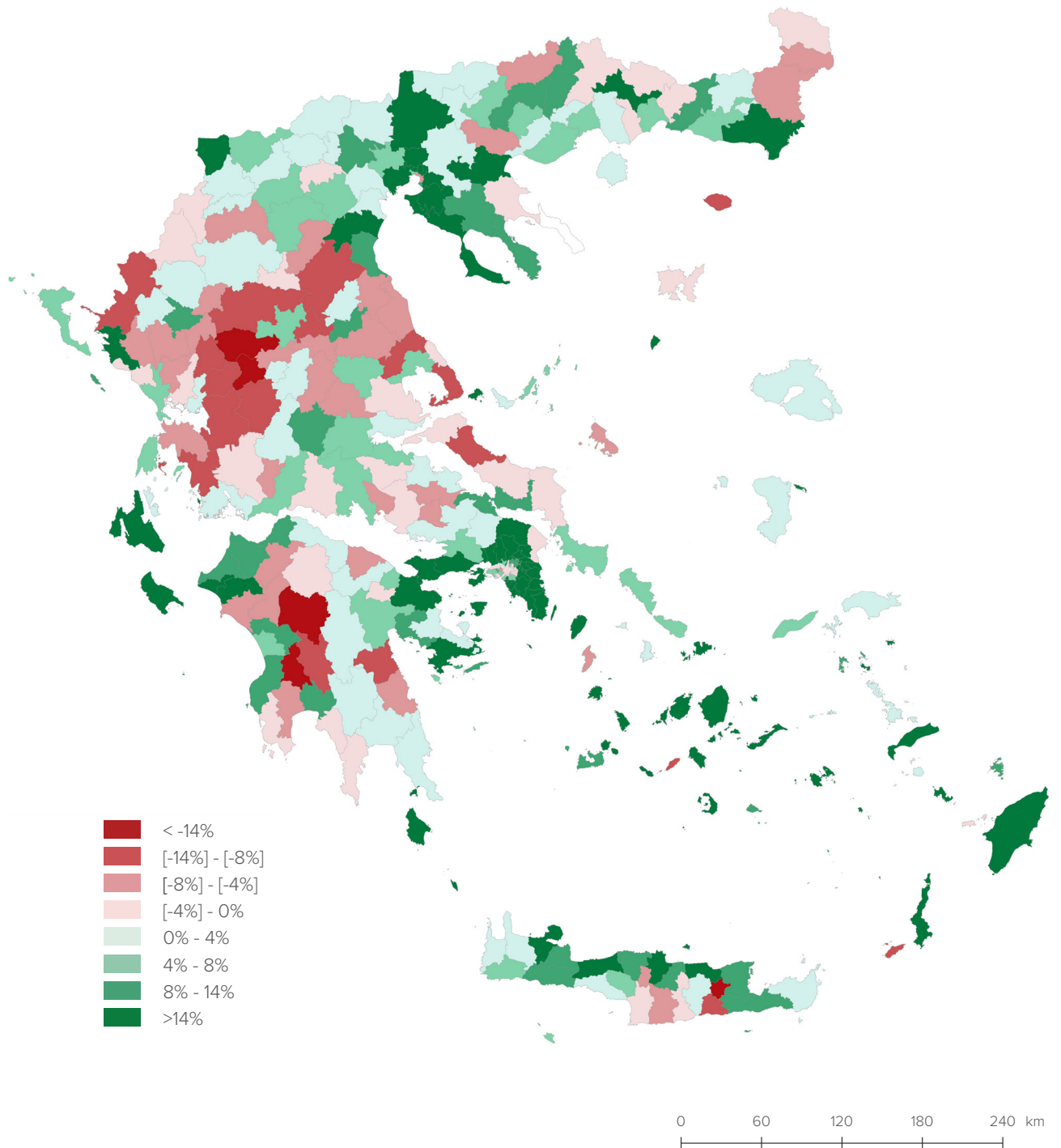
Source: Hellenic Statistical Authority, 2011 Census
E. Skoufoglou, 2018

Map 7.3 Population Change by Municipality, 2001-2011



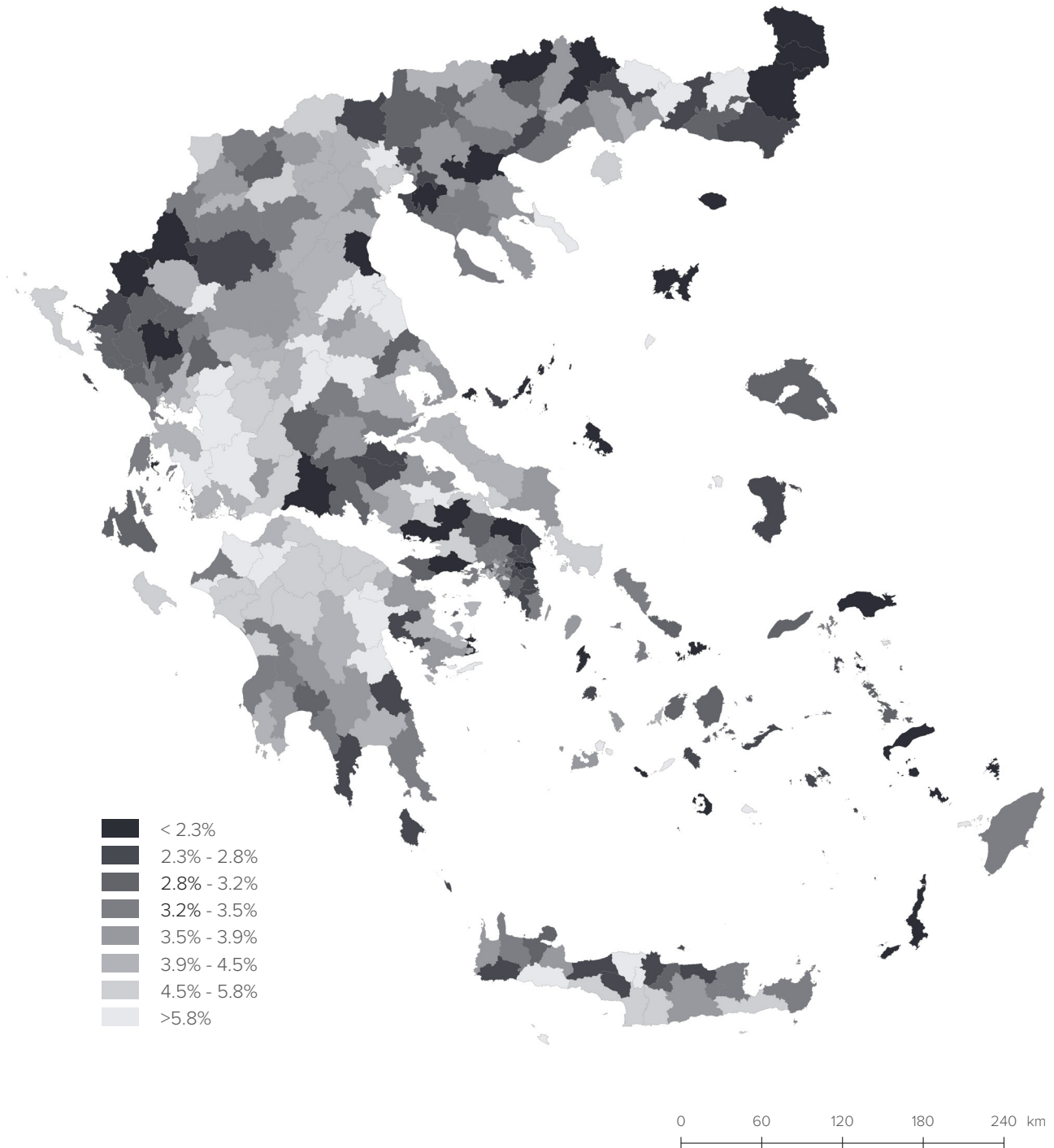
Source: Hellenic Statistical Authority, 2011 Census, 2001 Census
E. Skoufoglou, 2018

Map 7.4 Population Change by Municipality, 1991-2001



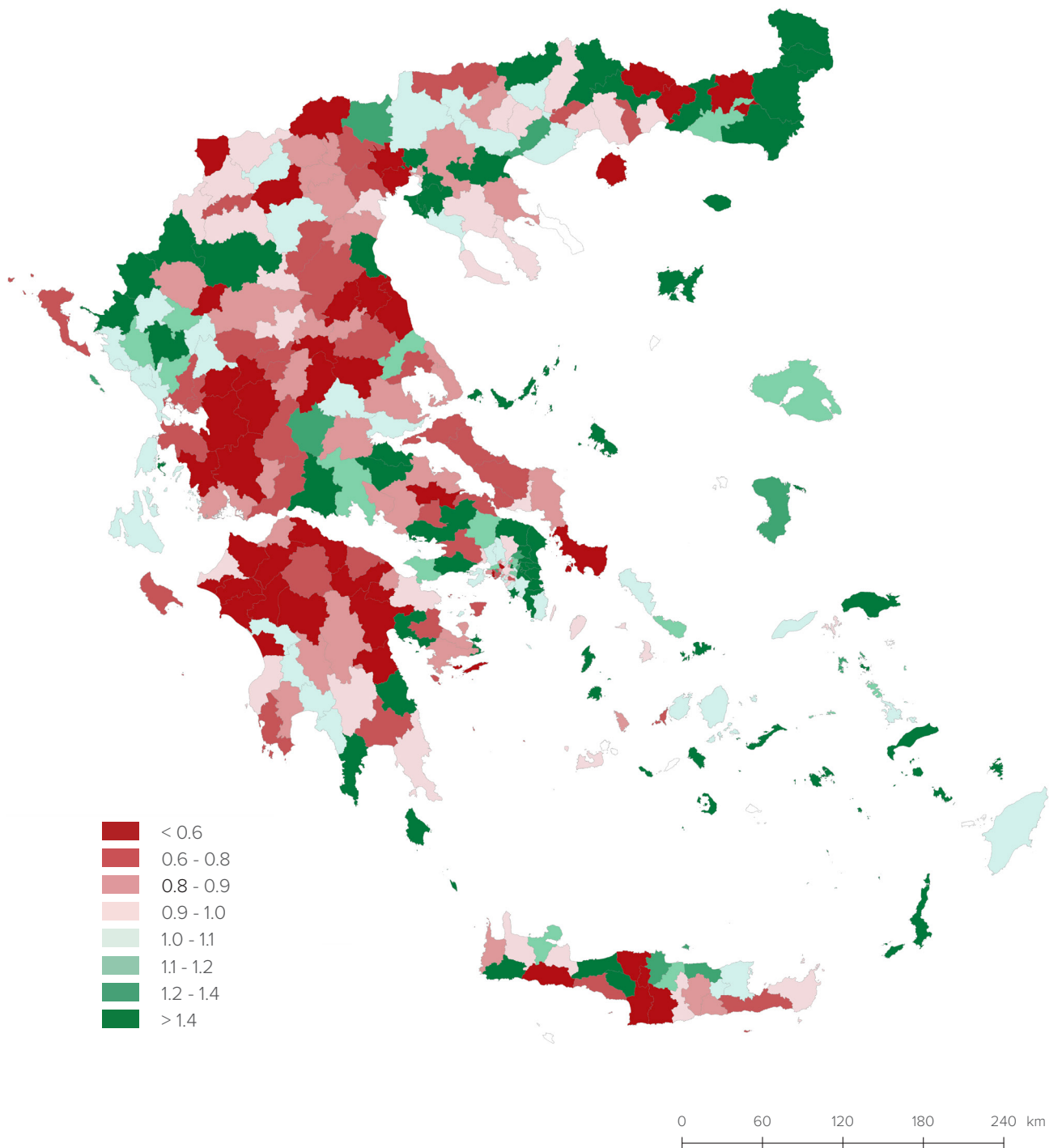
Source: Hellenic Statistical Authority, 2001 Census, 1991 Census
E. Skoufoglou, 2018

Map 7.5 Incoming Population from Internal Migration, by Municipality, 2010-2011



Source: Hellenic Statistical Authority, 2011 Census, 2011 Census
E. Skoufoglou, 2018

Map 7.6 Incoming Population from Internal Migration, by Municipality, 2010-2011, Ratios to the National Average



Source: Hellenic Statistical Authority, 2011 Census
E. Skoufoglou, 2018

CHAPTER 8

Estimated population changes before and after the crisis

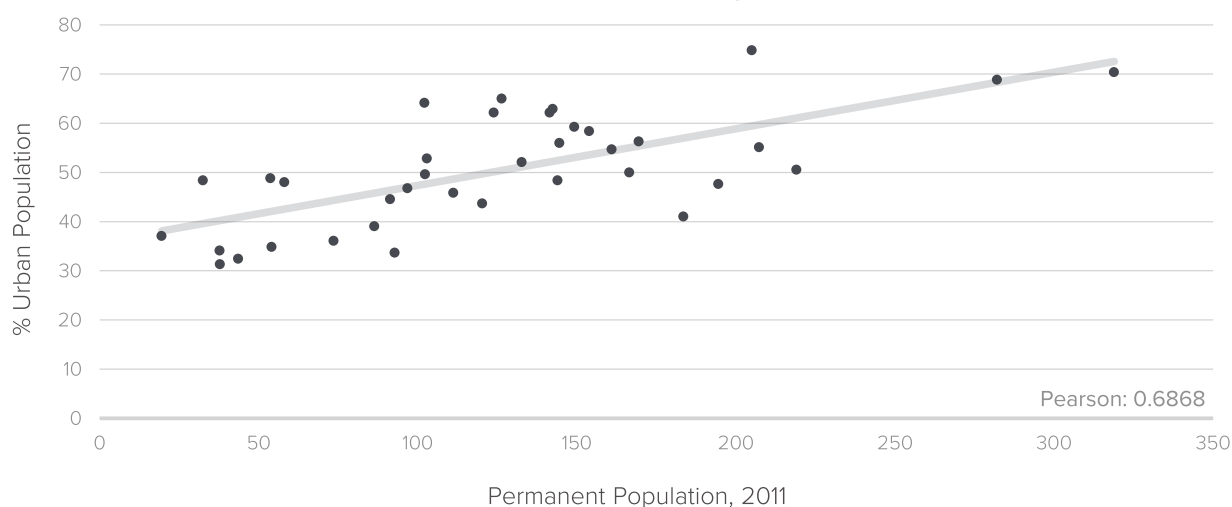
The NUTS 3 regions (former prefectures)

In order to obtain a comprehensive view of the general tendencies in the national territory in a context of crisis, it is necessary to examine the facts and data at a less detailed spatial scale than the one used in the maps of the previous chapter. The former prefectures, that is the NUTS3 level in the EUROSTAT classification, appear quite appropriate. Compared to more detailed scales, the NUTS3 level offers some considerable advantages. Firstly, it renders the separate or composite study of different variables much easier, as it only comprises a few dozens of geographical partitions. Secondly, it permits access to a broader range of data since some important figures are available only down to this level (annual evolution of the GDP and the value added, annual estimates of the population by ELSTAT etc.). Of course, there is simultaneously the danger for the findings to be misleading, because of the big size and the inner heterogeneity of the NUTS3 regions. However, there is some considerable counterweight to this danger because, as already mentioned, most NUTS3 regions across the country have a similar structure. As a rule, each region includes 1 or, at most and very rarely, 2 urban areas, which constitute the centre of gravity of both the population and the economic activity in the area. Attica and, to some extent, Thessaloniki regions are exceptions, as they enclose the two metropolitan areas of the city. The islands, particularly the smaller ones among them, display their own particularities, as their development is more diffuse, along the coasts, and not necessarily gravitating around a Capital city. However, these exceptions do not contradict the legitimacy of a study at this scale, and possible problems can be dealt with through an appropriate typology.

The above-mentioned structure is also reflected in the fact that the most populated prefectures also tend to be the most urbanised ones. One can see that in Chart 8.1, where percentages of the urban population by NUTS3 region is correlated with their population. The trend line is clearly upward, and the Pearson correlation coefficient is nearly 0.7, indicating a non-negligible degree of correlation, although not very high.

As mentioned previously, the former prefectures have recently transformed into 74 regional units. The census of 2011 took place in the framework of this new administrative division. We can elaborate on several aspects according to this division. However, in many other cases, it is

8.1 Urban Population as a percentage of the Regional Permanent Population, by non-metropolitan NUTS3 Regions, 2011



Source: Hellenic Statistical Authority, 2011 Census. E. Skoufoglou, 2018

more suitable or even obligatory to resort to the older division consisting of 51 prefectures. This choice has a certain cost, as it patches different islands or even islands along with mainland areas (Thassos along with Kavala or the Northern Sporades along with Magnesia, the region of Volos). At the same time, though, it offers comparability with older findings and data. Moreover, a series of significant facts are still provided by former prefectures and not by their newly established heirs, the regional units. Besides, the EUROSTAT NUTS3 statistical division of Greece still formally corresponds to the former prefectures and not to the actual administrative division.

According to the rural-urban typology of the EUROSTAT (EUROSTAT, 2013, p. 238), among all the NUTS3 regions of the country, one can find only 2 urban (Attica and Thessaloniki, both also characterised as metro regions, capital and second-tier respectively) and 5 intermediate ones (Achaia, Magnesia, Heraklion of Crete, Ioannina, and Chania). All the rest are predominantly rural, although in some cases they may include remarkable cities, Larissa being the most prominent example.

Another possibly useful typology would classify NUTS3 regions according to their dominant economic activity. We have constructed such a classification according to the Gross Value Added by NACE Rev.2 in the year 2010, which is the time describing most accurately the situation when the Census was performed. The relevant figures are provided in the annual regional accounts of ELSTAT. Only 4 different categories prevail in even one NUTS3 region: Public Administration/Education/Human Health; Retail/Services/Tourism; Industry; and Real Estate. Most regions belong to either of the two first of the before-mentioned categories. Four regions appear to be predominantly industrial, the three of them being specialised in electricity production, as they gather the biggest coal power plants in the country (Kozani, Florina, and Arcadia), and only one being a predominantly manufacturing region: Boeotia, which functions as a satellite region of Athens. When reference is made to the four industrial regions of the

country throughout this study, it conventionally regards those four regions, although we shall see that more regions had shifted to this category by 2014,¹ and that the classification would be different if employment was considered instead of value added. If we exclude the Public Administration/Education/Human Health category, of which the army is not a negligible part particularly near the borders, industry (manufacturing) prevails in another 2 regions: Kilkis and Rodopi (although in the latter case the contribution of industry in employment is not particularly high). Besides, Kilkis would belong to the group of industrial regions, according to the criterion of the contribution of industry in the Gross Value added in 2008. In Maps 8.1 and 8.2, one can see the dominant activity in each region, including or excluding the category of Public Administration/Education/Human Health respectively.

Table 8.1. shows the contribution of selected activities, including industry², in the total employment by former prefecture, according to the Census of 2011. This time, data are given by regional unit and not by prefecture – it wouldn't be difficult to adjust them by prefecture, but this would mean to lose some interesting information. Apart from the 5 out of the 6 already mentioned regions (Kozani, Kilkis, Boeotia, Arcadia, Florina), one can see considerable shares of industry in Euboea and Kastoria as well as, at a second level, in Xanthi, Kavala, Drama, Imathia, Magnesia, Phthiotis, Pella, and Corinthia. It must be noted that the top 4 regions in terms of employment in industry don't coincide the top 4 in terms of value added in the sector. Thessaloniki also records a relatively high rate (almost 14%), whereas Attica as a whole may not have to present a particularly high share, but in nevertheless comprises regional units that do: West Attica (displaying the fourth largest share after Kilkis, Boeotia, and Kozani), East Attica, West Athens, and Piraeus. The only islands with a remarkable employment in industry are Syros and Milos in the Cyclades. One can see the relevant information on Map 8.3.

The criterion of employment is more decisive when trying to identify agricultural³ regions since the contribution of the primary sector in the GDP and in the value added is very small. The respective rates may be found in Table 8.1 and Map 8.4. Agriculture is mostly concentrated in Central Macedonia (to the East and West of Thessaloniki), Thessaly, Central Greece (mostly Aetolia-Acarnania), the Peloponnese, and part of Thrace (Rodopi). In regions such as Laconia, Rodopi, Elis, Karditsa, Serres, Pella, and to a somewhat lesser extent Imathia, Aetolia-Acarnania, and Messinia, the presence of agriculture is so high as to have practically no rival among other activities in terms of employment.

Unlike the previous categories, the contribution of tourism is not so easy to be depicted on a map or table, because it doesn't only comprise persons employed in "accommodation and food service activities" but also in other NACE Rev.2 categories, such as retail trade or "arts,

1 To define as industrial exclusively the 4 regions where industry was the leading Nace Rev.2 activity in 2010 is not unfounded, since they are the only four regions where the predominance of the sector has been stable throughout the whole period under consideration.

2 Manufacturing/ Electricity, gas, steam and air conditioning supply Water supply; sewerage, waste management and remediation activities.

3 We use the term "agricultural region" instead of "rural region" to avoid confusion with the previously mentioned ELSTAT taxonomy, where "rural" signifies a low level of urbanisation and does not necessarily describe a high proportion of agricultural activities in a given region.

Table 8.1 Shares of the Primary Sector, Industry, and Accomodation and Food Service Activities in Employment, by Regional Units, 2011

Primary Sector		Industry		Accomodation and Food Service	
GREECE	9.99%	GREECE	10.53%	GREECE	7.82%
Laconia	38.98%	Kilkis	20.63%	Kos	35.37%
Rodopi	36.82%	Boeotia	20.43%	Mykonos	30.33%
Pella	32.79%	Kozani	20.01%	Thira	30.04%
Elis	31.99%	West Attica	19.39%	Rodos	27.39%
Karditsa	28.80%	Euboea	17.56%	Sporades	26.75%
Serres	28.32%	Kastoria	16.34%	Thasos	25.08%
Messinia	26.97%	Xanthi	14.77%	Zakynthos	24.35%
Aetolia-Acarnania	25.67%	Thessaloniki	13.71%	Corfu	23.44%
Imathia	25.24%	Magnesia	13.20%	Karpathos	23.21%
Lasithi	24.53%	West Athens	13.06%	Rethimnon	20.00%
Argolis	24.07%	Imathia	12.85%	Paros	18.39%
Ikaria	22.91%	Florina	12.77%	Lasithi	17.94%
Arta	21.96%	East Attica	12.52%	Cephalonia	17.71%
Grevena	21.81%	Piraeus	12.42%	Chalkidiki	17.18%
Boeotia	21.31%	Kavala	12.01%	Lefkada	16.98%
Corinthia	21.27%	Drama	11.37%	Tinos	15.77%
Preveza	21.27%	Arcadia	11.24%	Naxos	15.49%
Evrytania	21.15%	Pella	11.04%	Chania	14.71%
Phthiotis	21.06%	Corinthia	10.99%	Samos	14.61%
Thesprotia	20.48%	Phthiotis	10.95%	Milos	14.48%
Pieria	19.89%	Syros	10.56%	Ithaca	13.97%
Florina	19.80%	Milos	10.55%	Heraklion	13.25%
Trikala	19.47%	Larissa	10.34%	Kea	12.23%
Kea	18.94%	Ioannina	9.85%	Kalymnos	11.24%
Kastoria	18.91%	Rodopi	9.80%	Syros	11.11%
Larissa	18.58%	Trikala	9.68%	Islands (of Attica)	10.91%
Kilkis	18.02%	Pieria	9.60%	Preveza	10.33%
Arcadia	17.96%	South Athens	9.59%	Thesprotia	10.27%
Xanthi	17.88%	Serres	9.55%	Andros	10.25%
Lesvos	17.37%	Achaia	9.50%	Evrytania	9.65%
Evros	17.16%	North Athens	9.30%	Pieria	9.39%
Rethimnon	16.85%	Central Athens	8.96%	Argolis	9.27%
Chalkidiki	16.58%	Grevena	8.96%	Phokis	8.90%
Kavala	16.53%	Chalkidiki	8.80%	Lesvos	8.69%
Drama	16.27%	Arta	8.79%	Ikaria	8.47%
Andros	15.49%	Phokis	8.36%	Messinia	7.76%
Phokis	14.70%	Argolis	8.06%	Ioannina	7.75%
Thasos	14.47%	Heraklion	7.78%	Limnos	7.39%
Zakynthos	14.19%	Islands (of Attica)	7.27%	Euboea	7.36%
Naxos	13.94%	Tinos	7.21%	Trikala	7.22%
Limnos	13.46%	Karditsa	7.11%	Magnesia	7.19%
Heraklion	13.37%	Messinia	7.07%	Corinthia	7.18%
Euboea	12.32%	Preveza	7.04%	Grevena	7.15%
Magnesia	11.99%	Aetolia-Acarnania	7.00%	Chios	7.03%
Chania	11.31%	Elis	6.95%	Elis	7.00%
Ithaca	11.29%	Karpathos	6.88%	Achaia	6.71%
Samos	10.63%	Evros	6.84%	Central Athens	6.61%
Cephalonia	10.47%	Kalymnos	6.75%	Arta	6.59%
Lefkada	9.89%	Chania	6.73%	Laconia	6.58%
Achaia	9.33%	Rethimnon	6.36%	Kavala	6.57%
Ioannina	9.23%	Paros	6.29%	Arcadia	6.50%
Kalymnos	9.18%	Thasos	6.21%	Drama	6.27%
Kozani	8.81%	Thesprotia	6.06%	Aetolia-Acarnania	6.24%
Karpathos	8.48%	Lesvos	5.90%	Karditsa	6.23%
Islands (of Attica)	8.45%	Rodos	5.82%	Kastoria	6.18%
Chios	8.16%	Ikaria	5.77%	South Athens	6.15%
Tinos	7.11%	Evrytania	5.67%	Thessaloniki	6.12%
Corfu	6.88%	Chios	5.67%	Florina	6.10%
Paros	6.64%	Limnos	5.59%	Serres	6.05%
Sporades	6.37%	Naxos	5.57%	Piraeus	6.05%
Milos	6.04%	Cephalonia	5.48%	Phthiotis	5.95%
Thira	4.80%	Andros	5.43%	Larissa	5.73%
West Attica	4.76%	Sporades	5.36%	Evros	5.66%
East Attica	4.01%	Lefkada	5.23%	East Attica	5.60%
Thessaloniki	3.38%	Corfu	4.95%	Xanthi	5.56%
Syros	2.90%	Thira	4.92%	West Athens	5.50%
Rodos	2.87%	Lasithi	4.89%	Kozani	5.41%
Kos	2.84%	Laconia	4.83%	West Attica	5.33%
Mykonos	2.73%	Zakynthos	4.81%	Pella	5.25%
Piraeus	0.53%	Samos	4.67%	Kilkis	5.19%
West Athens	0.49%	Mykonos	4.57%	Imathia	5.12%
North Athens	0.48%	Kos	4.42%	Boeotia	5.02%
Central Athens	0.45%	Ithaca	4.35%	Rodopi	4.85%
South Athens	0.43%	Kea	4.22%	North Athens	4.03%

Source: Hellenic Statistical Authority, 2011 Census. E. Skoufoglou, 2018

entertainment, and recreation”. However, the geographical distribution of accommodation and food service can give a good approximation of the distribution of activities associated with tourism. This is done in Map 8.5. The predominance of islands is more than evident, and there is no mainland region to compete them apart from Chalkidiki. The fact that data are given by regional units offers the opportunity to also examine the differentiation between islands in more detail. Most islands in the North Aegean Sea (Lesvos, Limnos, Chios, Ikaria) are left behind, although Thasos and the Sporades exhibit particularly high rates (although none of them belongs to the North Aegean administratively). Kos, Rhodes, and Karpathos are leading the Dodecanese, Mykonos and Thira the Cyclades, Zakynthos and Corfu the Ionian Islands, and Rethimnon is leading Creta, concluding the top ten regions in the country in terms of the share of accommodation and food services in employment. In the mainland, apart from the distinguished case of Chalkidiki, one can see considerable rates in Preveza, Thesprotia, Pieria, Messinia, Argolis, Euboea, and Phokis. High rates in Evrytania and, to a lesser extent, Ioannina indicate the presence of winter tourism activities.

Finally, there is the unique case of Evros on the border with Turkey and Bulgaria, where the leading category in terms of employment is clearly “public administration and defence”. This reflects the excessive concentration of military facilities because of the long-standing rivalry between the Greek and the Turkish state. This has exceptional spatial repercussions. A similar situation is found on Limnos island (which constitutes a regional unit but not an autonomous NUTS3 region).

Estimated Population Changes

Since censuses are conducted only once in a decade, and since the period between the last two censuses comprises both before and after the outbreak of the crisis, the question is what data could form the basis for an examination of the population tendencies as well as their interrelations with other characteristics, measurements, and findings under the conditions of the crisis in particular. A first relevant source of data can, at disposal on an annual basis, are the estimates of the population by NUTS3 region provided by the Hellenic Statistical Authority (ELSTAT). Deriving from a certain algorithm, those estimations can’t simulate reality with precision.⁴ This is why we shall later examine more credible data and series. However, the annual estimation can provide important guidelines.

According to the estimates of the Hellenic Statistical Authority, between 2002 and 2010, the total population of the country had been increasing by 25,000 to 35,000 inhabitants per year. These rates seem to have remained unaffected during the first years of the global capitalist crisis. On the contrary, the tendency obviously reverses after the outbreak of the Greek public debt crisis and the concomitant initiation of the IMF programme in 2010. Between 2010 and 2011, the population change appears still positive, though only marginally, amounting to approximately 4,000 inhabitants. Afterwards, a sharp decline starts, at negative rates clearly exceeding the

4 For details regarding the methodology of the annual estimations, see ELSTAT (n.d.), Short methodological note on the estimated migration flows and the estimated population 1991-2014.

positive ones during the previous decade. The largest fall has been recorded in the year 2012, with a loss of about 83,000 persons, representing 0,75% of the total population. In 2014, the total population of the country was estimated already well below 11,000,000, reaching its lower level since 2003. ELSTAT estimates that the country has lost more than 205,000 inhabitants between 2011 and 2014 due to its negative migration balance sheet (Laboratory of Demographic and Social Analyses, 2016, p. 258).

As already mentioned, these estimates are not exactly consonant with the official measurements of the permanent population in the censuses, according to which the total population of the country in 2011 was already lower than it was in 2001. However, the dynamic is the same in both cases: positive in the early 2000, negative after at the beginning of the current decade.

This apparent population decline due to the crisis has been already noted. The issue here is to point out whether the crisis, apart from the general level of the population, has also affected its geographical distribution. If the values of the annually estimated population by regions are put together year by year, the standard deviation turns out to be constantly decreasing since 2010, whereas it had been continuously rising previously. The picture is almost the same if we remove Attica or both Attica and Thessaloniki from the total (it makes sense to remove them, as Attica represents more than 1/3 and Thessaloniki more than 1/10 of the total population of the country, thus giving extremely high standard deviation values that tell us very few about the actual distribution of the population among all the remaining regions of the country). The only difference in this latter case is that the decrease in the standard deviation of the remaining values starts one year later, that is between 2011 and 2012. Therefore, a first observation would be that the crisis generally tends to diminish the level of population disparities among the NUTS3 regions.

However, this conclusion still offers limited information about the actual distribution patterns. A first picture of these patterns is given in Map 8.6, where one can see the percent population change in each NUTS3 region during the period 2010-2014.

18 out of the 51 former prefectures still retain a positive balance sheet, the most dynamic ones being Phokis and Pieria. Among the remaining 33 declining regions, Attica, Arcadia, Karditsa, Trikala, Arta, Kozani, and Kastoria present the sharpest negative rates.

The big majority of all growing regions belong to either of the two following types:

1. Islands: Chios, Cyclades, and the Dodecanese in the Aegean Sea; Lefkada and Cephalonia in the Ionian Sea; 3 out of the 4 former prefectures of Crete.
2. Regions adjacent to the two metropolitan regions of the country (both of which are declining): Boeotia and Corinthia to the North and to the South of Attica respectively; Pieria and Chalkidiki (additionally, a region of exceptional touristic interest) around Thessaloniki. We shall call those regions “peri-metropolitan”.

The only cases escaping this classification are Thesprotia, Phokis, Laconia, and the three regions of Thrace, in the Northeastern end of the country. In the first instance, the observed vitality of the regions must be attributed to the port of Igoumenitsa, which was favoured very much by the construction of Egnatia, the large modern highway connecting the port to Thessaloniki and, through all North Greece, to the Turkish border. Egnatia has undertaken a very big load of road transports of passengers and, mainly, goods, and Igoumenitsa has evolved into a significant gateway to Italy and Central/Western Europe, at the expense of the port of Patras. Although it also has noteworthy mines of bauxite, the case of Phokis should rather be explained by means of its archaeological tourism sites and facilities, not far from Athens and thus suitable for weekend tourism as well. It should be noted, however, that those two cases represent two of the smallest NUTS3 regions of the country in terms of their overall population, not much more than 40,000 each, so that their relative positive rates, no matter how impressive, don't correspond to really high absolute numbers.

According to the above said, it could be concluded that the map indicates two main spatial processes: distant (interregional) exurbanisation or satellite urbanisation around the metropolitan regions; and tourism-led economic development. A third one should possibly be added: a certain degree of de-metropolisation. But, of course, it is far too risky to confirm and consolidate this picture yet, at this point and level of analysis.

For the time being let's focus on another aspect, that is the possible shifts that the map signalises in relation with the middle-term tendencies in the previous period. Maps 8.7 and 8.8 depict population densities by NUTS3 region, according to the findings of the censuses of 2001 and 2011 respectively. Differences between the two cases are not spectacular. One can determine a relocation of higher densities towards the East of the country, further underlining the S-shaped line Patras-Athens-Thessaloniki.

Map 8.9. is more pertinent, showing the percent permanent population change in the period 2001-2011, that is among the two last censuses, by NUTS3 region. In this case, the data is not based on estimations but derived from the exact findings of the censuses. As already noted, population estimates according to the methodology of ELSTAT don't coincide the official figures recorded in a census, even for the very same year of the census. There is also an overlap of one year in the selection of the two periods selected for comparative examination, but this is unlikely to seriously alter the general picture. However, it should be underlined in advance that comparisons between these two different sources of data are not fully reliable.

Again, we find here almost the same number of regions with a positive balance sheet: 19 out of the total 51. 13 of them are common, meaning that they have presented positive rates of population change in both periods, so that one can conclude, somewhat abstractly, that they have been growing at least ever since 2001. 6 regions estimated to be declining during the period 2010-2014 used to have a population surplus between 2001 and 2011: Ioannina, Larissa, Euboea, Evrytania, Zakynthos, and, most significantly, Thessaloniki. Contrarily, 5 regions have shifted from negative to positive rates of change: Evros, Thesprotia (with the before-mentioned case of the port of Igoumenitsa), Boeotia, Laconia, and Chios. The latter regions are seemingly

profiting from the crisis in terms of their population. Among the most sharply declining regions in the period 2010-2014, almost all have already been significantly declining in the period 2001-2011, though not necessarily at the same rates. The most obvious exception to this rule is Evrytania, which has apparently shifted from considerable rates of growth to one of the highest rates of depopulation.

At first sight, the map does not seem to indicate any major change or turnaround. Does this indicate that the crisis has not induced significant changes in the patterns of population change, apart from a general decrease? This doesn't sound convincing. First of all, certain effects of the crisis, or at least developments linked with the crisis in one way or another, may be obscured in this comparative examination because they were already present in 2011, since 2010, as a result of the bailout and the initiation of the IMF programme, or even earlier, due to the repercussions of the global economic meltdown of 2008. Besides, under more detailed scrutiny, some significant facts and changes may be distinguished.

In both periods, in line with what has already been noted, islands appear on average more dynamic than most parts of the mainland. This positive dynamic is particularly located in the southern part of the insular territory, while in the North certain regions are declining (Lesvos, Corfu, Samos etc.). Besides, Creta and the South Aegean are the only two peripheries that can take pride in presenting positive population balance sheets throughout the period 2001-2011, according to the permanent population figures of the censuses. In both cases, the rates of growth are significant: around 4,5% for Creta and 3,4% for the Southern Aegean. There is no doubt that this phenomenon is associated with tourism.

Both maps also corroborate the underdevelopment of inland mountainous areas, mainly along the Pindos mountain range and its continuation to the South, with some exceptions.

However, the differentiation of the growing regions in each period, although only partial, is quite telling. Apart from the islands and a couple of thinly populated regions with a significant concentration of mountain, archaeological or winter tourism activities (Phokis, Karpenisi), a remarkable part of the areas that appear to have grown during the period 2001-2011 are regions containing large and relatively large cities, that is cities of the second or third level of the urban hierarchy: Ioannina, Larissa, Xanthi, Chalkis. In all these cases, the population growth of the whole region has been clearly and undoubtedly gravitated by a single agglomeration, which is the Capital city. Only one out of those four regions was still growing in the period 2010-2014, Xanthi, and again only at a lower rate, as it seems.

Differences are clearer if we examine the map of the evolution of the estimated population between 2004-2008, that is in a period of the same duration as the one covered in Map 8.6, but before the crisis entirely (Map 8.10). The picture is substantially different than in the period 2010-2014. This is not only because green prevails over red on the map since at the time the population of the country was still enjoying an estimated increase, but also because of a qualitatively different geographical pattern. Unlike the period 2010-2014, between 2004 and 2008 almost all regions of the large cities around the country (with the only exception of Achaia/Patras) have grown in terms of population, according to the estimates: Heraklion in

Creta and Rhodes in the Dodecanese; Larissa, Magnesia/Volos, Ioannina, and even Trikala or Kavala, in the mainland; and both metropolitan regions, Attica/Athens and Thessaloniki. Not only did Attica and Thessaloniki grow at that period, but their rates of population growth exceeded the ones of almost all regions around them (apart from Pieria to the South-West of Thessaloniki), in sharp contrast with what has happened after 2010. This is a strong indication that the tendencies detected just above have been due to the crisis.

De-metropolisation tendencies

At the same time, the situation in and around the two metropolitan areas is substantially different. The region of Thessaloniki was still growing in the period 2001-2011, although its city centre was already depopulating rather strongly, as already indicated by the examination on the lower levels of administrative division (municipalities, municipal units). The decrease in the population of the city centre is evidently outnumbered by the increase in the nearby suburbs. It seems that the same is no longer the case in the second period under study. The whole region presents a negative rate of population change.

In the period 2001-2011, Attica, the region of Athens, was already declining but at a quite mild rate, recording a decrease of a little more than 2% throughout the whole decade. If we took account of the annual estimates instead of the censuses, the balance sheet for the decade would appear even marginally positive. On the contrary, in just 4 years after 2010 (which has been the historical peak of the population of Attica, according to the ELSTAT annual estimates), the region has lost 3,3% of its total population. Again, it is apparent that the beneficial effect of the growing distant suburbs of the second and third zone is not enough anymore to counterweight the sharp decline of the city centre and the milder, but still important, losses of Piraeus and of the first historic zone of suburbs.

So, should one speak of a de-metropolisation process in progress? There is indeed a first indication for that, but caution is still required. This is not only because, for the time being, we are only based on estimates. It is also because, while both metropolitan areas are losing population in absolute terms, this is not the case in relative terms. The share of Attica in the total population of the country has been diminishing already since 2007, and this downward tendency has accelerated considerably since 2010. Starting from nearly 36,1% of the total population, the estimated population of Attica was 36% of the (estimated) national population in 2010 and 35,36% in 2014. On the contrary, the share of the Thessaloniki region has been almost steadily raising both before and after the outbreak of the crisis: it was a little less than 10% back in 2002, to reach 10,28% in 2014. Of course, this rise describes two different processes during two different phases: a growth rate higher than the national average before the crisis and a rate of decrease lower than the national average after that. However, it remains a fact that the depopulation of the region of Thessaloniki appears only in absolute numbers and not as a percentage of the national population, and only in this restricted sense one could speak of de-metropolisation in this case.

This doesn't mean that the depopulation of the Thessaloniki region is not a substantial

phenomenon. Its significance is highlighted if we examine, instead of the share of the region in the national total, its share in the sum of the population of the remaining 50 NUTS3 regions, if Attica is excluded. Here, the comparative advantage of Thessaloniki vanishes at once. Indeed, the share of the region has clearly declined more than the share of any other region among those 50. Even more interestingly, the historical trajectory of this rate displays almost the same structure as the one of Attica as percentage of the national total: rising visibly until 2007, presenting only a marginal increase for another 3 years in the case of Thessaloniki (instead of a marginal fall in Attica), reaching a peak (16%) in 2010, then falling ever since. It seems that the relativity of the de-metropolisation process in the case Thessaloniki is, in turn, relative: it is obscured when the national total is involved only because of the bigger intensity of the same process in the Capital city.

Anyway, the comparative decline of the two metropolitan regions is evident from a very simple measurement: the share of the 49 non-metropolitan regions in the national population has risen by more than 0,6% of the total (or by nearly 1,2% of its own share in 2008) since the outbreak of the crisis. Overall, it has climbed up from 53,71% in 2009 to 54,36% in 2014. It is characteristic that this share was declining each and every year prior to the crisis, with no exception, although it is of some importance that its annual fall had shrunk to a minimum since 2007 already. The first year of a recorded positive balance sheet, yet marginal, for the total of non-metropolitan regions was 2009. Not only has it remained positive ever after this turnaround, but it has also grown remarkably in each of the following years.

Therefore, all the above constitute a piece of evidence that the currently observed phenomena of de-metropolisation are particularly connected to the crisis.

In contrast with the two metropolitan areas, regions adjacent to them have been substantially less dynamic during the period 2001-2011. Chalkidiki and Pieria around Thessaloniki, and Corinthia to the South of Athens have already been growing, but at rates rather lower than afterwards (much lower in the case of Pieria). As already indicated, not only are these regions still growing after 2010, despite the overall population decrease in the country, but more regions around the two metropolitan agglomerations also emerge as poles of attraction: this is the case of Boeotia to the North of Athens.

According to the facts indicated above, therefore, two out of the three spatial processes distinguished in the map concerning the period 2010-2014 were either absent or less developed in the previous period, that is before the crisis: distant exurbanisation (now beyond a first circle of already existing exurbs) and de-metropolisation. The remaining one, that is tourist-led development, was already present, although we shall later see that its dynamic has also altered under the conditions of the crisis.

At this level of analysis, the first tendency towards can only be observed in the two metropolitan areas. It is, of course, a legitimate assumption that something similar, though at a smaller scale, should be happening in smaller cities as well. The discussion in the previous chapter has provided some indications for that. The annual population estimates of ELSTAT are not suitable for cross-checking this assumption since they are not available beyond the

NUTS3 level.

Anyway, we do have a hint of a distant exurbanisation process around the two metropolitan areas. That alone is already a reason to associate exurbanisation with de-metropolisation, as described before. In fact, we should ask whether this distant exurbanisation or satellite urbanisation is, in fact, the concrete form of the de-metropolisation in progress, or, in other words, if both phenomena are aspects of a single process. Such an interpretation would have certain advantages.

First of all, it is consonant with the recorded decline of certain peripheral middle-scale cities as poles of population attraction. In simple words, if it is true that people are leaving the two metropolises due to the crisis, they may do so in favour of a settlement at a close range rather than for the sake of a smaller city somewhere in the mainland (the islands remain a different case).

Secondly, if this scenario is correct, it can explain the difference between the rate of depopulation in Athens and the one in Thessaloniki, in terms of the size of the two cities alone. Due to the much smaller area of Thessaloniki, exurbs or satellite settlements can be located within the limits of the region, thus constraining its overall population decrease resulting from the decline of the city core.

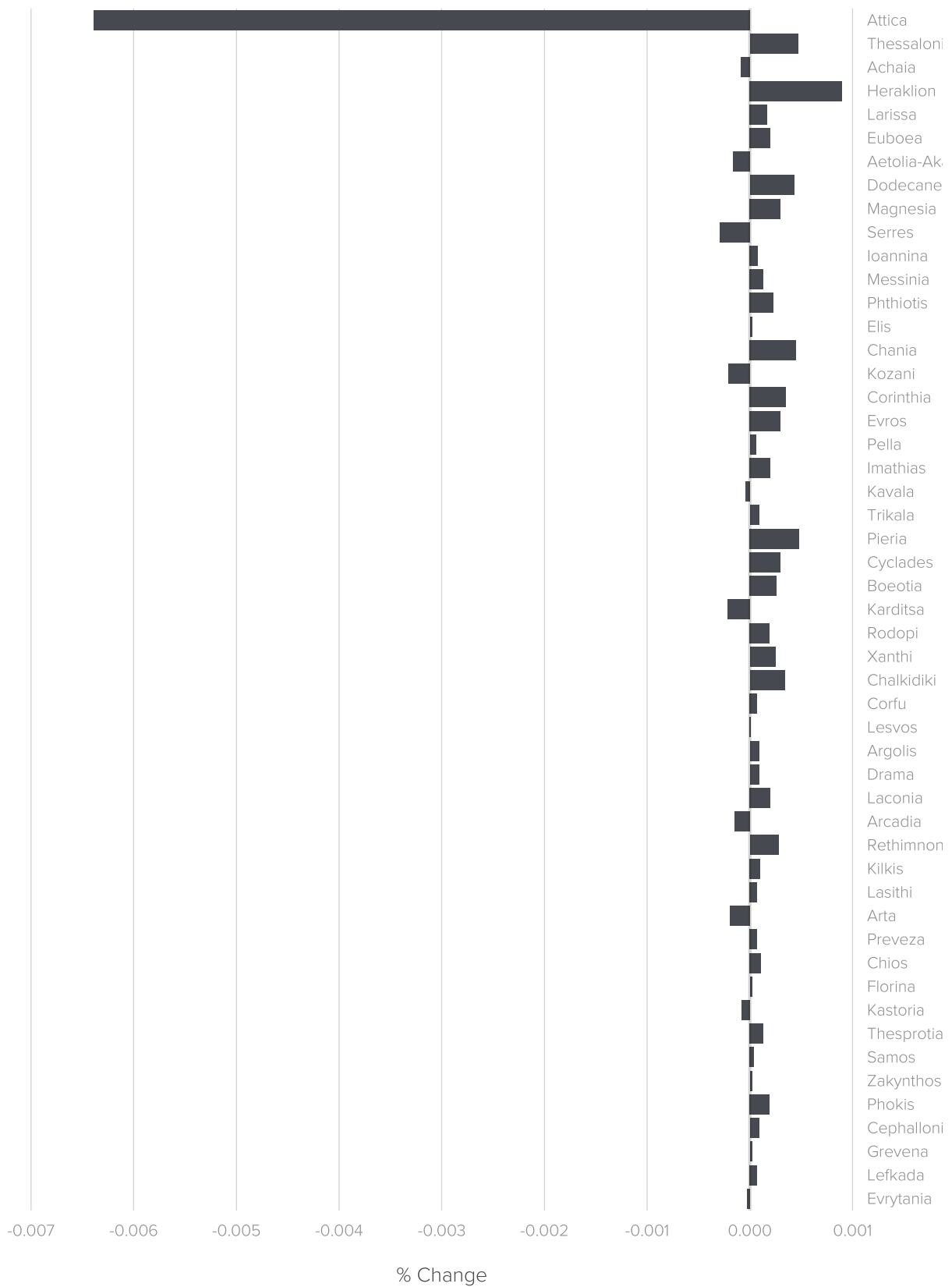
In this scenario, the regions close to the two metropolises but outside their contiguous built-up area would attract people amid the crisis because they could combine certain advantages of the countryside with proximity and low commuting cost to the metropolis and its facilities. Indeed, distant transports have been greatly restricted since the outbreak of the crisis. The advantage of proximity may also function vice versa, offering nearby alternatives to the inhabitants of the metropolis. For example, tourist resorts at a small distance can be approached at lower costs and in shorter times, thus being more suitable for briefer and cheaper holidays, for which the demand is expectedly higher in times of crisis. Therefore, the reason, or at least one reason, for the relative dynamic of the regions close to the two metropolitan areas may also be their relative economic advantage in certain fields.

Previously, we have seen that, seemingly, an apparent form of the reported general tendency to counter-urbanisation amid the crisis in Greece, if not the main one, is de-metropolisation, particularly a decline of the Athens metropolitan area both in absolute and relative terms. Now, a further assumption may be made: that the main form of de-metropolisation is distant exurbanisation, in the sense of an exodus towards nearby settlements outside the contiguous urban area and even outside a first ring of exurbs but still within the commuting field of the metropolis, of the reinvigoration of satellite towns (a hypothetical process the we have already called “satellite urbanisation”), or of a “Regional Urbanisation” the like of Soja (Soja, 2011).

Urbanisation and population change

An examination of the relative evolution of the population of each NUTS3 region as a share of the national total, instead of the absolute or relative change of its own population, may shed more light to certain developments. Our source remains to be the annual estimates of ELSTAT.

8.2 Change in the Share in the Estimated National Population, 2010-2014, by NUTS3 Regions



Source: Hellenic Statistical Authority, Annual Population Estimates. E. Skoufoglou, 2018

In Chart 8.2, one can see that 40 out of the 51 NUTS3 regions in the country have seen their share in the overall population increase between 2010 and 2014, and only 11 have seen the contrary. If we exclude the 7 regions whose share has been practically steady, that is they display a change equal to 0,04% or less of the total country's population, we come up with 34 upward and 10 downward cases.

All island regions, with no exception apart from an only marginal, though still positive, change in the cases of Samos, Lesvos, and Zakynthos, have increased their shares remarkably. Besides, the biggest progress belongs to an island region, Heraklion of Creta. All regions adjacent to the two metropolitan areas have also recorded climbing shares, with the exception of Serres to the Northeast of Thessaloniki. Pieria, in particular, can take pride in the second biggest rise, just behind Heraklion.

Among the 5 intermediate regions, that is on the second level according to the EUROSTAT rural-urban taxonomy, the picture is not homogeneous. Heraklion, Chania, and Magnesia display growing shares, whereas Achaia (Patras) a declining one. At this level, Ioannina exhibits positive rates of change, however, as we shall see, this is not the same anymore if shares among non-metropolitan regions, in particular, are taken into account. This lack of cohesion is not much of a surprise, as the EUROSTAT taxonomy is rather typical. However, if something was to be commented here, it would be that, among the 5 intermediate regions, the biggest one, containing the third biggest city of the country, Patras, rather follows the downward trajectory of the two metropolises, whereas the remaining 4 smaller ones are doing better. The region of Larissa, a formally rural region that nevertheless includes one of the biggest cities in the country, follows the same upward pattern, despite its decline in absolute numbers. The Dodecanese, where the 7th or 8th biggest city (Rhodes) is situated, is gaining ground.⁵

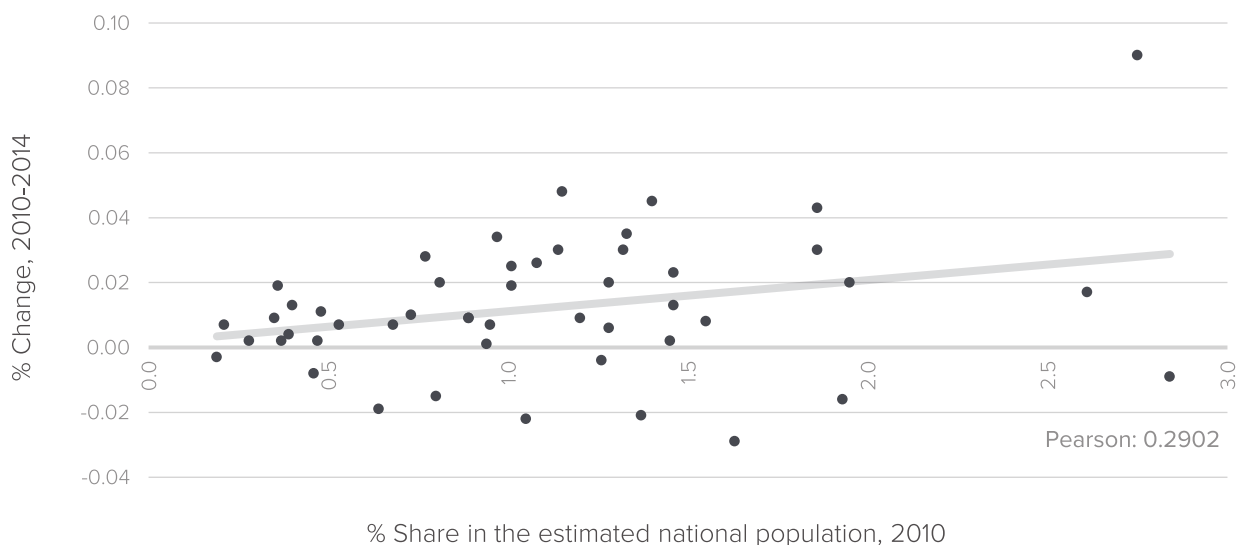
The most striking feature of the chart, though, is the decrease in the share of Attica, the region of Athens, which represents by far the biggest of all changes, with no close rivals. This hypertrophy largely explains why most of the remaining regions have recorded increasing shares.

A question arising here is whether, and what way, the size of the population in each NUTS3 region is related to its ability to attract new inhabitants amid the crisis. Does the decline of Athens coincide with a general downward tendency of the most populated regions? This would mean that the more populated an area was at the beginning of the period under consideration, the more probable it would be to have seen its share shrink throughout the period 2010-2014.

At first sight, this seems not to be the case, according to Chart 8.3, which shows the change in the share of each NUTS3 region in the national population during the period 2010-2014 as a function of their share back in 2010, excluding the two metropolitan regions, Attica and Thessaloniki. Despite the strong differentiation among the different cases, which results to a strong variation in the graph, the share of each of the 49 non-metropolitan regions in the total population tends to modify in line with its share back in 2010. This is evident from the trend line.

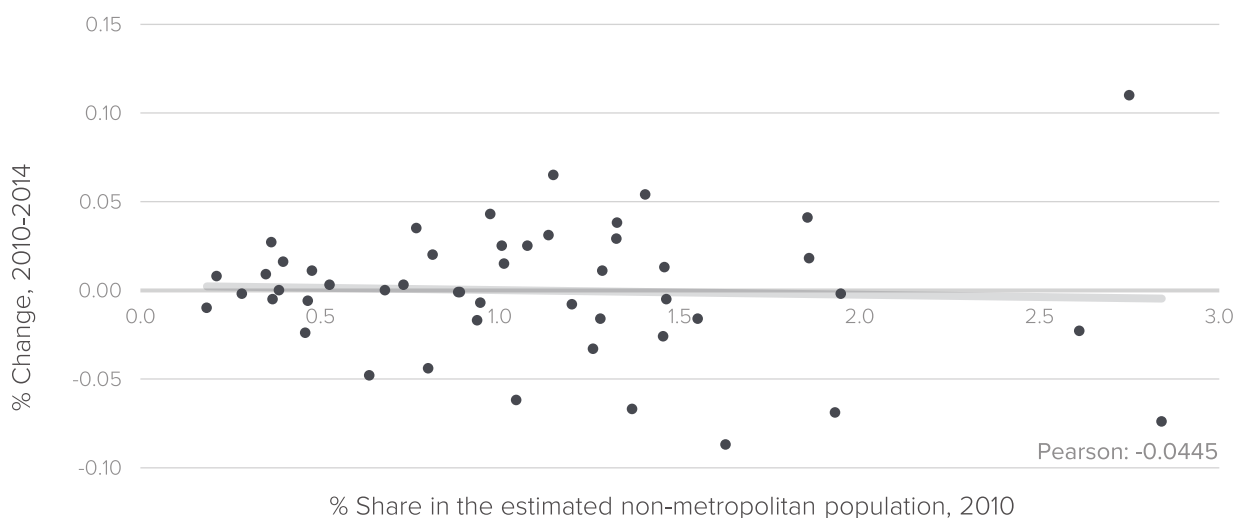
5 There is a specificity in this case, as the Dodecanese is a complex of islands, and therefore the contribution of the island of Rhodes in the share of the region is not visible at this level of analysis.

8.3 Change in the Share of non-metropolitan NUT3 Regions in the Estimated National Population, 2010-2014, as a function of their share in 2010



Source: Hellenic Statistical Authority, Annual Population Estimates. E. Skoufoglou, 2018

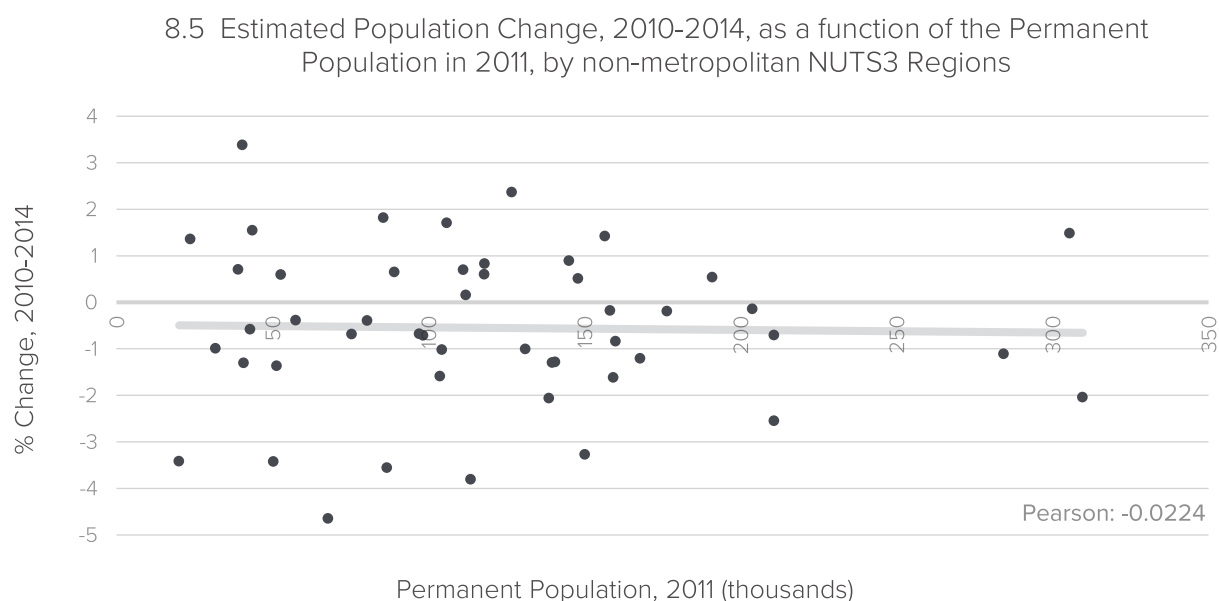
8.4 Change in the Share of non-metropolitan NUT3 Regions in the Estimated National Population, 2010-2014, as a function of their share in 2010



Source: Hellenic Statistical Authority, Annual Population Estimates. E. Skoufoglou, 2018

In simple words, the line shows that the more populated a region was in 2010, the more likely it has been to improve its share afterwards, or that the population is generally attracted by more rather than less populated regions, the metropolitan ones excluded.

However, this picture is deceptive. A completely different impression is given if we consider the shares of the non-metropolitan regions among themselves, that is the proportion of the population of each region as a percentage of the total national population minus the populations of Attica and Thessaloniki (Chart 8.4). The trend line appears downward now, even with a marginal inclination. The more populated a region is, the (slightly) more probable it seems to have experienced a decrease in its share in the period after the outbreak of the crisis. In fact,



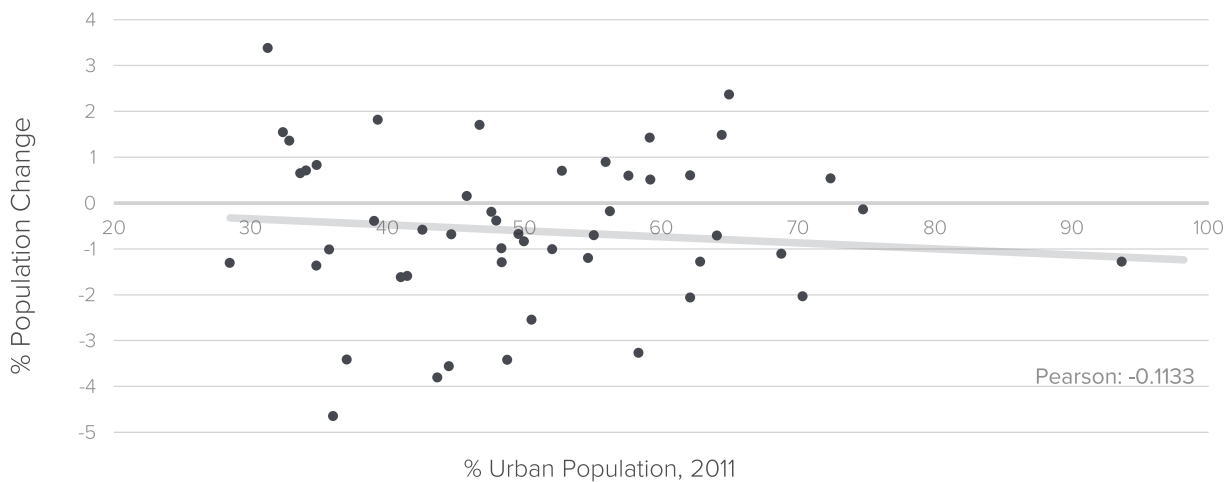
Source: Hellenic Statistical Authority, 2011 Census, Annual Population Estimates. E. Skoufoglou, 2018

it would be more accurate to say that the relationship between the existing population of a certain region and the probability of its share among the non-metropolitan population to have risen after 2010 is indifferent, since the trend line is almost a horizontal line coinciding with the x-axis. Since, as a rule, the most populated regions are also the most urbanised ones, this can be interpreted as an indication that urbanisation is not directed towards the most urbanised regions anymore. On the other hand, of course, if the hypothesis of a counter-urbanisation crisis is indeed correct, the link between permanent population and the degree of urbanisation should be weakening.

As expected, a similar picture emerges if the evolution of each NUTS3 region's own population is examined instead of its share in the total population. In Chart 8.5 one can see the population change of non-metropolitan NUTS3 regions during the period 2010-2014, according to the ELSTAT annual estimates, as a function of their formally recorded permanent population in the census of 2011. The two metropolitan regions are excluded, because their disproportionate population, especially the one of Athens, would distort the graph to an extent that would make it impossible to read (besides, there is already quite a lot of evidence about the evolution of the two metropolitan areas). Again, the trend line appears practically horizontal, which means that the size of the preexisting population is indifferent for the population change during the crisis. An additional observation is that the more populated regions among the non-metropolitan ones tend to vary less around the trend line than the less populated ones.

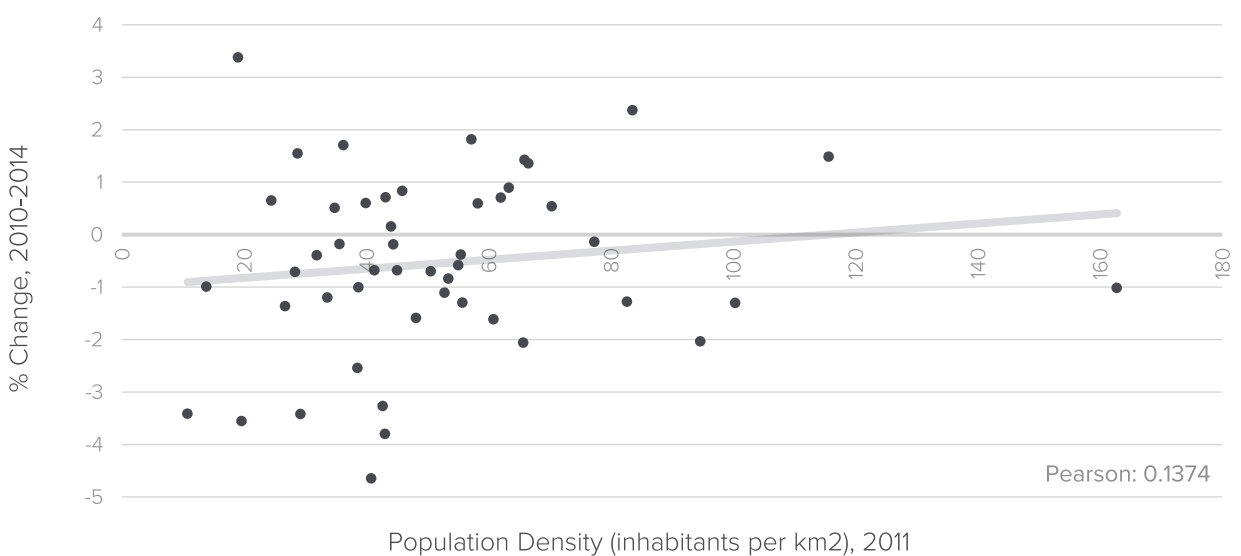
The picture is not much different if the percentage of urban population in each NUTS3 region is directly correlated with estimated population changes (Chart 8.6). The trend line is again practically horizontal (marginally upward) when only non-metropolitan regions are included, whereas it becomes slightly downward when the two metropolitan ones are added, which reflects the de-metropolisation pressures. The Pearson correlation coefficient is particularly low, indicating that no significant correlation exists between the two variables.

8.6 Estimated Population Change, 2010-2014, as a function of the Urban Population, 2011, by NUTS3 Regions



Source: Hellenic Statistical Authority, 2011 Census, Annual Population Estimates. E. Skoufoglou, 2018

8.7 Estimated Population Change, 2010-2014, as a function of Population Density, by non-metropolitan NUTS3 Regions



Source: Hellenic Statistical Authority, 2011 Census, Annual Population Estimates. E. Skoufoglou, 2018

According to the above, we can already reject a possible allegation that the crisis may be favouring the most populated and urbanised regions at the expense of the thinly populated ones in general. Population movements are apparently not following the previous urban accumulation.

The picture alters if the preexisting densities are considered, instead of the preexisting population. Chart 8.7 shows the relative population change between 2010 and 2014, by NUTS3 region, as a function of their population density in inhabitants per km², according to the findings of the census of 2011. Again, only non-metropolitan regions are included. This time, the trend line is strongly upward. That is, the denser a region was in 2011, the more it is probable to have a positive balance in its population change during the period 2010-2014. Density appears more attractive than the absolute size of the population. However, this is not particularly significant

at this level, since density is just a fraction of the total population divided by the total area of a prefecture and therefore doesn't refer to built-up areas. For example, the region of a large city might also comprise extended uninhabited mountains and thus appear as sparsely populated while, in fact, its residents live under conditions of high densities.

Again, we should remind that all these observations are still very abstract. No account is taken of the particular characteristics of the regions, apart from their preexisting population and degree of urbanisation. It should be also underlined that in all the above charts, the dispersal of the values is so strong that no linear or other mathematically determined relation between the correlated quantities may be deduced. Population growth doesn't appear as an even approximate mathematical function of any of the quantities examined – besides, it would be weird to expect that population movements could be determined by a single parameter. In this context, trend lines refer to a possibility instead of a function capable of predicting values. Practically, an upward trend line means that the bigger the value on the x-axis, the “more probable for the population of the respective region to have grown”, rather than “the more the population of the respective region has grown” since the outbreak of the crisis, and vice versa.

Shares in the national population before and after the crisis

Before we conclude this chapter, it is interesting to try to track down the modifications in the evolution of the regions' shares that can be attributed to, or at least associated with, the crisis. This will be attempted by monitoring the share of each region in each year from 2002 up to 2014, according to the annual estimates of ELSTAT. We have already discussed the two metropolitan regions. We shall now examine the shares of the non-metropolitan ones in the total non-metropolitan population, which is defined at this level as the population of non-metropolitan regions.

As the two metropolitan regions, and especially Athens with its sharp declining rates, have been removed, it is reasonable to expect that the new table will record more equal a distribution of positive and negative change rates among the remaining 49 regions. Indeed, the two categories are practically equal: 24 regions present a positive balance sheet whereas 25 present a negative one. In fact, 7 regions have been practically steady, which reduces the number in each category to 23 and 20 respectively. The statistical dispersion of the values is, of course, smaller here. This means that proportions among non-metropolitan regions change at a slower pace than the ones among all regions in total. This could be already deduced from the lower rates of change in the standard deviation of the absolute population values for non-metropolitan regions in comparison with the respective rates referring to all regions, both metropolitan and non-metropolitan: during the period 2010-2014, the standard deviation among all regions was reduced by 3,29%, the standard deviation among all regions apart from the region of the Capital city was reduced by 1,24%, and the one among non-metropolitan regions alone, that is excluding both Attica and Thessaloniki, was reduced by 0,74%. This practically means that disparities among non-metropolitan regions are decreasing more slowly

than the ones between non-metropolitan and metropolitan regions.

This time, the islands don't present the same degree of cohesion. In fact, 3 island regions present a downward tendency: Lesvos, Corfu, and Zakynthos. Again, this depicts the relative advantage of the islands in the South compared to the ones in the North. These cases don't change the fact that the share of the island regions in the total non-metropolitan population is constantly growing, both before and after the outbreak of the crisis. It is interesting, nevertheless, that the pace of its relative growth is on average lower than in the first half of the previous decade, having recorded a negative record in 2010. Despite its restoration in the last two years, this lower pace of change shows that it is not an indisputable allegation that the crisis has favoured islands particularly, although it is absolutely true that most of the islands are dealing better with the crisis than the mainland.⁶

Among the intermediate regions, according to the EUROSTAT rural-urban taxonomy, one can find 3 upward (Heraklion, Chania, Magnesia) and 2 downward ones (Achaia, Ioannina). Larissa is shrinking, whereas the region of Rhodes (the Dodecanese) is growing. No new conclusions are offered by this (anyway expected) lack of cohesion.

Let's now take a closer look at the evolution of each non-metropolitan NUTS3 region. We can see that, except perhaps changing its pace, the period of the crisis has not apparently altered the generally upward or downward preexisting tendency in most cases. However, there is a substantial number of some 20 cases where the general tendency did change, whether totally inverting or shifting to/away from stability. The year when this shift has started may differ in each case, ranging from 2008 to 2011.

Among those 20 cases, we find 7 where a negative effect has been recorded. 4 regions have shifted from relative stability prior to the crisis to a clear downward tendency: Kavala, Pella, Zakynthos, and Lesvos (it is interesting that 2 island regions are included, in contrast with the detected general trend). Even more characteristic, 3 regions have seen their scores invert from an upward to a downward general tendency: Evrytania, Florina, and Ioannina.

On the other hand, 13 regions seem to have changed their fate for the better. Argolis, Euboea, Grevena, Preveza, and Samos have shifted from falling rates (in the first two cases rather emphatic) to stability. In the cases of Samos and Preveza, stability entailed after a couple of upward years, which restored their share to the levels of the first half of the previous decade, more or less. It must be noted, besides, that stability among the non-metropolitan regions means, in fact, a climbing share in the national population. 4 regions have shifted from stagnant to upward rates: Laconia, Boeotia, Korinthia, and Phokis, the three latter cases being particularly interesting, as they are located within the broader range of Athens and its activities. 4 cases have experienced an inversion from shrinking to growing shares: Kilkis, Phthiotis, Lefkada, and Chios, although the turnaround for the two latter has been recorded very early, so it can hardly

⁶ It should never be forgotten that speaking of island regions is not exactly the same as speaking of islands. Thasos, Skyros, the Northern Sporades, the islands of the Saronic Bay to the south of Attica, and Kythira belong to mainland regions, administratively and statistically. Euboea is geographically an island, however it is considered as a mainland region, since it is connected with a bridge to the mainland. On the contrary, Lefkada is deemed an island, despite its bridge connection.

be associated with the crisis (however, the subsequent accelerating rates may).

We can take a more comprehensive picture by mapping the change of trajectory of the above shares. In Map 8.11, non-metropolitan regions are divided into 5 categories, according to the evolution of their shares in the national non-metropolitan population: regions that have shifted from shrinking (or stable) to increasing shares, regions retaining growing shares both before and after the outbreak of the crisis, regions that have shifted to shrinking rates, regions retaining shrinking rates, and regions with a practically steady share. In fact, this map is more representative of the actual redistribution processes than the previous ones, as it removes the effect of the overall population reduction.

The rings of distant exurbanisation around the two metropolises are even more evident here. Adjacent to Thessaloniki, we find 3 regions of steadily growing rates (Pieria, Chalkidiki, Imathia) and one more region that has shifted to growing rates, while only one has maintained a shrinking trajectory (Serres) and one more has shifted to a downward one (Pella). This phenomenon is much more impressive around Athens, though. All adjacent regions (Boeotia, Corinthia, Argolis, Euboea, Cyclades) are recording rising shares, and so do some non-adjacent but still neighbouring regions (Pthiotis, Phokis). The pattern is very clear. Moreover, with the only exception of the Cyclades (an island region anyway, which would be more appropriate to examine along with island regions rather than with peri-urban ones), all neighbouring regions have only achieved growing shares after the outbreak of the crisis, whereas stagnant or shrinking before it. This finding is a good piece of evidence in support of the connection of the observed phenomenon with the crisis. We can even claim a similar pattern around the isolated urban centre of Ioannina in western Greece, although, given the small urban area relative to the total area of the Ioannina region, one should expect to detect this phenomenon mostly within the limits of the region.

A second finding in the map is, again, that most island regions are steadily growing. This is true in all cases in the South (with the exception of Zakynthos), the relevant advantage of which compared to the northern islands is recorded once again. Simultaneously, an expansion of the growing island regions to the North is reflected in the map, with Samos, Chios, and Lefkada having enjoyed a shift to growing rates. Combined with the shift of the region of Lesbos to downward shares and with the steadily downward trajectory of Corfu, this fact tends to exacerbate the South/North spatial division among island regions.

Finally, it is interesting that, while industrial regions specialised in energy (Kozani, Florina, Arcadia) are losing ground, the ones specialised in manufacturing seem to be increasing their shares in the non-metropolitan population almost altogether, although most of them are depopulating in absolute terms. This is the case with Boeotia, with all four regions that would move to the category of industrial regions by 2014, according to the contribution of the sector in the regional value added (Corinthia, Euboea, Pthiotis, Kilkis) as well as with Rodopi, where industry would be the leading sector (NACE Rev.2 activity) if it were not for Public Administration/Education/Human Health. Even more important, the share of all those regions, except for the last one, started increasing only after the outbreak of the crisis. This finding indicates that the

relative advantage of the regions specialised in manufacturing in face of the crisis is more significant than it appeared at first. However, in almost all cases, the regions considered are also peri-metropolitan regions, which makes it hard to tell whether it was industry, their proximity to the two metropolises, or both that mainly resulted in this relative advantage.

So as to conclude, the examination of the evolution of the share of non-metropolitan regions among themselves, according to the annual population estimates of ELSTAT, doesn't provide any findings much different than what has been already observed previously, although it does provide a more explicit picture in some cases. The most important finding, which is further corroborated, remains the relevant decline of the two metropolitan areas, and especially the metropolitan area of the Capital, as the most striking aspect of the crisis period. In addition, two distinct categories of regions seem to be profiting the most of the metropolitan de-concentration process: peri-urban regions (that is regions surrounding the metropolitan ones; and islands.

Conclusions

The examination of the annual population estimates of ELSTAT over the period 2010-2014, as set against the respective estimates before the crisis as well as the findings of the censuses of 2001 and 2011, has resulted in some interesting findings.

According to the criterion of the standard deviation of population values, after the outbreak of the crisis, population disparities among the NUTS3 regions of the country tend to diminish, whereas, before it, they have been steadily growing. This suggests that the most populated areas, that are also the most urbanised ones in the particular geographical framework of Greece, are losing ground. Of course, the standard deviation is no strong piece of evidence. However, further analysis points out in the same direction.

Indeed, a de-metropolisation effect, in the sense of a process of absolute and relative depopulation, is evidenced in both Attica and the Thessaloniki region. The proportions among non-metropolitan regions in terms of their population are changing slower than the proportions among all regions in total, which reflects a bigger (negative) dynamic of change in the two metropolitan regions. The share of Attica in the national population is steadily declining, while the same applies to the share of Thessaloniki in the rest of the country (that is, excluding Attica). The de-metropolisation effect appears earlier and more sharply in Attica than in Thessaloniki, which is the only reason why the estimated decline of the latter is not reflected in its shares in the national population. Besides, a closer look at the evolution of the regional shares in the total non-metropolitan population clearly reveals rings of distant (interregional) exurbanisation or satellite urbanisation around the two depopulating metropolitan regions, Thessaloniki and, especially, Athens.

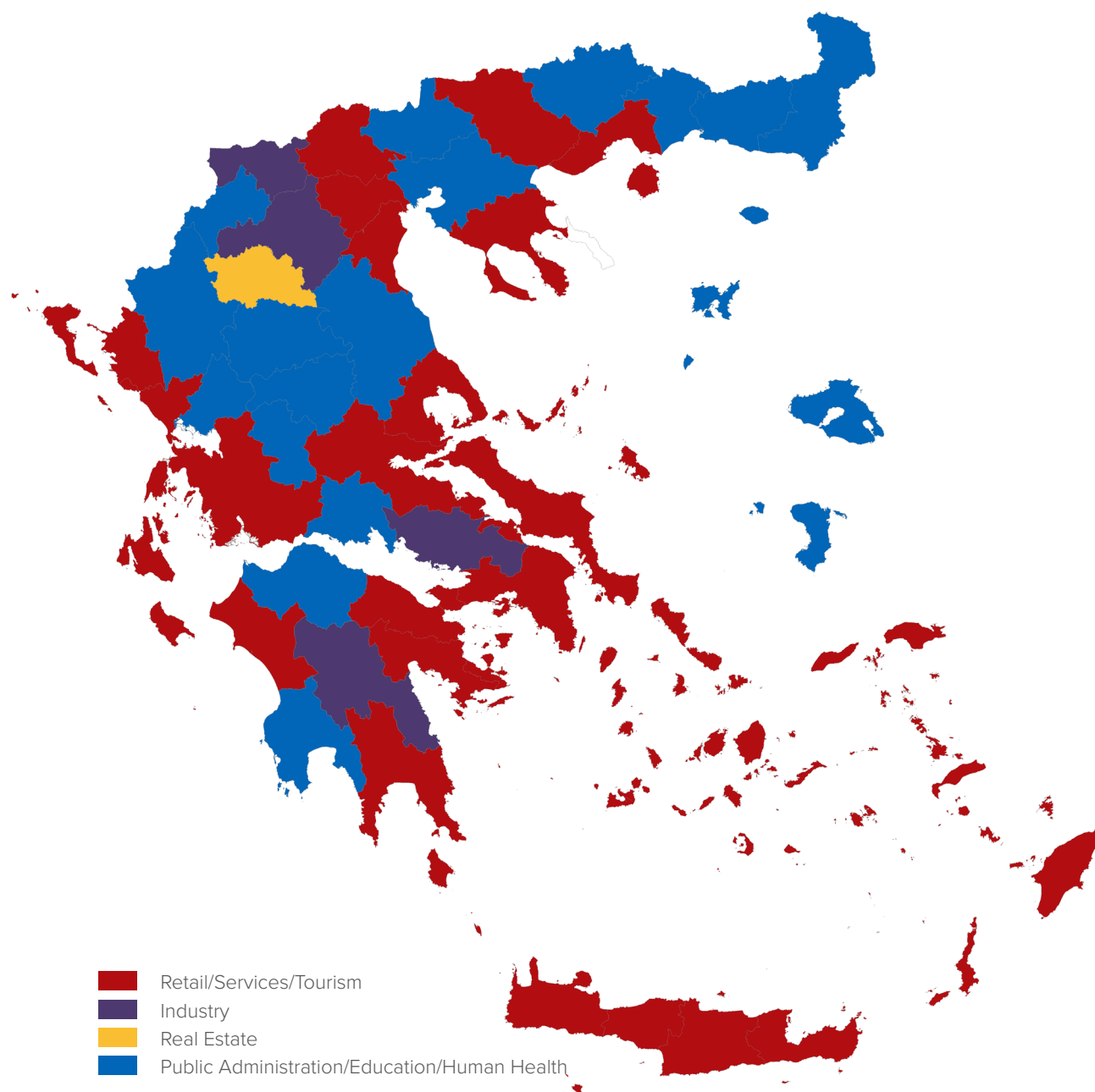
De-metropolisation may thus be considered the predominant aspect of the current counter-urbanisation tendencies. However, it is not the only one. Among the 49 non-metropolitan regions, there seems to be no correlation between the preexisting size of the population or the degree of urbanisation and their development after the crisis, as was generally the case before the crisis.

The two metropolitan regions are also the only urban regions according to the formal EUROSTAT urban-rural taxonomy. Among the 5 intermediate regions, the biggest one (Patras) is following downward trends similar to the two metropolitan areas (urban regions), whereas the remaining 4 are either growing (Heraklion, Chania, Magnesia) or suffering less (Ioannina) amid the crisis. Among the two typically rural regions that include cities among the 6 top ones behind Athens and Thessaloniki (what we have called the group of next-6), the Dodecanese is profiting, whereas Larissa is suffering a mild decline. Therefore, at the second level of the urban hierarchy, the situation appears mixed. This conclusion will have to be reexamined and refined according to other measurement and criteria later in this study.

Finally, island regions are generally resisting the crisis better than the mainland in terms of their population, although in most cases the pace of growth of their relative share in the non-metropolitan population has not risen during the crisis. A relative advantage of the islands in the South in comparison with the ones in the North is recorded. This South/North gap, which preceded the crisis, is seemingly widening, whereas the border between advantaged and disadvantaged island regions is moving to the North.

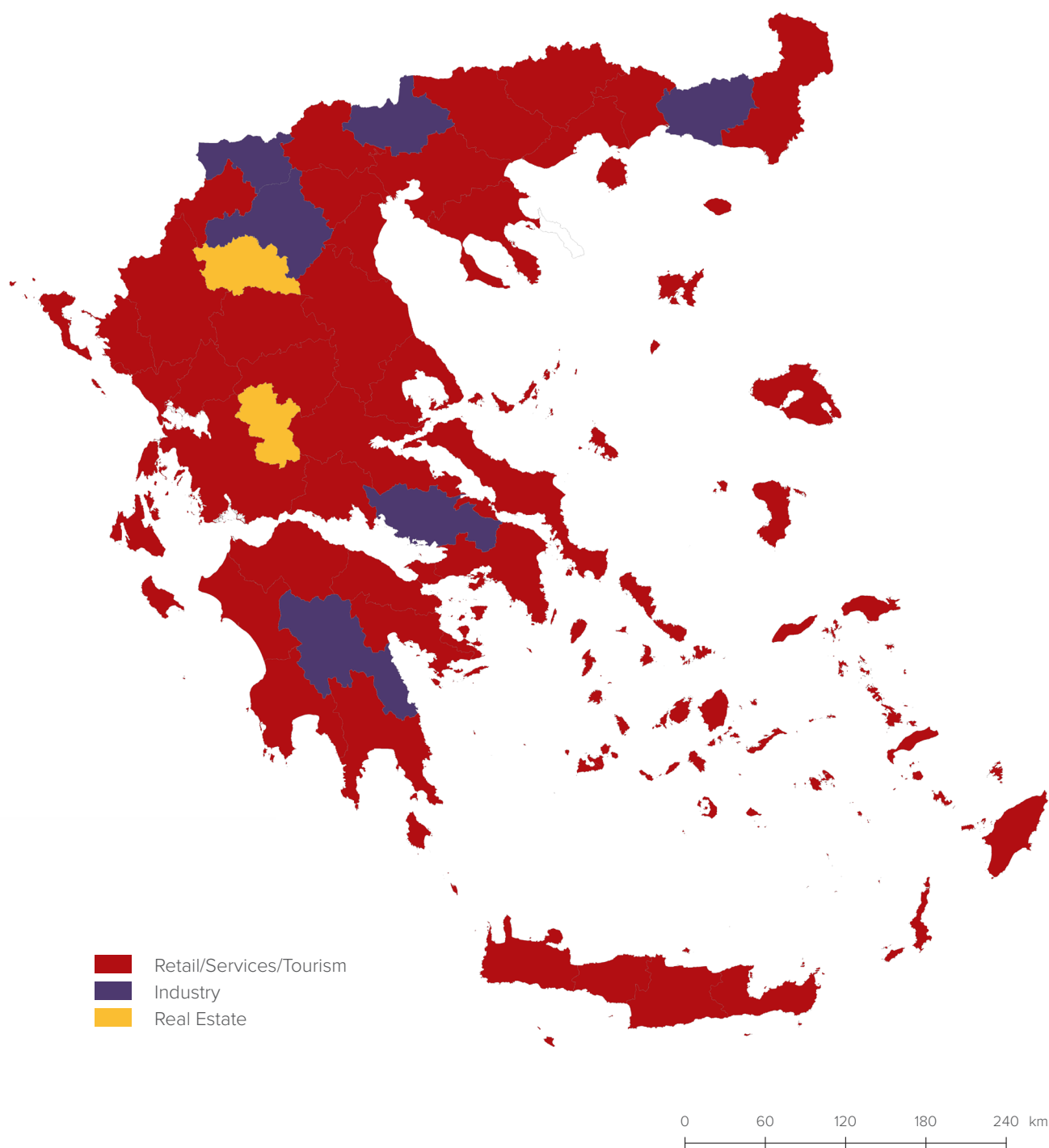
In short, it may be said that the pattern of NUTS3 regions with a growing population amid the crisis, according to the annual estimates, suggests two main spatial processes: distant exurbanisation or satellite urbanisation around the two metropolises; and a relative progress of the islands and other regions associated with tourism in terms of population.

Map 8.1 Dominant Economic Sector (Nace Rev2) in terms of Gross Value Added, by NUTS3 Regions, 2010



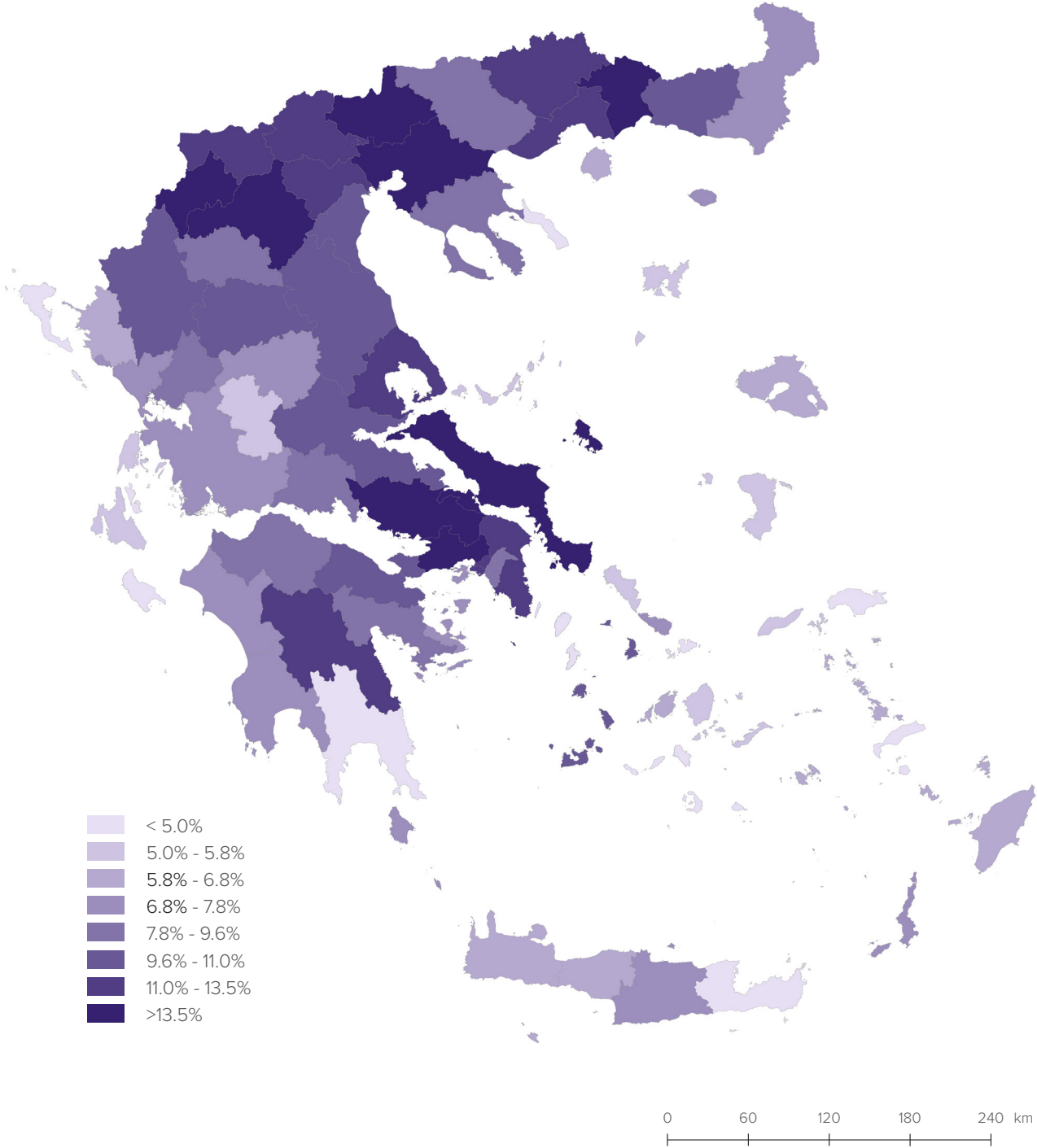
Source: Hellenic Statistical Authority, Annual Regional Accounts
E. Skoufoglou, 2018

Map 8.2 Dominant Economic Sector (Nace Rev2) in terms of Gross Value Added, excluding Public Administration/Education/Human Health, by NUTS3 Regions, 2010



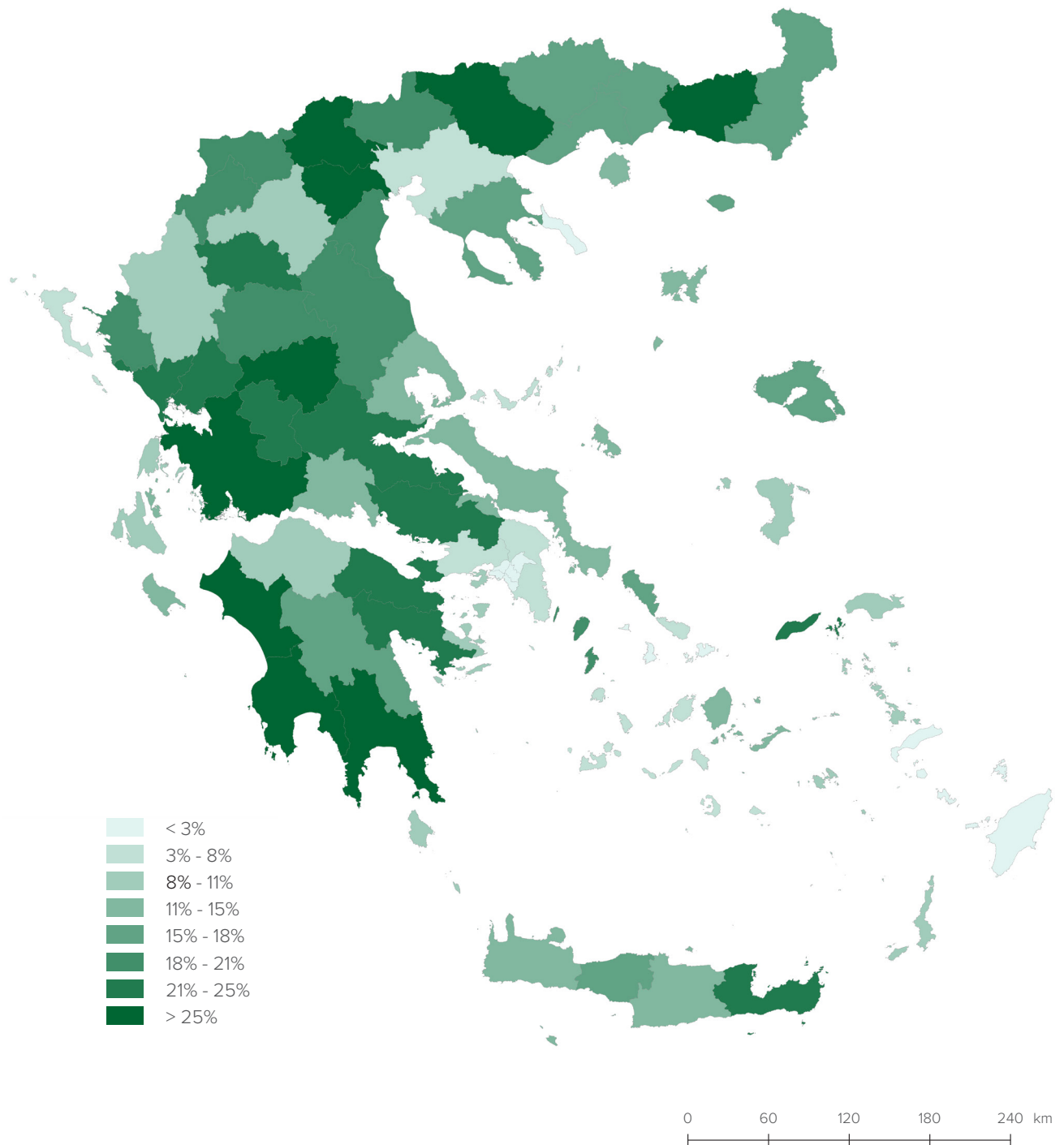
Source: Hellenic Statistical Authority, Annual Regional Accounts
E. Skoufoglou, 2018

Map 8.3 Contribution of Industry to Regional Employment, 2011, by Regional Units



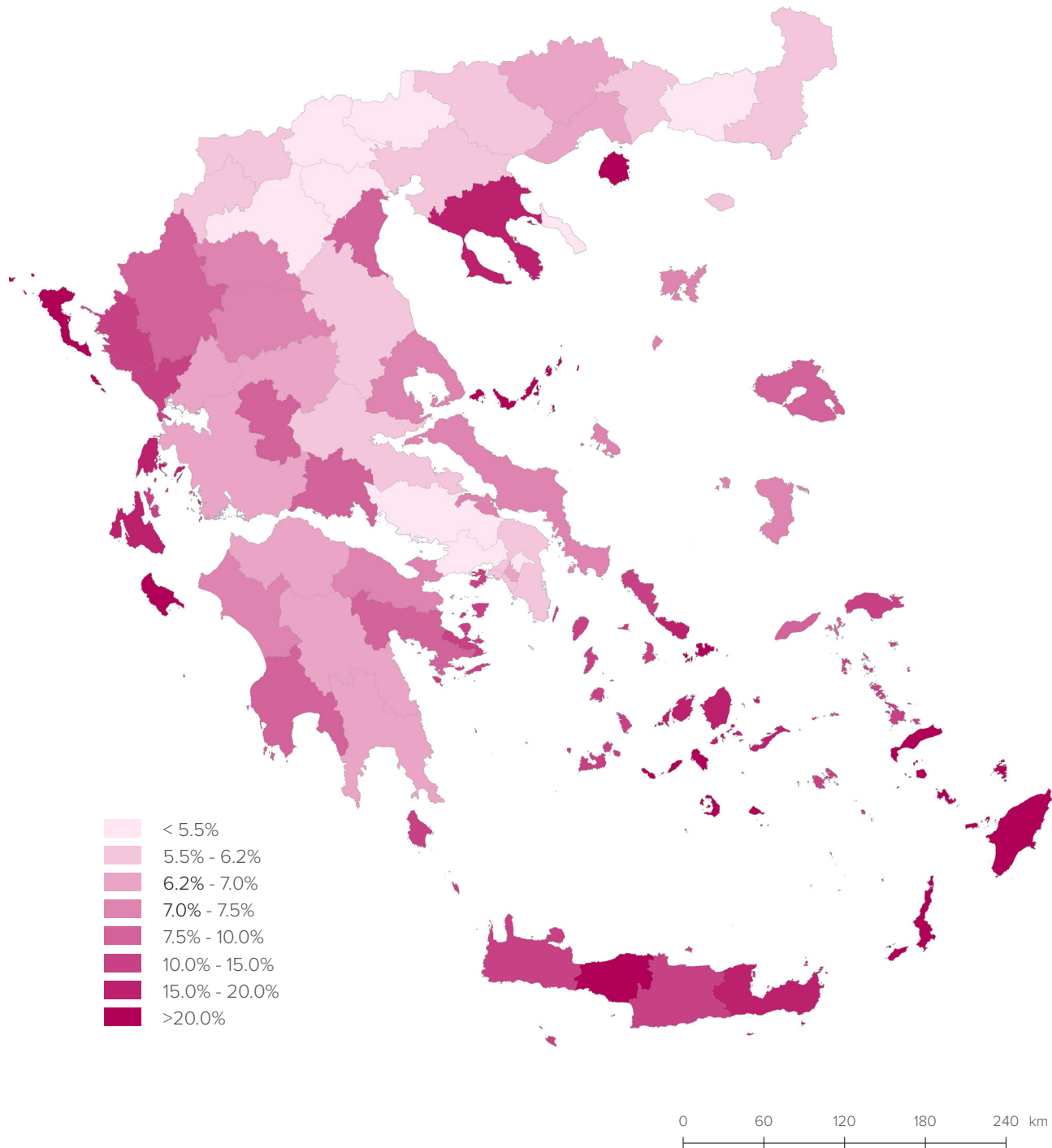
Source: Hellenic Statistical Authority, 2011 Census
E, Skoufoglou, 2018

Map 8.4 Contribution of Agriculture, Forestry, and Fishery to Regional Employment, 2011, by Regional Units



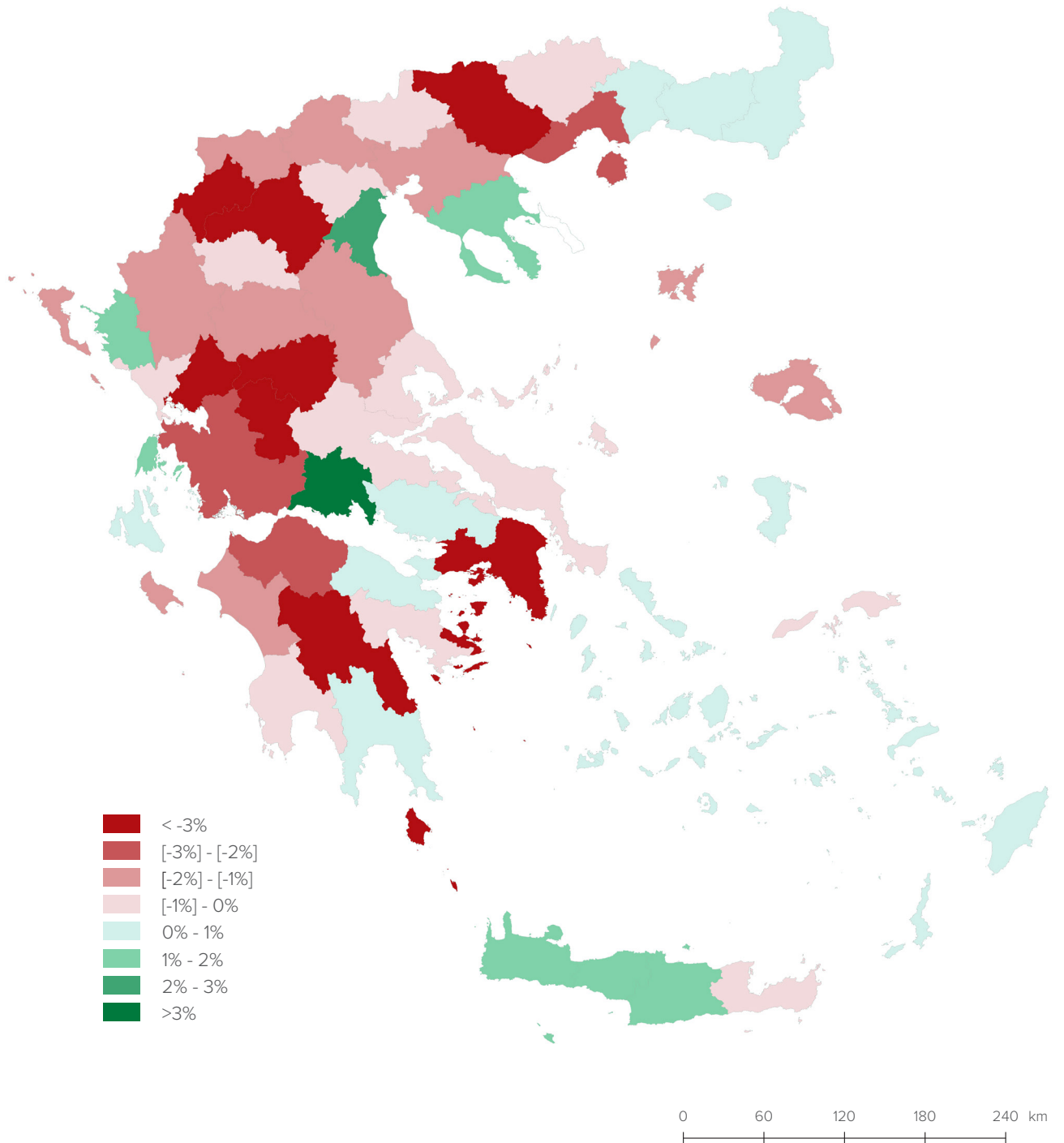
Source: Hellenic Statistical Authority, 2011 Census
E. Skoufoglou, 2018

Map 8.5 Contribution of Accommodation and Food Services to Regional Employment, 2011, by Regional Units



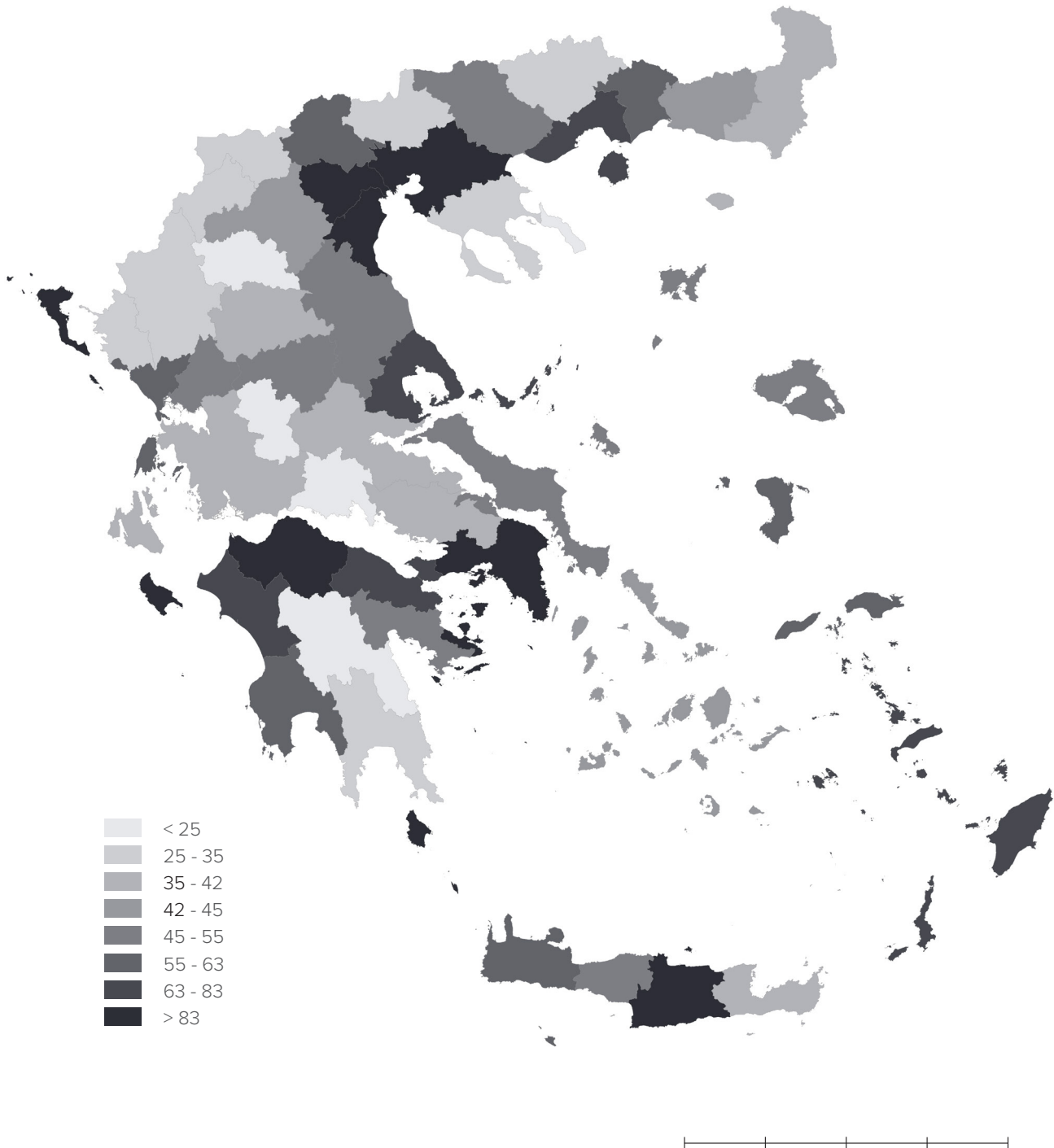
Source: Hellenic Statistical Authority, 2011 Census
E. Skoufoglou, 2018

Map 8.6 Estimated Population Change, 2010-2014, by NUTS3 Regions



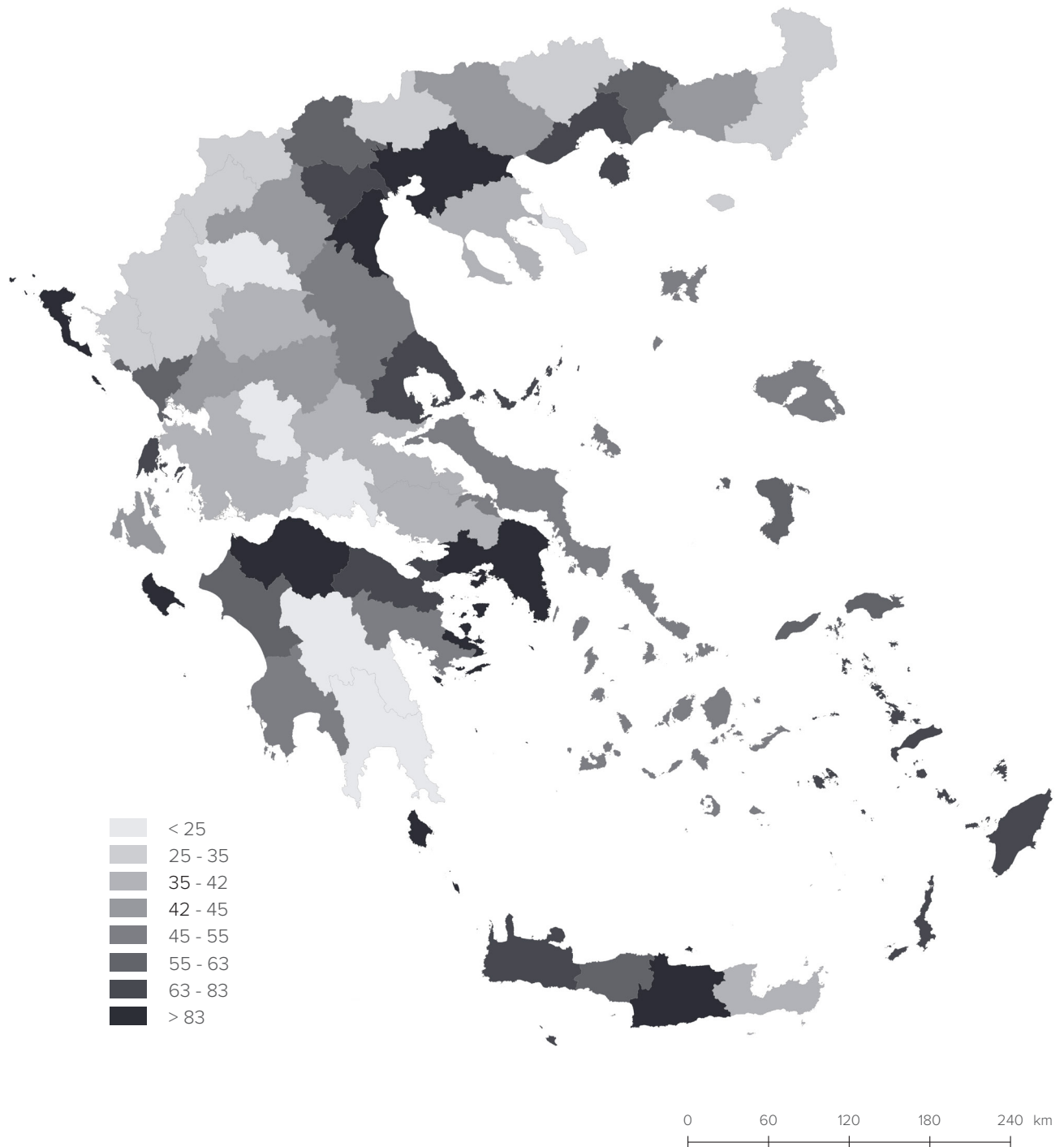
Source: Hellenic Statistical Authority, Annual Population Estimates
E. Skoufoglou, 2018

Map 8.7 Population Density in inhabitants per km², 2001, by Regional Units



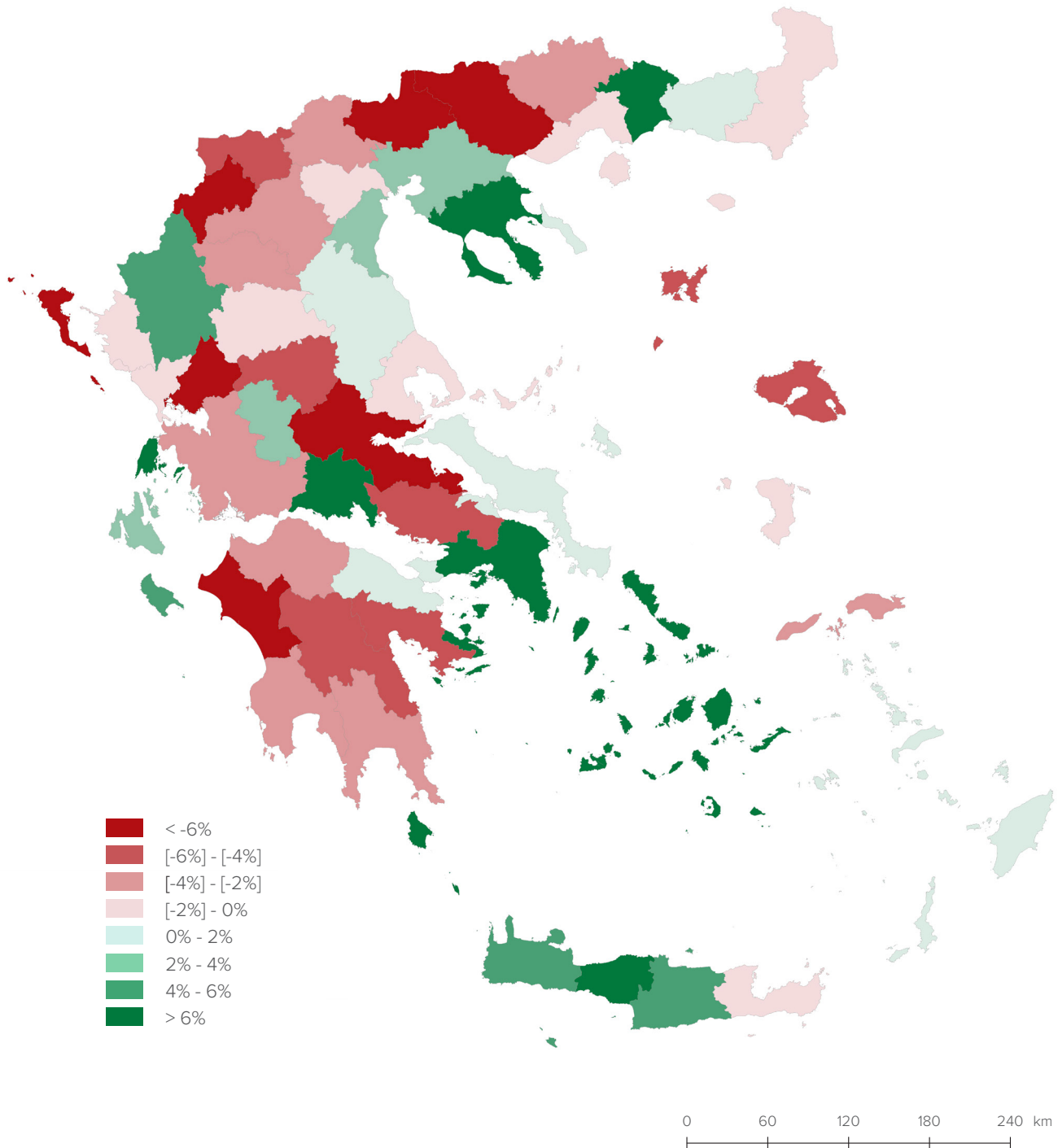
Source: Hellenic Statistical Authority, Annual Regional Accounts
E. Skoufoglou, 2018

Map 8.8 Population Density in inhabitants per km², 2011, by Regional Units



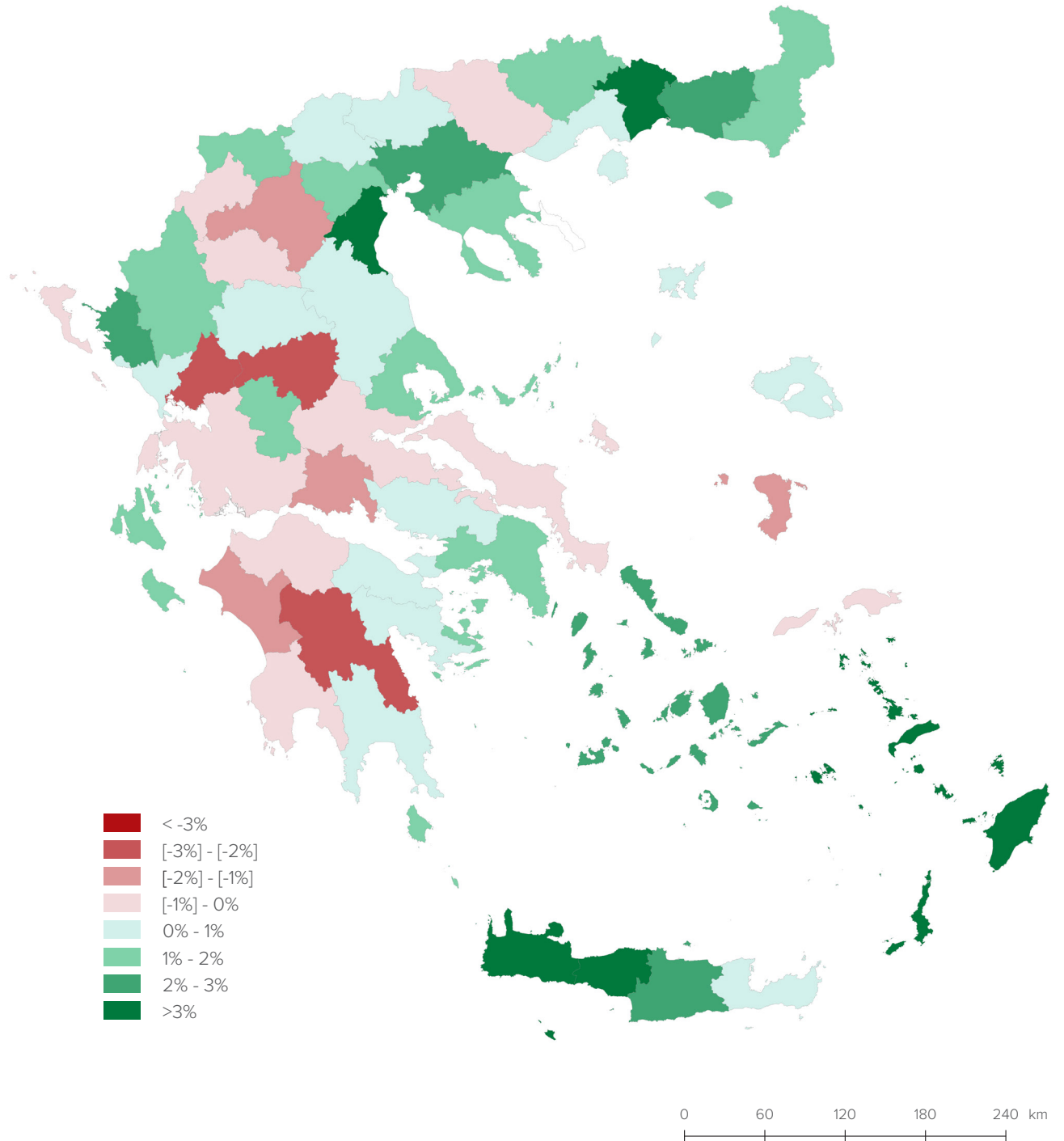
Source: Hellenic Statistical Authority, 2011 Census
E. Skoufoglou, 2018

Map 8.9 Population Change, 2001-2011, by NUTS3 Regions



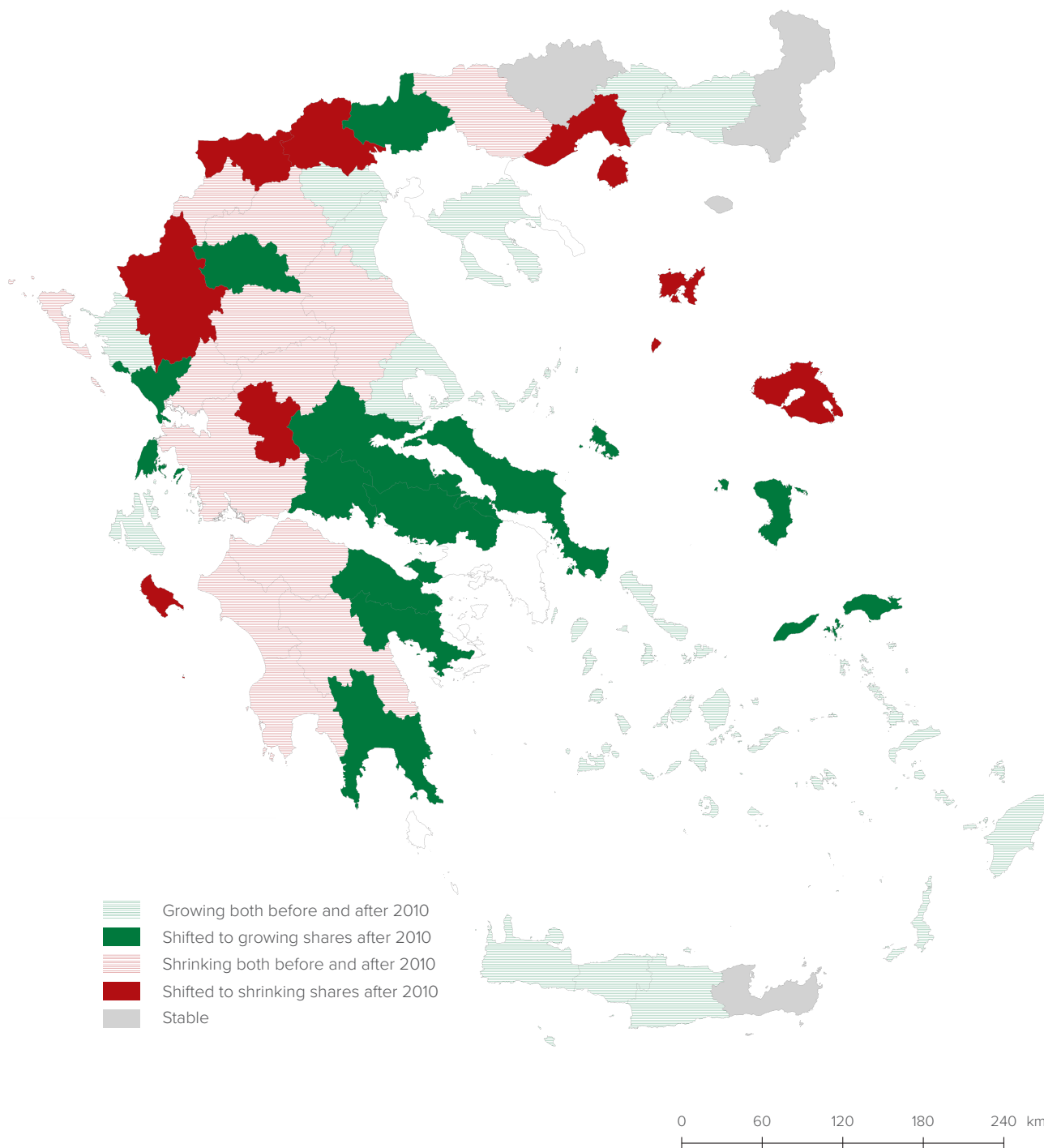
Source: Hellenic Statistical Authority, 2001 Census, 2011 Census
E. Skoufoglou, 2018

Map 8.10 Estimated Population Change, 2004-2008, by NUTS3 Regions



Source: Hellenic Statistical Authority, Annual Population Estimates
E. Skoufoglou, 2018

Map 8.11 Evolution of the Regional Shares in the non-metropolitan Population before and after 2010, by non-metropolitan NUTS3 Regions



Source: Hellenic Statistical Authority, 2001 Census, 2011 Census
E. Skoufoglou, 2018

CHAPTER 9

Indications of de-metropolisation

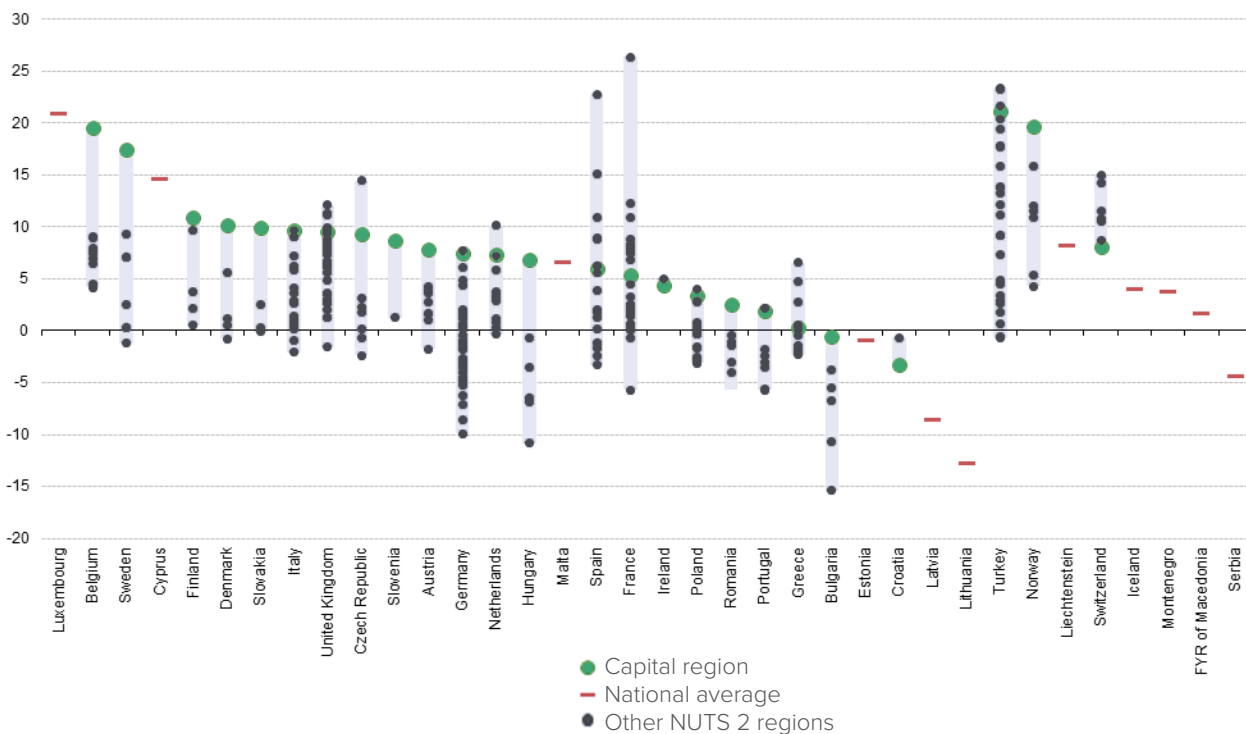
Some first indications

As derives from the previous chapters, there is some primary evidence of a process of de-metropolisation (that is, an absolute and relative decline in the population of both Athens and Thessaloniki) in the context of the crisis in Greece. Before we proceed further with the examination of the statistical data, we should elaborate a little more on the hypothesis of de-metropolisation, particularly of a possible metropolitan exodus, as well as its causes and links with the crisis.

A few authors have already formulated the hypothesis of an urban exodus in Greece because of the effects of the crisis, although, to our knowledge, no extended research on the topic has been made yet. Duquenne has pointed out a trend towards rural areas, which is not confined to pensioners, but it is also recorded among the productive age groups (Duquenne, 2014, p. 217). Interestingly, she also remarks that this trend is not mainly due to motivations connected with the exploitation of agricultural resources (Duquenne, 2014, p. 220). However, her conclusions are based on a statistical analysis of population changes between the censuses of 2001 and 2011, that is over a period comprising 3 years of crisis and 7 years before the crisis. At that level of analysis, it is not clear whether the observed facts are the outcome of the crisis or of pre-crisis tendencies, or both. In fact, two other authors, Schaffar and Pavleas, based exclusively on population changes between consecutive censuses too, have reached the opposite conclusion: according to them, the thirty-year-old decline of the importance of the Athens agglomeration is mitigated, rather than intensified, during the crisis (Schaffar & Pavleas, 2014, p. 91). Gkartzios confirms the validity of the “crisis counter-urbanisation” hypothesis, but his conclusions are only based on a small number of interviews (17) (Gkartzios, 2013). Some of his findings episodically confirm our own assumptions in this study, but they cannot be deemed concrete evidence. Therefore, more detailed analysis, as well as an appropriate method, must be employed in order to examine the counter-urbanisation hypothesis under the conditions of the crisis.

EUROSTAT already gives an indication of a de-metropolisation process in Greece, in a chart displaying the average crude rate of population change per 1,000 inhabitants by region (European level NUTS 2) in the 28+8 European countries for which the Agency provides data.

Chart 9.1: Average Crude Rate of Population Change per 1,000 inhabitants in the 28+8 European countries, 2008-2012, by NUTS2 region

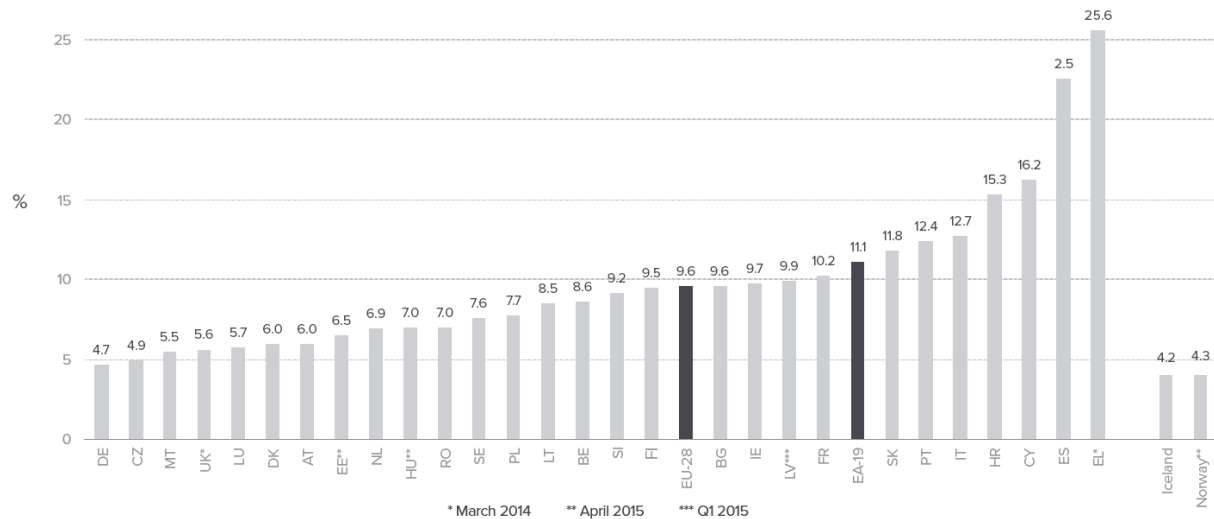


Source: EUROSTAT

The chart regards the period 2008-2012, i.e. after the outbreak of the crisis. According to the chart, Greece is one of the only 6 countries where the growth rate of the Capital region falls short of the national median value, the other 5 being France, Spain, Ireland, Croatia and Switzerland (measurements are not applicable for Luxembourg, Cyprus, Malta, Lichtenstein, Latvia, Lithuania, Estonia, Serbia, Montenegro, Macedonia, because of their territorial structure which does not include NUTS 2 regions). Apart from that, Greece is one of the three countries where the value of the growth rate of the Capital region appears not to be positive. We should probably add Serbia, Estonia, Latvia, and Lithuania in this category, despite the lack of NUTS 2 regions in their administrative division and thus of direct comparability, as their national average crude rate of population change is negative, and impressively negative in the cases of Latvia and especially Lithuania (Chart9.1).

It is interesting to reflect on the countries where the growth rate of the Capital region appears to be below the national median value. Among them, one can find Greece, Ireland, and Spain, that is three of the countries constituting the so-called PIIGS or the periphery of the euro-zone. All these countries proved to be particularly vulnerable to the global capitalist crisis, having faced, and still facing, severe problems of public and/or private debt viability and having implemented harsh austerity measures. The countries who constitute the rest of the PIIGS, Portugal and Italy, don't follow the same pattern, however, they belong to those countries where the Capital region is not leading the rate of growth (13 countries as opposed to 11 where the Capital leads the growth). Besides, it should be noted that in the case of Italy, the Capital

Chart 9.2: Unemployment Rates in the EU, Iceland, and Norway in June 2015



Source: EUROSTAT

is not the primate city, neither does it represent a distinct level in the urban hierarchy. France can't be considered a country of the periphery of the euro-zone; however, it is well known that the financial credibility of the French state is insecure. France is often deemed to be the big weak link of the euro-zone. Croatia is a country particularly affected by the crisis since 2009. Switzerland, the sixth country of this category, is the only one along with Croatia where the Capital region falls short of any other region in terms of rates of growth, however, this is undoubtedly a different case. Switzerland, despite being far from unaffected by the global crisis, as well as by the Euro crisis in particular (although it is not part of the euro-zone), can't be viewed as a weak link. Besides, all regions of the country manifest a strongly positive rate of population change.

Of course, the reasons why Capital regions may grow faster or slower in relation with other regions in the same country (or even not grow at all) must be extremely complicated and different between different countries. However, there is an indication of a negative correlation between the relative growth of the Capital region and the degree to which a country has been affected by the crisis. In other words, it seems founded to say that the weak links in Europe, and particularly in the EU, are more likely to see their Capital regions decline in comparison with other regions. Additional evidence for that comes about when rates of unemployment are taken into account. Indeed, 3 out of the 6 countries that belong to the above-mentioned category (displaying rates of population change in their Capital region below the national median value) are among the 4 leading countries regarding unemployment rates, the fourth one being Cyprus, where the division in NUTS 2 regions doesn't apply. All 5 out of the 6 countries of the category that belong to the EU (that is apart from Switzerland) display unemployment rates above the EU-28 average. And in only 2 among the 11 countries that exceed the EU-28 average the Capital region leads population change rates (in Bulgaria and in Slovakia), as opposed to 9 out of the 16 countries that are below the average of unemployment. It is, therefore, justified to remark that the intensity of the crisis in a particular European country tends to be associated with

what we have called de-metropolisation, which may be either a sign of relative “polarisation reversal” towards smaller scale cities or a hint of counter-urbanisation. (Chart 9.2)

A Kapa Research Survey

In March 2012, i.e. almost one year after the general census of 2011, the Ministry of Rural Development and Food presented to the public a telephone survey titled “Return to the countryside. Employment and quality of life” (Kapa Research, 2012). The survey was conducted by a private company, Kapa Research, over a sample of 1,286 inhabitants of Athens and Thessaloniki. It used quota sampling according to the geographical distribution, age, and gender of the population.

The size of the sample corresponded to the standards in a usual telephone survey regarding issues such as voting intention. Therefore, the survey was not particularly large. At the same time, the questionnaire over-emphasized on issues about agriculture, which are of specific interest to the Ministry. Moreover, it included questions that tended to direct the interviewed towards certain answers, as we shall see. All the above factors reduced the credibility of the results. However, the primary question of the survey – are the inhabitants of the two metropolitan areas of the country considering moving to the countryside? – is in the core of our own research questions in the present study. Therefore, this source can’t be ignored and left out of the discussion.

It must be pointed out that the survey didn’t investigate already accomplished facts, that is actual movements from the metropolises to the countryside (meaning both the countryside in the narrow sense and urban centres on the inferior levels of urban hierarchy), but only intentions. It reflects expectations of a possible change of the place of residence to the countryside, however, it gives no clue about whether those expectations are tenable or not. The agents of those expectations may very well have a distorted view of life in the countryside, insufficient or incorrect information etc. Actual people are not fully rational and well-informed individuals. Therefore, the survey records subjective views and not objective factors.

The main finding of the survey was that the inhabitants of Athens and Thessaloniki were generally discontented with the quality of life in their cities of residence: 41% declared being somewhat dissatisfied and 17% very dissatisfied. This general climate of disappointment, clearly connected with the implications of the crisis, was reflected in all relevant questions. Therefore, 68,2% of the sample appears to have considered moving to the countryside, although we are not in the position to know how seriously they have considered that. Most of them (61.1% of the positive answers) had even thought to live in the countryside forever. Maybe only a few did or will do so indeed, however, these numbers are still remarkable.

Among the factors of discontent, the interviewed allege the following: poverty (83.2%), inability to find a job (56.7%), mistrust among people (80.3%), the high cost of living (90%), and the fact that Athens or Thessaloniki is not a clean and healthy city (96.1%). Moreover, 80.2% of the interviewed disagree that the presence of immigrants is something positive for Athens or Thessaloniki, which is a particularly disappointing finding, although the formulation of the

question doesn't allow to know if immigrants are viewed as a problem or not. It has also to be considered that the time of the survey was a time of escalation of xenophobic sentiments, which was one of the factors contributing to the emergence of the neo-Nazi party Golden Dawn in the political scene. The climate is not the same today anymore.

Of course, the questions were closed, and the list of factors was indicated by the survey itself. The interviewed may answer "yes" or "no" when asked about the relevance of a factor or the validity of a statement, however, it is not at all certain that they would have referred to this factor or statement themselves if not directed to by the survey. Moreover, the formulation of a closed question itself often indicates the expected answer as well, which is a problem in most surveys of the kind, and maybe in many qualitative researches in general. However, the eagerness of the interviewed to register as a problem each and every factor mentioned in the survey is characteristic of the climate of frustration among the inhabitants of the two metropolitan centres. A picture of social disintegration is depicted. This is perfectly consistent with the economic and political collapse of the time, which was obvious not only to everyone who lived in Greece but also to anybody that would happen to visit the country or even just read the press.

A more specific finding in this section is that, no matter how many people consider it difficult to find a job in Athens or Thessaloniki, much larger numbers point out the high cost of living or alienation among city dwellers. This is confirmed by the answers to the question: "what reason or reasons would you leave Athens or Thessaloniki for, in order to settle in the countryside?". The question was addressed to those who had previously declared to have thought to leave the metropolises. Among the top popular answers, we find the following ones:

- to enjoy a better quality of life in general (87.9%)
- because the rhythm of life is more relaxed in the countryside (79.5%)
- to enjoy a lower cost of living (77%)
- because human relations are more intimate in the countryside (68.2%)

We find factors corresponding to common hypotheses about possible counter-urbanisation tendencies only at the other side of the spectrum: 14.9% declared their will to rejoin their family or friends, 14% would leave in pursuit of more money, while just 7.2% thought that there are more opportunities for employment in the countryside. In the first case, the rate may be misleading, as rejoining family households may not be an end in itself but a parameter of reduction of the cost of living and thus already included in the respective incentive.

The question about employment in the countryside is particularly interesting, as it is an indication that internal migration away from metropolitan areas, if any, is not mainly led by the search for a job in the countryside. It is interesting to juxtapose this indication with the findings of another survey, which was carried out several years afterwards, in November and December 2017. The survey was conducted by another private company, Marc, commissioned

by the Regional Development Fund of Attica in collaboration with the Centre of Athens Labour Unions (Centre of Athens Labour Unions/Region of Attica, 2017). The sample was 1,501 residents of Attica (1,001 employees and 500 unemployed), aged between 18 and 65, and the aim of the survey was to monitor the living and working conditions in the Capital city. According to the survey, no more than 25.3% among the unemployed are willing to change their place of residence in Greece in order to find a job (a marginally higher percentage, 25.5%, would be willing to move abroad for this purpose) (Centre of Athens Labour Unions/Region of Attica, 2017, p. 13). This figure is substantially lower than the 68.2% of the population who were considering moving away from Athens or Thessaloniki back in 2012. One could assume that maybe the climate has changed in between the two surveys, or maybe a number of those who were willing to move to the countryside had already done so in 2017. However, the survey of 2017 still records similar levels of deprivation and discontent among metropolitan residents as the one of 2012. Besides, the general socio-economic conditions render the assumption of a possible radical limitation of the urge to abandon Athens highly unlikely. It might also be the case that the structure of the questions directed the interviewed to different answers. Be that as it may, the finding is an additional indication that expectations to find a job (or a good job) in the countryside are not particularly high among metropolitan residents.

Production and reproduction: employment and living costs

Reduced expectations for a job in the countryside probably reflect long-term features of the structure of the production in the country, with the chronic underemployment, low productivity of labour, and low degree of specialisation characterising the countryside. This disadvantage remains after the outbreak of the crisis. In the second trimester of 2012, unemployment in Attica was only marginally higher than the national average (23,8% as compared with 23,6%) (ELSTAT, 2nd Quarter 2012) and it has previously been steadily below average until 2010, included (although higher ever since). At the same time, the unemployment rate of Thessaloniki was well above the national average (22% as compared with 17.9% in 2011, 24.4% as compared with 28.9% in 2012, yearly average),¹ however, this has been a constant feature of the region for many years already before the crisis.

A similar picture appears if we compare unemployment rates in urban and in rural settlements. In the second trimester of 2012, unemployment in urban areas was 25,3% higher than in the rural ones. However, the advantage of rural areas regarding unemployment rates is not something that came with the crisis, but a long-term phenomenon. In the second trimester of 2001, for example, the divergence was 33.3%, whereas, in the same trimester of 2007, it was 24.9%. The gap expands or contracts over time but remains steadily for the benefit of rural areas both before and after the crisis. This indicates that the partial reversals that have taken place in the end of the decade 2001-2011, as detected in the relevant chapter (the internal urban-rural migration exceeding the deficit of rural settlements in their natural population change, the recorded immigration in rural areas exceeding the respective rates for urban centres), may

¹ Time series by NUTS3 regions available at <http://www.statistics.gr/en/statistics/-/publication/SJO01/2012-Q2>

hardly be attributed to new opportunities for employment in the countryside, at least not in the general case.

It is a good question why this advantage in unemployment rates does not generally result in a major incentive to move to the countryside (although we can already pinpoint the exception of the islands). A first factor is a relatively aged population in rural areas, which means a higher percentage of pensioners. Of course, pensioners are not included in the economically active population and are thus left out of the calculation of employment rates. However, it is very common in rural areas to supplement income from pensions (which are anyway very low in the case of farmers) with farming and/or breeding activity, even at an advanced age. This fact decreases unemployment rates, as there is no category of unemployed among pensioners, whereas there is a category of employed. It may be also the case that unemployment in rural areas is undervalued, because of the lack of relevant public services and authorities (such as employment offices). Nevertheless, the main factor is probably that workplaces in the countryside provide much lower income (be it wages or self-employment revenues) and worse working conditions. This is consonant with the low expectations of people inclined to leave the two metropolises for higher income in the countryside, as indicated by the already mentioned very low rate of those who determine the latter as a reason to move.

Even if obtaining a job offering a higher income is not the main reason to move to the countryside, people there will still have to work. So, which sector do they hope to find an occupation in, in case they abandon Athens or Thessaloniki? As the survey was oriented towards agriculture, there was a first question regarding the intention to search for a job in the primary sector in particular. One-third of the interviewed gave a positive answer, and the rest were subsequently asked to indicate what other activity they would be interested in. Through this layout, answers in favour of the primary sector are encouraged, and thus the numbers for agriculture are probably exaggerated and not comparable to the ones for the rest of the sectors. But there are additional reasons to question the assumption of a massive turn of metropolitan residents to agriculture in the countryside.

It is clear that the recorded interest in agriculture is based on a very ambivalent and contradictory view about farmers and breeders, especially about the former, which reflects certain stereotypes. The majority among the interviewed think that the Greek farmers have abused EU subsidies (75.1%) and state support (68.8%), that they don't respect public health (56.8%) or the environment (66.2%), and that they are not competitive enough (77.7%). At the same time, though, they consider that agriculture is a sector that has a bright future (69.8%) and state that they would encourage their children to become farmers (63.6%), probably because only a few of them believe that farmers are poor (38.5%). What's more, the idea that, given the economic situation of the country, the primary sector should be promoted, seems to be an almost unanimous conviction (96.2%).

Like what has happened in every other sector, both employment and the gross value added in agriculture, forestry, and fishing have declined in absolute numbers amid the crisis. However, they have risen in relative terms. From a historical low of 3.18% in 2008, they represented

4.12% of the total gross value added in 2014, having enjoyed an increase each and every year in between.² The rate in 2014 exceeded the respective rate back in 2006 but it fell behind the one in 2005. In 2008, the sector contributed by only 2.74% to the GDP, to rise to 3.34% in 2014; however, it never reached again the numbers of 2005 (4.32%) or before (Nikolaidis & Stasinopoulos, 2015, p. 90). The cease in the secular trend of decline in the primary sector of the economy and its marginal recovery are, in a certain sense, a symptom of economic counter-urbanisation. However, it should be clear that the relative resilience of the primary sector is due to the sharper decline of the secondary and tertiary sectors; it is a sign of fatigue of the Greek economy in general and not one of a supposed dynamism in the sector (Nikolaidis & Stasinopoulos, 2015, pp. 96,319). The above numbers are too small to determine anything. Moreover, there are additional indications of a further pressure on the sector: it is now even more dependent on subsidies than it was before the crisis (Nikolaidis & Stasinopoulos, 2015, p. 266); it only attracts an even smaller proportion of the overall bank financing (from 3.3% in 2008 down to 1.7% in 2014) (Nikolaidis & Stasinopoulos, 2015, p. 192) etc.

As similar reversal as the one in its contribution to the GDP can be observed in the development of employment in the sector: after a long-term decline of the share of the sector in employment (which was, for example, 18.3% in 1995), 11.14% of the total employed worked in agriculture, forestry, and fishing in 2008, whereas the respective rate was 12.90% in 2014.³ The only difference, in this case, is that employment in the sector reached its historical low one year earlier (10.98% in 2007) and that it has been seemingly shrinking again after 2013, when it reached a peak of 13.69%. These increasing rates can't be ignored. However, employment in the sector in absolute numbers has fallen, which means that there is not much room for newcomers. It is true, though, that there has been a small absolute increase in two sub-categories among the employed in the sector: the self-employed with no employees and the salaried workers. The estimated increase was 14.7 thousand between the last quarter of 2008 and the last quarter of 2013 for the former category, and 6.8 thousand for the latter. At the same time, Attica and Thessaloniki combined have lost an estimated 140 thousand residents. The assumption that a major part among them moved to the countryside to become a farmer is simply untenable.

The really striking fact remains the very large divergence between the share of agriculture in the total employment and its share in the total gross value added. This reflects the very low productivity in the sector, which constitutes a counter-argument to the attractions of agriculture and rural life. It is hard to believe that a sector of such low productivity can be really attractive, at least for young people and in the long run. The primary sector of the economy does not suffice to provide adequate income to an average employed person (Nikolaidis & Stasinopoulos, 2015, p. 322), although it can serve as a source for immediate consumption (subsistence farming), in some cases. The relative recovery of the sector may suggest that certain areas with a high

2 Time series regarding the period 1995-2015 available at: <http://www.statistics.gr/en/statistics/-/publication/SEL12/>

3 Time series regarding the period 1981-2015 available at: <http://www.statistics.gr/en/statistics/-/publication/SJO03/>

proportion of primary sector activities have been able to retain their population, but it is unlikely to have attracted former metropolitan residents at a massive scale.

Let's come back to the survey. Among those who didn't intend to get involved in agriculture, the preferred activities were energy and renewable energy sources (10.6%), education (11.8%), telecommunications and new technologies (14.2%), and, above all, different types of tourism (25%). Another 5.8% would choose food and beverage service activities and entertainment, and it would be reasonable to assume that a quite large part of them would be meant for tourist areas (we could argue the same about trade, which is chosen by 7%). This is not a coincidence, as activities related to tourism are widely considered the "heavy industry of the country".

There is also a wide-spread impression that tourism is resisting the crisis better than other sectors.⁴ Indeed, employment in "accommodation" and "food and beverage service activities", according to the NACE Rev. 2 taxonomy, displays a substantial and accelerating rise in relevant terms, from 6.99% of the total employed labour force in 2008 to 9.02% in 2014, after having been more or less stable during the first years of the century. Although the long-term tendency was already upward, it is evident that the period of the crisis has given a boost to tourism. It is interesting, though, that this didn't happen immediately, but in a later phase, according to the available data about the value added: starting from 5.52% of the total gross value added in 2008, it was only 4.67% in 2011, to climb up to 6.21% in 2014. Of course, we must take account of the fact that numbers are most probably underestimated, as accommodation, restaurants, and bars are activities fostering high rates of undeclared work and social contribution (as well as tax) evasion. Besides, we shall see later that, even according to the available numbers, if the indirect contribution of tourism is included too, in fact, the sector contributes twice as much in the overall employment in the country and three times as much in the GDP.⁵ Be it as it may, it is rather certain that tourist activities were capable of protecting certain areas, especially the islands, from an economic collapse, preserving relatively lower rates of unemployment and, thus, attracting and/or retaining population.

At the same time, employment in other key sectors is shrinking rapidly. Manufacture saw its share shift from 11.82% in 2008 to only 9.26% in 2014, although its share in the total gross value added rose again, after a biennial of decrease (2009-2010), to nearly reach the level of 2008 in 2013 (9.52% as compared with 9.62%), which is probably a sign of industrial restructuring and/or of a higher rate of productivity decline in most other sectors.

In terms of employment, the rate of wholesale and retail trade appears marginally higher in 2014 than in 2008 (18.30% of the total as compared with 18.22%), but it had been falling in between (except for the years 2010 and 2011), reaching a bottom of 17.69% in 2014. This is more significant than it seems at first sight, as the respective rate had been constantly rising between 1997 and 2008. Pressures on trade are revealed more explicitly in the data regarding the

4 Governments who imposed the austerity pacts in Greece have often been cynical enough to unleash their campaigns against social movements and workers' strikes on the basis of the argument that they would harm the image of the country and, therefore, tourism.

5 Data derived from the Greek Tourism Confederation - <http://sete.gr/el/stratigiki-gia-ton-tourismo/vasika-megethi-tou-ellinikoy-tourismoy>

value added: starting from 12.86% in 2008, trade represented 10.14% of the total gross value added in 2013, to raise only at a mediocre pace afterwards (10.67% in 2014). The crisis restored a long-term downward tendency that emerged even before the change of the century, due to the decline in retail trade (except vehicles and motorcycles) but seemed to have reversed between 2006 and 2008.

The real disaster, however, is to be found in construction (including civil engineering), which has been a sector of particular importance within the structure of the production and economy in Greece (actually, its former “heavy industry”): from 9.37% in 2006, the share of construction in the total gross value added had fallen to 5.02% already in 2008,⁶ and to an anaemic 2.38% in 2014. Things are not better regarding employment; from a peak of 8.72% in 2007, construction ended up representing 4.02% of the total employed labour force in 2014.⁷ In front of such a colossal collapse, tourism is apparently doing better.

Let’s now come to the question regarding the expected “professional status” as reflected in the expected relations of labour in the new place of residence. Among persons who have thought to leave Athens or Thessaloniki for a smaller city or a village, the most popular answer to the question “what employment would you search for in the countryside?”⁸ is “to start my own business” (39%). This was declared by nearly half of the interviewed, if persons employed in the public sector and those who have not answered the question are excluded. All this is further evidence that what attracts people out of the metropolitan areas is not mainly already existing workplaces.

However, it is also an indication of a mythical view of the countryside. We shall see afterwards that leaving Athens or Thessaloniki to start a business in the countryside has not been a substantial phenomenon in practice. Expectations about life in the countryside as well as about the opportunities it can offer are not based on facts and may, therefore, be distorted. Besides, 54.8% of those inclined to leave Athens or Thessaloniki have never lived in the countryside before, even if the percentage of those who would be willing to leave for the countryside is higher among those who have already lived there at some point (as indicated by the fact the latter accounted for 45.2% of the inclined to leave whereas for only 41.8% of the total interviewed). In the eyes of those who would allegedly leave the metropolises for the first time, the countryside may represent an escape. Attraction to agriculture might be an expression of the imaginary perception of agricultural life as a life free of anxiety and in close connection with nature, rather than of the conviction that it can offer a steady and viable income. For those who used to live in the countryside in the past, the urge to go back may well be an expression of nostalgia for better times.

6 Because of the deflation of the Greek bubble, which has preceded – and contributed to - the crisis.

7 Let us remark that the decline in the sector in terms of employment has succeeded its decline in terms of value added, which is reasonable, anyway.

8 To avoid confusion, we should note that, in the context of Greece, the term “countryside” usually refers to any place other than Athens and Thessaloniki, including relatively large cities that can’t be considered as rural by any scientific or statistical criterion. In the Kapa Research survey, the term is used in this every-day life sense, making it thus impossible to make any distinction among those who would leave the two metropolitan areas for a smaller urban centre or for the countryside indeed.

There is an ideological element in the impulse towards the countryside, actual or alleged, which is particularly revealed by the high rates of positive answers to the question about whether or not the relocation of population away from big cities would have possible effects to the economy (75.9%), to the institution of family (72.9%), to individuals (70.6%), and to the labour market (64.2%) - and it is worth remarking that employment appears again as the least of the expected benefits. This is further corroborated by the advantages attributed to the countryside, most of which are not exactly measurable (better quality of life, relaxed rhythms, intimate human relations).

As abstract as they may be, however, these non-measurable advantages describe, in a certain indirect way, a network of social security and protection, which is expected to be found in settlements of a smaller scale. This is also connected with the most measurable among the declared reasons to move to the countryside: the reduced cost of living. This is indeed the most convincing and practical factor of all.

Besides, 69.4% of the interviewed declared to possess some property in the countryside. Let us not forget that modern urbanisation in large scales is a relatively recent phenomenon in Greece, with large cities and, above all, the Capital achieving a breakthrough in their population not before the mid-war period and the first years after World War II. This means that individuals and households in the two major cities have rarely a history of more than one or two generations of metropolitan or even urban life. Therefore, most metropolitan residents maintain links with their places of origin in the countryside, have assets, relatives, and friends there, and probably hope that they can resort to their networks of social security, including access to domestic production of basic consumption goods (even if the latter is also part of the already mentioned mythical or nostalgic perceptions of the countryside).

To quantify and measure such networks is not an easy task. It is not simple even to estimate living costs in the different geographical parts of the country. We shall attempt that in a later chapter. However, it is hard to deny the existence of this advantage in rural areas, villages, and small towns. Even more, we can make here the hypothesis that the reduction of living costs is the leading factor attracting residents from large urban centres and regions to those areas in the countryside that are not specialised in tourism, outweighing a possible interest in agricultural activities.

Two distinct mechanisms of de-metropolisation

According to the indications provided by the Kapa Research survey, to the relevant data of the Hellenic Statistical Authority, and to our previous analysis, we can distinguish between two different major types of population attraction away from the two metropolitan centres of the country, and probably away from cities in the second class of the urban hierarchy as well: possibilities for employment in certain sectors, principally in tourism, and the reduction of living costs in smaller scale settlements. The second factor is probably the leading one, which would mean that the de-metropolisation effect is a phenomenon of internal migration push rather than of migration pull. The two factors might also combine, e.g. in cases where the place

of origin is at the same time a tourist area. However, islands, which comprise most tourist areas, are not particularly cheap places to live in. In any case, the two factors represent two mechanisms or legs that are distinct from an analytical point of view, the first one being led by economic activity and the second one by consumption. We can label them production-led or, more accurately, job-led since some jobs may be in social reproduction rather than production, and reproduction-led de-metropolisation (or counter-urbanisation, if the phenomenon also affects large non-metropolitan cities too) respectively.⁹

The two legs also correspond to different social and demographic features. A very interesting one refers to the seasonal oscillation of population. According to this criterion, the different areas of the country can be divided into three categories: areas with a relatively stable population throughout the year, areas with temporary population boosts, and areas with temporary population losses. Most of the seasonal variations happen during the summer, but, in some cases, the same may be observed for a short period around Christmas time.

There is no available data about short-term changes in the population on a regional base, as estimates by ELSTAT are only annual. However, we can take an approximate picture of the seasonal oscillation of population by monitoring the number of employed workers throughout the year,¹⁰ irrespective of the long-term tendencies. According to the facts, the regional units of the country may be classified as follows:

- Regions with relatively stable employment throughout the year: Drama, Evros, Kavala, Kilkis, Grevena, Kastoria, Florina, Larissa, Magnesia, Karditsa, Trikala, Achaia, Aetolia-Acarnania, Elia, Boeotia, Pthiotis, Phokis, Laconia, East and West Attica, and Syros¹¹
- Regions with seasonal boosts: Imathia, Pella, Pieria, Chalkidiki, Preveza, Thesprotia, Evrytania, Messinia, Corinthia, Argolis, and all islands and island regions apart from Syros
- Regions with seasonal losses: Xanthi, Rodopi, Thessaloniki, Serres, Kozani, Arta, Ioannina and all sub-regions of Attica (all sectors of Athens and Piraeus), apart from East and West Attica and the islands.¹²

We find all non-island big cities among stable or temporary declining regions. Both metropolitan areas suffer seasonal losses in the summer. On the other hand, regions that benefit from temporal oscillations in employment, and thus most probably in population too, are either

9 This distinction is similar to, but not coincident with, the distinction between people-led and job-led explanations of the “rural renaissance”, proposed by Malcom Moseley (Moseley M. , 1984). While production-led counter-urbanisation practically means job-led counter-urbanisation, people-led explanations do not only include living costs, social networks, subsistence farming etc. (which is reproduction-led factors), but also, and mainly, values, life-styles etc, factors that do not seem likely to have played a major role in the relocations under the conditions of the crisis in Greece.

10 Elaborated data about employment by regional units on a monthly basis may be found in Kritikidis (2017).

11 In some of the above cases, minor seasonal differentiations in the population can still emerge, e.g. short peaks in Christmas time and shallow bottoms in the summertime in Kastoria or Trikala, minor losses in the summer in Florina, Achaia, Aetolia-Acarnania, or Pthiotis, and short summer peaks in Elis, Phokis, and Laconia; however, all this doesn't change the big picture of general stability.

12 Evrytania enjoys its peak at Christmas time.

island and mainland tourist areas (Chalkidiki) or areas with relatively significant tourist activities (Messinia, Preveza, Argolis, Corinthia, Pieria), or regions adjacent to large cities, mainly Athens and Thessaloniki. In some cases, the two categories overlap (Chalkidiki, Pieria, Corinthia). There is no doubt that, in both cases, the phenomenon is explained by internal and external tourism and summer holidays. The structure and function in each category are different, though. In the islands and in mainland tourist areas, oscillations are much deeper and correspond to inflows of domestic and foreign tourists and of people intending to work in jobs related to tourism. In the case of regions adjacent to large cities, the seasonal oscillations, much milder anyway, are mainly due to the summer holidays or to weekend excursions of the permanent residents of those neighbouring large cities, i.e. they refer to a much more limited spatial range.¹³ This difference has crucial implications in the duration of stays, in distances covered, in the type of activities and infrastructure, in spending etc.

If we combine this last observation with the hypothesis of a dual de-metropolisation process, we are probably justified to notice that a bigger proportion of the job-led de-metropolisation is directed towards those regions with sharp seasonal boosts, whereas the reproduction-led de-metropolisation is driven to regions with a stable population throughout the season, regions with mild seasonal boosts, and maybe certain regions with seasonal losses (the ones that are not depopulating amid the crisis). Population gains due to tourism and, thus, job-led de-metropolisation tend to be more temporary than gains due the reproduction-led de-metropolisation. This explains why the recorded or estimated increase in the permanent population of islands is not as impressive as one could expect, although it is undoubtedly remarkable.

Conclusions

After having detected some first indications of a process of de-metropolisation under the conditions of the crisis in Greece, and before we proceed to a further examination and analysis of data, what is attempted in this chapter is to track down certain features, motives, and mechanisms associated with this process.

A juxtaposition with other European countries demonstrates that Greece is one out of the 6 countries, among those which EUROSTAT provides data about, where the population growth rate of the Capital region is below the median value of the growth rate per NUTS 2 region. The EUROSTAT data provide some evidence of a negative correlation between the relative growth of the Capital region and the degree to which the crisis has affected each country. This suggests that the current de-metropolisation effect is a phenomenon of crisis.

After the outbreak of the capitalist crisis in Greece, a majority among metropolitan residents have considered at some point to leave Athens or Thessaloniki for a smaller scale-city or for the countryside. Of course, this declaration of intent does not necessarily mean an actual

¹³ In a few cases, above all Chalkidiki, the two categories overlap. In cases where the region of a big city is also suitable for summer holidays and week-end trips (Magnesia, Achaia, Larissa), seasonal balance sheets are neutral.

metropolitan exodus too, but it is still significant. According to their own statements, what would attract metropolitan residents to the countryside is mainly quality of life, networks of social protection, and reduced living costs. Expectations to find a good job in the countryside seem to be very limited in a context of an overall collapse in employment.

However, some people do hope to work in the countryside. Surveys have recorded a favourable opinion about agriculture and its perspectives among metropolitan residents, as well as some willingness to engage in the sector. Indeed, there is a relative progress of agriculture in terms of employment and gross value added. However, it is doubtful whether the sector constitutes a substantial factor of attraction to the countryside, given its very low level of productivity and the very restricted income it can secure. More detailed data that will be examined later in this study will demonstrate that the number of former metropolitan residents who have actually moved to the primary sector of the economy due to the crisis is rather insignificant, at least at first. On the contrary, this is not the case with jobs associated with tourism. Tourism is apparently the most attractive activity in the countryside, especially on the islands.

According to its main incentives, thus, one can distinguish between two distinct mechanisms or legs of de-metropolisation (and probably counter-urbanisation in general): a production/job-led one, induced by the search for a job; and a reproduction-led one, stimulated by the expectation for reduced living costs and networks of social protection. The latter leg is probably the predominant one.

Although they may sometimes overlap, the two legs of de-metropolisation generally tend to be directed towards different types of regions. According to the oscillation of their total employment and population over the year, all regions in the country may be divided into three types: stable regions, regions with seasonal losses, and regions with seasonal boosts of employment and population. All non-island regions comprising big cities belong to either of the former two types, whereas almost all islands belong to the latter. It appears that job-led de-metropolisation is generally directed to regions with sharp seasonal boosts of employment and population, while reproduction-led de-metropolisation is oriented mainly towards regions with no seasonal differentiation, with mild boosts, or maybe even with mild seasonal losses. This also suggests that the job-led leg of de-metropolisation is also more likely to be only temporary.

CHAPTER 10

Economic urbanisation and population tendencies according to economic and social features

Economic structure and performance

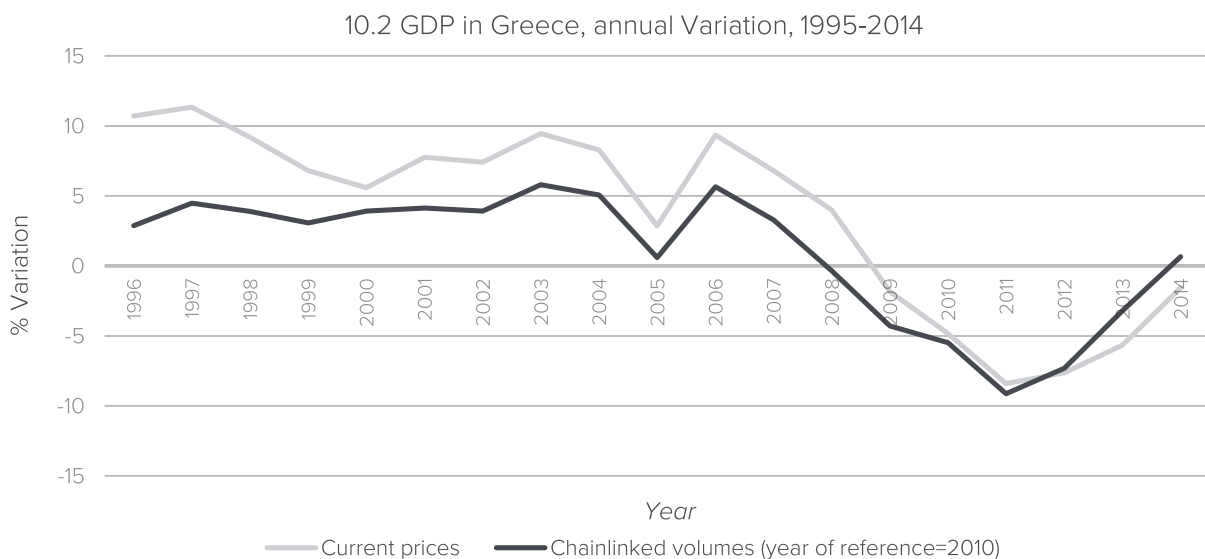
As described in the pertinent chapter, the GDP of Greece has shrunk by more than 26% between the beginning of the crisis and the end of 2014 (Chart 10.1, Chart 10.2). This suppression has manifested itself in immediate response to the outbreak of the global financial meltdown, and it has not waited for the implementation of the IMF programme and the bailout to happen, although it has been sharper after 2010. The overall cumulative decrease is not substantially altered whether the GDP is calculated in current prices or deflated, in chainlinked volumes (in the charts of ELSTAT the year of reference is 2010). The only changes are that, in the second case, the beginning of the downward movement is recorded one year earlier, already in 2008, despite its nominal rise in that year, and that, in this second case again, the change between 2013 and 2014 appears marginally positive (0,65%), whereas the GDP in current prices is still declining (the latter phenomenon revealing deflation). Anyway, this issue is indifferent at the current stage, since what is at stake is the relative evolution of each NUTS3 regions, which remains the same no matter how the regional GDP is calculated, in current prices or deflated. For ease of elaboration, we will be based on the GDP by NUTS3 regions as provided in the regional account tables of ELSTAT (Table 10.1).

First of all, it has to be underlined that the economic structure of Greece is even more disproportionately centred around the Capital city than its population structure. Lately, nearly half the GDP of the whole country is produced in the region of Attica alone. The vast predominance of Attica is undoubtedly the main characteristic of the country's economic structure.

In Chart 10.3 one can compare the shares of each one of the 51 NUTS3 regions in the total permanent population of the country (2011) and in the national GDP (2011, 1st quarter). As the huge share of Athens makes it very difficult to distinguish the shares of the other regions in this chart, it was necessary to depict the shares of the 49 non-metropolitan regions in the national total also in a separate chart (Chart 10.4). It is striking that, among the 51 regions, only 4 contribute to the national GDP more than they do to the national population: Attica, Boeotia, the Cyclades, and Zakynthos. A fifth one, Cephalonia, has practically the same share in both sectors, whereas all the remaining 46 regions represent a smaller proportion in the national GDP than in the total population of the country. That is, they have a lower rate of GDP per capita than the national rate.



Source: Hellenic Statistical Authority, Annual National Accounts. E. Skoufoglou, 2018

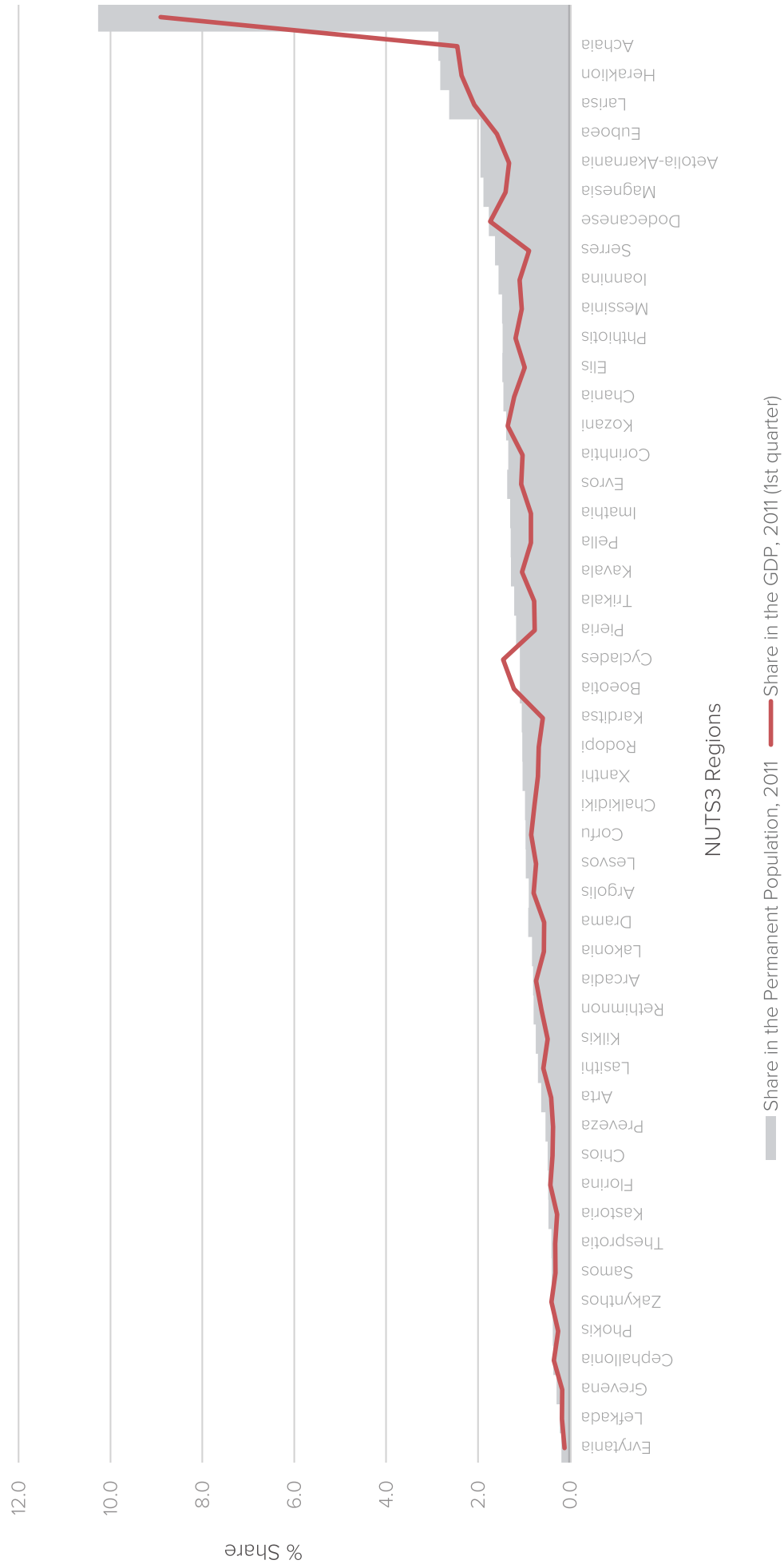


Source: Hellenic Statistical Authority, Annual National Accounts. E. Skoufoglou, 2018

The picture was not much different back in 2008.¹ At the time, one more region, Kozani, exceeded the national rate of GDP per capita, and another one, Florina, practically equaled it. The relatively high rates of both regions are associated with their big power plants. Therefore, apart from Attica, the rest of the regions presenting high rates of GDP per capita are characterised by either touristic (the Cyclades, certain Ionian islands) or industrial activities, such as energy production (Kozani, Florina) or manufacturing (Boeotia). On the other extreme, the lowest rates are recorded in inland (Karditsa, Grevena, Evrytania) or mostly inland areas (Serres), largely rural or/and mountainous.

¹ In this case, figures about the population are derived from the population estimates of the Hellenic Statistical Authority.

10.3 Share in the National Permanent Population and in the GDP by NUTS3 Regions, 2011



Source: Hellenic Statistical Authority, 2011 Census, Annual National Accounts. E. Skoufoglou, 2018

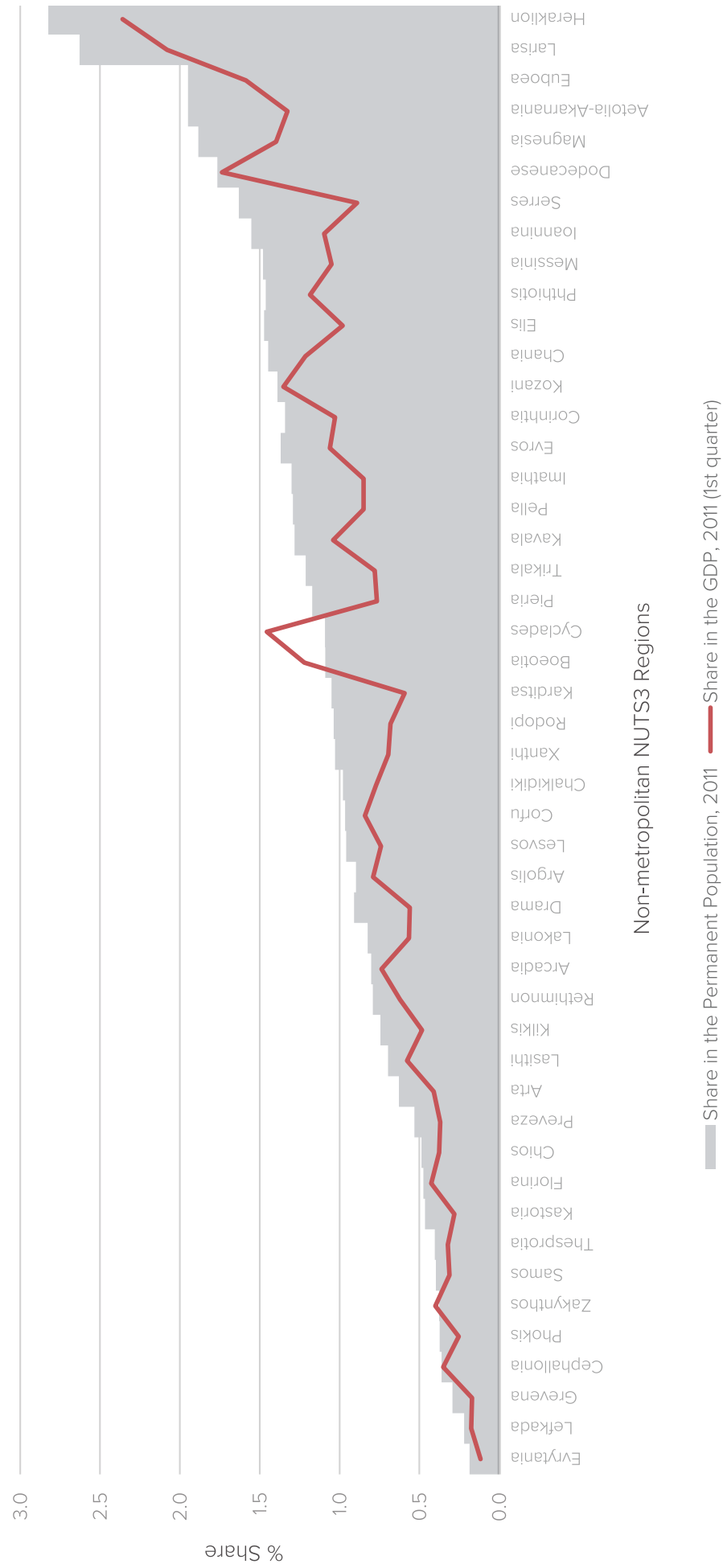
Now, how did these rates evolve during the period of the crisis, whether its conventional start-point is placed in 2008, in accordance with the global financial meltdown, or in 2010, being identified with the Greek public debt crisis?

Of course, most regions have suffered a serious decline of their GDP each and every year throughout the period 2010-2014 (almost all of them did so until 2013, while after that some regions recorded a small increase) (Table 10.2). The cumulative fall in a three-year period varies from 10% (Kozani) up to more than 30% (Xanthi).² In most cases, this shrinkage has been added to a previous decrease, less sharp yet existing, in the period 2008-2010, that is between the outbreak of the global financial meltdown and the Greek public debt crisis. In this sense, it sounds weird to speak about benefited and harmed regions, since all of them have virtually collapsed. However, not all of them have collapsed to the same degree. This phenomenon is not a detail; it represents an essential aspect of the objective function of every capitalist crisis, which is the destruction of capitals and productive forces. The universal process of destruction is not symmetric among different social classes, different capitalist states, different sections of the capital, or different productive sectors and activities. Neither is it so among different geographical areas. At the same time as it destroys the accumulated masses of capitals and productive forces that have saturated the capitalist mode of production and, thus, undermined its capacity to provide profits, a capitalist crisis also installs new relations of forces. The classes, groups, states, activities, and regions that will be able to better resist the effects of the crisis are much more likely to occupy a more hegemonic position in the aftermath of the crisis – provided that social clashes don't result to a radical socio-economic rearrangement. In this sense, in the long run, they are benefited, indeed. The less hurt is the winner.

It is from this perspective that we should deal with the figures regarding the GDP by NUTS3 regions. Let's come back to the data. A first effortless observation is that, despite the general decline, the annual fluctuations of the level of the GDP in each region are more abrupt and abnormal than the ones regarding the estimated population. In other words, the annual rates of change are much less stable. This is particularly evident when the shares in the national GDP are considered: in many cases the same region may see its share rise one year and fall another, whereas the shares in the national estimated population evolve, in almost all cases, in a uniform way, whether upward or downward, throughout the whole period under study. This is quite expectable, for basically two reasons. First of all, calculations of the GDP are not based on the figures of the previous year, whereas population estimates are. Secondly, the economic conjuncture is much more susceptible to rapid changes and seasonal fluctuations than the population of an area. Therefore, a close monitoring of the annual changes in each region would not give as clear a picture as the one offered by the monitoring of the annual evolution of the estimated population, in the previous chapter.

² Florina is a unique case, as it appears to have recorded a small increase in its GDP between 2010 and 2014 (2.44% in current values). However, this is due to an abrupt annual fluctuation, since the GDP of the region was below its level in 2010 both in 2013 (-5.59%) and in 2015 (-4.83%).

10.4 Share in the National Permanent Population and in the GDP by non-metropolitan NUTS3 Regions, 2011



Source: Hellenic Statistical Authority, 2011 Census, Annual National Accounts. E. Skoufoglou, 2018

The standard deviation of the values of the GDP by NUTS3 regions is decreasing year by year, which is, of course, expected as the GDP is sinking everywhere (Table 10.3). In a six-year period (2008-2014), the standard deviation, which has been constantly increasing before the crisis, has shrunk by 26.45%, whereas the GDP has shrunk by 26.17%. This implies that the crisis has slightly restricted the dispersion of values. This is also reflected in the development of inequalities, as measured by the Gini coefficient, which has been slightly declining since 2010 (included), while it has been increasing almost every year before the crisis. The cumulative decrease of the Gini coefficient between 2008 and 2014 is 1.22%. The above facts suggest that regional inequalities in terms of GDP have been somewhat reduced after the outbreak of the crisis, although remaining high. However, the real situation is more complicated.

A reason for that is that the population of the NUTS3 regions has changed meanwhile. Given the decrease in the national population, the GDP per capita has declined a little less than the GDP, that is by 24.91% between 2008 and 2014. The respective fall in the standard deviation of values has been a little bigger, 25.57%. What's interesting, though, is another observation: the Gini coefficient for the GDP per capita has declined more than the one for the GDP (by 3.11%), suggesting that regional inequalities have been further restricted. However, this overall fall is subdivided into two opposite movements: the Gini coefficient has been continuously decreasing from 2008 (in fact, already from 2007) until 2011 (included) but it has been constantly rising again after this year. This indicates that, while regional inequalities in the first years of the capitalist crisis (including the years before the Greek bailout and structural adjustment programme) were contracting, they started expanding again afterwards. This is consonant with the prediction that the crisis initially has certain seemingly egalitarian effects, as it first affects those layers, activities, and geographical areas that are more closely interwoven with the global capitalist economy and represent higher levels of capital accumulation, only to give rise to a new process of polarisation as the destruction of capitals and productive forces proceeds. However, it is too early to think that the destructive function of the crisis is already completed, even based on the data just examined. Numbers are still far from the levels they were before the crisis. Moreover, we shall see that the relative decline of the top level in the urban hierarchy, that is the region of Capital city, had not even started when the above-mentioned reversal occurred.

Let's now take a quick look at the situation among the 49 non-metropolitan regions. The standard deviation of the values of the GDP among non-metropolitan regions has shrunk by 27.97% between 2008 and 2014. During the same period, a decrease of 2.60% has been recorded in the Gini coefficient. Those facts indicate that disparities among non-metropolitan regions have been reduced more than the ones among all regions in general. The decreases in the standard deviation and in the Gini coefficient for all regions except Attica, that is among non-metropolitan regions plus Thessaloniki, are even higher: 31.22% and 3.60% respectively. Therefore, the gap between non-metropolitan regions and Thessaloniki has been closing more quickly than the average gap in between non-metropolitan regions alone, whereas the gap between them and Attica has been closing slower. The respective numbers for the GDP

per capita confirm this finding. They also reflect the same turnaround from falling to rising Gini coefficients in 2011 as the respective figures regarding all the regions of the country.

Nevertheless, this picture changes if we look at the situation a few years earlier, in 2011. The decrease in the standard deviation among non-metropolitan regions between 2008 and 2011 is already big, 18.72%, and a little higher than the respective decrease for non-metropolitan regions plus Thessaloniki (17.27%). On the contrary, the standard deviation among all 51 regions is substantially lower: 13.58%. In 2011, the Gini coefficient for all regions was 0.24% lower than in 2008, while for non-metropolitan regions it had already decreased by 2.72%. The gap has narrowed afterwards. Figures about the GDP per capita point to the same direction. All these facts indicate the most interesting phenomenon in the evolution of regional GDPs since the outbreak of the crisis: a turnaround in the trajectory of the Capital region.

We shall not deal with a further analysis of those or with other inequality measurements. Inequality, in general, is an abstract notion, whereas we are interested in concrete spatial phenomena. Moreover, the GDP per capita already conceals a great lot of inequality. The usefulness of such an analysis would, therefore, be limited.

Nevertheless, the above-mentioned finding is confirmed by the examination of the evolution of the share of Attica in the national GDP (Table 10.4). During the first years of the crisis, Attica has been raising its share in the GDP each year, although its share in the population was falling. However, from 2011 on, it has suffered a severe downturn in its share in the national GDP as well. Following at least a decade of continuous annual increase, this share was 48.23% in 2008, 48.84% in 2009, and 48.87% in 2010, only to fall back to 48.47% in 2012 and 47.86%, at its lowest level since 2007. From a comfortable surplus of 1.32% in 2011, with 2008 as the year of reference, the balance sheet of its share has recorded an overall deficit of 0.78% in 2014.

Of course, this is associated with the already detected depopulation of Attica in a rate much sharper than the overall population decrease in the country (Table 10.5). However, starting from 2011, there is also a significant change in terms of GDP per capita. Attica maintains a massive advantage in its GDP per capita compared to the national average. This advantage has been steadily expanding for at least a decade. From 2011 on, this is not the case anymore: the gap has recorded a decrease in 2012, 2014, and 2014, having meanwhile enjoyed an important temporary rise in 2013. As a result, in 2014 it practically at the same level as in 2011, that is somewhat higher than 36.1%. The recorded phenomenon is thus not only a matter of depopulation. It also reflects the fact that, under the conditions of the crisis, the advantage of the Capital region in terms of productivity is not expanding anymore and, therefore, it can't counterweight, even partly, the negative effect of the depopulation of Attica in its share in the GDP. This is an important turnaround.

It is also interesting that the gap between Attica and the remaining regions of the country started closing just at the time when inequality among those remaining regions has started rising again, after some years of contraction. We are, therefore, in front of a double turnaround.

It could be assumed here that the detected turnaround, or at least its second branch, may relate to a relative economic recovery. According to such a scenario, during the economic

suppression, disparities tend to be milder, and they tend to sharpen again when economic stabilisation or recovery occurs. But this is by no means the case in Greece after 2011, as described in the pertinent chapter. In fact, 2011 and 2012 were the years of the sharpest decline in the GDP in relative terms (-8.41% and -7.64% respectively), to be followed by a substantial fall in 2013 too (-5.52%). Therefore, this double change of trajectory constitutes a new phase in the crisis, as its processes unfold, instead of a sign that its dynamic is expiring.

If the facts in the years before the crisis are also examined, it is found out that both tendencies that reversed at some point during 2011 were present even before the crisis. Disparities in the GDP per capita by NUTS3 regions were contracting since 2007, whereas the hegemony of Athens was expanding. During its first years, the crisis preserved these two preexisting tendencies, even intensifying the former, whereas in the following years it completely reversed both.

In fact, the increase in the share of Attica in the GDP in 2010 was already only marginal (0.03%). This means that the relative decline of Attica is a little prior to the process of the re-expansion of regional inequalities among the remaining regions. It is interesting that the decline of Attica in its share in the GDP, as well as the pressures on its relative advantage in terms of GDP per capita, started in 2010 or just after that, which is after the introduction of the first Structural Adjustment Programme (memorandum). This is an indication that this process has been related to austerity rather than with the initial consequences of the crisis.

Let's now proceed to a closer look at all NUTS3 regions. Map 10.1 depicts the relative change in the GDP by NUTS3 region. This can give a first picture of the situation; however, it is a snapshot that might be deceptive, due to the already mentioned fluctuation in the annual GDP, which means that, if the next or the previous year was examined instead of 2014, the situation would appear quite different. It is more appropriate, thus, to consider the general tendencies in the evolution of the GDP before and after the outbreak of the crisis of 2008, ignoring annual fluctuations that don't affect the longer-term trajectory. A classification of the prefectures of the country according to those tendencies is provided in Map 10.2.

A first observation is that the evolution of the shares of most regions has changed direction after the crisis: this happened in 37 cases, whereas only 14 regions retained their preexisting dynamic, whether positive or negative). Despite being by far the most spectacular, Attica is not the only case where the GDP switched from rising shares to a negative trajectory. There are 4 more such cases: Thessaloniki, Cephalonia, Samos, and Chios. The difference is that in all those cases, apart from Chios, the decline started as soon as the crisis broke, and not a couple of years later. Another 12 regions maintained shrinking shares both before and after the crisis. It is interesting that in all the above categories one can find several islands or island regions: Samos, Chios, Cephalonia, Corfu, Zakynthos, Heraklion. Besides, those regions can be also found in Map 10.1 among those with the sharpest decline in their GDP during the period 2010-2014. Most cases reflect the relative disadvantage of the northern islands, however this doesn't explain everything, as we shall see immediately.

An impressive number of 32 regions made the reverse transition, from a negative to a

positive tendency. Of those, 19 started improving immediately after the outbreak of the crisis, while 13 followed some years later, that is after the massive austerity programmes were imposed. The much bigger number of regions in these categories is, of course, not irrelevant with the relative decline of Attica, which automatically tends to increase the shares of all other regions. The remaining 3 regions (Messinia, Lesvos, Lefkada) have maintained a generally upward trajectory both before and after the crisis.

It is interesting that most dynamic island regions (the Cyclades, the Dodecanese, Lasithi and Chania in Crete) have seen their share rise only some years after the outbreak of the crisis, while their share in the population was already increasing. This indicates that the reason why islands have attracted internal migration was not a relative economic advantage created by the crisis, in the first place.

The situation appears much more uniform among the 4 regions where industry was the leading sector in the economy (in terms of value added) in 2010: Boeotia, Kozani, Florina, and Arcadia. Not only all four regions have suffered a less sharp decline in their GDP (Florina even recorded a small surplus in 2014 compared to 2010 or 2008), but they have all shifted from constantly decreasing shares before the crisis to constantly increasing shares since 2008.

Now, let's see what the situation of the GDP per capita by NUTS3 regions was like in 2014, that is the last year we had data about when those lines were written, in comparison with what it was like back in 2008 (Table 10.6). In the bottom of the ranking, the situation has not changed dramatically: 10 out of the 13 regions of the bottom quartile were the same in 2014 as in 2008. Among them, one can find the regions with the biggest estimated improvement in terms of population throughout the crisis (Phokis, Pieria) as well as a couple of other regions whose population has grown (Xanthi, Rodopi). Once more, this is an indication of population improvement with no respective advantage in terms of economic performances. A few regions (Aetolia-Acarnania, Preveza, Trikala, Arta) have enjoyed an upgrade, the three first escaping the bottom quartile, although it is not possible to tell whether this progress is sustainable.

At the other end of the spectrum, that is the top rates of GDP per capita, Attica was leading the ranking in 2014, whereas it was marginally second to the Cyclades in 2008. Again, there are no more than 4 regions (Heraklion, Thessaloniki, Samos, Euboea) among the top quartile in 2008 that don't belong to the top quartile in 2014 anymore – and none among the top 8 regions. The most important phenomenon implied by this fact is probably the decline of Thessaloniki.

However, the most important finding is the advantage of islands and industrial regions. This advantage existed already at the beginning of the crisis, but it is expanding. In 2014, there were only 2 among the 13 regions of the top quartile that were neither islands nor primarily industrial: Attica and Argolis – and, in fact, Attica does have important industrial activity too. In 2008, the respective number was 4, since Thessaloniki and Euboea were also included (again, both having significant rates of industrial activity). The most interesting fact is that all 4 industrial regions are now among the top 7 regions, whereas the 3 of them (Kozani, Florina, Arcadia) were not even in the top quartile in 2008.

Table 10.6 NUTS3 regions ranked according to their GDP per capita, 2008, 2015

2008		2015*	
GREECE	21,845	GREECE	16,294
Cyclades	29,388	Attica	22,192
Attica	29,215	Cyclades	21,578
Zakynthos	25,264	Boeotia	19,370
Boeotia	25,103	Florina	17,865
Cephalonia	23,420	Kozani	17,662
Dodecanese	21,943	Zakynthos	17,425
Corfu	21,341	Arcadia	16,442
Argolis	19,787	Dodecanese	16,057
Heraklion	19,562	Lasithi	15,426
Chania	19,509	Corfu	14,916
Thessaloniki	19,454	Argolis	14,693
Samos	19,253	Cephalonia	14,668
Euboea	18,937	Chania	14,297
Lasithi	18,807	Larissa	13,860
Achaia	18,733	Thessaloniki	13,628
Kavala	18,388	Rethymnon	13,523
Arcadia	18,382	Heraklion	13,460
Kozani	18,345	Kavala	13,241
Thesprotia	18,324	Phthiotis	13,193
Magnesia	18,113	Achaia	13,175
Phthiotis	18,074	Chalkidiki	12,973
Corinthia	18,011	Euboea	12,972
Larissa	18,001	Lesvos	12,972
Florina	17,942	Corinthia	12,743
Rethymnon	17,511	Magnesia	12,686
Chalkidiki	17,362	Samos	12,395
Lesvos	17,272	Messinia	12,188
Chios	17,095	Thesprotia	12,185
Phokis	15,619	Lefkada	12,177
Messinia	15,480	Laconia	12,119
Evros	15,438	Evros	12,072
Kilkis	15,402	Chios	11,985
Ioannina	15,299	Preveza	11,888
Imathia	15,189	Aetolia-Acarnania	11,526
Rodopi	15,148	Ioannina	11,442
Laconia	15,125	Kilkis	11,379
Pella	14,960	Pella	11,115
Lefkada	14,818	Trikala	11,054
Aetolia-Acarnania	14,761	Imathia	11,021
Pieria	14,673	Arta	10,842
Xanthi	14,537	Pieria	10,795
Preveza	14,325	Elis	10,750
Elis	13,990	Kastoria	10,726
Trikala	13,847	Drama	10,635
Drama	13,377	Phokis	10,420
Kastoria	13,270	Grevena	10,244
Evrytania	13,149	Evrytania	9,841
Grevena	12,699	Serres	9,684
Arta	12,601	Karditsa	9,647
Karditsa	12,090	Xanthi	9,549
Serres	11,421	Rodopi	9,533

island regions
 industrial regions
 metropolitan regions

Source: Hellenic Statistical Authority, Annual Regional Accounts. E. Skoufoglou, 2018

Table 10.7 Contribution to the Gross Value Added by selected sectors (NACE Rev.2)

	2008	2010	2014
Agriculture, forestry and fishing	3.18%	3.27%	3.84%
Mining and quarrying, manufacturing, electricity, gas, steam, air conditioning and water supply, sewerage, waste management and remediation activities	12.71%	11.20%	13.61%
Wholesale and retail trade, repair of motor vehicles and motorcycles, transportation and storage, accommodation and food service activities	26.62%	24.74%	23.86%
Public administration and defence, compulsory social security, education, human health and social work activities	20.56%	24.74%	20.86%
Construction	5.01%	4.45%	2.40%

Source: Hellestic Statistical Agency, *Annual National Accounts. E. Skoufoglou, 2018*

The ability of industry to resist economic collapse somewhat better than other sectors is also manifested in the fact that, whereas in 2010 industry was the top sector in terms of its contribution to the regional Gross Value Added in only four regions, as exhibited in Chapter 8, the number of such regions had grown to 8 by 2014: Kilkis, Euboea, Phthiotis, and Corinthia have been added to Kozani, Florina, Boeotia, and Arcadia. This reflects the radical restriction of public spending, on one hand, and a sharper decline in wholesale and retail trade due to the decline in domestic demand, on the other. Indeed, as testified by Table 10.7, in the period 2008-2010, which was after the outbreak of the crisis but before the introduction of the massive austerity programme, the contribution of Public Administration/Defence/Education/Human Health in the Gross Value Added at the national level increased while trade and industry were shrinking in relative terms. This is also reflected in the fact that several regions where trade was the leading activity in 2008 had shifted to Public Administration/Defence/Education/Human Health (Thessaloniki, Achaia, Trikala, Arta, Samos, Chios). After the introduction of the austerity packages, though, public spending could not play this role anymore and thus Administration/Defence/Education/Human Health started declining faster than the other sectors. Thus, Thessaloniki and Samos, for example, shifted back to trade. However, industry proved to be relatively more resilient than trade, thus improving its relative position.

Among regions with significant industrial activities, the ones specialised in energy production (Kozani, Florina, Arcadia) are showing explicit progress altogether. On the contrary, regions specialised in manufacturing display less homogeneous tendencies. The leading one, Boeotia, is particularly dynamic. On the other hand, other regions with a notable manufacturing activity have lost ground or remained low (Kilkis, Euboea, Rodopi, as well as Kavala, Magnesia, Xanthi, Corinthia, Drama). Only the top manufacturing area was benefited.

What about the islands? Despite a downgrade in certain cases, they have generally improved their position in the ranking, and the same also applies to Chalkidiki as well as certain mainland regions with relatively important tourist infrastructure and activities (Messinia, Preveza). The Cyclades, which were exceeding even Attica in their GDP per capita in 2008, have retreated to the second place in 2014. Moreover, as already noted, the formerly top island areas (Zakynthos,

Dodecanese, Cephallonia, Corfu) appear to have lost ground in comparison with the leading industrial ones, the two latter being left behind by Lasithi and Chania (island) regions as well. Lasithi and Rethimnon in Crete have risen in the ranking, whereas Heraklion and Chania have fallen. Lesvos has progressed, Chios has fallen moderately, Samos has been downgraded significantly, whereas Lefkada presents a peculiar annual fluctuation. It is, nevertheless, true that, in general, the GDP in islands is more susceptible to annual variations, as tourism is an unstable activity that may easily be affected by extraordinary or random factors.

The conclusion of the above analysis is clear: regions that have managed to resist the crisis better in terms of their GDP were either tourist areas, mostly islands, or regions with significant industrial activity (the three energy producing regions plus the top region in manufacturing, while the remaining regions with relatively important manufacturing activity have declined). However, it is only in the former category that this is also combined with a growing share in the national population. The only region among those that we have characterised industrial in 2010 that has apparently recorded an improvement in terms of population is Boeotia, and the same is the case with Corinthia among the regions that have moved to the category of industrial cities in 2014. Besides, we should add that Boeotia and Corinthia are the two adjacent regions to Attica, including areas that practically constitute distant metropolitan exurbs, and thus also benefit largely from the metropolitan exodus and de-urbanisation of Athens. The reason why industrial regions are not attracting population despite their economic advantage, which is even more evident than the one of tourist areas, is probably that employment is less elastic there. It is much more difficult to get hired in industry amid the crisis than to find a job related to tourism, which is usually seasonal, less specialised, and often undeclared. This is reflected on the fact that, despite industry (manufacturing, energy and water supply, quarries and mines) has been progressing in terms of productivity more than any other sector under the conditions of the crisis, its share in employment is still falling throughout this period (IOBE [Foundation for Economic and Industrial Research], 2017, pp. 32-34). Finding a job in industry is not really a choice for the unemployed currently, while resorting to an island or other tourist area is a resort, even if precarious and underpaid.

On the contrary, the increase in the contribution of tourism in the GDP has been accompanied by an even sharper increase in its share in employment. The estimated direct and indirect contribution of tourism in the GDP was 16.8% in 2008 and 16% in 2010, to rise up to 18.5% in 2014.³ The respective estimated direct and indirect contribution of tourism in employment was 14.7% in 2008 and 18.9% in 2014 (INSETE [Institute of the Greek Tourism Confederation], 2016, p. 60). It is worth noting that tourism in Greece started its relative economic progress only after some years after the outbreak of the global capitalist crisis, which had serious immediate repercussions on the global tourism as well (Hadjidakis, 2015, p. 60). This is obviously not irrelevant with the fact that the most dynamic island regions have started improving in terms of their share in the GDP a few years after the manifestation of the crisis in the country. However,

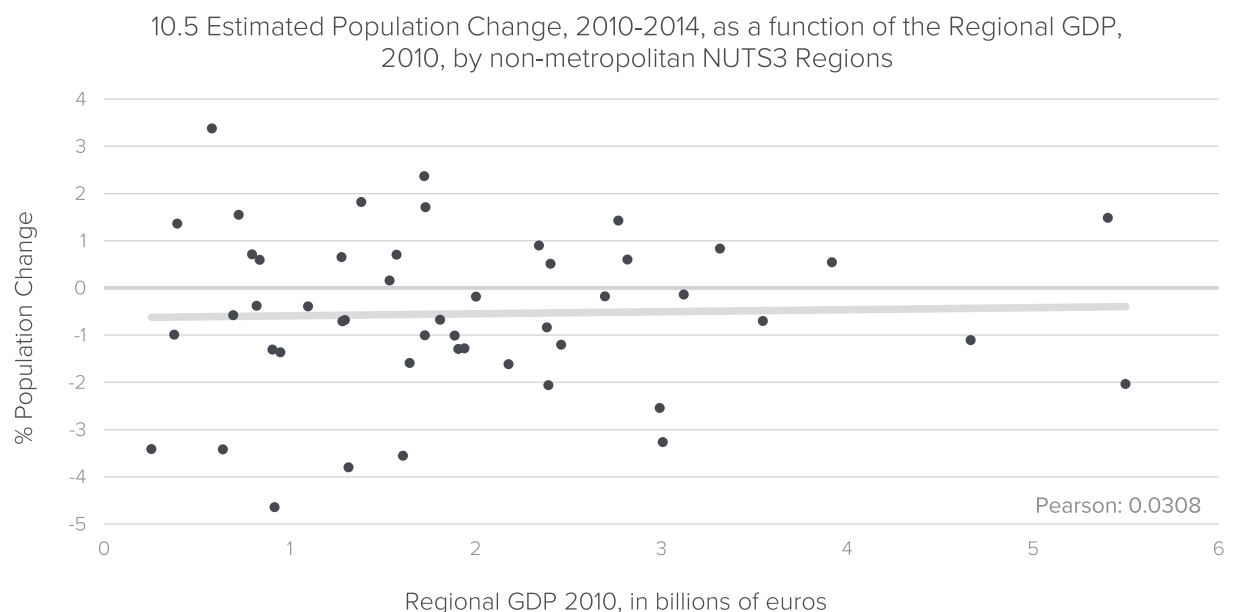
3 Word Travel and Tourism Council Data, available at: <http://sete.gr/el/stratigiki-gia-ton-tourismo/vasika-megethi-tou-ellinikoy-tourismoy>

the share of tourism in employment didn't follow this double movement: it has been already rising since the beginning of the crisis.

GDP per capita and population change

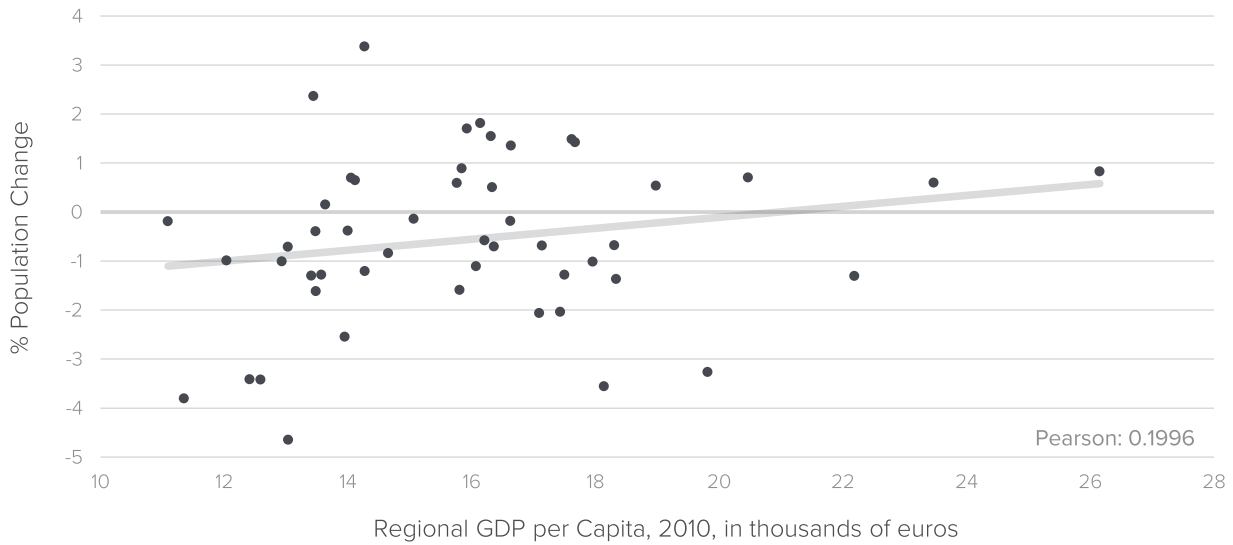
If there is any relationship between the evolution of the GDP by NUTS3 regions and their population change under the conditions of the crisis, it will not be very simple to spot. The initial absolute level of the GDP seems irrelevant with the population change, as exhibited in Chart 10.5. Again, we have chosen to examine the period 2010-2014, which is after all the repercussions of the crisis were fully manifested, and we have included only the 49 non-metropolitan regions, to ensure that the chart will be readable. The population has been attracted neither by regions with a high mass of GDP at the beginning of the period under consideration, nor by the ones with a low mass. The only information that the chart provides is that variations are smaller (or less abrupt) as the absolute level of the GDP rises and bigger (or more abrupt) as it shrinks.

Now, what about the GDP per capita, which sounds anyway more relevant (Map 10.3)? Theoretically, it would be reasonable to assume that the population tends to move towards regions with a higher GDP per capita. Certain cases seem to verify this assumption: for example, Boeotia and Corinthia, to the North and to the South of Attica respectively, as well as Chalkidiki, to the South of Thessaloniki, have progressed in terms of their share both to the population and to the GDP. Simultaneously, certain regions with particularly low rates of GDP per capita, such as Karditsa and Evrytania, are also depopulating quickly. On the other hand, it has been already pointed out that Pieria maintains low standings in the GDP per capita rankings, despite experiencing high rates of population growth, and Phokis is sinking in the bottom of the list while presenting the most impressive rate of population growth throughout the country. The opposite may also happen: this is the already mentioned case of the three energy producing regions (Florina, Arcadia, Kozani), where a clear improvement in the GDP per capita is combined



Source: Hellenic Statistical Authority, Annual Population Estimates. Annual Regional Accounts. E. Skoufoglou, 2018

10.6 Estimated Population Change, 2010-2014, as a function of the Regional GDP per Capita, 2010, by NUTS3 Regions (excl. Attica)



Source: Hellenic Statistical Authority, Annual Population Estimates. Labour Force Surveys. E. Skoufoglou, 2018

10.7 Estimated Population Change as a function of the Change in the GDP, by NUTS3 Regions, 2010-2014



Source: Hellenic Statistical Authority, Annual Population Estimates. Annual Regional Accounts. E. Skoufoglou, 2018

with quite sharp depopulation rates. In the same category one can also find regions lower in the ranking, that have been nevertheless increasing their GDP per capita without this to be reflected on a similar progress in terms of estimated population – for example, Messinia, Aetolia-Acarnania, or Trikala.

In Chart 10.6, the population change in the period between 2010 and 2014, by NUTS3 regions, is correlated with the regional GDP per capita at the beginning of the given period, that is in 2010. We have removed Attica, with its already documented specificity to combine sharp depopulation with a high GDP per capita. The trend line in the graph upward, but the dispersion of the values around it is very large, and the Pearson correlation coefficient is very low. This means that, while it seems that the higher GDP per capita a region presented in 2010,

the more probable it is to have gained population afterwards, no linear correlation between the two quantities can be substantiated.

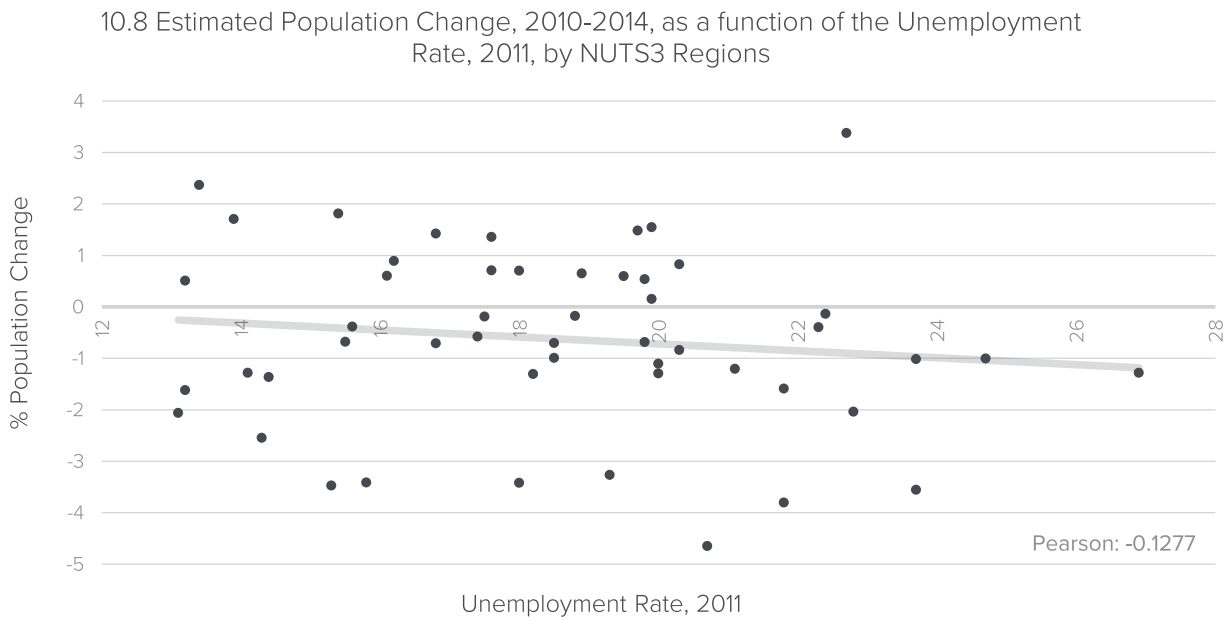
A closer look would suggest the graph can in fact be divided into three parts that follow different patterns. In the first section, the two lowest quartiles, there is a visibly upward trend line. On the contrary, in the 3rd quartile, the trend line is strongly downward, and moreover the Pearson correlation coefficient (-0.6576) indicates a degree of negative linear correlation. Finally, in the last quartile, the degree of correlation is very low, and the trend line modestly upward again. Of course, it would be pointless to insist further on such an analysis, because this would be like playing with numbers. What could be commented, though, is that among the “poor” regions, there is a somewhat positive correlation between the GDP per capita at the beginning of the period under study and the estimated population change until 2014, whereas, on the contrary, the correlation is very negative as far as the intermediate regions are concerned. At the top quartile, there is rather no significant pattern.

In Chart 10.7, one can see the relation between the estimated population change and the change in the GDP by NUTS3 region during the same period. The inclination of the tendency is negative, but the values are again scattered around the trend line to establish any correlation. However, it can be remarked that the estimated population has not changed in line with the change in the GDP.

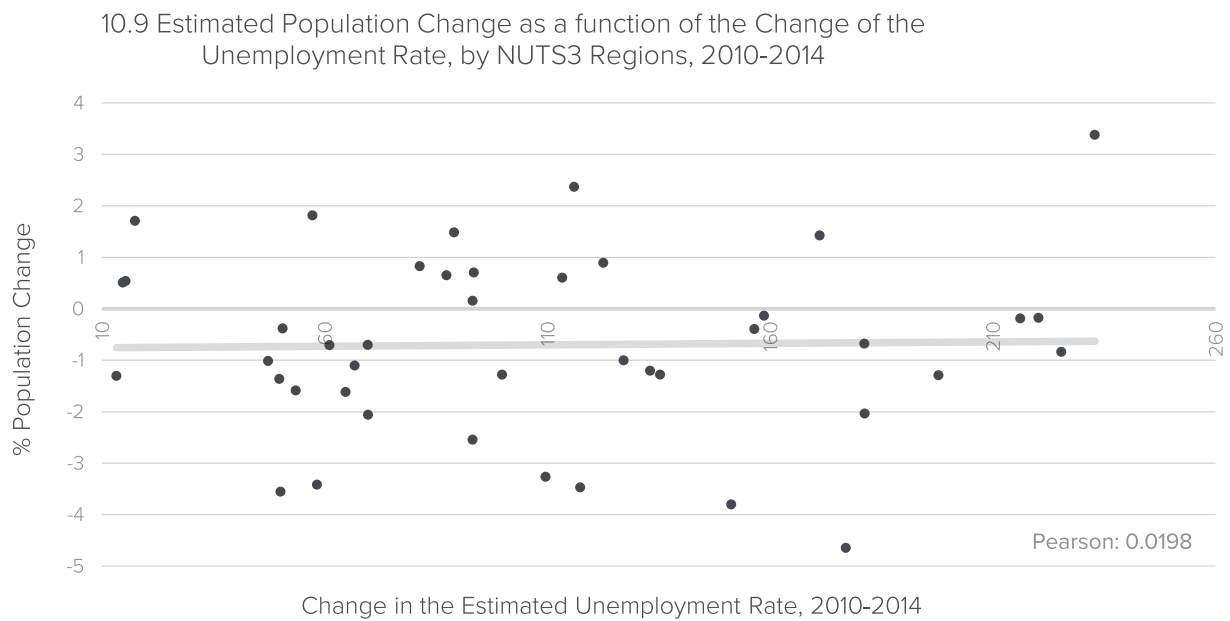
Despite the interesting partial conclusions can be drawn through the previous examination, it is quite explicit that the geographical distribution of the GDP can't be deemed the key reason for the redistribution of population, though it may be one of the reasons among certain regions. Is there, then, any other variable that can be considered as decisive for changes in the population?

Employment and population change

Unemployment is a first reasonable assumption (Map 10.4). Indeed, it is evident from the trend line in Chart 10.8 that higher unemployment rates by NUTS3 regions, as recorded in the census of 2011, tend to correspond to worse balance sheets in the population throughout the period 2010-2014, although the very low Pearson Correlation Coefficient indicates no linear correlation. Among the 13 regions with the highest unemployment rates in that year, which corresponds to the bottom quartile in the respective rank, there is only one (Phokis) that has enjoyed an increase in its population. 2011 was a year when the repercussions of the crisis were already fully developed, although unemployment escalated even further subsequently. Of course, the distribution of unemployment may have altered afterwards, which is why we will also have to juxtapose unemployment with internal migration in real time, instead of population changes in the following years. The impression is given, though, that depopulation is associated more with high levels of unemployment than with low levels of GDP per capita, although this is not absolute and although the rise of unemployment is in turn connected with the fall in the GDP. This is reasonable, since, for ordinary people in their everyday life, the GDP is only a number, whereas unemployment has immediate effects on them.



Source: Hellenic Statistical Authority, 2011 Census, Annual Population Estimates. E. Skoufoglou, 2018



Source: Hellenic Statistical Authority, Annual Population Estimates. Labour Force Surveys. E. Skoufoglou, 2018

However, there are quite impressive exceptions in this case too. Phokis presented the 6th highest rate of unemployment in 2011 (22.7%) among the 51 regions, and it, all the same, achieved the highest percent population increased between 2010 and 2014. On the contrary, Aetolia-Acarnania has suffered one of the fiercest percent losses in population, while recording relatively low rates of unemployment in 2011 (14.3%). The same happened in the case of Kavala, which had the lowest rate of unemployment at the time of the census (13.1%) but, all the same, it had suffered an estimated population loss of more than 2% by 2014. The most puzzling case, though, is again Attica, which has lost nearly 3.5% of its population (that is the 4th greatest fall among all NUTS3 regions), despite having a not particularly high level of unemployment in 2011

(in fact, the 9th lowest) and despite maintaining the highest GDP per capita.

If the chart is examined more carefully, different patterns are revealed once again. The top quartile in unemployment present generally big population losses (with the before-mentioned exception of Phokis) but not a downward trend line. However, they are the reason why the overall trend line is negative: if the 4th quartile is removed, the trend line of the remaining values is somewhat upward. All the previous observations highlight that the picture is heterogeneous again. Regions with the highest unemployment rates, according to the facts available in 2011, have shrunk in population, however, there is no universal rule: the higher unemployment, the bigger depopulation.

There is a legitimate objection to the remarks made just above: they are based on the comparison of census data with estimates. At this point, it is not possible to compare census data with census data, but we can compare estimates with estimates. Based on the Labour Force Surveys, ELSTAT provides estimates for the unemployment rate for 44 out of the 51 former prefectures of the country (in the remaining 7, the sampling error is deemed too big for an estimate to have any credibility).⁴ If the previous chart is recreated, substituting the unemployment rate recorded in the census with the estimated unemployment rate in 2010, the picture remains the same. However, the estimates offer an additional possibility, which is to juxtapose the estimated population changes with the estimated GDP changes in the unemployment rate throughout the same period. This is done in Chart 10.9. Again, the conclusions that the chart provide are not much different. The only region of climbing population among those with the most increased unemployment rates between 2010 and 2014 is, again, Phokis, which has seemingly recorded the biggest increase in unemployment – however, we shall see that this was not exactly the case in the longer run. The general trend line is not downward, but it becomes so if the extraordinary case of Phokis is removed. The Pearson Correlation Coefficient suggests no linear correlation.

At this point, a more fundamental question emerges: which were the regions to record a sharper increase in their unemployment rates in the crisis? Of course, unemployment skyrocketed at unprecedented levels in all regions, however, this fact conceals a rearrangement of their ranking.

Table 10.8 shows the ratio of the regional unemployment rates to the national rate from 2001 to 2014. Like what also happened with the regional GDP per capita, important turnarounds are observed after the outbreak of the crisis. Judging from the observation of the general tendencies in the development of the rate in each former prefecture, one can distinguish 19 cases where the ratio of the regional unemployment rate to the respective national rate has shifted from increasing to decreasing, whereas in 16 cases the opposite occurred. Among the 19 cases that shifted from relatively climbing to relatively decreasing rates, 13 experienced their turnaround as soon as the crisis broke, whereas 6 made it some years later. The respective

4 In our calculation, we have removed another region, Chios, because its unemployment rate appeared extremely low in 2010 (4.3%), which is not consonant with the finding of the Census a few months later. Anyway, most cases where the margin of error is high are island regions.

numbers in the opposite category were 8 and 8. Finally, 9 regions maintained a downward trajectory, whereas maintained an upward one. For ease of analysis, the findings of the table are also depicted on Map 10.5.

All four industrial regions have recorded unemployment rates rising slower than the national rate, and they have thus improved their relative position, either following a tendency observed also before the crisis (Florina, Boeotia) or shifting to shrinking ratios after the crisis (Kozani, Arcadia). Among the remaining regions with high proportions of industrial employment, the latter case also applies to Kilkis, Kastoria, and Euboea, but not to Magnesia or Corinthia, where the opposite development occurred, from decreasing to increasing rates relative to the national average. In short, the observed tendency is basically observed in the top regions in terms of employment in industry. Around Thessaloniki, regions resisting the rise in unemployment somewhat better tend to be the ones who have also recorded an estimated rise in their share in the national population (except for Imathia, where a modest increase in the latter share is combined with a relative increase in unemployment). The same is not the case around Attica. Although all neighbouring regions have been improving, in relative and sometimes in absolute terms too, there doesn't seem to be a similar tendency in terms of unemployment rates.

Most islands among those that there is data about do seem to have made some progress compared to the national average, however, this is not the case in Chania, Chios, and most impressively, the Cyclades. Of course, the great proportion of seasonal labour on the islands renders estimates and measurements, questionable, but, nevertheless, the Cyclades have recorded a particularly unstable trajectory: their ratio to the national unemployment rate was falling before the crisis, it rose for a couple of years starting from 2008, it decreased for another two years afterwards, and it started increasing slowly again since 2012. This is probably related to the fact that, compared to the other island NUTS3 regions (Ionian islands, the Dodecanese, Creta) and even Chalkidiki, the Cyclades were more oriented towards domestic tourism. For example, in 2010, the ratio of domestic arrivals to foreign arrivals exceeded 2/3 in the Cyclades, whereas at the same time it was less than 1/2 in Chalkidiki and in the Ionian Islands, approximately 1/5 in Creta, and less than 1/7 in the Dodecanese. This means that the Cyclades were more vulnerable to the suppression of the domestic consumption and purchasing power than their competitors. With time, also this region adjusted to a larger proportion of foreign tourists but there is still a gap with the rest: in 2016, the ratio of domestic arrivals to foreign arrivals had fallen down to a little less than 1/3 in the Cyclades; however, it was now approximately 1/5 in Chalkidiki, less than 1/6 in the Ionian Islands, 1/9 in Creta, and 1/14 in the Dodecanese.

However, it would be deceptive to believe that the Cyclades have a relative disadvantage in terms of employment (apart from the general collapse), because, in fact, their regional rate has never exceeded the national rate of unemployment. A snapshot of the general relative evolution of unemployment rates might save us other misunderstandings too. Table 10.9 displays the respective rankings of the NUTS3 regions in 2008 and in 2014. A first observation is that the range of values has contracted considerably.

The position of both metropolitan regions has deteriorated greatly. For Athens, particularly,

Table 10.9 NUTS3 regions ranked according to the Ratio of their Regional Unemployment Rate to the National unemployment Rate, 2008, 2014

2008		2014	
Phthiotis	0.368	Lakonia	0.485
Cyclades	0.523	Elis	0.513
Chania	0.614	Zakynthos	0.532
Lesvos	0.618	Rodopi	0.589
Lakonia	0.706	Chalkidiki	0.606
Chalkidiki	0.751	Dodecanese	0.692
Messinia	0.757	Trikala	0.744
Serres	0.759	Arcadia	0.752
Chios	0.795	Preveza	0.761
Rodopi	0.807	Evros	0.786
Pella	0.822	Lesvos	0.799
Karditsa	0.839	Larissa	0.825
Attica	0.861	Rethimnon	0.830
Xanthi	0.869	Cyclades	0.841
Argolis	0.880	Kavala	0.845
Heraklion	0.881	Aetolia-Akarnania	0.871
Trikala	0.912	Florina	0.914
Corinthia	0.977	Argolis	0.930
Evros	1.042	Corfu	0.945
Magnesia	1.055	Serres	0.945
Zakynthos	1.083	Heraklion	0.952
Florina	1.092	Chania	0.963
Thessaloniki	1.111	Boeotia	0.965
Elis	1.211	Messinia	0.972
Kavala	1.213	Phthiotis	0.983
Aetolia-Akarnania	1.214	Chios	1.001
Imathia	1.216	Ioannina	1.004
Larissa	1.248	Pieria	1.006
Ioannina	1.258	Pella	1.007
Boeotia	1.276	Imathia	1.020
Pieria	1.303	Attica	1.032
Euboea	1.322	Corinthia	1.033
Dodecanese	1.324	Phokis	1.033
Arcadia	1.332	Karditsa	1.075
Corfu	1.334	Euboea	1.101
Achaia	1.338	Kastoria	1.118
Rethimnon	1.348	Kozani	1.130
Arta	1.401	Thessaloniki	1.140
Preveza	1.488	Xanthi	1.200
Kilkis	1.549	Kilkis	1.268
Kozani	1.657	Magnesia	1.307
Phokis	1.874	Drama	1.332
Drama	2.034	Arta	1.338
Kastoria	2.400	Achaia	1.464
Grevena		Grevena	
Thesprotia		Thesprotia	
Cephalonia		Cephalonia	
Lefkada		Lefkada	
Evrytania		Evrytania	
Samos		Samos	
Lasithi		Lasithi	

	island regions
	industrial regions
	metropolitan regions
	no estimates available

Source: Hellenic Statistical Authority, Labour Force Surveys. E. Skoufoglou, 2018

this meant that its unemployment rate has overtaken the national rate for the first time in the 21st century (in Thessaloniki this was the case already before the crisis).

Among peri-metropolitan regions (the ones around the two metropolitan ones), some have been doing better, but not significantly, in general. Pieria and Imathia have approached the national average in 2014 but were still above that. Pella and Serres had relatively lower rates, but they had both been demoted in the ranking since 2010. Chalkidiki represented the best case by far, being now 5th in the list. On the contrary, Kilkis had the 5th highest unemployment rate, exceeding even Thessaloniki, despite its progress in terms of population.

Around Athens, Corinthia followed Athens in its downgrade in the list, even at a somewhat slower pace. Euboea and Phokis improved their ratio with the national unemployment rate, in both cases, though, remaining well above it. Despite doing still better than average, Argolis was demoted. The same applies to Phthiotis, a little further away, which had the lowest unemployment rate in 2010. The only real relative progress has been recorded in Boeotia, where a far worse than average unemployment rate in 2010 has evolved into a rate somewhat better than average in 2014. In short, most peri-metropolitan regions seem to have resisted the explosion of unemployment rates somewhat better than the two metropolitan ones; however, they are not doing particularly good. And, apparently, there is no rule saying that the (relatively) lower the unemployment rate, the more probable for a peri-metropolitan region to have benefited in terms of population.

As a rule, unemployment rates in the island regions that we have data about were lower than the national rate in 2014 (except for Chios, marginally), while this was not the case in 2010. The Dodecanese made an impressive leap forward. The group of island regions has lost some top positions in the ranking, but, overall, it has moved upwards in the list.

All four industrial regions have seen their relative position improve, although Kozani still exceeded the national rate of unemployment. Finally, among the regions of the next-6 biggest cities, Larissa and Ioannina have made some progress (impressive in the former case, more modestly in the latter). Heraklion had been demoted despite maintaining a certain advantage compared to the national rate. Magnesia has suffered an abrupt fall in the ranking, to find itself near the bottom. And, finally, Achaia, which seems to share the fate of the two metropolitan regions amid the crisis, has obtained the controversial privilege present the highest unemployment rate in 2014.

Finally, some of the top regions in terms of employment in the primary sector had moved to the top of the list by 2014 (Lakonia, Elis, and Rodopi, having the 1st, 2nd, and 4th lowest unemployment rates in the country respectively) or have improved considerably (Aetolia-Acarnania). This is accompanied by an apparent increase in the population in Lakonia and Rodopi, but not in the remaining two cases. On the other hand, there are other cases among the top agricultural regions that have declined very abruptly in terms of employment: Serres, Messinia, Pella, and Karditsa. All those cases also present an estimated deficit of population over the same period, although we shall see that Messinia and Karditsa had a positive balance sheet in internal migration at the time of the census. It seems that certain regions specialised

in agriculture are doing better in terms of unemployment but there is no such universal rule. It would require specific research to detect the features of each region and its productive structure that might relate to this uneven situation.

Professional status and population change

Another aspect that would be interesting to put under scrutiny in this section is the correlation between the estimated population change by NUTS3 regions and what official statistics call “professional status”, that is the distinction between employers, employees, and self-employed persons among the employed population, as recorded in the census.

As already mentioned in the relevant chapter, this classification relates to the class stratification, but it does by no means coincide with it, as formal labour relations don't necessarily describe accurately an individual's class status or even status in the production process. The majority of the employees are whether blue-collar or white-collar workers, or lower-rank civil servants, but the category also includes executives or high-rank officers, who receive a salary but are definitely not working class. Likewise, persons typically appearing to be self-employed may, in fact, be employees, because of the common practice of employers to present their staff as independent contractors or partners, in order to save taxes and insurance contributions. We will not come back to the details here. However, where, for example, the share of the employees is larger, this is serious evidence of a greater proportion of the working class, and likewise, where there is a large share of the self-employed, this indicates a higher proportion of petit-bourgeois strata and/or farmers who work for their own account.

In Table 10.10 one can see the share of the three categories in the employed population by NUTS3 regions, plus a category for the remaining cases (members of production cooperatives, family assistants etc.). It is reasonable to find mostly rural areas, which are characterised by the existence of a broad stratum of self-employed farmers and minor businessmen, among the ones with the lower share of employees. On the other end of the spectrum we mostly come across regions including big or relatively big cities (Athens, Thessaloniki, Heraklion, Patras, Volos), industrial areas (Boeotia, Kozani, Euboea), or island regions whose touristic development model is dominated by large-scale hotel and business units (Dodecanese, Chania) (Map 10.6). Central Athens, that is the regional unit corresponding to the core of the Capital city, possesses the national record: 79.25% salaried employees among the employed in 2011. As already mentioned, Evros, on the borders with Turkey, constitutes a specific case, having a large percentage of employees because of the high concentration of military camps and facilities.

No matter how important this classification is, though, at first sight, it is not particularly decisive for population changes. As derives from Chart 10.10, the trend line is only mildly upward, which means that the population is only slightly more probable to be attracted by regions with a high percentage of salaried jobs. The Pearson correlation coefficient is extremely low. However, if we remove Athens and Thessaloniki, which constitute specific cases, as they display the highest and 3rd highest proportion of salaried employees among the employed respectively

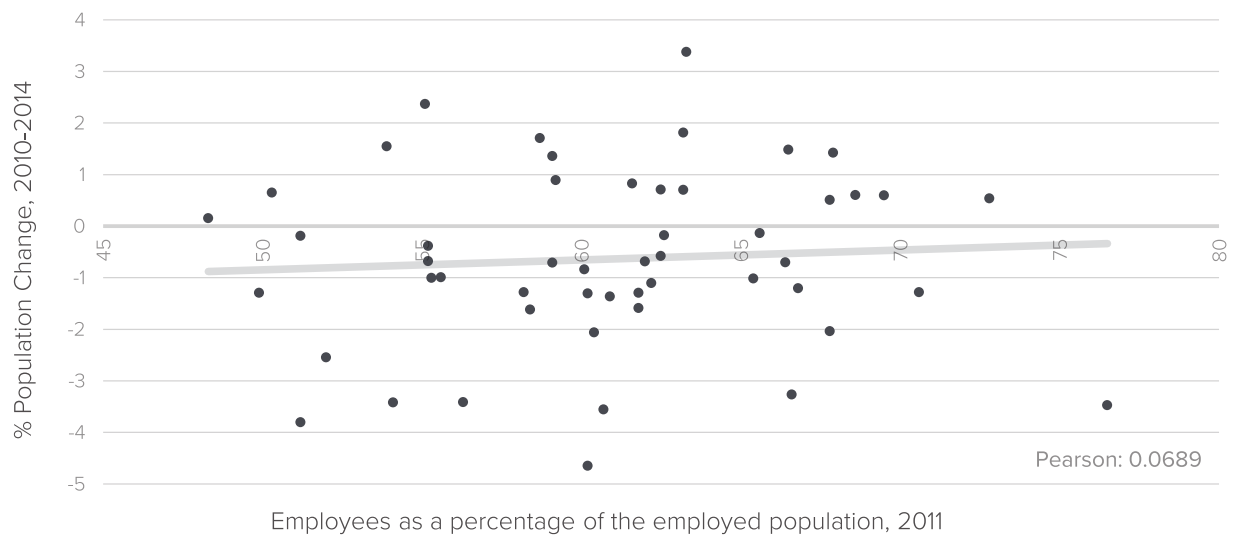
Table 10.10 Professional Status of the Employed Population, by NUTS3 Region, 2011

	Employed Population	Employers	Self-employed	Employees	Other*
GREECE	3,727,633	7.38%	22.38%	68.26%	1.98%
Rodopi	35,798	5.17%	40.86%	48.33%	5.64%
Drama	28,020	8.43%	30.29%	59.05%	2.23%
Evros	48,443	5.48%	24.78%	67.80%	1.94%
Kavala	43,420	8.83%	28.37%	60.35%	2.45%
Xanthi	31,625	6.67%	27.11%	63.17%	3.05%
Thessaloniki	369,392	7.58%	20.10%	70.63%	1.70%
Imathia	43,103	7.47%	32.27%	58.18%	2.08%
Kilkis	22,986	6.47%	28.81%	61.84%	2.87%
Pella	43,803	7.03%	40.21%	49.87%	2.89%
Pieria	39,424	8.74%	32.64%	55.08%	3.54%
Serres	49,976	7.09%	39.11%	51.25%	2.55%
Chalkidiki	34,449	10.25%	27.61%	58.73%	3.41%
Kozani	43,496	7.41%	24.00%	66.61%	1.99%
Grevena	8,673	9.29%	32.77%	55.59%	2.35%
Kastoria	16,007	12.03%	31.12%	54.15%	2.70%
Florina	15,354	5.07%	31.46%	60.89%	2.58%
Ioannina	54,654	8.02%	22.84%	66.85%	2.29%
Arta	19,438	7.37%	30.31%	60.19%	2.13%
Thesprotia	13,983	9.32%	32.84%	53.93%	3.91%
Preveza	17,978	9.70%	32.66%	55.16%	2.49%
Larisa	92,713	7.53%	28.08%	62.16%	2.23%
Karditsa	33,024	7.50%	38.46%	51.21%	2.83%
Magnesia	65,286	8.44%	23.92%	65.61%	2.03%
Trikala	39,382	8.55%	32.33%	55.34%	3.78%
Phthiotis	49,322	6.92%	28.74%	62.59%	1.74%
Boeotia	42,085	5.86%	23.16%	68.64%	2.33%
Euboea	67,990	7.96%	23.47%	66.36%	2.21%
Evrytania	5,111	8.47%	31.27%	56.25%	4.01%
Phokis	11,464	7.35%	27.02%	63.30%	2.33%
Corfu	36,477	9.18%	22.84%	65.39%	2.60%
Zakynthos	15,206	12.14%	25.35%	60.19%	2.32%
Cephallonia	13,526	11.03%	24.21%	62.53%	2.23%
Lefkada	8,141	11.24%	26.96%	59.12%	2.68%
Achaia	97,034	7.71%	22.31%	67.78%	2.20%
Aetolia-Akarnania	59,738	7.63%	37.26%	52.05%	3.06%
Elis	49,571	7.47%	31.31%	58.38%	2.83%
Arcadia	28,236	7.69%	29.18%	60.67%	2.45%
Argolis	34,165	9.46%	31.70%	55.21%	3.64%
Corinthia	49,454	8.23%	30.13%	59.20%	2.44%
Lakonia	31,014	7.10%	40.37%	50.33%	2.20%
Messinia	53,892	7.51%	30.05%	60.11%	2.33%
Attica	1,452,203	6.42%	15.72%	76.51%	1.35%
Lesvos	33,903	8.19%	27.18%	61.77%	2.86%
Samos	14,503	7.87%	27.33%	62.55%	2.25%
Chios	17,503	9.47%	19.55%	69.54%	1.45%
Cyclades	44,693	12.40%	23.12%	61.57%	2.91%
Dodecanese	76,257	8.03%	17.37%	72.81%	1.78%
Heraklion	109,627	8.08%	23.40%	66.47%	2.05%
Lasithi	28,593	10.20%	24.86%	62.04%	2.90%
Rethimnon	30,499	9.97%	24.22%	63.25%	2.55%
Chania	56,999	9.16%	20.83%	67.92%	2.09%

*Members of production cooperatives, assistants in family businesses and other cases

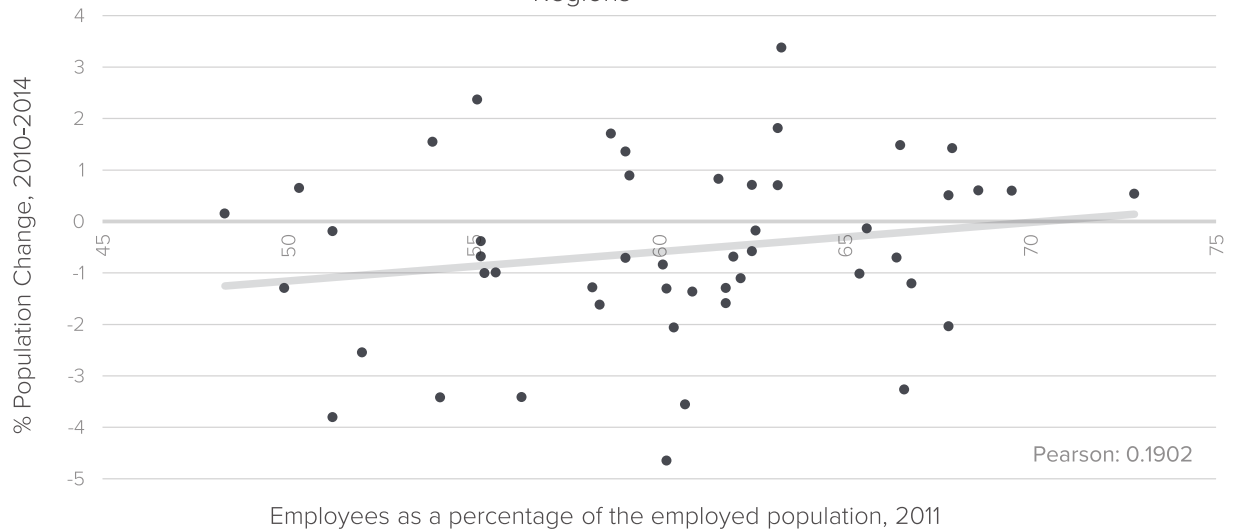
Source: Hellenic Statistical Agency, 2011 Census. E. Skoufoglou, 2018

10.10 Estimated Population Change, 2010-2014, as a function of the Rate of Employees among the Employed Population, 2011, by NUTS3 Regions



Source: Hellenic Statistical Authority, 2011 Census, Annual Population Estimates. E. Skoufoglou, 2018

10.11 Estimated Population Change, 2010-2014, as a function of the Rate of Employees among the Employed Population, 2011, by non-metropolitan NUTS3 Regions



Source: Hellenic Statistical Authority, 2011 Census, Annual Population Estimates. E. Skoufoglou, 2018

and, at the same time, sharp rates of population decline, the picture changes, and the graph exhibits an indisputable upward trend line (Chart 10.11). The higher the proportion of employees in the employed population of a NUTS3 region, the more likely it seems to have had a positive estimated population balance sheet throughout the period under consideration, although the Pearson correlation coefficient is still too low to suggest any linear correlation. It could be also observed that, in the middle ranks of the graph, a sub-area appears where the correlation between the two quantities is more explicit.

It seems, therefore, that among the variables examined (GDP per capita, unemployment rate, professional status), the last one is somewhat more relevant with the rates population growth by NUTS3 region. However, it is certain that none of them alone can explain the changes in the geographical distribution of the population in the context of the crisis. This probably means that, in different cases, different factors are decisive, which is reasonable anyway. A combination of factors might also be the clue. However, it may also be the case that social factors are decisive instead of economic ones. We shall examine two of them: family structure and owner-occupied housing. Both are important because they represent certain factors of social protections. In the non-scientific as well as in the scientific discourse, such networks are very often supposed to be a principal reason for relocation.

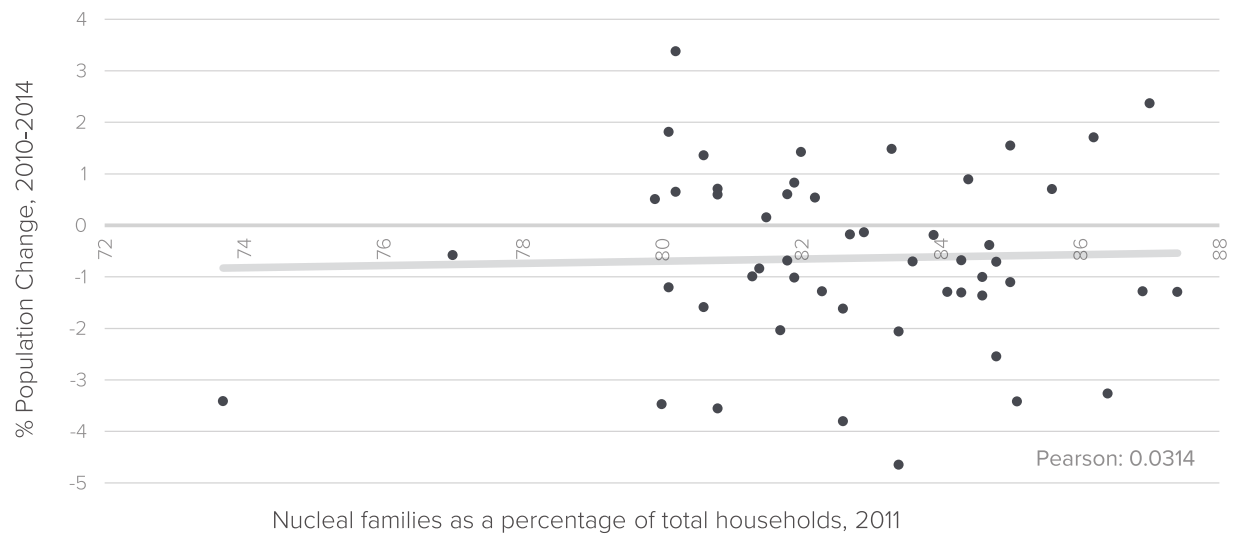
Population changes and household structure

A very common assumption regarding internal migration (inter-regional movements of population, on the level we are dealing with here) in the context of the crisis is the trend towards family reunification, so as to reduce living costs. The idea is that people, above all young and aged persons, who are the groups that live as individuals most often, should be going back to their family homes or, in any event, rejoin family households. Another aspect of the same tendency would be individuals tending to leave their family households more rarely.

Of course, such a possibility can hardly be monitored in the official statistics of ELSTAT, as it requires more detailed data. However, an indication can be given by associating the rate of nuclear families, which is by far the dominant form of family in the country, with changes in the population by NUTS3 region, according to the ELSTAT annual estimates. If the above-mentioned tendency is indeed true, it is reasonable to expect that regions presenting a larger proportion of nuclear family households will be more likely to have attracted (or retained their own) population during the crisis.

This correlation is depicted in Chart 10.12. Again, the variation of values around the trend line is too large. Amid the scattered values, a practically stagnant trend line emerges. Moreover, almost the same number of positive and negative cases appears in all 4 quartiles of the chart. Both observations testify that, at this level of geographical analysis, there is no correlation between the two quantities. A reason for that may be that relatively low percentages of nuclear families can indicate completely different social features depending on the case: a large proportion of students in cities with big universities, strongly aging population in mountainous areas, or even more specific conditions, such the big number of single military officials that reside for a few years in Evros and other regions by the borderline. Anyway, at this level, it doesn't seem possible to confirm that joining nuclear family households is indeed one of the key reasons to move in the conditions of the crisis, no matter how reasonable this assumption would sound. On the other hand, it does seem to be confirmed by the fact that city centres in the two metropolitan areas, as well as the biggest non-metropolitan cities across the country, are losing ground relative to their suburbs - and it is well known that the proportion of nuclear family households is on average lower in the city centres than in suburbs (Maloutas T. , 2000,

10.12 Estimated Population Change, 2010-2014, as a function of the percentage of Nuclear Families among total households, 2011, NUTS3 Regions



Source: Hellenic Statistical Authority, 2011 Census, Annual Population Estimates. E. Skoufoglou, 2018

10.13 Estimated Population Change, 2010-2014, as a function of the Rate of Owner-occupied Housing, 2011, by NUTS3 Regions



Source: Hellenic Statistical Authority, 2011 Census, Annual Population Estimates. E. Skoufoglou, 2018

pp. 64-65). It is possible, therefore, that the tendency of joining nuclear family households can only be recorded in larger (infra-regional) scales of analysis, if any.

Another common assumption is that people should tend to resort to owned homes, as the suppression of incomes makes paying for house rents ever more difficult. An additional incentive could be the fact that, as it will be demonstrated in a pertinent chapter, rents are declining much slower than house prices and, in fact, have even risen for at least two years after the outbreak of the crisis. On the other hand, as soon as the memoranda and austerity packages were introduced in the country, property taxes have risen to an unprecedented degree. This was a major change. Before the crisis, immovable property and housing were

promoted by a traditional policy of low taxation. On the contrary, Greece is currently one of the few countries offering no tax incentives for home-ownership (Alpha Bank, 2016, p. 2).

In Chart 10.13, rates of home-ownership (owner-occupancy) by NUTS3 regions (at the time of the census) are set against the respective changes in the estimated population, according to ELSTAT. The general trend line is clearly downward. On top of that, it is evident that in the top quartile of the NUTS3 regions in terms of home-ownership rates, almost all values of population change are negative, whereas in the first quartile (that is among the regions with the lowest rates of home-ownership) most values are positive. The picture would be even more explicit if we had excluded the two metropolitan regions, that are both declining in terms of population while presenting relatively low rates of home-ownership. Almost all non-metropolitan regions in the lowest quartile have risen in terms of estimated population.

In fact, if a more careful look is given to the chart, it appears that the strong downward tendency is exclusively due to the top and the bottom quartiles, whereas in the two intermediate quartiles the trend line is practically horizontal, suggesting an indifferent relation between the two quantities under consideration. It can be said, therefore, that among the NUTS3 regions with low and with high rates of home-ownership, the bigger the rate it was in 2011, the more probable it is for the population to have decreased since 2010; and among the NUTS3 regions in the middle ranks of home-ownership rates, no connection can be maintained among these rates and population changes. Overall, the hypothesis of home-ownership being a factor of population pull is not confirmed at this level of spatial analysis.

Surprising as it may sound, this finding is quite consistent with the general tendency of the national rate of home-ownership to decrease during the crisis. According to the Eurostat, 74% of the population lived in owned residences in 2014, whereas the respective rate in 2010 was 77.2% (Alpha Bank, 2016, p. 2). It is a consolidated belief that home-ownership is of paramount importance in Greece; however, it is probable that it is not as decisive a factor in determining people's behaviour as usually contented. Maybe the significance of the phenomenon had been somewhat overestimated altogether, since, even before the crisis, private owner-occupancy was much higher than in Northern Europe but not higher than the South European average, and definitely lower than in Eastern Europe (Sampaniotis & Hardouvelis, 2012, p. 59), as already mentioned in a previous chapter. However, we should be cautious before we draw such a conclusion, as the level of analysis is still too abstract.

Before we conclude this chapter, it should be reminded once again that the conclusions made above can't be firm, since they are based on population estimates, which are never safe, even if it is quite unlikely that they fail to pinpoint the general trajectory of a region. Moreover, population changes do not only involve relocations but also births and deaths, which is not the subject of the present study. The following chapters, therefore, will focus particularly on internal migration and on census data.

Conclusions

This chapter has focused on economic urbanisation and its development throughout the

first years of the crisis, as well as on the interrelation between socio-economic features and demographic urbanisation. Population changes are still derived from the annual estimates of ELSTAT, while socio-economic data come from either the census of 2011 or the annual national and regional accounts. This examination has resulted in various interesting conclusions.

During the period 2008-2014, inter-regional inequality with regard to the GDP, as measured by the standard deviation and the Gini coefficient of the absolute regional GDP values, has been somewhat restricted keeping pace with the reduction of the national GDP. During the same period, inequality in the regional GDP per capita, as measured by the same conventional criteria, has recorded an even higher rate of overall reduction; however, it has been rising again since 2011. In terms of both quantities, inequality among the 49 non-metropolitan former prefectures (NUTS3 regions) has been closing slower than the gap between them and Thessaloniki but quicker than the gap between them and Attica. Unlike its share in the population, Attica's share in the national GDP has been rising every year until 2010 (included) but shank afterwards. At the same time, Attica ceased to expand its advantage in terms of GDP per capita. 2011 thus appears as the year of a double turnaround: conventional regional inequality, in general, started rising again, while the gap between Attica and all other regions started declining for the first time.

In both Athens and Thessaloniki, unemployment in the crisis has been increasing quicker than the national average. On the other hand, most peri-metropolitan regions have resisted the explosion of unemployment somewhat better than Athens or Thessaloniki. However, in most cases, their relative advantage doesn't seem to be decisive.

In terms of the evolution of their share in the GDP, islands and the four industrial regions (as determined by the contribution of industry in the regional value added in 2010) are the most dynamic regions in the country. However, this is generally combined with a growing share in the national population only in the islands (plus Boeotia among the top four industrial regions), which also reflects that it is easier for a newcomer to find a job in tourism than in industry. It is interesting, though, that while the share of most dynamic island regions in the population was already growing, their share in the GDP started increasing only some years after the outbreak of the crisis. This might mean that it took some time before seasonal summertime workers decided to move to the islands permanently (let's remind that the estimated population is given for the first day of each year, which is during the off-season). However, it also reflects the sharp international crisis in tourism in the first years of the crisis.

In almost all islands, unemployment amid the crisis has been steadily lower than the national rate. However, while unemployment rates have increased slower than the national average in most islands, this is not the case in all of them. The instability and seasonal character of tourism activities are reflected in this fact too. The evolution of unemployment rates is more irregular in tourist regions that depend more on domestic demand (like the Cyclades).

Among regions with significant industrial production, the ones specialised in energy are gaining ground in terms of their contribution to the national GDO, whereas the ones specialised in manufacturing are following divergent trajectories, with the top one (Boeotia) improving and

the rest not. On the other hand, in all four primarily industrial non-metropolitan regions, as well as in the top 5 regions in terms of employment in industry in relative terms, unemployment rates have been rising slower than the national rate. However, the fact that industrial regions are doing relatively better in terms of employment is in most cases not because they have attracted new workers but because they have preserved more already existing workplaces.

Finally, certain regions with a high rate of employment in agriculture have found themselves among the ones with the lowest unemployment rates in 2014, while others have seen their position deteriorate.

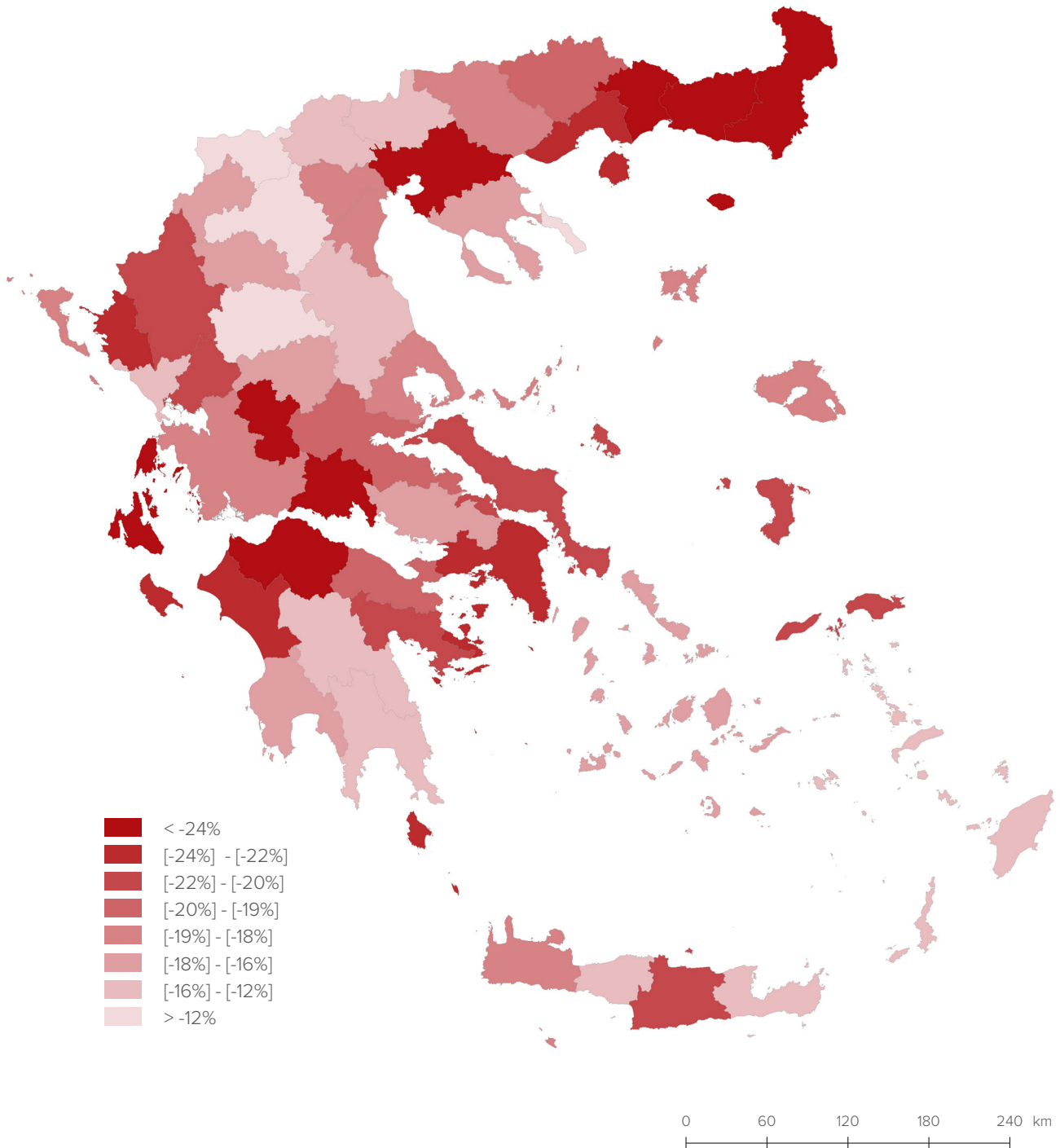
Regarding the possible correlation between the various socio-economic features and population growth, an examination of estimated population changes in the period 2010-2014 against the GDP, the change of the GDP throughout the same period, the GDP per capita, the rate of unemployment, the change of unemployment rates, the share of the employees among the employed population, the proportion of nuclear family households among households in total, and the rate of home-ownership by NUTS3 region indicates no linear relationship in either case.

Of course, some quantities are associated with a higher or a lower probability to have enjoyed a population surplus. Among all regions excluding Attica, the higher GDP per capita a region presented in 2010, the somewhat more probable it is to have gained population afterwards. This tendency, though, is mainly recorded in the top and the bottom quartile, while in the intermediate ones it is virtually absent. On the other hand, depopulation is seemingly more associated with high rates of unemployment than with low levels of GDP per capita. A closer look, though, reveals that, while regions with the highest unemployment rates (1st quartile) have clearly depopulated, no universal correlation between unemployment and depopulation is tenable.

A high proportion of salaried employees among the employed population appears to be related with a higher probability for a positive population balance sheet in the period 2010-2014, especially if Attica is excluded. On the contrary, changes in the estimated population at the level of NUTS3 regions appear rather unrelated to the proportion of nuclear family households by NUTS3 region. At the same level of analysis, the possibility of a region to have grown in terms of estimated population amid the crisis appears to move in the inverse direction of the rate of home-ownership among its residents.

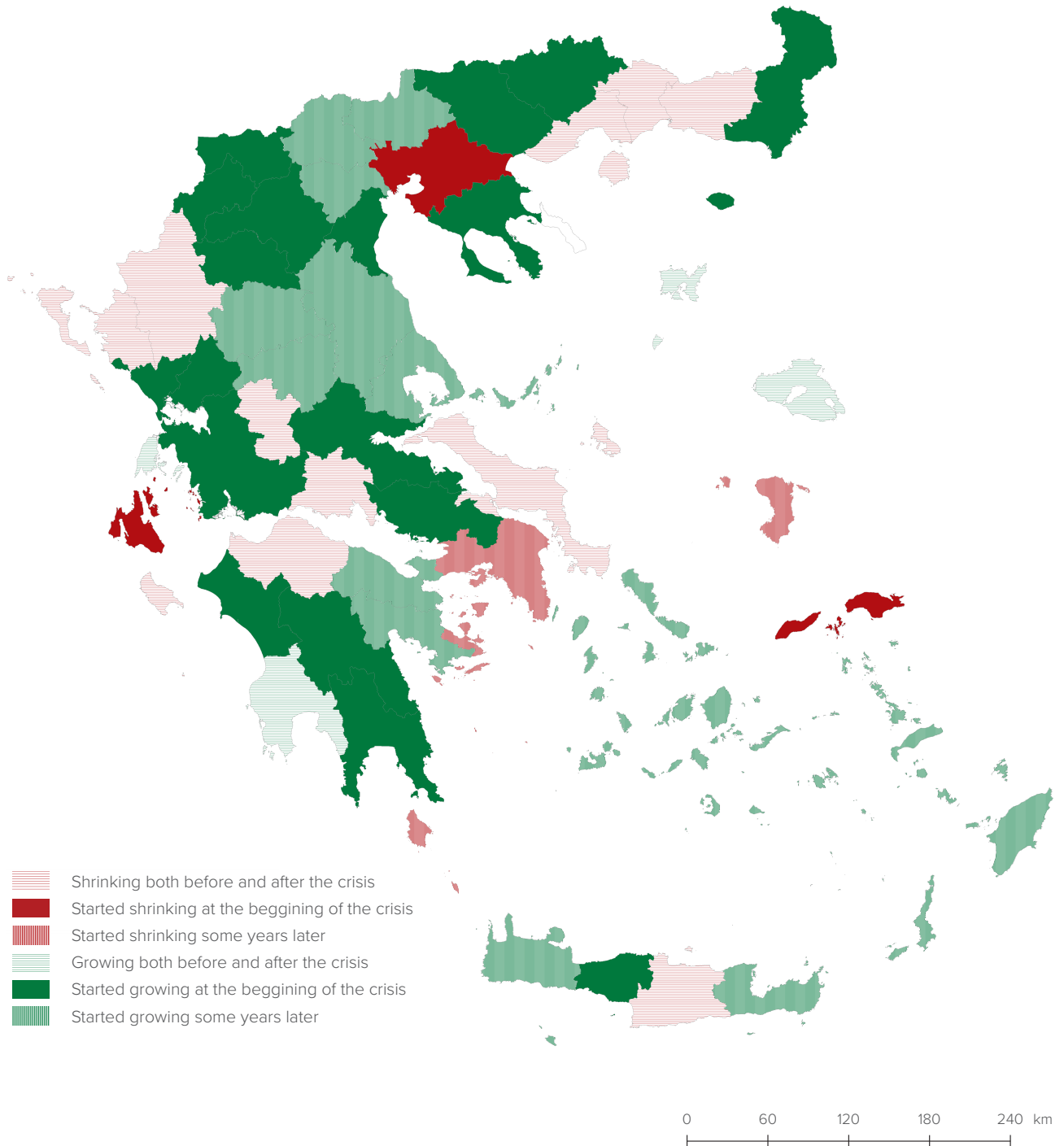
In general, though, the geographical redistribution of the population at the regional level can't be explained by any of the above variables alone. This is hardly a surprise, given the multiplicity of factors that have an impact on urbanisation, as well as the fact that the very process of urbanisation has different features between different regions. Therefore, it is more fruitful to examine the different regions and types of regions in concrete than to restrict our analysis to sophisticated statistical correlations that are very likely to be of negligible importance.

Map 10.1 Change in the Regional GDP, 2010-2014, by NUTS3 Region



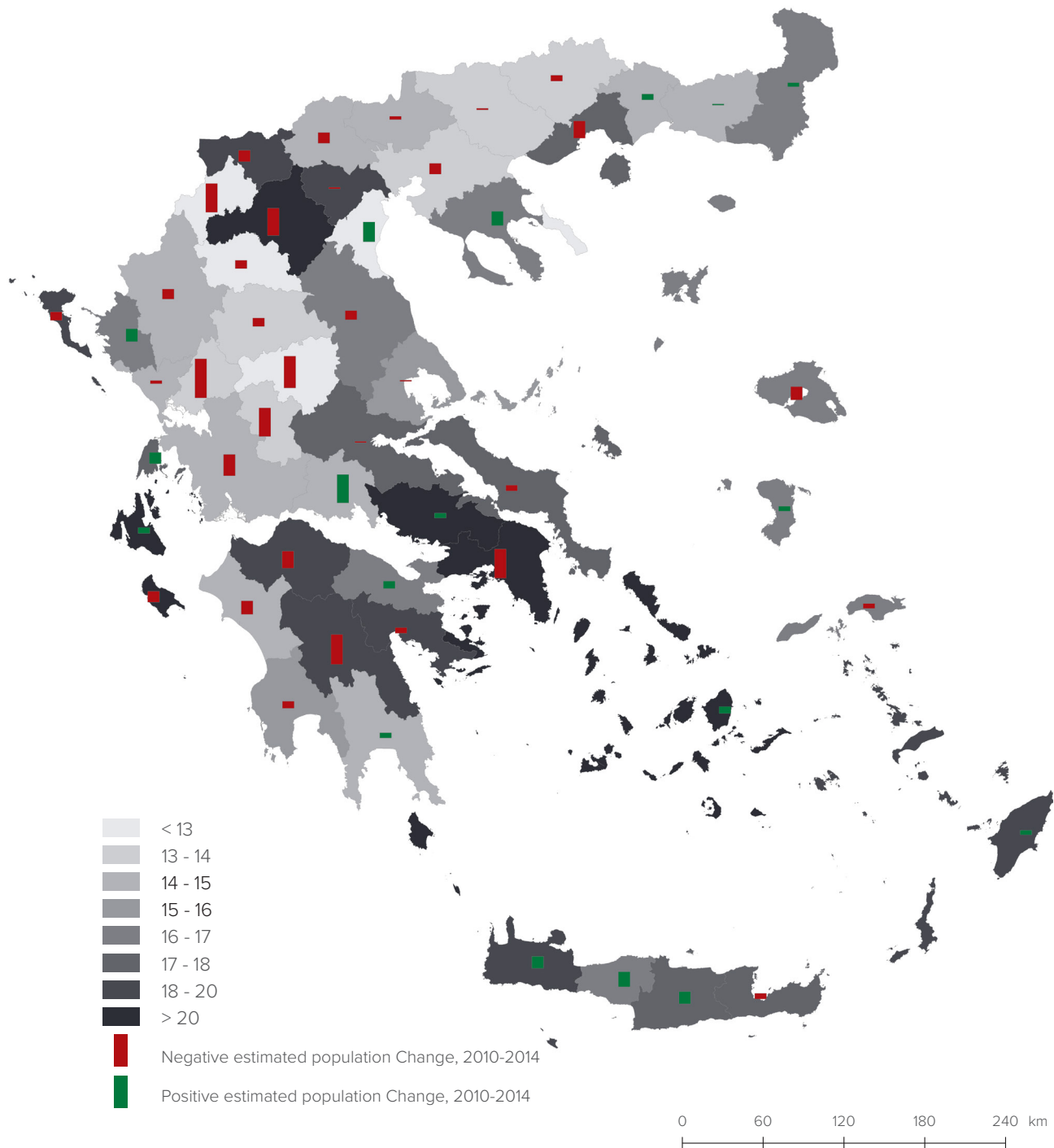
Source: Hellenic Statistical Authority, Annual Regional Accounts
E. Skoufoglou, 2018

Map 10.2 Evolution of Regional Shares in the GDP throughout the Crisis



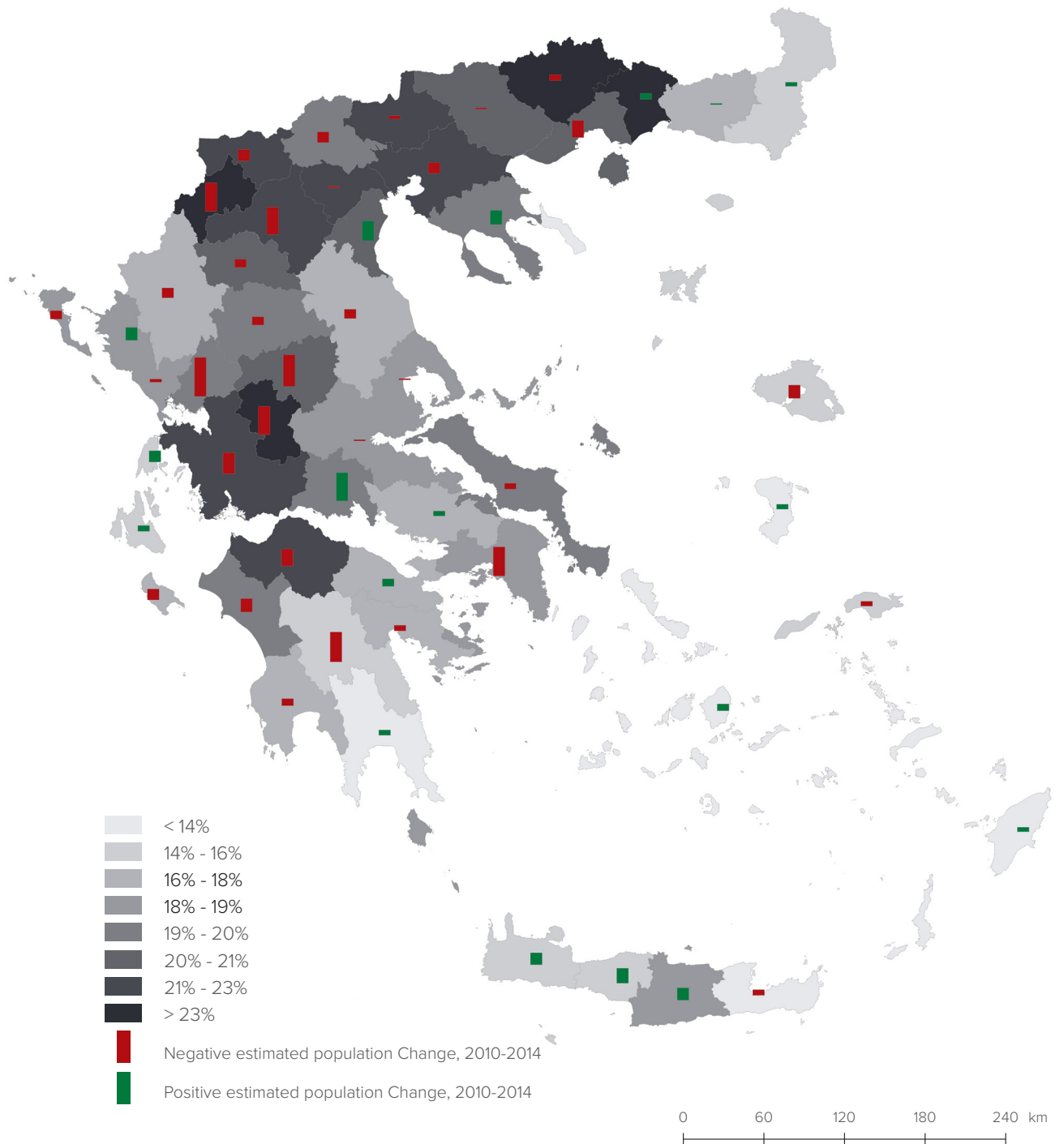
Source: Hellenic Statistical Authority, Annual Regional Accounts
E. Skoufoglou, 2018

Map 10.3 Regional GDP per Capita, in thousands of euros (current prices), 2010, by NUTS3 Region



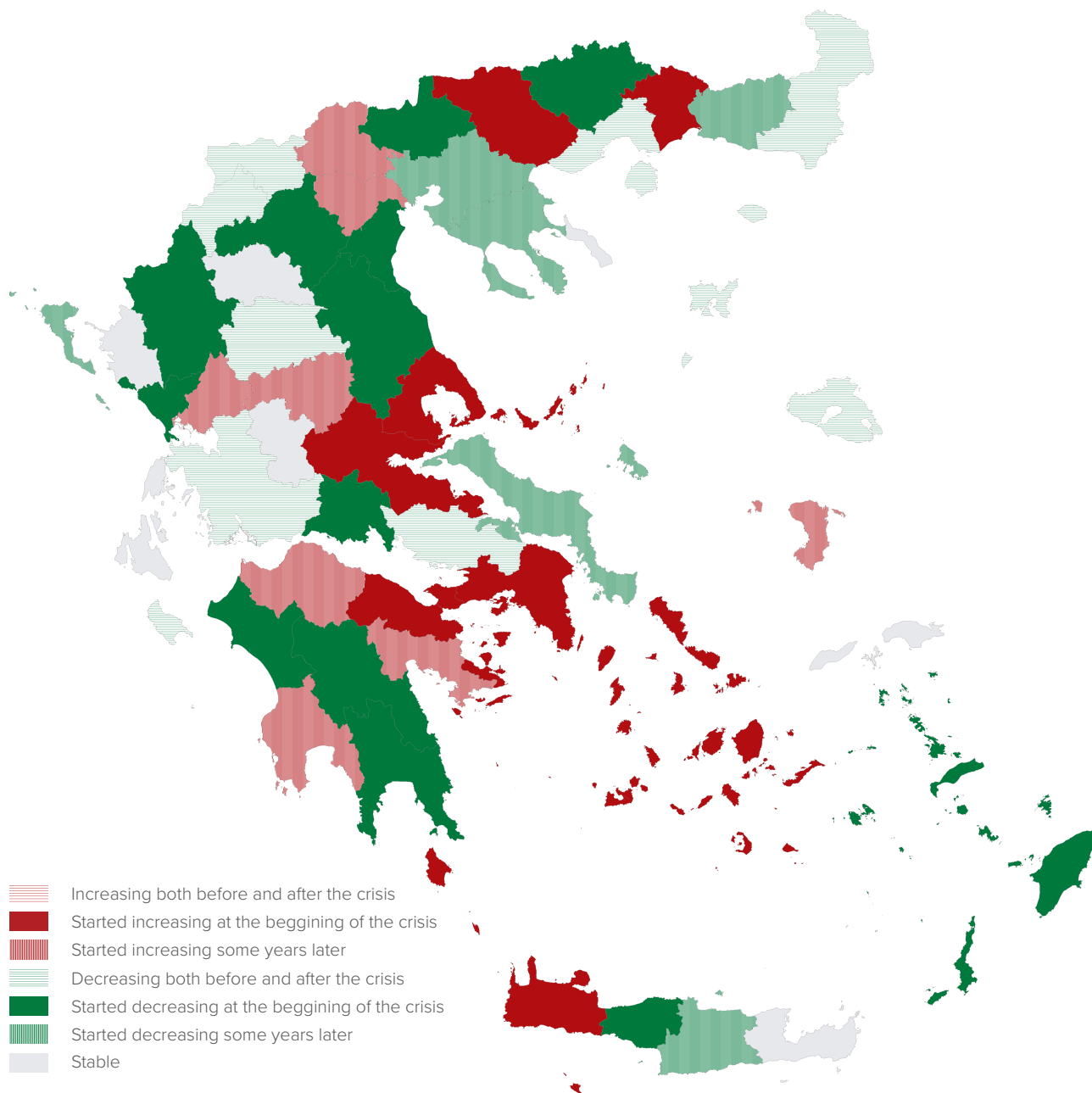
Source: Hellenic Statistical Authority, Annual Regional Accounts, Annual Population Estimates
E. Skoufoglou, 2018

Map 10.4 Regional Unemployment Rates, 2011, by NUTS3 Region



Source: Hellenic Statistical Authority, 2011 Census, Annual Population Estimates
E. Skoufoglou, 2018

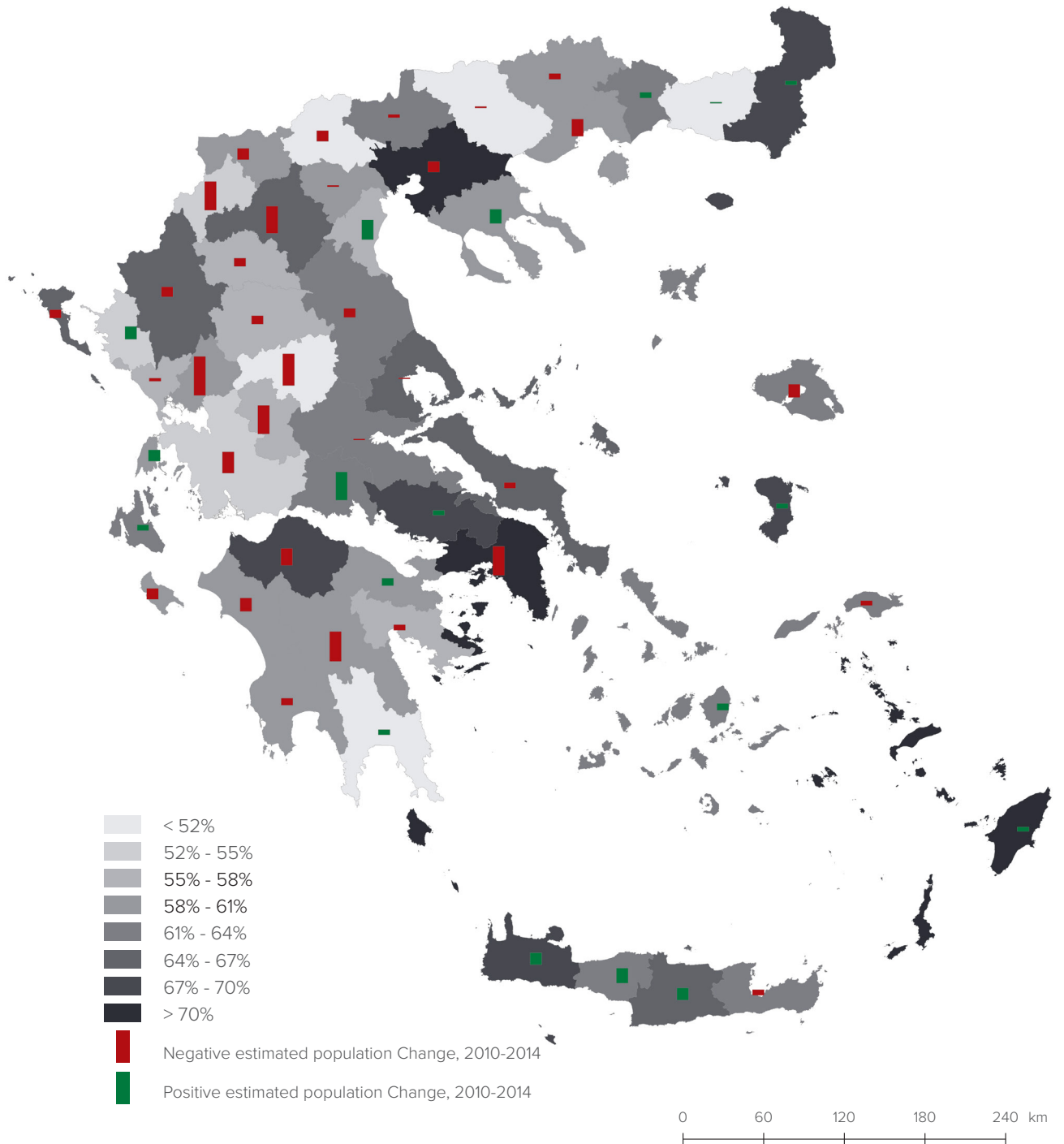
Map 10.5 Evolution of the Ratio of the Regional Unemployment Rates to the National Unemployment Rate, 2001-2014, by NUTS3 Region



0 60 120 180 240 km

Source: Hellenic Statistical Authority, Labour Force Surveys
E. Skoufoglou, 2018

Map 10.6 Employees among the Employed Population, 2011, by NUTS3 Region



Source: Hellenic Statistical Authority, 2011 Census, Annual Population Estimates
E. Skoufoglou, 2018

Table 10.1 GDP by NUTS2 and NUTS 3 region, 2000-2014 (in billions of euros, current prices)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011*	2012*	2013*	2014*	2000-2015	2008-2015
GREECE	141.25	152.19	163.46	178.90	193.72	199.24	217.86	232.69	241.99	237.53	226.03	207.03	191.20	180.65	178.66		
Attica	64.14	68.95	75.42	82.49	90.81	94.04	104.33	112.01	116.72	116.00	110.46	100.97	92.67	87.64	86.05		
Athens, Northern Sector	9.88	10.68	12.02	12.78	14.15	15.24	16.80	18.39	19.48	19.82	19.31	17.71	16.50	15.57	15.17		
Athens, Western Sector	4.84	5.24	5.68	6.16	6.61	6.72	7.43	7.69	7.92	7.73	7.25	6.58	5.94	5.61	5.52		
Athens, Central Sector	24.09	25.92	28.15	30.21	33.12	34.82	37.47	40.38	42.45	42.23	39.79	35.95	33.38	31.51	30.85		
Athens, Southern Sector	7.90	8.40	9.12	9.96	10.87	11.38	12.13	13.16	13.67	13.34	12.88	11.66	10.71	10.15	9.94		
Eastern Attica	5.63	6.10	7.16	8.44	9.58	9.68	11.62	12.75	13.14	13.48	13.19	12.26	11.28	10.82	10.74		
Western Attica	2.99	3.27	3.83	4.51	4.96	4.59	6.07	6.14	6.18	6.00	5.41	5.41	4.45	4.27	4.21		
Piraeus, Islands	8.80	9.35	9.46	10.42	11.52	11.61	12.82	13.50	13.88	13.41	12.63	11.40	10.42	9.72	9.63		
North Aegean	1.90	2.03	2.12	2.49	2.64	2.80	3.04	3.30	3.51	3.40	3.18	2.94	2.68	2.57	2.55		
Lesvos	0.98	1.06	1.09	1.32	1.34	1.46	1.60	1.70	1.80	1.75	1.65	1.52	1.37	1.36	1.34		
Samos	0.40	0.44	0.45	0.51	0.57	0.64	0.69	0.75	0.82	0.76	0.70	0.64	0.57	0.56	0.55		
Chios	0.52	0.53	0.57	0.66	0.72	0.70	0.76	0.86	0.90	0.88	0.84	0.78	0.75	0.66	0.66		
South Aegean	4.80	5.07	5.16	5.78	6.30	6.66	7.18	7.68	8.18	7.60	7.24	6.60	6.08	5.98	6.04		
Dodecanese	2.82	2.98	2.97	3.29	3.50	3.59	4.01	4.21	4.52	4.15	3.92	3.62	3.47	3.21	3.31		
Cyclades	1.98	2.09	2.19	2.49	2.80	3.07	3.17	3.48	3.66	3.45	3.32	2.99	2.61	2.77	2.73		
Creta	6.90	7.55	8.08	8.80	9.68	9.87	10.69	11.20	11.81	11.51	10.86	9.72	8.85	8.56	8.78		
Heraklion	3.29	3.68	3.96	4.32	4.70	4.75	5.28	5.55	5.91	5.68	5.41	4.77	4.22	4.16	4.24		
Lasithi	0.84	0.93	0.97	1.05	1.14	1.23	1.31	1.38	1.42	1.42	1.30	1.14	1.09	1.09	1.13		
Rethymnon	1.04	1.08	1.12	1.21	1.35	1.39	1.37	1.41	1.47	1.46	1.39	1.28	1.17	1.15	1.17		
Chania	1.73	1.86	2.03	2.23	2.49	2.50	2.74	2.87	3.00	2.95	2.77	2.52	2.36	2.16	2.25		
E. Macedonia, Thrace	5.88	6.28	6.69	7.21	7.61	7.87	8.14	8.91	9.45	9.31	9.20	8.15	7.58	7.00	6.88		
Evros	1.35	1.41	1.51	1.67	1.78	1.87	1.93	2.17	2.28	2.31	2.40	2.16	1.97	1.81	1.79		
Xanthi	1.02	1.11	1.13	1.25	1.33	1.34	1.45	1.48	1.61	1.54	1.58	1.36	1.26	1.22	1.10		
Rodopi	1.09	1.23	1.25	1.40	1.39	1.40	1.45	1.59	1.69	1.64	1.54	1.42	1.28	1.18	1.10		
Drama	0.91	1.02	1.08	1.09	1.14	1.16	1.23	1.29	1.31	1.31	1.28	1.16	1.08	1.02	1.04		
Kavala	1.51	1.52	1.72	1.80	1.98	2.10	2.09	2.37	2.57	2.50	2.39	2.06	1.99	1.78	1.85		
Central Macedonia	19.83	21.51	22.60	24.51	26.69	26.89	29.55	31.95	33.30	32.44	30.35	28.09	25.81	24.17	23.77		
Imathia	1.45	1.58	1.61	1.69	1.81	1.86	1.98	2.12	2.15	2.10	1.94	1.86	1.74	1.59	1.59		
Thessaloniki	12.63	13.74	14.57	15.98	17.44	17.43	19.59	20.97	22.01	21.52	19.94	18.32	16.63	15.49	15.12		
Kilkis	0.76	0.85	0.88	0.91	1.03	1.02	1.05	1.25	1.25	1.17	1.10	1.02	0.95	0.90	0.96		
Pella	1.28	1.42	1.51	1.48	1.67	1.68	1.76	2.05	2.12	2.02	1.91	1.75	1.69	1.60	1.62		
Pieria	1.10	1.17	1.21	1.35	1.42	1.50	1.57	1.70	1.84	1.82	1.73	1.64	1.51	1.46	1.41		
Serres	1.49	1.56	1.57	1.71	1.84	1.84	1.89	2.08	2.07	2.03	2.00	1.86	1.76	1.69	1.64		
Chalkidiki	1.12	1.18	1.25	1.39	1.48	1.55	1.70	1.78	1.86	1.78	1.73	1.64	1.53	1.44	1.44		

Western Macedonia	3.25	3.53	3.89	4.32	4.57	4.76	4.93	4.98	4.80	5.04	4.98	4.82	4.72	4.40	4.53
Grevena	0.28	0.30	0.30	0.31	0.35	0.35	0.36	0.38	0.40	0.37	0.38	0.35	0.34	0.31	0.32
Kozani	1.92	2.10	2.33	2.61	2.72	2.87	2.96	2.96	2.80	3.01	3.01	2.83	2.83	2.63	2.71
Kastoria	0.41	0.44	0.50	0.54	0.55	0.55	0.60	0.66	0.68	0.66	0.64	0.63	0.59	0.56	0.53
Florina	0.64	0.69	0.75	0.87	0.94	0.98	1.01	0.99	0.92	0.99	0.95	1.01	0.97	0.90	0.97
Epirus	3.40	3.64	3.97	4.30	4.42	4.51	4.79	5.03	5.16	5.02	4.93	4.61	4.19	3.99	3.96
Arta	0.59	0.63	0.72	0.79	0.78	0.82	0.88	0.90	0.90	0.91	0.92	0.85	0.78	0.77	0.73
Preveza	0.59	0.61	0.64	0.71	0.70	0.70	0.76	0.81	0.83	0.83	0.82	0.78	0.71	0.75	0.70
Thesprotia	0.61	0.66	0.70	0.77	0.78	0.71	0.69	0.74	0.80	0.72	0.73	0.66	0.62	0.56	0.56
Ioannina	1.60	1.74	1.90	2.04	2.16	2.28	2.46	2.58	2.62	2.56	2.46	2.32	2.07	1.91	1.97
Thessaly	7.46	8.08	8.68	9.88	10.40	10.23	11.21	11.75	12.19	11.81	10.84	9.95	9.52	9.06	9.11
Karditsa	0.93	1.02	1.11	1.22	1.30	1.25	1.27	1.37	1.41	1.44	1.32	1.20	1.12	1.08	1.09
Trikala	1.17	1.32	1.36	1.52	1.61	1.59	1.68	1.82	1.84	1.86	1.73	1.56	1.54	1.49	1.55
Larissa	3.23	3.43	3.65	4.25	4.48	4.32	4.77	5.04	5.21	5.07	4.67	4.22	4.08	3.90	3.93
Magnesia	2.13	2.32	2.56	2.90	3.02	3.07	3.49	3.52	3.72	3.45	3.12	2.97	2.78	2.59	2.54
Ionian Islands	2.69	2.94	2.98	3.40	3.61	3.79	4.03	4.29	4.52	4.20	3.99	3.48	3.26	3.07	3.11
Zakynthos	0.63	0.69	0.68	0.80	0.82	0.86	0.91	0.98	1.03	0.97	0.91	0.76	0.74	0.70	0.70
Corfu	1.37	1.48	1.50	1.71	1.81	1.89	1.99	2.08	2.24	2.05	1.89	1.71	1.58	1.49	1.54
Cephalonia	0.49	0.54	0.55	0.63	0.70	0.74	0.80	0.87	0.90	0.82	0.80	0.66	0.63	0.57	0.58
Lefkada	0.20	0.23	0.23	0.26	0.28	0.30	0.33	0.34	0.35	0.37	0.40	0.34	0.31	0.30	0.30
Western Greece	6.89	7.42	8.06	8.77	9.47	9.72	10.73	11.24	11.36	10.89	10.67	9.61	8.96	8.27	8.20
Aetolia-Acarnania	1.92	2.09	2.26	2.48	2.77	2.86	3.02	3.13	3.18	3.09	2.99	2.79	2.63	2.49	2.43
Achaia	3.53	3.77	4.11	4.47	4.86	4.94	5.64	5.90	5.92	5.62	5.50	4.83	4.51	4.07	4.08
Elis	1.43	1.55	1.69	1.83	1.84	1.92	2.06	2.22	2.26	2.19	2.18	1.99	1.81	1.71	1.69
Sterea Ellada	7.75	8.28	8.52	9.15	9.38	9.74	10.12	10.56	10.88	10.40	9.90	9.27	8.63	8.07	7.91
Boeotia	2.44	2.63	2.60	2.80	2.81	2.80	2.92	2.93	2.98	2.95	2.82	2.83	2.66	2.51	2.33
Euboea	2.71	2.86	2.99	3.20	3.32	3.57	3.81	4.07	4.08	3.78	3.55	3.21	2.96	2.76	2.78
Evyvotania	0.17	0.18	0.19	0.21	0.21	0.21	0.23	0.23	0.27	0.27	0.26	0.23	0.21	0.20	0.19
Phthiotis	2.03	2.18	2.29	2.43	2.50	2.62	2.60	2.75	2.92	2.79	2.70	2.49	2.33	2.16	2.17
Phokis	0.39	0.43	0.45	0.51	0.54	0.53	0.55	0.58	0.62	0.61	0.58	0.52	0.46	0.45	0.44
Peloponnese	6.39	6.91	7.30	7.78	8.13	8.36	9.12	9.79	10.10	9.91	9.43	8.81	8.27	7.85	7.77
Argolis	1.10	1.22	1.37	1.44	1.48	1.54	1.72	1.87	1.95	1.91	1.81	1.60	1.49	1.43	1.43
Arcadia	1.13	1.20	1.28	1.39	1.49	1.51	1.64	1.69	1.64	1.68	1.61	1.51	1.40	1.38	1.38
Corinthia	1.74	1.88	1.90	2.03	2.07	2.12	2.28	2.45	2.63	2.49	2.34	2.19	2.09	1.98	1.89
Laconia	0.89	0.96	1.04	1.08	1.16	1.13	1.22	1.33	1.36	1.37	1.28	1.26	1.17	1.13	1.10
Messinia	1.52	1.65	1.71	1.83	1.93	2.07	2.28	2.45	2.52	2.47	2.39	2.24	2.12	1.93	1.98

*Provisional data

Source: Hellenic Statistical Agency, Annual Regional Accounts. E. Skoufoglou, 2018

Table 10.2 Annual Change in the GDP by NUTS 2 and NUTS 3 region, 2000-2015

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011*	2012*	2013*	2014*	2015	2008-2015
GREECE	7.75%	7.40%	9.45%	8.28%	2.85%	9.35%	6.81%	3.99%	-1.84%	-4.84%	-8.41%	-7.64%	-5.52%	-1.11%		
Attica	7.50%	9.38%	9.38%	10.09%	3.55%	10.95%	7.36%	4.20%	-0.61%	-4.77%	-8.59%	-8.22%	-5.43%	-1.82%		
Athens, Northern Sector	8.06%	12.59%	6.34%	10.68%	7.71%	10.21%	9.50%	5.94%	1.74%	-2.59%	-8.27%	-6.84%	-5.67%	-2.57%		
Athens, Western Sector	8.19%	8.45%	8.49%	7.27%	1.61%	10.56%	3.46%	3.06%	-2.48%	-6.09%	-9.30%	-9.68%	-5.58%	-1.70%		
Athens, Central Sector	7.57%	8.61%	7.31%	9.65%	5.13%	7.60%	7.77%	5.12%	-0.51%	-5.77%	-9.67%	-7.16%	-5.59%	-2.10%		
Athens, Southern Sector	6.30%	8.63%	9.25%	9.09%	4.65%	6.64%	8.45%	3.90%	-2.42%	-3.46%	-9.44%	-8.18%	-5.24%	-2.06%		
Eastern Attica	8.30%	17.31%	17.92%	13.52%	1.08%	19.98%	9.79%	3.05%	2.53%	-2.14%	-7.05%	-8.02%	-4.02%	-0.73%		
Western Attica	9.36%	17.13%	17.76%	9.96%	-7.52%	32.36%	1.13%	0.58%	-2.80%	-9.85%	-0.03%	-17.68%	-4.14%	-1.38%		
Piraeus, Islands	6.26%	1.16%	10.23%	10.52%	0.80%	10.42%	5.29%	2.77%	-3.39%	-5.81%	-9.70%	-8.65%	-6.70%	-0.94%		
North Aegean	7.07%	4.21%	17.66%	5.94%	6.04%	8.70%	8.67%	6.33%	-3.36%	-6.21%	-7.55%	-9.03%	-3.93%	-0.79%		
Lesvos	7.96%	3.05%	21.34%	1.48%	8.68%	9.15%	6.33%	5.99%	-2.55%	-5.95%	-7.58%	-10.27%	-0.75%	-0.86%		
Samos	9.70%	2.53%	12.64%	12.80%	11.26%	8.28%	8.67%	9.00%	-6.49%	-8.56%	-8.71%	-11.26%	-1.01%	-2.27%		
Chios	3.33%	7.92%	14.59%	9.61%	-3.03%	8.14%	13.63%	4.67%	-2.14%	-4.70%	-6.52%	-4.83%	-11.95%	0.60%		
South Aegean	5.63%	1.72%	12.13%	8.91%	5.76%	7.75%	7.04%	6.50%	-7.14%	-4.78%	-8.74%	-7.94%	-1.58%	0.99%		
Dodecanese	5.84%	-0.43%	10.68%	6.34%	2.78%	11.62%	4.82%	7.55%	-8.25%	-5.54%	-7.70%	-4.06%	-7.44%	3.00%		
Cyclades	5.33%	4.79%	14.09%	12.28%	9.49%	3.21%	9.85%	5.25%	-5.75%	-3.85%	-9.98%	-12.63%	6.20%	-1.35%		
Creta	9.44%	7.01%	8.92%	9.98%	1.94%	8.37%	4.75%	5.42%	-2.53%	-5.64%	-10.54%	-8.96%	-3.17%	2.53%		
Heraklion	11.89%	7.60%	9.07%	8.89%	1.06%	11.14%	5.07%	6.58%	-3.98%	-4.80%	-11.78%	-11.43%	-1.47%	1.86%		
Lasithi	10.11%	4.06%	8.57%	8.98%	7.04%	6.72%	5.25%	3.12%	0.08%	-8.54%	-11.85%	-4.55%	0.00%	3.23%		
Rethymnon	4.17%	4.04%	7.55%	11.73%	3.24%	-1.91%	2.99%	4.61%	-0.89%	-4.90%	-7.63%	-8.52%	-2.07%	1.57%		
Chania	7.62%	9.04%	9.56%	11.60%	0.57%	9.64%	4.76%	4.67%	-1.69%	-6.23%	-8.94%	-6.50%	-8.24%	3.97%		
E. Macedonia, Thrace	6.83%	6.45%	7.78%	5.61%	3.38%	3.48%	9.40%	6.11%	-1.53%	-1.16%	-11.39%	-7.00%	-7.59%	-1.81%		
Evros	4.59%	7.29%	10.20%	6.91%	4.88%	3.21%	12.39%	5.07%	1.51%	4.05%	-10.30%	-8.62%	-8.41%	-0.58%		
Xanthi	8.56%	1.82%	10.53%	6.16%	0.72%	8.40%	2.42%	8.25%	-3.85%	2.12%	-13.57%	-7.64%	-3.40%	-9.71%		
Rodopi	12.61%	1.59%	12.65%	-0.74%	0.80%	3.35%	9.58%	6.08%	-2.87%	-6.10%	-7.91%	-9.43%	-8.33%	-6.49%		
Drama	11.47%	6.07%	0.74%	4.33%	2.22%	5.79%	5.33%	1.33%	0.33%	-2.27%	-9.82%	-6.81%	-5.22%	1.26%		
Kavala	0.67%	13.24%	4.76%	9.76%	6.30%	-0.61%	13.73%	8.35%	-2.83%	-4.20%	-14.13%	-3.30%	-10.23%	3.66%		
Central Macedonia	8.46%	5.10%	8.45%	8.90%	0.73%	9.89%	8.13%	4.23%	-2.60%	-6.45%	-7.43%	-8.13%	-6.33%	-1.66%		
Imathia	8.71%	2.40%	4.75%	6.85%	2.98%	6.55%	6.95%	1.49%	-2.47%	-7.48%	-4.35%	-6.34%	-8.82%	-0.06%		
Thessaloniki	8.77%	6.09%	9.68%	9.12%	-0.07%	12.41%	7.01%	4.97%	-2.23%	-7.36%	-8.10%	-9.23%	-6.84%	-2.41%		
Kilkis	12.03%	3.15%	3.70%	12.30%	-0.08%	2.94%	18.53%	-0.35%	-6.07%	-6.03%	-6.93%	-6.94%	-5.38%	6.45%		
Pella	11.29%	6.03%	-2.17%	13.47%	0.51%	4.41%	16.92%	3.37%	-4.74%	-5.65%	-8.21%	-3.46%	-5.33%	1.13%		
Pieria	6.28%	3.44%	11.58%	5.21%	5.74%	4.81%	8.02%	8.45%	-1.49%	-4.97%	-4.84%	-8.17%	-3.14%	-3.65%		
Serres	5.12%	0.29%	9.22%	7.51%	-0.12%	2.67%	10.42%	-0.65%	-1.99%	-1.28%	-7.21%	-5.55%	-3.81%	-2.76%		
Chalkidiki	5.59%	5.51%	11.13%	6.96%	4.49%	9.58%	4.44%	4.72%	-4.16%	-2.76%	-5.54%	-6.47%	-5.79%	-0.20%		

Western Macedonia	8.84%	10.20%	11.07%	5.59%	4.25%	3.48%	1.08%	-3.56%	4.94%	-1.14%	-3.25%	-1.97%	-6.90%	2.99%
Grevena	7.46%	1.81%	18.3%	13.51%	-0.46%	2.80%	5.51%	5.45%	-7.39%	2.87%	-7.11%	-3.72%	-8.52%	2.32%
Kozani	9.40%	10.96%	11.73%	4.43%	5.53%	2.86%	-0.04%	-5.15%	7.44%	-0.08%	-6.06%	-0.01%	-6.83%	2.83%
Kastoria	8.55%	13.15%	7.53%	1.64%	0.59%	9.00%	9.07%	3.51%	-2.21%	-3.45%	-2.34%	-5.37%	-6.09%	-4.77%
Florina	7.93%	9.59%	15.06%	8.70%	4.46%	2.43%	-1.96%	-6.93%	7.92%	-4.31%	6.55%	-4.71%	-7.01%	8.50%
Epirus	7.16%	9.02%	8.48%	2.76%	2.07%	6.10%	5.01%	2.57%	-2.59%	-1.88%	-6.47%	-9.20%	-4.73%	-0.85%
Arta	6.03%	15.01%	8.68%	-1.17%	5.77%	6.69%	2.25%	0.20%	1.12%	1.06%	-8.07%	-7.14%	-1.86%	-4.90%
Preveza	3.10%	4.55%	11.33%	-0.78%	-0.96%	8.72%	6.81%	2.86%	-0.39%	-0.97%	-4.81%	-9.03%	4.91%	-6.66%
Thesprotia	7.80%	7.24%	9.27%	1.15%	-8.71%	-2.20%	6.68%	8.21%	-9.64%	0.25%	-9.07%	-5.70%	-9.40%	-0.96%
Ioannina	8.83%	9.09%	7.16%	6.13%	5.59%	7.66%	4.96%	1.69%	-2.40%	-3.82%	-5.66%	-10.99%	-7.73%	3.09%
Thessaly	8.39%	7.39%	13.85%	5.20%	-1.60%	9.62%	4.80%	3.69%	-3.05%	-8.29%	-8.14%	-4.38%	-4.75%	0.55%
Karditsa	8.73%	9.43%	9.77%	6.42%	-3.61%	1.83%	7.63%	2.87%	1.87%	-8.29%	-9.18%	-6.13%	-3.50%	0.11%
Trikala	12.36%	3.19%	11.66%	5.80%	-0.72%	5.50%	8.20%	1.23%	0.86%	-6.97%	-9.92%	-1.38%	-3.01%	4.34%
Larissa	6.23%	6.53%	16.32%	5.42%	-3.54%	10.51%	5.55%	3.44%	-2.75%	-7.91%	-9.49%	-3.42%	-4.39%	0.76%
Magnesia	9.32%	10.16%	13.25%	4.03%	1.66%	13.69%	1.10%	5.65%	-7.28%	-9.55%	-4.70%	-6.62%	-6.75%	-1.78%
Ionian Islands	9.40%	1.28%	14.29%	6.13%	4.98%	6.35%	6.34%	5.53%	-7.12%	-4.95%	-12.85%	-6.31%	-5.93%	1.48%
Zakynthos	10.83%	-1.22%	16.46%	2.34%	5.45%	5.71%	8.30%	4.59%	-6.23%	-5.93%	-16.60%	-2.17%	-5.31%	-0.83%
Corfu	8.31%	1.35%	14.02%	5.56%	4.41%	5.31%	4.74%	7.68%	-8.85%	-7.66%	-9.33%	-7.83%	-5.43%	2.98%
Cephalonia	9.63%	3.17%	14.31%	11.38%	4.58%	8.48%	9.21%	3.08%	-8.50%	-2.95%	-16.92%	-5.71%	-8.93%	1.85%
Lefkada	11.83%	3.95%	9.62%	8.77%	8.30%	9.47%	3.62%	1.40%	5.02%	8.32%	-12.84%	-8.97%	-3.97%	-1.31%
Western Greece	7.72%	8.63%	8.84%	7.99%	2.66%	10.32%	4.81%	1.08%	-4.18%	-2.00%	-9.94%	-6.80%	-7.61%	-0.95%
Aetolia-Acarnania	8.80%	8.18%	9.40%	11.72%	3.42%	5.61%	3.48%	1.51%	-2.83%	-3.01%	-6.62%	-5.74%	-5.46%	-2.38%
Achaia	6.79%	8.77%	8.78%	8.88%	1.59%	14.21%	4.50%	0.50%	-5.19%	-2.08%	-12.18%	-6.64%	-9.70%	0.15%
Elis	8.58%	8.91%	8.23%	0.76%	4.33%	7.33%	7.58%	1.99%	-3.43%	-0.38%	-8.84%	-8.71%	-5.56%	-1.50%
Sterea Ellada	6.95%	2.86%	7.41%	2.55%	3.76%	3.88%	4.42%	3.00%	-4.36%	-4.82%	-6.36%	-6.96%	-6.41%	-2.02%
Boeotia	7.94%	-1.22%	7.74%	0.57%	-0.51%	4.47%	0.21%	1.80%	-0.97%	-4.60%	0.35%	-6.01%	-5.73%	-7.02%
Euboea	5.41%	4.63%	6.99%	3.79%	7.45%	6.70%	6.76%	0.39%	-7.41%	-6.18%	-9.59%	-7.77%	-6.75%	0.69%
Evyros	5.35%	6.16%	9.04%	-1.37%	0.67%	8.49%	2.42%	15.12%	0.36%	-5.28%	-8.61%	-9.24%	-5.33%	-3.52%
Phthiotis	7.40%	4.91%	5.93%	2.85%	5.17%	-1.00%	5.92%	6.04%	-4.35%	-3.32%	-7.84%	-6.13%	-7.69%	0.57%
Phokis	9.77%	4.18%	15.10%	5.84%	-1.89%	4.07%	4.29%	8.11%	-2.73%	-4.12%	-11.30%	-10.13%	-2.30%	-2.51%
Peloponnese	8.15%	5.69%	6.54%	4.46%	2.90%	9.08%	7.30%	3.19%	-1.88%	-4.87%	-6.62%	-6.08%	-5.12%	-1.03%
Argolis	11.07%	12.14%	5.29%	2.32%	4.38%	11.21%	8.91%	4.52%	-2.31%	-5.06%	-11.65%	-6.85%	-3.83%	-0.30%
Arcadia	6.26%	6.02%	9.27%	6.83%	1.38%	8.70%	2.91%	-2.57%	1.93%	-3.93%	-6.29%	-7.26%	-1.69%	-0.02%
Corinthia	7.59%	1.37%	6.46%	2.36%	2.21%	7.37%	7.51%	7.62%	-5.36%	-5.99%	-6.42%	-4.54%	-5.54%	-4.59%
Laconia	7.94%	8.31%	4.12%	7.01%	-2.78%	8.01%	9.56%	1.77%	0.76%	-6.38%	-1.40%	-7.18%	-3.88%	-2.57%
Messinia	8.19%	4.04%	7.05%	5.16%	7.07%	10.13%	7.83%	2.52%	-1.84%	-3.38%	-6.00%	-5.63%	-8.58%	2.25%

*Provisional data

Source: Hellenic Statistical Authority, Annual Regional Accounts, E. Skoufoglou, 2018

Table 10.4 Shares in the GDP by NUTS2 and NUTS 3 region, 2000-2015

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011*	2012*	2013*	2014*	2000-2015	2008-2015
Attica	45.41%	45.30%	46.14%	46.11%	46.88%	47.20%	47.89%	48.14%	48.23%	48.84%	48.87%	48.77%	48.47%	48.51%	48.16%		
Athens, Northern Sector	7.00%	7.02%	7.35%	7.15%	7.30%	7.65%	7.71%	7.90%	8.05%	8.35%	8.54%	8.56%	8.63%	8.62%	8.49%		
Athens, Western Sector	3.43%	3.44%	3.48%	3.45%	3.41%	3.37%	3.41%	3.30%	3.27%	3.25%	3.21%	3.18%	3.11%	3.11%	3.09%		
Athens, Central Sector	17.06%	17.03%	17.22%	16.88%	17.10%	17.48%	17.20%	17.35%	17.54%	17.78%	17.61%	17.36%	17.46%	17.44%	17.27%		
Athens, Southern Sector	5.59%	5.52%	5.58%	5.57%	5.61%	5.71%	5.57%	5.65%	5.65%	5.62%	5.70%	5.63%	5.60%	5.62%	5.56%		
Eastern Attica	3.99%	4.01%	4.38%	4.72%	4.94%	4.86%	5.33%	5.48%	5.43%	5.67%	5.83%	5.92%	5.90%	5.99%	6.01%		
Western Attica	2.12%	2.15%	2.34%	2.52%	2.56%	2.30%	2.79%	2.64%	2.55%	2.53%	2.39%	2.61%	2.33%	2.36%	2.36%		
Piraeus, Islands	6.23%	6.14%	5.79%	5.83%	5.95%	5.83%	5.89%	5.80%	5.73%	5.64%	5.59%	5.51%	5.45%	5.38%	5.39%		
North Aegean	1.34%	1.33%	1.29%	1.39%	1.36%	1.40%	1.40%	1.42%	1.45%	1.43%	1.41%	1.42%	1.40%	1.42%	1.43%		
Lesvos	0.69%	0.70%	0.67%	0.74%	0.69%	0.73%	0.73%	0.73%	0.74%	0.74%	0.73%	0.74%	0.71%	0.75%	0.75%		
Samos	0.28%	0.29%	0.28%	0.28%	0.30%	0.32%	0.32%	0.32%	0.34%	0.32%	0.31%	0.31%	0.30%	0.31%	0.31%		
Chios	0.36%	0.35%	0.35%	0.37%	0.37%	0.35%	0.35%	0.37%	0.37%	0.37%	0.37%	0.38%	0.39%	0.36%	0.37%		
South Aegean	3.40%	3.33%	3.16%	3.23%	3.25%	3.34%	3.29%	3.30%	3.38%	3.20%	3.20%	3.19%	3.18%	3.1%	3.38%		
Dodecanese	2.00%	1.96%	1.82%	1.84%	1.81%	1.80%	1.84%	1.81%	1.87%	1.75%	1.73%	1.75%	1.82%	1.78%	1.85%		
Cyclades	1.40%	1.37%	1.34%	1.39%	1.45%	1.54%	1.45%	1.49%	1.51%	1.45%	1.47%	1.44%	1.36%	1.53%	1.53%		
Creta	4.88%	4.96%	4.94%	4.92%	5.00%	4.95%	4.91%	4.81%	4.88%	4.85%	4.80%	4.69%	4.63%	4.74%	4.91%		
Heraklion	2.33%	2.42%	2.42%	2.41%	2.43%	2.38%	2.42%	2.38%	2.44%	2.39%	2.39%	2.30%	2.21%	2.30%	2.37%		
Lasithi	0.60%	0.61%	0.59%	0.59%	0.59%	0.61%	0.60%	0.59%	0.59%	0.60%	0.57%	0.55%	0.57%	0.60%	0.63%		
Rethymnon	0.73%	0.71%	0.69%	0.67%	0.70%	0.70%	0.63%	0.60%	0.61%	0.61%	0.61%	0.62%	0.61%	0.63%	0.65%		
Chania	1.23%	1.22%	1.24%	1.24%	1.28%	1.25%	1.26%	1.23%	1.24%	1.24%	1.23%	1.22%	1.23%	1.20%	1.26%		
E. Macedonia, Thrace	4.16%	4.13%	4.09%	4.03%	3.93%	3.95%	3.74%	3.83%	3.91%	3.92%	4.07%	3.94%	3.96%	3.88%	3.85%		
Evros	0.95%	0.93%	0.92%	0.93%	0.92%	0.94%	0.88%	0.93%	0.94%	0.97%	1.06%	1.04%	1.03%	1.00%	1.00%		
Xanthi	0.72%	0.73%	0.69%	0.70%	0.68%	0.67%	0.66%	0.64%	0.66%	0.65%	0.70%	0.66%	0.66%	0.67%	0.61%		
Rodopi	0.77%	0.81%	0.76%	0.78%	0.72%	0.70%	0.67%	0.68%	0.70%	0.69%	0.68%	0.68%	0.67%	0.65%	0.62%		
Drama	0.65%	0.67%	0.66%	0.61%	0.59%	0.58%	0.56%	0.56%	0.54%	0.55%	0.57%	0.56%	0.56%	0.57%	0.58%		
Kavala	1.07%	1.00%	1.05%	1.01%	1.02%	1.05%	0.96%	1.02%	1.06%	1.05%	1.06%	0.99%	1.04%	0.99%	1.04%		
Central Macedonia	14.04%	14.13%	13.83%	13.70%	13.78%	13.50%	13.56%	13.73%	13.76%	13.66%	13.43%	13.57%	13.50%	13.38%	13.31%		
Imathia	1.03%	1.04%	0.99%	0.95%	0.93%	0.93%	0.91%	0.91%	0.89%	0.88%	0.86%	0.90%	0.91%	0.88%	0.89%		
Thessaloniki	8.94%	9.03%	8.92%	8.93%	9.00%	8.75%	8.99%	9.01%	9.10%	9.06%	8.82%	8.85%	8.70%	8.58%	8.46%		
Kilkis	0.54%	0.56%	0.54%	0.51%	0.53%	0.51%	0.48%	0.54%	0.51%	0.49%	0.49%	0.49%	0.50%	0.50%	0.54%		
Pella	0.90%	0.93%	0.92%	0.82%	0.86%	0.84%	0.81%	0.88%	0.88%	0.85%	0.84%	0.85%	0.88%	0.89%	0.91%		
Pieria	0.78%	0.77%	0.74%	0.75%	0.73%	0.75%	0.72%	0.73%	0.76%	0.76%	0.76%	0.79%	0.79%	0.81%	0.79%		
Serres	1.05%	1.03%	0.96%	0.96%	0.95%	0.92%	0.87%	0.90%	0.86%	0.85%	0.89%	0.90%	0.92%	0.94%	0.92%		
Chalkidiki	0.79%	0.78%	0.76%	0.78%	0.77%	0.78%	0.78%	0.76%	0.77%	0.75%	0.77%	0.79%	0.80%	0.80%	0.81%		

Western Macedonia	2.30%	2.32%	2.38%	2.42%	2.36%	2.39%	2.26%	2.14%	1.98%	2.12%	2.20%	2.33%	2.47%	2.43%	2.54%
Grevena	0.20%	0.20%	0.19%	0.17%	0.18%	0.18%	0.16%	0.16%	0.16%	0.16%	0.17%	0.17%	0.18%	0.17%	0.18%
Kozani	1.36%	1.38%	1.43%	1.46%	1.41%	1.44%	1.36%	1.27%	1.16%	1.27%	1.33%	1.37%	1.48%	1.46%	1.52%
Kastoria	0.29%	0.29%	0.31%	0.30%	0.28%	0.28%	0.28%	0.28%	0.28%	0.28%	0.28%	0.30%	0.31%	0.31%	0.30%
Florina	0.45%	0.45%	0.46%	0.48%	0.49%	0.49%	0.46%	0.43%	0.38%	0.42%	0.42%	0.49%	0.50%	0.50%	0.55%
Epirus	2.40%	2.39%	2.43%	2.41%	2.28%	2.27%	2.20%	2.16%	2.13%	2.12%	2.18%	2.23%	2.19%	2.21%	2.21%
Arta	0.42%	0.41%	0.44%	0.44%	0.40%	0.41%	0.40%	0.39%	0.37%	0.38%	0.41%	0.41%	0.41%	0.43%	0.41%
Preveza	0.42%	0.40%	0.39%	0.40%	0.36%	0.35%	0.35%	0.35%	0.34%	0.35%	0.36%	0.38%	0.37%	0.41%	0.39%
Thesprotia	0.43%	0.43%	0.43%	0.43%	0.40%	0.36%	0.32%	0.32%	0.33%	0.30%	0.32%	0.32%	0.33%	0.31%	0.31%
Ioannina	1.13%	1.14%	1.16%	1.14%	1.12%	1.15%	1.13%	1.11%	1.08%	1.08%	1.09%	1.12%	1.08%	1.06%	1.10%
Thessaly	5.28%	5.31%	5.31%	5.52%	5.37%	5.13%	5.15%	5.05%	5.04%	4.97%	4.79%	4.81%	4.98%	5.02%	5.10%
Karditsa	0.66%	0.67%	0.68%	0.68%	0.67%	0.63%	0.59%	0.59%	0.58%	0.61%	0.58%	0.58%	0.59%	0.60%	0.61%
Trikala	0.83%	0.87%	0.83%	0.85%	0.83%	0.80%	0.77%	0.78%	0.76%	0.78%	0.76%	0.75%	0.80%	0.82%	0.87%
Larissa	2.28%	2.25%	2.23%	2.37%	2.31%	2.17%	2.19%	2.16%	2.15%	2.13%	2.06%	2.04%	2.13%	2.16%	2.20%
Magnesia	1.50%	1.53%	1.57%	1.62%	1.56%	1.54%	1.60%	1.51%	1.54%	1.45%	1.38%	1.44%	1.45%	1.43%	1.42%
Ionian Islands	1.90%	1.93%	1.82%	1.90%	1.86%	1.90%	1.85%	1.84%	1.87%	1.77%	1.77%	1.68%	1.70%	1.70%	1.74%
Zakynthos	0.44%	0.46%	0.42%	0.45%	0.42%	0.43%	0.42%	0.42%	0.43%	0.41%	0.40%	0.37%	0.39%	0.39%	0.39%
Corfu	0.97%	0.97%	0.92%	0.96%	0.93%	0.95%	0.91%	0.90%	0.93%	0.86%	0.84%	0.83%	0.83%	0.83%	0.86%
Cephalonia	0.35%	0.35%	0.34%	0.35%	0.36%	0.37%	0.37%	0.38%	0.37%	0.35%	0.35%	0.32%	0.33%	0.32%	0.33%
Lefkada	0.14%	0.15%	0.14%	0.14%	0.14%	0.15%	0.15%	0.15%	0.14%	0.15%	0.17%	0.17%	0.16%	0.17%	0.17%
Western Greece	4.88%	4.87%	4.93%	4.90%	4.89%	4.88%	4.92%	4.83%	4.70%	4.58%	4.72%	4.64%	4.68%	4.58%	4.59%
Aetolia-Acarnania	1.36%	1.38%	1.39%	1.38%	1.43%	1.44%	1.39%	1.34%	1.31%	1.30%	1.32%	1.35%	1.38%	1.38%	1.36%
Achaia	2.50%	2.48%	2.51%	2.50%	2.51%	2.48%	2.59%	2.53%	2.45%	2.36%	2.43%	2.33%	2.36%	2.25%	2.28%
Elis	1.01%	1.02%	1.03%	1.02%	0.95%	0.97%	0.95%	0.95%	0.94%	0.92%	0.96%	0.96%	0.95%	0.95%	0.94%
Sterea Ellada	5.48%	5.44%	5.21%	5.12%	4.84%	4.89%	4.64%	4.54%	4.50%	4.38%	4.38%	4.48%	4.51%	4.47%	4.43%
Boeotia	1.72%	1.73%	1.59%	1.56%	1.45%	1.41%	1.34%	1.26%	1.23%	1.24%	1.25%	1.37%	1.39%	1.39%	1.30%
Euboea	1.92%	1.88%	1.83%	1.79%	1.72%	1.79%	1.75%	1.75%	1.69%	1.59%	1.57%	1.55%	1.55%	1.53%	1.55%
Evrytania	0.12%	0.12%	0.12%	0.12%	0.11%	0.11%	0.10%	0.10%	0.11%	0.11%	0.11%	0.11%	0.11%	0.11%	0.11%
Phthiotis	1.44%	1.43%	1.40%	1.36%	1.29%	1.32%	1.19%	1.18%	1.21%	1.18%	1.19%	1.20%	1.22%	1.19%	1.21%
Phokis	0.28%	0.28%	0.27%	0.29%	0.28%	0.27%	0.25%	0.25%	0.26%	0.26%	0.26%	0.25%	0.24%	0.25%	0.25%
Peloponnese	4.52%	4.54%	4.47%	4.35%	4.20%	4.20%	4.19%	4.21%	4.17%	4.17%	4.17%	4.25%	4.33%	4.34%	4.35%
Argolis	0.78%	0.80%	0.84%	0.81%	0.76%	0.77%	0.79%	0.80%	0.81%	0.80%	0.80%	0.77%	0.78%	0.79%	0.80%
Arcadia	0.80%	0.79%	0.78%	0.78%	0.77%	0.76%	0.75%	0.73%	0.68%	0.71%	0.71%	0.73%	0.73%	0.76%	0.77%
Corinthia	1.23%	1.23%	1.16%	1.13%	1.07%	1.06%	1.04%	1.05%	1.09%	1.05%	1.04%	1.06%	1.09%	1.09%	1.06%
Laconia	0.63%	0.63%	0.64%	0.61%	0.60%	0.57%	0.56%	0.57%	0.56%	0.58%	0.57%	0.61%	0.61%	0.62%	0.61%
Messinia	1.08%	1.08%	1.05%	1.03%	1.00%	1.04%	1.04%	1.05%	1.04%	1.04%	1.06%	1.08%	1.11%	1.07%	1.11%

*Provisional data

Source: Hellenic Statistical Authority, Annual Regional Accounts. E. Skoufoglou, 2018

Table 10.3 Standard deviation and Gini Coefficient for the GDP and GDP per capita by NUTS3 region

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011*	2012*	2013*	2014*
GDP														
Index (base year=2008)	62.893	67.548	73.931	80.051	82.335	90.029	96.159	100	98.159	93.405	85.553	79.013	74.653	73.828
NUTS3 regions														
Standard deviation	9522	10412	11390	12543	12976	14413	15472	16127	16025	15247	13937	12784	12085	11861
% Annual Change	7.54%	9.34%	9.40%	10.12%	3.45%	11.07%	7.35%	4.24%	-0.64%	-4.85%	-8.59%	-8.27%	-5.47%	-1.85%
Index (base year=2008)	59.044	64.558	70.626	77.774	80.459	89.368	95.937	100	99.363	94.54	86.416	79.269	74.936	73.547
Gini coefficient	0.658	0.664	0.664	0.670	0.671	0.681	0.681	0.682	0.684	0.682	0.680	0.677	0.676	0.674
% Annual Change	-0.11%	0.83%	0.04%	0.95%	0.13%	1.42%	-0.03%	0.17%	0.26%	-0.31%	-0.19%	-0.45%	-0.22%	-0.31%
Index (base year=2008)	96.559	97.358	97.4	98.33	98.453	99.851	99.826	100	100.26	99.95	99.756	99.309	99.095	98.783
NUTS3 regions excluding Attica and Thessaloniki														
Standard deviation	873	928	1024	1096	1118	1240	1295	1341	1273	1209	1090	1016	956	966
% Annual Change	7.48%	6.22%	10.37%	7.10%	1.92%	10.96%	4.40%	3.60%	-5.11%	-4.96%	-9.87%	-6.81%	-5.84%	1.00%
Index (base year=2008)	65.109	69.161	76.334	81.751	83.323	92.455	96.523	100	94.886	90.175	81.277	75.741	71.315	72.027
Gini coefficient	0.336	0.336	0.337	0.338	0.339	0.347	0.342	0.342	0.336	0.335	0.333	0.333	0.330	0.333
% Annual Change	-0.37%	0.24%	0.24%	0.37%	0.21%	2.22%	-1.38%	-0.02%	-1.56%	-0.58%	-0.60%	0.06%	-0.72%	0.79%
Index (base year=2008)	98.16	98.396	98.636	99.001	99.213	101.42	100.02	100	98.44	97.87	97.278	97.341	96.643	97.402
NUTS3 regions excluding Attica														
Standard deviation	1929	2048	2249	2451	2453	2763	2944	3087	3004	2788	2554	2323	2165	2123
% Annual Change	8.60%	6.16%	9.84%	8.98%	0.08%	12.61%	6.57%	4.84%	-2.67%	-7.19%	-8.41%	-9.03%	-6.79%	-1.96%
Index (base year=2008)	62.499	66.347	72.874	79.416	79.479	89.503	95.386	100	97.326	90.327	82.73	75.263	70.156	68.777
Gini coefficient	0.420	0.421	0.421	0.425	0.423	0.434	0.431	0.432	0.428	0.424	0.422	0.420	0.416	0.416
% Annual Change	-0.04%	0.24%	0.20%	0.83%	-0.46%	2.54%	-0.72%	0.29%	-0.78%	-1.08%	-0.35%	-0.59%	-0.82%	-0.03%
Index (base year=2008)	97.163	97.396	97.592	98.403	97.949	100.43	99.713	100	99.216	98.141	97.799	97.218	96.422	96.397

GDP per Capita	64.142	68.638	74.944	80.948	83.013	90.499	96.414	100	97.901	93.04	85.343	79.248	75.42	75.085
% (base year=2008)														
NUTS3 regions														
Standard deviation	2706	2699	3070	3263	3438	3654	3765	3898	3624	3378	3093	2899	2846	2901
% Annual Change	5.77%	-0.27%	13.77%	6.29%	5.35%	6.28%	3.05%	3.51%	-7.02%	-6.80%	-8.44%	-6.26%	-1.82%	1.93%
Index (base year=2008)	69.422	69.237	78.769	83.725	88.208	93.748	96.605	100	92.979	86.66	79.349	74.381	73.026	74.435
Gini coefficient	0.119	0.115	0.120	0.121	0.124	0.125	0.119	0.118	0.113	0.110	0.107	0.109	0.110	0.115
% Annual Change	-1.90%	-3.78%	4.47%	0.83%	2.16%	0.85%	-4.45%	-0.60%	-4.22%	-3.37%	-2.30%	1.53%	0.78%	4.72%
Index (base year=2008)	100.83	97.023	101.36	102.2	104.41	105.29	100.6	100	95.78	92.548	90.422	91.804	92.521	96.888
NUTS3 regions excluding Attica and Thessaloniki														
Standard deviation	2629	2568	2947	3092	3268	3406	3471	3581	3243	3013	2755	2603	2570	2645
% Annual Change	5.59%	-2.29%	14.73%	4.91%	5.70%	4.24%	1.91%	3.16%	-9.43%	-7.09%	-8.59%	-5.49%	-1.30%	2.95%
Index (base year=2008)	73.407	71.726	82.291	86.335	91.258	95.127	96.94	100	90.572	84.151	76.92	72.696	71.755	73.872
Gini coefficient	0.116	0.110	0.116	0.116	0.119	0.119	0.113	0.112	0.106	0.102	0.099	0.101	0.102	0.108
% Annual Change	-2.10%	-5.01%	5.24%	0.10%	2.46%	-0.18%	-5.23%	-0.97%	-5.52%	-3.52%	-2.82%	2.27%	0.80%	5.79%
Index (base year=2008)	104.12	98.904	104.09	104.19	106.74	106.55	100.97	100	94.483	91.153	88.582	90.592	91.316	96.6
NUTS3 regions excluding Attica														
Standard deviation	2605	2546	2920	3067	3237	3382	3448	3559	3227	2992	2735	2581	2546	2620
% Annual Change	5.62%	-2.25%	14.69%	5.00%	5.57%	4.46%	1.96%	3.23%	-9.33%	-7.30%	-8.58%	-5.63%	-1.36%	2.90%
Index (base year=2008)	73.187	71.542	82.048	86.154	90.953	95.01	96.867	100	90.667	84.049	76.84	72.515	71.525	73.597
Gini coefficient	0.115	0.110	0.115	0.115	0.118	0.118	0.112	0.111	0.105	0.101	0.098	0.100	0.101	0.107
% Annual Change	-2.07%	-4.94%	5.14%	0.23%	2.24%	0.03%	-5.20%	-0.82%	-5.42%	-3.77%	-2.67%	2.02%	0.71%	5.63%
Index (base year=2008)	103.82	98.686	103.76	104	106.32	106.36	100.83	100	94.58	91.017	88.583	90.377	91.022	96.144

*Provisional data

Source: Hellenic Statistical Authority, Annual Regional Account. E. Skoufoglou, 2018

Table 10.5 GDP per capita by NUTS2 and NUTS 3 region, 2000-2015 (in euros)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011*	2012*	2013*	2014*	2000-2015	2008-2015
GREECE	13,071	14,011	14,994	16,371	17,683	18,134	19,769	21,061	21,845	21,386	20,324	18,643	17,311	16,475	16,402		
Attica	16,514	17,701	19,310	21,012	23,026	23,735	26,234	28,096	29,215	28,992	27,630	25,380	23,530	22,540	22,389		
Athens, Northern Sector												28,747	26,974	25,694	25,261		
Athens, Western Sector												12,938	11,822	11,321	11,277		
Athens, Central Sector												33,845	32,278	31,448	31,667		
Athens, Southern Sector												21,166	19,578	18,729	18,506		
Eastern Attica												23,212	21,056	19,972	19,633		
Western Attica												31,966	26,004	24,673	24,111		
Piraeus, Islands												20,989	19,422	18,398	18,481		
North Aegean	9,636	10,253	10,615	12,497	13,245	14,043	15,304	16,652	17,647	16,991	15,882	14,669	13,389	12,927	12,883		
Lesvos	9,542	10,256	10,530	12,791	12,981	14,070	15,334	16,310	17,272	16,815	15,806	14,622	13,186	13,181	13,146		
Samos	9,648	10,485	10,616	11,923	13,435	14,979	16,339	17,787	19,253	17,865	16,212	14,763	13,158	13,099	12,871		
Chios	9,811	10,064	10,782	12,382	13,609	13,239	14,414	16,419	17,095	16,632	15,764	14,685	13,967	12,302	12,388		
South Aegean	15,557	16,174	16,293	18,185	19,666	20,609	22,012	23,389	24,747	22,872	21,709	19,748	18,163	17,874	18,045		
Dodecanese	14,673	15,353	15,145	16,664	17,560	17,831	19,699	20,504	21,943	20,098	18,981	17,476	16,739	15,491	15,945		
Cyclades	17,017	17,513	18,164	20,670	23,129	25,211	25,860	28,185	29,388	27,428	26,153	23,442	20,481	21,756	21,470		
Creta	11,944	12,913	13,660	14,796	16,173	16,374	17,621	18,330	19,176	18,542	17,372	15,465	14,046	13,584	13,912		
Heraklion	11,533	12,742	13,559	14,729	15,960	16,033	17,706	18,487	19,562	18,636	17,619	15,460	13,648	13,420	13,646		
Lastithi	11,650	12,616	12,905	14,013	15,273	16,343	17,413	18,287	18,807	18,773	17,139	15,113	14,467	14,513	15,023		
Rethymnon	13,607	13,890	14,194	15,128	16,734	17,101	16,604	16,925	17,511	17,152	16,144	14,805	13,500	13,199	13,379		
Chania	12,025	12,880	13,962	15,151	16,745	16,672	18,108	18,806	19,509	19,005	17,674	16,004	14,926	13,676	14,198		
E. Macedonia, Thrace	10,075	10,701	11,316	12,146	12,772	13,142	13,535	14,741	15,568	15,272	15,057	13,320	12,403	11,498	11,324		
Evros	9,322	9,767	10,474	11,512	12,273	12,827	13,187	14,760	15,438	15,665	16,331	14,611	13,323	12,203	12,132		
Xanthi	9,951	10,710	10,804	11,821	12,427	12,396	13,318	13,535	14,537	13,861	14,054	12,092	11,157	10,788	9,752		
Rodopi	10,497	11,686	11,680	13,062	12,870	12,875	13,212	14,379	15,148	14,608	13,634	12,515	11,341	10,422	9,773		
Drama	9,545	10,605	11,211	11,274	11,743	11,976	12,625	13,250	13,377	13,369	13,031	11,745	10,977	10,446	10,614		
Kavala	11,014	10,990	12,373	12,949	14,196	15,070	14,958	16,996	18,388	17,846	17,094	14,712	14,311	12,952	13,529		
Central Macedonia	10,790	11,628	12,170	13,130	14,229	14,262	15,596	16,794	17,437	16,913	15,776	14,600	13,458	12,669	12,520		
Imathia	10,515	11,434	11,696	12,206	12,997	13,337	14,141	15,041	15,189	14,734	13,571	12,961	12,156	11,112	11,138		
Thessaloniki	11,727	12,646	13,352	14,536	15,752	15,634	17,466	18,606	19,454	18,943	17,504	16,094	14,669	13,747	13,494		
Kilkis	9,708	10,770	10,953	11,303	12,679	12,660	13,029	15,439	15,402	14,434	13,479	12,513	11,671	11,094	11,868		
Pella	9,151	10,149	10,722	10,477	11,878	11,925	12,435	14,506	14,960	14,223	13,410	12,329	11,949	11,368	11,553		
Pieria	9,331	9,880	10,157	11,247	11,745	12,311	12,776	13,670	14,673	14,293	13,446	12,691	11,595	11,192	10,751		
Serres	8,055	8,508	8,561	9,371	10,099	10,108	10,389	11,484	11,421	11,204	11,092	10,355	9,881	9,618	9,452		
Chalkidiki	10,978	11,399	11,954	13,280	14,176	14,770	16,106	16,706	17,362	16,508	15,927	14,941	13,924	13,097	13,052		

Western Macedonia	11,327	12,314	13,520	15,016	15,870	16,561	17,159	17,362	16,748	17,583	17,405	16,908	16,711	15,707	16,320
Grevena	8,733	9,340	9,497	9,755	11,124	11,108	11,436	12,054	12,699	11,741	12,042	11,182	10,808	9,939	10,222
Kozani	12,420	13,547	15,020	16,830	17,632	18,662	19,247	19,294	18,345	19,763	19,817	18,721	18,895	17,800	18,490
Kastoria	8,039	8,747	9,835	10,541	10,701	10,756	11,718	12,793	13,270	13,002	12,591	12,374	11,825	11,226	10,805
Florina	12,961	14,032	15,203	17,299	18,687	19,432	19,880	19,420	17,942	19,240	18,336	19,544	18,727	17,523	19,119
Epirus	10,027	10,668	11,591	12,578	12,919	13,171	13,948	14,613	14,960	14,540	14,240	13,328	12,162	11,662	11,630
Arta	8,152	8,572	9,775	10,703	10,657	11,355	12,184	12,512	12,601	12,812	13,037	12,095	11,377	11,331	10,923
Preveza	10,179	10,445	10,955	12,238	12,169	12,069	13,111	13,969	14,325	14,213	14,001	13,303	12,140	12,783	11,972
Thesprotia	14,454	15,510	16,606	18,102	18,232	16,567	16,112	17,072	18,324	16,414	16,314	14,744	13,872	12,551	12,397
Ioannina	9,673	10,443	11,347	12,120	12,813	13,466	14,431	15,091	15,299	14,884	14,277	13,468	12,038	11,175	11,588
Thessaly	10,085	10,888	11,660	13,300	14,010	13,793	15,103	15,805	16,363	15,831	14,499	13,328	12,796	12,256	12,389
Karditsa	7,725	8,398	9,203	10,176	10,916	10,598	10,847	11,717	12,090	12,342	11,352	10,379	9,860	9,634	9,756
Trikala	8,933	9,958	10,172	11,409	12,109	12,042	12,695	13,710	13,847	13,929	12,934	11,652	11,535	11,244	11,784
Larissa	11,287	11,946	12,710	14,782	15,574	15,006	16,547	17,432	18,001	17,472	16,075	14,561	14,107	13,552	13,727
Magnesia	10,549	11,484	12,618	14,288	14,850	15,071	17,076	17,205	18,113	16,724	15,065	14,323	13,393	12,528	12,341
Ionian Islands	13,135	14,216	14,323	16,418	17,456	18,332	19,474	20,669	21,759	20,153	19,106	16,633	15,621	14,746	15,007
Zakynthos	15,901	17,444	17,160	19,920	20,318	21,334	22,455	24,228	25,264	23,612	22,186	18,529	18,212	17,336	17,254
Corfu	12,968	13,967	14,132	16,178	17,136	17,937	18,914	19,820	21,341	19,453	17,958	16,287	15,060	14,313	14,804
Cephalonia	13,543	14,490	14,696	16,826	18,726	19,528	21,080	22,883	23,420	21,254	20,469	16,934	15,977	14,559	14,833
Lefkada	8,607	9,494	9,837	10,896	11,937	12,980	14,204	14,679	14,818	15,468	16,636	14,414	13,093	12,561	12,389
Western Greece	9,744	10,503	11,436	12,502	13,550	13,952	15,425	16,196	16,393	15,722	15,430	13,940	13,070	12,166	12,133
Aetolia-Acarnania	8,716	9,533	10,364	11,382	12,763	13,242	14,011	14,519	14,761	14,358	13,950	13,082	12,424	11,847	11,660
Achaia	11,072	11,796	12,841	14,008	15,282	15,544	17,778	18,613	18,733	17,776	17,433	15,355	14,419	13,117	13,224
Elis	8,563	9,299	10,146	11,070	11,231	11,791	12,708	13,702	13,990	13,522	13,485	12,315	11,295	10,734	10,634
Sterea Ellada	13,954	14,804	15,189	16,401	16,877	17,547	18,229	19,019	19,552	18,631	17,663	16,510	15,383	14,428	14,167
Boeotia	20,425	22,071	21,864	23,662	23,850	23,747	24,767	24,753	25,103	24,726	23,470	23,470	22,045	20,795	19,337
Euboea	12,549	13,130	13,750	14,779	15,392	16,576	17,693	18,885	18,937	17,487	16,362	14,789	13,683	12,807	12,944
Evrytania	8,788	9,256	9,770	10,591	10,389	10,431	11,269	11,471	13,149	13,140	12,412	11,393	10,461	10,034	9,794
Phthiotis	12,646	13,463	14,037	14,938	15,405	16,224	16,079	17,049	18,074	17,251	16,626	15,301	14,386	13,310	13,420
Phokis	9,976	10,524	10,745	12,630	13,552	13,412	13,982	14,534	15,619	15,048	14,268	12,532	11,187	10,855	10,515
Peloponnese	10,889	11,687	12,322	13,198	13,842	14,281	15,588	16,715	17,224	16,862	16,009	14,942	14,066	13,390	13,291
Argolis	11,558	12,592	13,871	14,635	14,994	15,666	17,416	18,950	19,787	19,309	18,310	16,170	15,097	14,574	14,577
Arcadia	12,323	12,980	13,733	15,133	16,297	16,641	18,181	18,789	18,382	18,805	18,141	17,110	16,027	15,941	16,109
Corinthia	12,211	12,919	12,998	13,902	14,275	14,615	15,679	16,810	18,011	16,944	15,843	14,770	14,081	13,291	12,671
Laconia	9,751	10,642	11,676	12,203	13,071	12,691	13,671	14,930	15,125	15,158	14,118	13,880	12,878	12,375	12,056
Messinia	9,198	9,926	10,354	11,165	11,808	12,696	14,008	15,107	15,480	15,182	14,652	13,771	13,037	11,971	12,285

*Provisional data

Source: Hellenic Statistical Authority, Annual Regional Accounts. E. Skoufoglou, 2018

Table 10.8 Regional Unemployment Rates by NUTS 3 regions, Ratio to the National Unemployment Rate, 2000-2014

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2001-2014	2008-2014
Attica	0.969	0.913	0.926	0.883	0.911	0.943	0.928	0.861	0.944	0.989	1.008	1.057	1.044	1.032		
North Aegean																
Lesvos	0.801	1.085	0.989	0.944	1.251	1.227	1.084	0.618	0.950	1.084	0.944	0.953	0.765	0.799		
Samos*																
Chios	0.445	0.712	0.474	0.860	0.780	0.933	0.901	0.795	0.449	0.342	0.775	0.924	0.867	1.001		
South Aegean																
Dodecanese	1.391	1.874	1.673	0.943	1.106	1.041	1.340	1.324	1.511	1.249	0.956	0.609	0.744	0.692		
Cyclades	0.638	0.609	0.329	0.702	0.722	0.926	0.659	0.523	0.859	0.966	0.648	0.663	0.826	0.841		
Creta																
Heraklion	0.696	0.867	0.809	0.789	0.775	0.824	0.627	0.881	0.948	1.049	1.026	0.965	0.906	0.952		
Lasithi*																
Rethymnon	0.543	0.629	0.841	1.105	0.747	0.767	0.923	1.348	1.362	1.100	0.874	0.782	1.021	0.830		
Chania	0.727	0.810	0.715	0.513	0.671	0.783	0.527	0.614	0.743	0.740	0.721	0.962	0.976	0.963		
Eastern Macedonia, Thrace																
Evros	0.948	1.021	0.942	1.091	1.249	1.249	0.987	1.042	1.505	1.427	1.190	1.106	0.814	0.786		
Xanthi	0.714	0.657	1.111	0.956	0.901	0.901	1.136	0.869	1.166	1.292	1.318	1.094	1.388	1.200		
Rodopi	0.476	0.340	0.443	0.735	0.527	0.664	0.696	0.807	0.741	0.745	0.773	0.666	0.621	0.589		
Drama	0.952	1.902	1.604	2.108	2.240	2.180	2.126	2.034	1.421	1.284	1.179	0.991	1.350	1.332		
Kavala	1.326	1.265	1.518	1.499	1.287	1.373	1.284	1.213	1.008	1.037	1.144	0.841	0.844	0.845		
Central Macedonia																
Imathia	1.237	1.773	2.115	2.187	2.087	1.726	1.574	1.216	0.842	0.903	0.818	0.826	1.013	1.020		
Thessaloniki	0.993	1.130	1.020	1.096	1.068	1.004	1.059	1.111	1.195	1.188	1.233	1.182	1.172	1.140		
Kilkis	1.128	0.670	0.570	1.308	1.484	1.772	1.830	1.549	0.931	1.030	0.885	0.961	1.221	1.268		
Pella	0.560	0.594	0.756	0.930	1.117	1.041	1.077	0.822	0.703	0.704	0.852	0.942	0.954	1.007		
Pieria	1.271	1.349	0.868	1.332	0.834	0.919	1.109	1.303	0.996	1.085	1.285	1.034	1.060	1.006		
Serres	1.263	1.050	1.016	1.039	0.929	0.740	0.618	0.759	0.538	0.623	0.608	0.797	0.832	0.945		
Chalkidiki	0.694	0.734	1.066	0.602	0.515	0.663	0.733	0.751	0.716	1.075	0.835	0.709	0.824	0.606		
Western Macedonia																
Grevena*																
Kozani	1.381	1.533	1.615	1.267	1.312	1.349	1.410	1.657	1.269	0.010	1.206	1.318	1.265	1.130		
Kastoria	1.924	1.475	2.285	2.257	2.856	2.802	1.854	2.400	1.753	1.471	1.365	1.033	1.229	1.118		
Florina	1.644	1.607	1.951	1.957	2.228	1.678	1.821	1.092	1.166	1.271	1.477	0.987	0.765	0.914		

Epirus														
Ariá	1.539	1.563	1.428	1.206	1.611	1.186	1.505	1.401	1.235	1.006	1.054	1.203	1.257	1.338
Preveza	0.778	0.787	1.063	0.804	0.933	1.290	1.617	1.488	1.092	1.053	0.710	0.516	0.731	0.761
Thesprotia*														
Ioannina	1.325	1.155	1.232	1.054	1.057	1.027	1.030	1.258	1.176	0.897	0.884	0.937	1.022	1.004
Thessaly														
Karditsa	0.983	1.218	1.270	0.579	0.930	0.643	0.790	0.839	0.741	0.891	0.597	0.651	0.868	1.075
Trikala	1.616	0.739	0.673	0.957	0.879	0.983	0.876	0.912	0.818	0.682	0.909	0.760	0.739	0.744
Larissa	1.020	1.193	1.197	1.075	1.039	0.995	1.132	1.248	1.088	1.030	0.865	0.830	0.805	0.825
Magnesia	1.170	1.179	1.156	0.868	0.845	0.862	0.709	1.055	0.991	1.053	1.282	1.363	1.366	1.307
Ionian Islands														
Zakynthos	1.319	1.063	1.359	1.184	0.731	1.691	1.098	1.083	0.937	0.978	0.426	0.451	0.511	0.532
Corfu	0.951	1.061	1.276	1.231	1.004	1.288	1.341	1.334	1.148	1.336	0.926	0.603	0.739	0.945
Cephalonia*														
Lefkada*														
Western Greece														
Aetolia-Akarnania	0.949	0.994	0.907	1.474	1.116	1.051	1.255	1.214	0.983	0.939	1.040	1.199	0.932	0.871
Achaia	1.223	1.344	1.215	1.106	1.163	1.207	1.171	1.338	1.080	1.085	1.096	1.202	1.372	1.464
Elis	0.515	0.435	0.539	0.942	0.789	0.805	1.045	1.211	0.916	0.664	0.686	0.550	0.542	0.513
Sterea Ellada (Central Greece)														
Boeotia	1.408	1.136	1.213	1.477	1.377	1.213	1.316	1.276	1.323	0.942	0.919	1.013	0.869	0.965
Euboea	1.649	1.233	1.285	1.338	1.195	1.098	1.229	1.322	1.270	1.352	1.393	1.342	1.091	1.101
Evrytania*														
Phthiotis	0.839	0.679	0.377	0.644	0.581	0.672	0.530	0.368	0.453	0.639	0.892	1.129	1.088	0.983
Phokis	0.807	1.054	1.548	1.456	1.316	1.046	1.875	1.874	1.471	0.646	0.634	0.922	1.111	1.033
Peloponnese														
Argolis	0.796	0.495	0.663	1.096	0.966	0.844	0.834	0.880	0.917	0.689	0.619	0.551	0.877	0.930
Arcadia	1.216	0.934	1.068	0.949	1.022	1.328	1.316	1.332	1.060	1.044	0.815	0.882	0.889	0.752
Corinthia	0.721	1.010	0.906	0.668	0.757	0.664	0.724	0.977	0.973	0.967	0.937	0.821	0.764	1.033
Lakonia	0.335	0.321	0.613	0.771	0.692	0.529	0.714	0.706	0.540	0.539	0.606	0.616	0.536	0.485
Messinia	0.939	0.765	0.948	0.825	0.884	0.852	0.857	0.757	0.702	0.622	0.786	0.944	0.875	0.972
No estimates available														

Source: Hellenic Statistical Authority, Labour Force Surveys. E. Skoufoglou, 2018

CHAPTER 11

Internal migration and population change

Natural population change and apparent migration

Until now, we have examined the relation of a whole range of findings in the 2011 census with the population changes, by NUTS3 region, according to the annual ELSTAT estimates. This process has provided interesting indications. However, the main question as far as the current study is concerned is where people tend to move under the conditions of the crisis in Greece. Annual population changes have plenty to say about these moves, but they constitute no direct measurement of them.

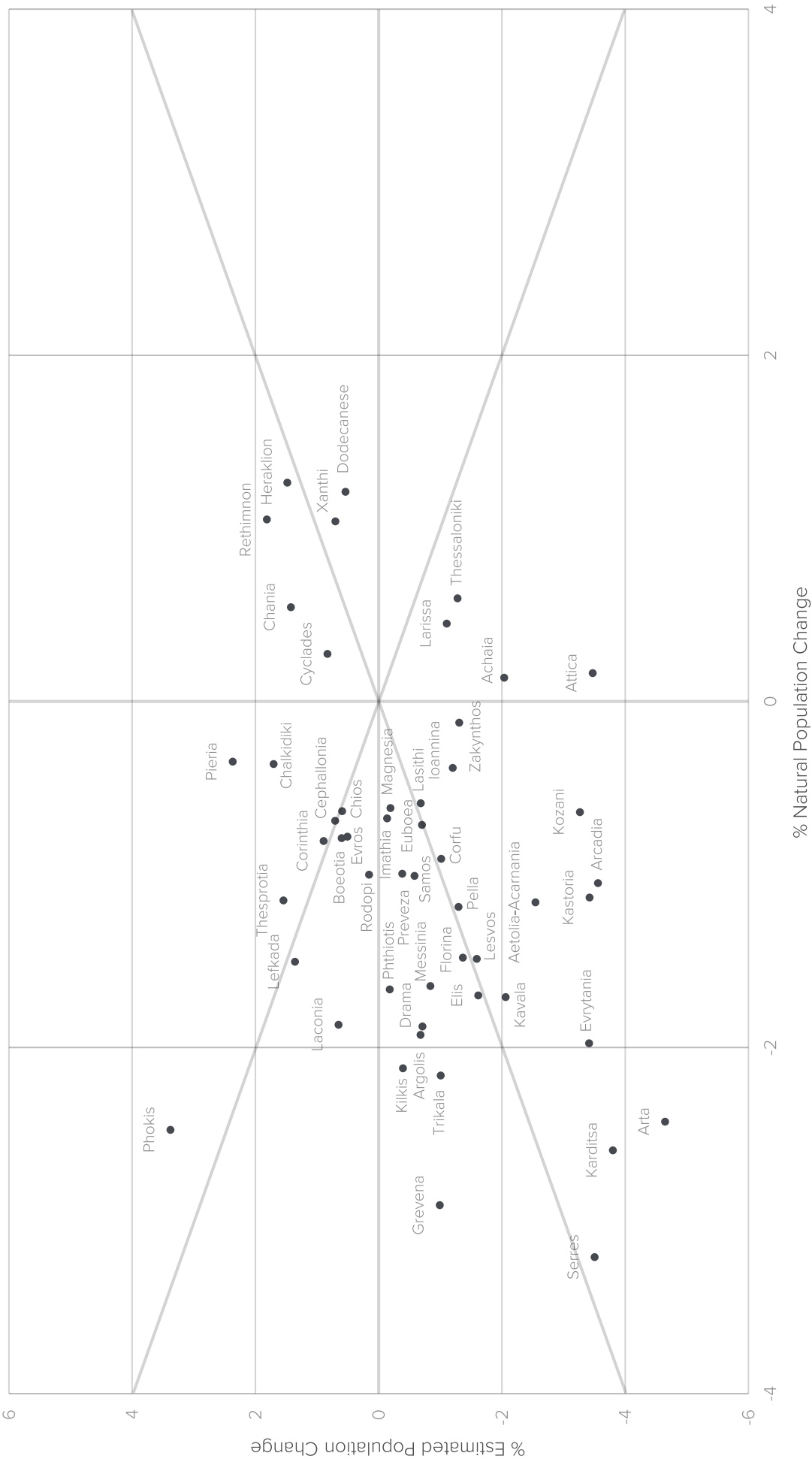
A way to deal with this issue would be to examine the so-called apparent migration, that is the difference between annual population estimates and the natural population change (births less deaths) as recorded in the civil registry offices across the country. Of course, this will be about estimates again, so the first reservation remains.

In Chart 11.1, estimated population changes throughout the period 2010-2014 by NUTS3 region are set against the respective natural population changes. Since estimates conventionally refer to the first day of each year, the period covered by the estimates under examination corresponds to the recorded births and deaths of the years 2010, 2011, 2012, and 2013 combined. It is not a surprise to find out that most regions have a deficit in their natural population change. Births in the country have been reduced substantially throughout the crisis: in 2014 they were almost 20% lower than in 2009, while deaths were 3% more.¹ Different combinations of natural population change trends and natural population change indicate different dynamics and different social features.

The chart is divided into four quartiles, corresponding to the four possible combination of the two juxtaposed quantities: positive estimated population change/positive natural population change, positive estimated population change/negative natural population change, negative estimated population change/negative natural population change, and negative estimated population change/positive natural population change. Moreover, the diagonal lines indicate the impact of apparent migration: for example, a region located in the quartile of positive estimated population change and positive natural population change will have only also a

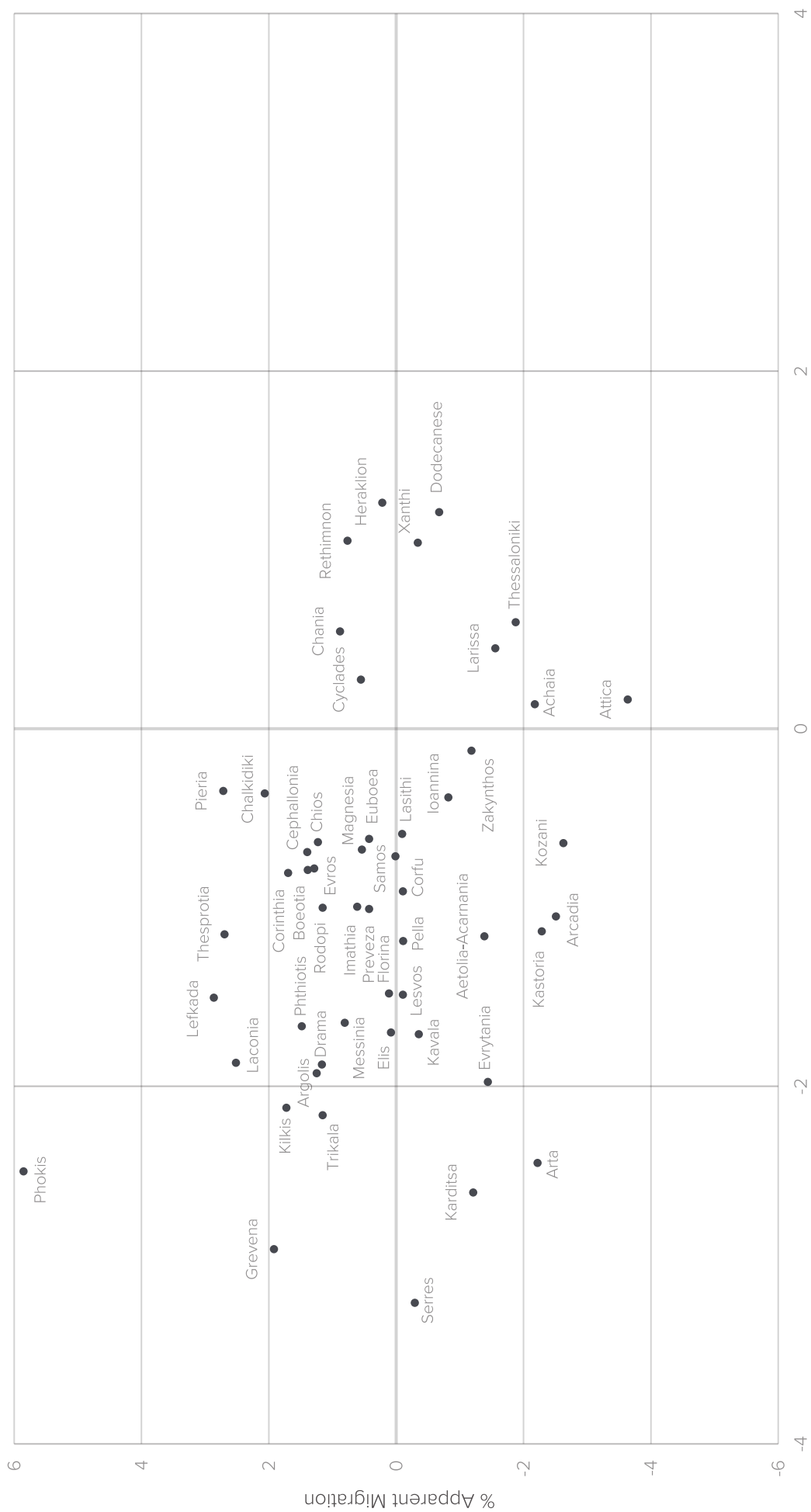
¹ Despite this impressive decline in births, though, the negative balance sheet in the natural population change (-31,290 persons) has not contributed more than 1/6 to the overall estimated population decrease in the country (-192,248 persons).

Chart 11.1 Estimated Population Change and Natural Population Change, by NUTS3 Regions, 2010-2014



Source: Hellenic Statistical Authority, Annual Population Estimates, Civil Registry Offices. E. Skoufoglou, 2018

Chart 11.2 Apparent Migration and Natural Population Change, by NUTS3 Regions, 2010-2014



Source: Hellenic Statistical Authority, Annual Population Estimates, Civil Registry Offices. E. Skoufoglou, 2018

positive apparent migration if its value is above the diagonal line. On the contrary, a value below the line would indicate a negative apparent migration, just not big enough to outweigh the respective surplus in the natural change. A direct correlation between the apparent migration and natural population change can be found in Chart 11.2.

According to the charts, the following taxonomy emerges:

- Growing regions combining positive natural population change and positive estimated population balance sheets. The group includes 6 regions, 5 of them being island regions (the Cyclades, the Dodecanese and 3 out of the 4 regions of Creta: Rethimnon, Chania, and Heraklion). Xanthi is the only mainland region found in the group. While the above-mentioned island regions are generally among the most dynamic regions in the country, it is interesting that most growing regions in terms of population (12), including the two top ones (Phokis and Pieria), do not belong to the group, as they present deficits in their natural population change. Among the group under study, 4 regions present also positive apparent migration rates (the Cyclades and the 3 regions of Creta), i.e. either high rates of incoming population or low rates of outgoing population (outmigration), or both. This means that they combine a young or relatively young population with reasons to attract or maintain inhabitants. The remaining 2 regions seem to have enjoyed an estimated population growth despite a negative apparent migration balance sheet. It is somewhat surprising to find among those two cases the Dodecanese, where a vigorous natural population change rate is combined with a particularly high rate of incoming population, as we shall see, and yet the estimated population growth achieved is only meagre and the apparent migration is seemingly negative, indicating a very high rate of outmigration as well. However, we shall see that this is not consonant with the data of the census about the period 2010-2011, where the region records an important internal migration surplus. The finding here may suggest a sharp deficit in the external migration balance sheet, a change of trajectory at some point between 2011 and 2014 (indeed, the deficit in the overall apparent migration is almost entirely due to the last year of the period under study, i.e. 2013), or a failure of population estimates. The Dodecanese, anyway, is one of the already mentioned cases with high levels of temporary or seasonal population, being at the same time a border region and a region of large-scale summer tourism, which renders estimated more difficult. Besides, positive apparent migration rates seem to have been restored a couple of years later.
- Regions growing in terms of their estimated population despite a negative balance sheet in their natural population change. In all 12 cases of this category, a strongly positive apparent migration makes up for the losses due to the surplus of deaths over births. The category includes 3 island regions (Lefkada, Chios, Cephalonia) and several regions close to the 2 metropolitan ones: Chalkidiki, Pieria, Phokis, Boeotia, and Corinthia. Finally, it includes Rodopi and Evros in Thrace, Thesprotia in Epirus, and Laconia in

the Peloponnese. It is interesting to note that the top manufacturing non-metropolitan region in terms of gross value added (Boeotia), the two top agricultural regions in terms of employment (Laconia and Rodopi), the top mainland region in tourism (Chalkidiki), and the most militarised region in the country, thus being also the top region in the NACE Rev.2 category “Public Administration/Defence/Education/Human Health”, are all to be found in this category. Negative balance sheets in the natural change of population indicate ageing population and lower degrees of urbanisation. The fact that migration is directed towards such regions is an indication of counter-urbanisation. This is also reinforced by the fact that no major city can be found among the regions in the category.

- Region depopulating only due to their deficit in the natural population change. This means regions that do enjoy a positive balance sheet in apparent migration, but this can't compensate for their losses because of their excess of deaths over births. Understandably, in Chart 11.2, those 14 regions are included in the same quartile as the previous category. The most interesting finding in this group is that it contains almost all the remaining regions around the two metropolitan ones: Kilkis, Imathia, Argolis, and even Euboea or Phthiotis. If the peri-metropolitan regions belonging to the previous group are added, it turns out that only two among the regions surrounding the two metropolitan regions have presented a negative apparent migration balance sheet (Serres, Pella), and even in those cases this deficit has only been marginal, their depopulation being mainly the outcome of strongly unfavourable natural population changes.
- Regions depopulating both due to a deficit in their natural population change and to negative apparent migration. This group obviously includes some of the most disadvantaged areas in terms of unemployment, lack of infrastructure (transports,² services, administration, universities etc.), and ageing indices. It also includes a considerable number of mountainous regions. However, not all regions of the category are necessarily poor in terms of GDP per capita: although some of the poorest regions of the country are found among them (Karditsa, Arta, Serres, Evrytania, Kastoria), there are also cases well above the national average (Kozani, Arcadia). It is nevertheless certain that even the latter, relatively rich, regions, apart from their developed industrial nuclei, also include extended mountainous areas that display the social features of the rest of the cases in this category. In additions, it includes four island regions with negative apparent migration rates: Lesvos, Lasithi, Corfu, and Zakynthos. Of course, in the three former cases the apparent migration is only marginally negative, while in the latter case it is considerable and what is marginal is the negative balance sheet in the natural population change. At least for Lasithi, Corfu, and Zakynthos, which are among the top regions in terms of GDP per capita and, moreover, have resisted the crisis better than the rest of the country, this finding is rather surprising. Nonetheless, the same as in the

² Since the beginning of the crisis, though, the map of transport infrastructure has been partly transformed through the completion of highways in the Peloponnese, Western Greece, Central Greece/Thessaly, and Macedonia/Epirus (Egnatia).

case of the Dodecanese, the finding is not consonant with the recorded balance sheets of internal migration during the last year before the 2011 census, which we shall deal with next: among the four island regions under study, only Corfu has recorded a minor deficit.

- Finally, there is the group of depopulating regions despite their stable surplus of births over deaths, which indicates a younger population. This category includes only four regions, which nevertheless constitute very highlighted cases: Attica, Thessaloniki, Achaia, and Larissa, that is the four most populated mainland regions (and 4 out of the 5 biggest ones across the country), including the four biggest mainland cities. This finding reinforces our previous conclusions: since all regions of the two metropolises and the top cities in the mainland maintain favourable balance sheets of natural population movements, their apparent depopulation means that they are not attractive anymore under the conditions of the crisis. This is an explicit indication of counter-urbanisation pressures. To those four regions, one should add Ioannina, which is also among the regions with a negative apparent migration balance sheet, combined in this case with a negative natural population change. The only region of the group of the next-6 cities exhibiting a modest apparent migration surplus is Magnesia, the region of Volos.

Incoming Population

We should now deal with the most important reservation regarding the conclusions drawn so far about the relocation of population, which has been pinpointed before: estimates are always estimates, and thus possibly divergent from real facts.

As already mentioned in the chapter about general counter-urbanisation trends, a measurement of the census that is highly relevant with what we are examining here and can help lift the above reservation is the change of residence during the year before the census, that is during the second quarter of 2010 and the second quarter of 2011 approximately. Apart from deriving from census data instead of estimates, this measurement has also the advantage of offering the possibility to isolate internal migration, whereas the apparent migration makes no distinction between internal and external population flows (we shall focus on internal migration alone in the following chapter). On the other hand, it has the disadvantage of referring to a single year, and thus miss longer-term trends – this is why our previous analysis was necessary to provide the general framework.

The published tables of ELSTAT give numbers for the incoming population in each region, but not for the outgoing population, so they can't provide a full balance sheet of internal migration during that one-year period. We have dealt with this problem by signing a convention with ELSTAT for access to unpublished data, which is analysed in the following chapter. Nevertheless, it is worth examining the published tables first, since they offer information about how many people have moved in, and thus a certain criterion to assess whether the population is moving towards regions with given features or not.

A reasonable method to compare trends before and after the 2007-2008 crisis would be

to juxtapose the corresponding fields of the censuses of 2011 and of 2001. This would make it possible to compare the periods 2010-2011 and 2006-2011 with the periods 2000-2001 and 1996-2001 respectively, the latter two being situated comfortably before the crisis. Indeed, the same question was included in the censuses of 2001 and of 1991. However, it is impossible to compare the respective figures, because they are given at levels that cannot be interpreted in each other. The published tables of the 2001 census, as well as the ones of 1991, provided only numbers of inhabitants that used to live in a different (from the current one) municipality or community, according to the administrative division of the time, regardless of the administrative or statistical level at which the data was regrouped in each case. The tables of the 2011 census also provide numbers of inhabitants that used to live in a different municipality 1 and 5 years ago, by contemporary municipalities. The problem is that the administrative division of the country has changed since 2001, ending up with substantially larger municipalities. The category “different municipality” in 2001 or in 1991, thus, included a large number of cases that in the present context would be classified as “same municipality as the present one”. If for each contemporary municipality we just added the incoming population of its constituent former municipalities in the previous census, we would end up with much higher numbers than the real ones, since a large amount on internal movements would have been included in the calculation. Based on the available tables, there is no way to calculate these actual numbers, even approximately, and therefore there is no way to extract comparable figures.

The ELSTAT tables for the census of 2011 also record the number of inhabitants that have moved from other regions or regional units to the current one, that is referring to much broader entities. If the previous censuses had provided the respective numbers at the level of prefectures as well, it would be possible to compare the two sets of data, through a simple method that shall be described below. Only that they don't. So, comparability is not feasible at this level either.

Theoretically, a researcher could apply for relevant unpublished tables, if any, or for the original micro-data of the censuses to combine them in a different way, so as to restore comparability, but that would be an enormous task in itself, with no guaranty for an outcome that would be worth the effort and, anyway, far beyond the range and capability of the current research.

Other ways to utilise this set of data must be devised, therefore. A legitimate idea is to juxtapose the trends recorded in the 2011 census regarding this specific field and the ones detected through the examination of the annual estimates of the population. In this case, the respective tables are quite favourable for comparison. The most detailed level that ELSTAT provides its annual estimates about is the NUTS3 regions, whereas in the tables of the census the incoming population is registered by regional units. As explained before, the two classifications don't coincide, because certain NUTS3 regions (former prefectures) comprise 2 regional units or more. The same problem mentioned just above appears also here: the sum of the incoming population of the constituent units is bigger than the actual incoming population of an aggregate NUTS3 region, as it also includes movements in between those constituent

units. However, in this case, the obstacle is not insuperable.

In all cases apart from Attica, NUTS3 regions consisting of more than one regional unit comprise either a mainland unit and a nearby island unit (Kavala - Thasos, Magnesia – Sporades), or a big island along with a much less inhabited one (Lesvos – Lemnos, Cephalonia – Ithaca, Samos – Ikaria), or a complex of islands (Cyclades, Dodecanese). In the first case, it is evident, from the far smaller population of the island regional unit than the one of the corresponding mainland unit, that the population exchange between the two entities is not decisive relative to the total incoming population of the aggregate NUTS3 region. The same can be maintained for the second case too, although the proportion of the population between the big and the small constituent island unit is not equally overwhelming. In the Dodecanese, one of the 4 constituent units (Rhodes) still concentrates nearly two-thirds of the total population of the complex, but in the Cyclades, no such leading unit can be found among the 9 constituent ones. However, in all the above exclusively island NUTS3 regions, the proportion of the incoming population appertaining to the category “from a different regional unit of the same region”, that is from different islands on the South Aegean in general, is particularly low, which is an indication that mobility among islands is relatively low (this is not surprising, given the bad transport connection among islands, which is in many cases only feasible via ports of the mainland). In all the above cases, therefore, we will consider that a satisfactory approximation of the actual incoming population to the aggregate NUTS3 region can be given by the sum of the categories “from different regions” and “from abroad” of all the constituent regional units, adding the entries in the category “from a different regional unit of the same region” weighted according to the population of the regional units that are not included in the aggregate NUTS3 region as a percentage of the whole regional population. This means subtracting a proportion of the number in the entry for each constituent unit equal to the proportion of all other constituent units (combined) with the total population of the region. This presupposes the assumption that movements among the regional units are relative to their population, which is arbitrary, but it returns figures not substantially different than the ones that would be taken otherwise (if, for example, we completely omitted possible population exchanges among constituent units). The assumption should be considered legitimate for our purpose, therefore.

In the case of Attica, things are much easier, because all regional units regroup into a single region, which coincides with the titular NUTS3 region. So, the only thing to do is to sum up the categories “from different regions” and “from abroad” for the 8 constituent units, and completely omit the category “from a different regional unit of the same region”.

Once this process of adaptation is conducted, one comes up with a table of incoming population by NUTS3 regions suitable for comparison with population and GDP estimates or other data available at the level of NUTS3 regions. In our case, it finally turned out that we didn't need to do that, as the required information to do the adjustment was provided in the unpublished tables obtained by the Eurostat. The above methodology is mentioned only to permit the reader to cross-check the conclusions or elaborate further based on published data.

Let's now proceed to some initial remarks about the incoming population, starting from the

Capital region. Apart from presenting a sharp estimated population deficit in the crisis, Attica also presents the lowest rate of incoming population in 2011 (1.68% of its permanent population). According to the findings of the census, during the last year before it, 54,504 people left Attica, while only 37,786 came in from other regions, which corresponds to a net deficit of almost 31%.³ It is characteristic that, during the last year before the 2001 census, the picture was completely different: the number of newcomers (68,713) exceeded that of outgoing inhabitants (66,270) by a little more than 3.5%. While, as evidenced before, a process of urban exodus was already underway before the crisis, to intensify further after its outbreak, the negative internal migration balance sheet of Attica is a phenomenon of the era of the crisis entirely. It is interesting, though, that this deficit is the outcome of a collapse in the number of incoming inhabitants rather than of an increase in the number of residents leaving the region, which is, in fact, smaller than the one back in 2001.

We take similar results if we consider relocations compared with 5 years ago: from a surplus of nearly 10% between 1996 and 2001, Attica has shifted to an internal migration deficit of approximately 22,6% throughout the quinquennial 2006-2011. This time, the number of outgoing residents in 2006-2011 exceeds the one back in 1996-2001, but again to an extent clearly lower than its decline in terms of incoming population: in 2011, the incoming population since 2006 has been more than 18,5% lower than the one between 1996 and 2001, whereas outmigration was just above 12,5% higher than the one during the latter period.

It seems thus that the relative disadvantage of Attica lies in its inability to attract newcomers rather than in a massive wave of abandonment of the Capital city. It is very probable that, at least in some important cases, the inverse is the case for certain growing regions: their relative advantage it's rather their ability to maintain their own population than their attractiveness to newcomers. Both phenomena relate to the fact that the general mobility of the population⁴ among different NUTS3 regions (that is, middle- and long-range mobility) has been about 21% lower during the period 2010-2011 than in the last year before the 2001 census, which is a substantial reduction.⁵ In general, the crisis doesn't foster mobility, at least not at this level of spatial analysis.

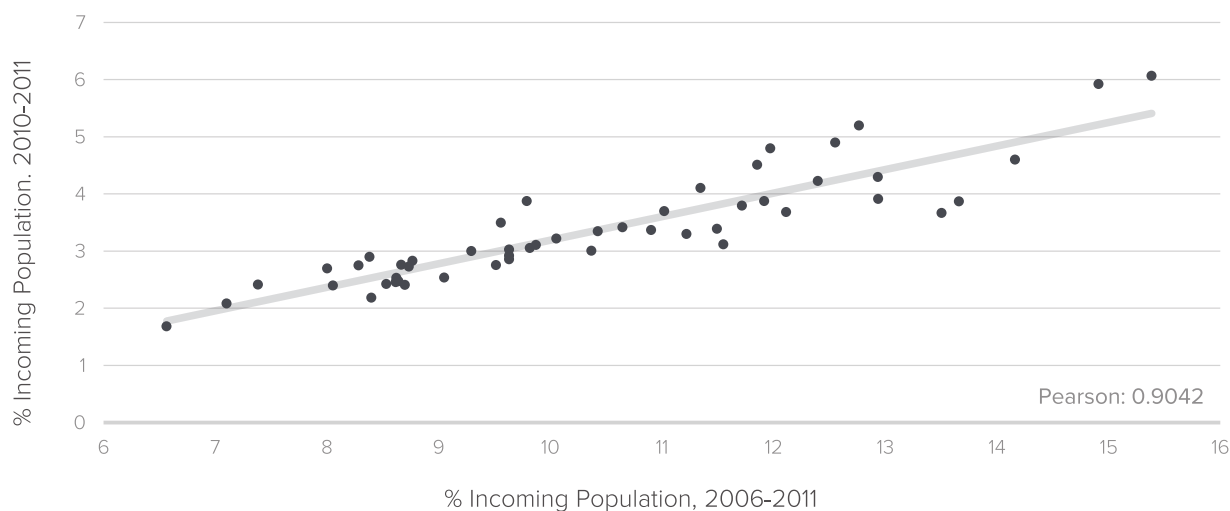
An additional, more particular, conclusion is that, despite all big divergences among the

3 In this case, it is possible to calculate the balance sheet based on the published data because, while ELSTAT does not provide tables correlating newcomers by regional unit with their previous regional unit of residence for the census of 2011, it does provide a respective table for (NUTS2) regions – and Attica happens to be a region by itself.

4 Changes of the place of residence in comparison with the one or five years ago are a measurement of mobility only in one sense of the word, and at a certain level of abstraction, since there is no way to know if during the period of reference more relocations have taken place. But, of course, a current location of residence that coincides the one at the beginning of the period of reference is very probable to indicate a fixed place of residence throughout the whole period.

5 We take this number by comparing the table on which we have based our calculations regarding the period 2010-2011, after adjusting them with the technique described earlier in this chapter, with the table of the 2001 census where the outgoing population towards settlements in other NUTS3 regions (during the period 2000-2001) is given. The same table provides the number of residents who have left each of the remaining NUTS3 regions for Attica, making it thus possible to calculate the incoming domestic population in the region of the Capital – but not in any other NUTS3 region for the time being.

Chart 11.3 Incoming Population 2010-2011 as a function of the Incoming Population 2006-2011, by NUTS3 Regions



Source: Hellenic Statistical Authority, 2011 Census. E. Skoufoglou, 2018

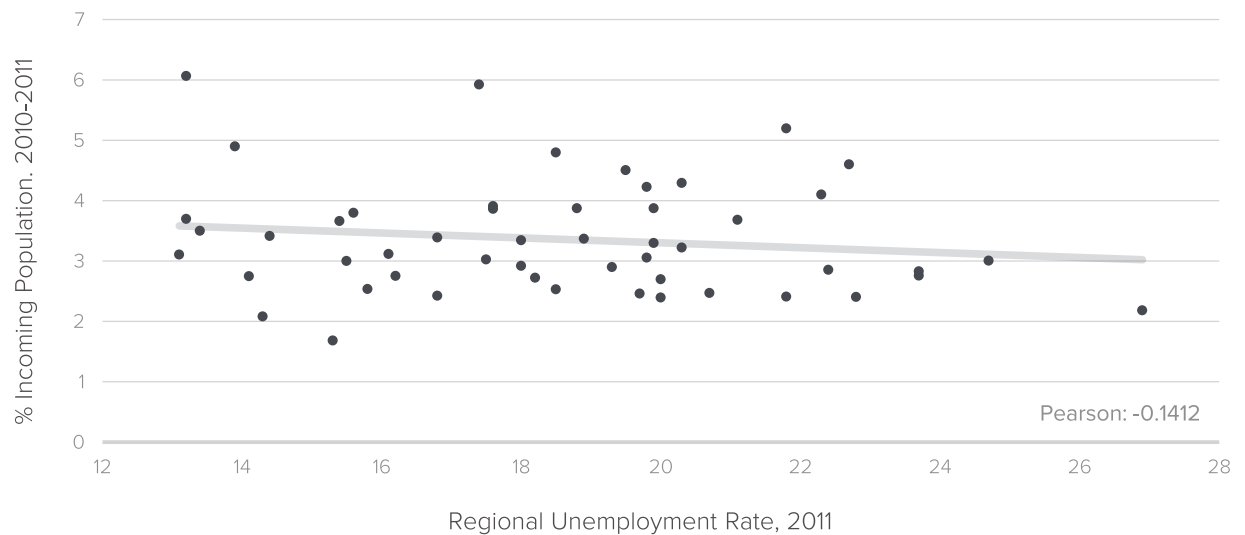
different cases, none of the generally most dynamic NUTS3 regions, according to our previous conclusions, is so attractive as to exceed the rates of incoming population (in the period 2010-2011) to the regions with a structurally high proportion of temporary or seasonal population. Both last points are consistent with the hypothesis that, amid the crisis, what is most decisive is the defensive capacity of sectors, fractions of the capital, and geographical areas in the context of the antagonism for the distribution of the burden of destruction, rather than their direct capacity of profit-making.

In the following analysis, we shall be based on the data regarding relocations during the last year before the census. We could have used the data about the place of residence 5 years before the census, instead. The results would give a picture of longer-term trends in internal migration. However, the general conclusions would be, in all likelihood, similar. This is evident in Chart 11.3, which depicts the incoming population since 2010 as a function of the respective incoming population since 2006, by NUTS3 regions: the two quantities are almost directly proportional, and all data gather closely around the trend line. This is not much of a surprise, since the largest part of the period 2006-2011 is already dominated by the years of the crisis. Most deviations seem to occur in the highest part of the chart, which comprises regions with a high proportion of temporary or seasonal population. Such regions are more susceptible to annual oscillations, especially when depending on tourism, a sector that is particularly affected by the short-term economic situation, and by short-term conditions in general. Indeed, among the 10 top positions of the chart, one can find 8 regions with a high proportion of summer tourist activities, and 9 regions with a high proportion of temporary population (the previous 8 plus Evros).

At this point, however, we come across an interesting reversal: whereas mobility on the inter-regional level has been substantially lower in 2010-2011 than one decade earlier, the respective mobility in the last quinquennials before the two censuses doesn't follow the same

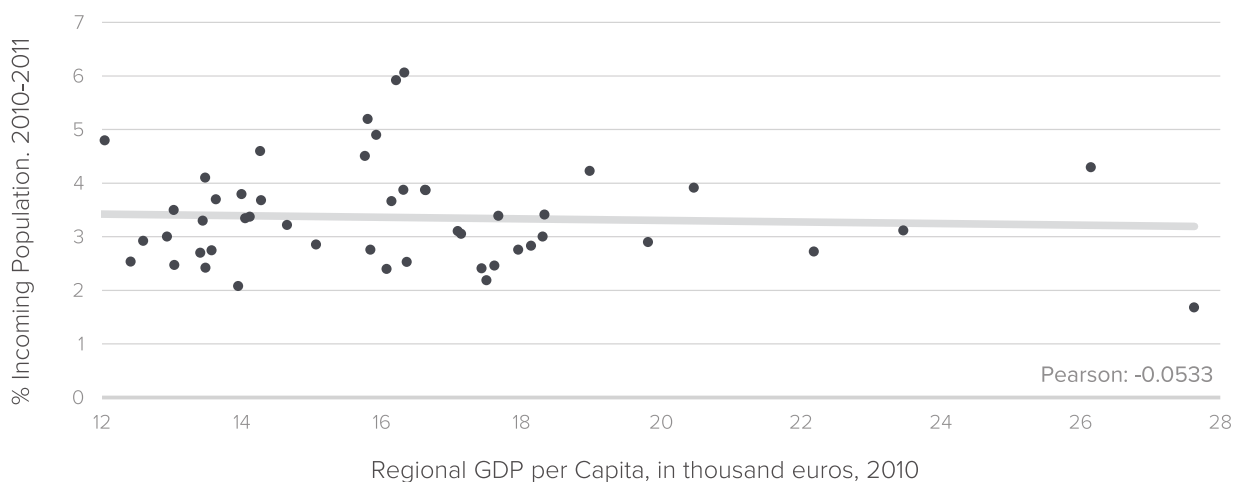
pattern. On the contrary, the overall number of relocations among NUTS3 regions in the period 2006-2011 exceeds the respective number of the period 1996-2001 by more than 10%. It is not something surprising to see mobility grow over time, as transport infrastructures improve, communication networks expand, precarity proliferates etc. In our case, though, this only makes its subsequent regression more remarkable and highlights its causal connection with the crisis. It is not possible to point out the exact time of the shift from elevated, compared to the past, mobility rates to reduced ones. Nevertheless, we should rather assume that this happened towards the end of the period, maybe as soon as the public debt crisis emerged and the bail-out and austerity programme was inaugurated.

Chart 11.4 Incoming Population, 2010-2011, as a function of the Regional Unemployment Rate, 2011, by NUTS3 Regions



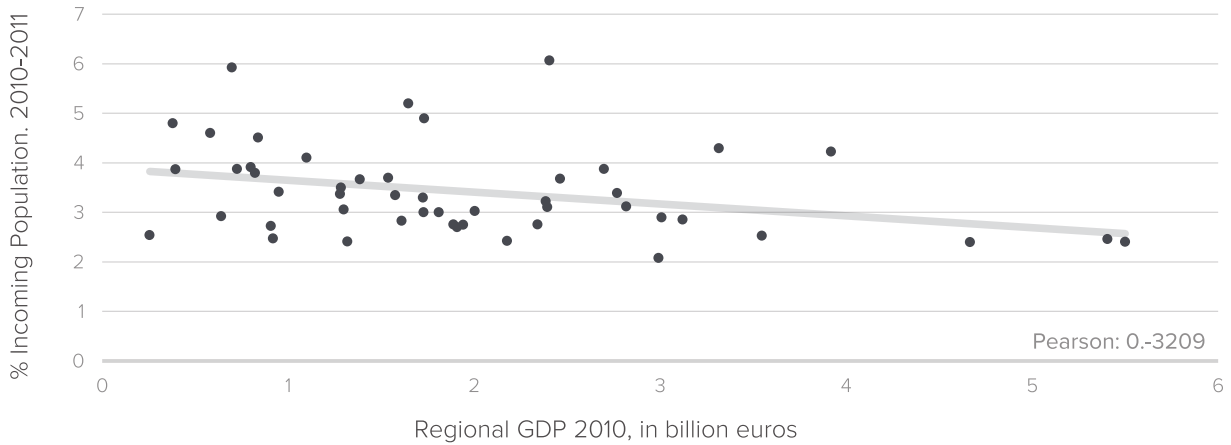
Source: Hellenic Statistical Authority, 2011 Census. E. Skoufoglou, 2018

Chart 11.5 Incoming Population, 2010-2011, as a function of the Regional GDP per Capita in 2010, by NUTS3 Regions



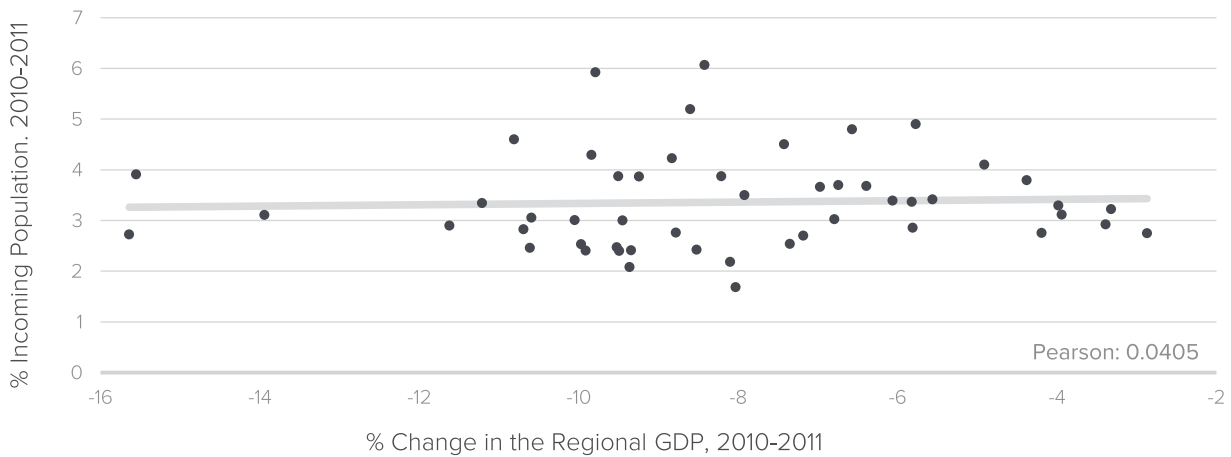
Source: Hellenic Statistical Authority, 2011 Census, Annual Regional Accounts. E. Skoufoglou, 2018

Chart 11.6 Incoming Population, 2010-2011, as a function of the Regional GDP in 2010, by non-metropolitan NUTS3 Regions



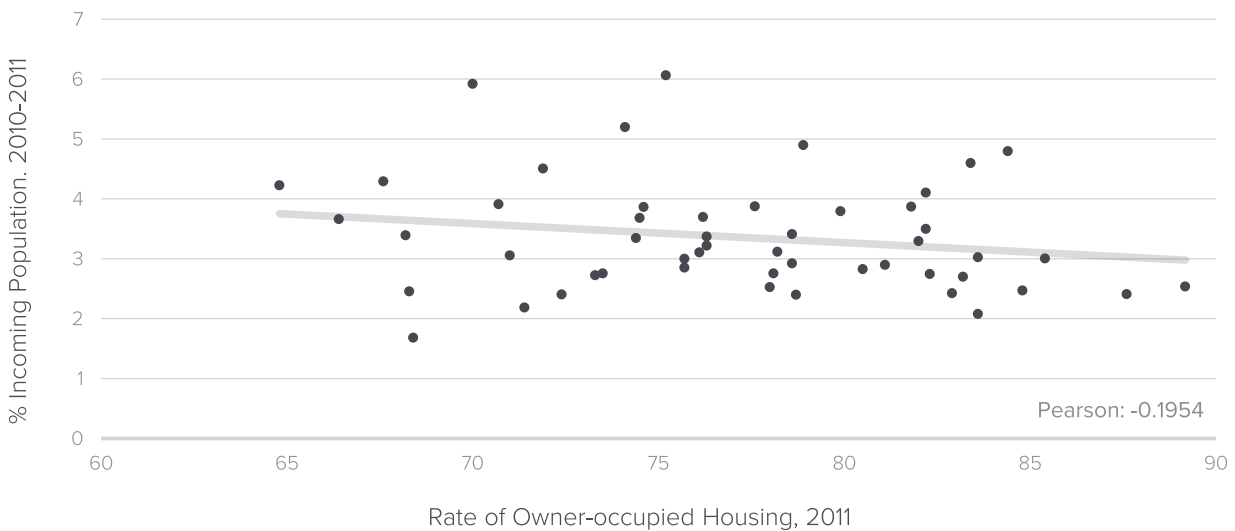
Source: Hellenic Statistical Authority, 2011 Census, Annual Regional Accounts. E. Skoufoglou, 2018

Chart 11.7 Incoming Population, 2010-2011, as a function of the Change in the Regional GDP, 2010-2011, by NUTS3 Regions



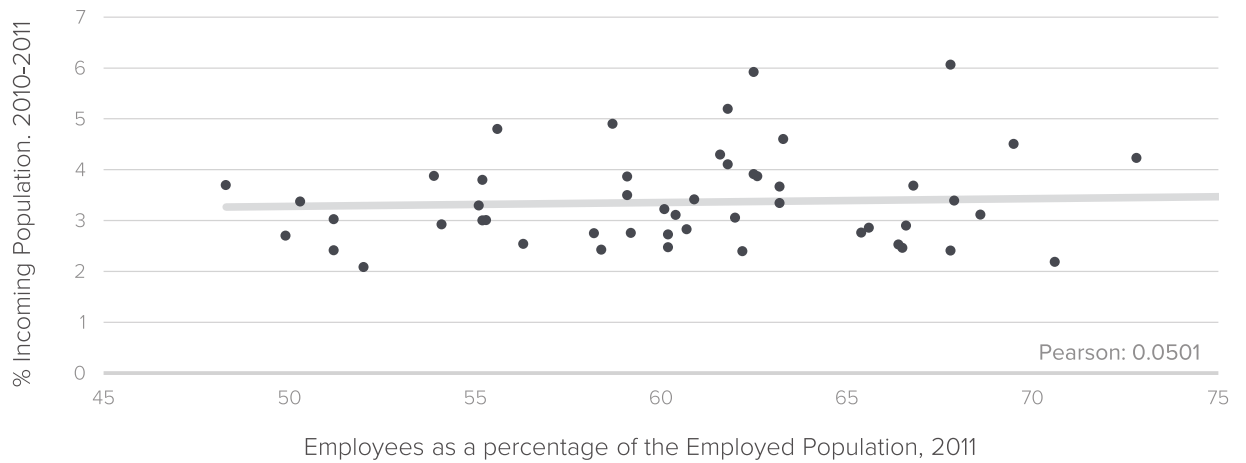
Source: Hellenic Statistical Authority, 2011 Census, Annual Regional Accounts. E. Skoufoglou, 2018

11.8 Incoming Population, 2010-2011, as a function of the Rate of Owner-occupied Housing, 2011, by NUTS3 Regions



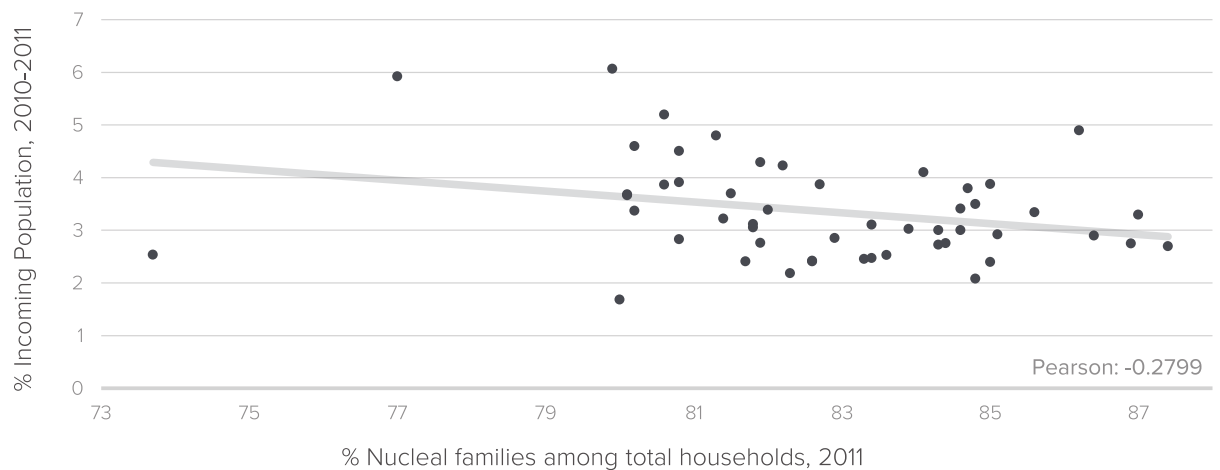
Source: Hellenic Statistical Authority, 2011 Census. E. Skoufoglou, 2018

Chart 11.9 Incoming Population, 2010-2011, as a function of the Rate of Employees among the Employed Population, 2011, by NUTS3 Regions



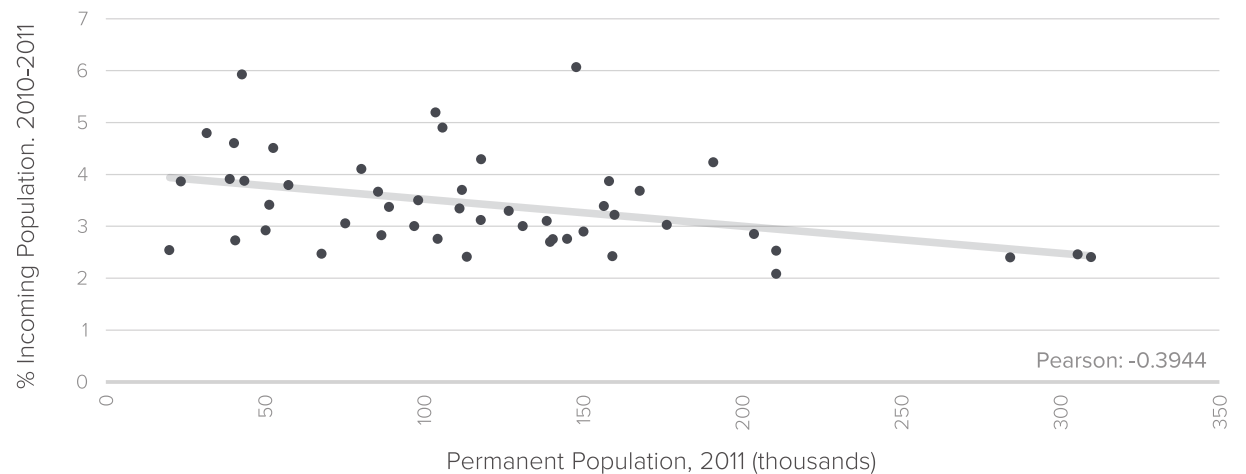
Source: Hellenic Statistical Authority, 2011 Census. E. Skoufoglou, 2018

Chart 11.10 Incoming population, 2010-2014, as a function of the percentage of Nuclear Families among Total Households, 2011, by NUTS3 Regions



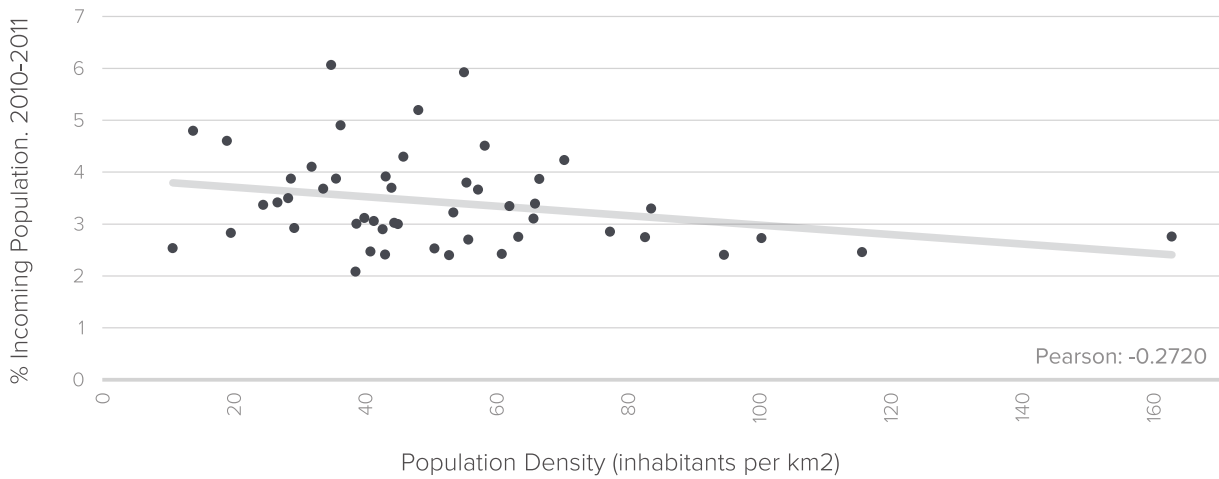
Source: Hellenic Statistical Authority, 2011 Census, Annual Population Estimates. E. Skoufoglou, 2018

Chart 11.11 Incoming Population, 2010-2011, as a function of the Permanent Population in 2011, by non-metropolitan NUTS3 Regions



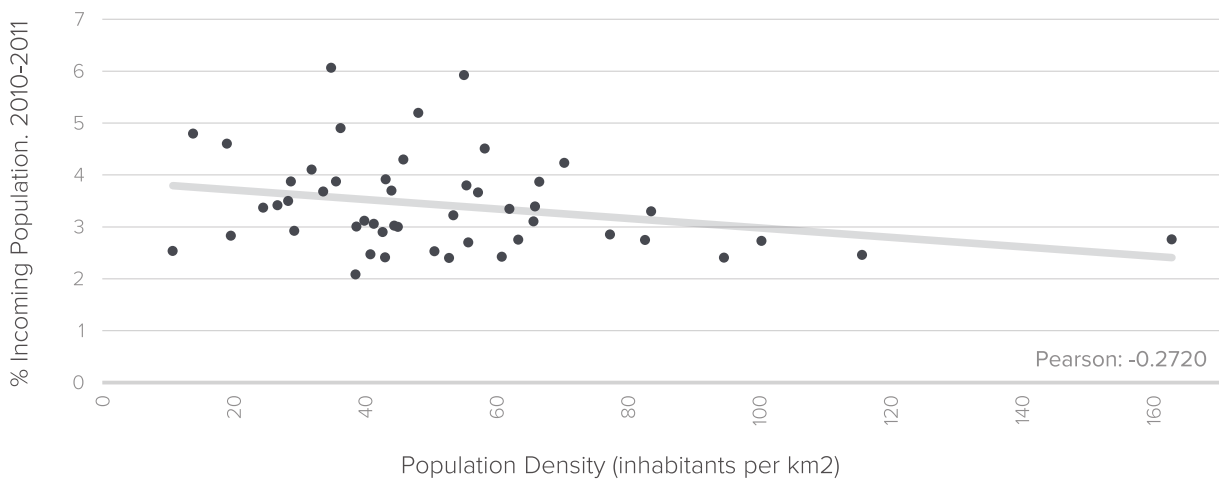
Source: Hellenic Statistical Authority, 2011 Census. E. Skoufoglou, 2018

Chart 11.12 Incoming Population, 2010-2011, as a function of Population Density, 2011, by non-metropolitan NUTS3 Regions



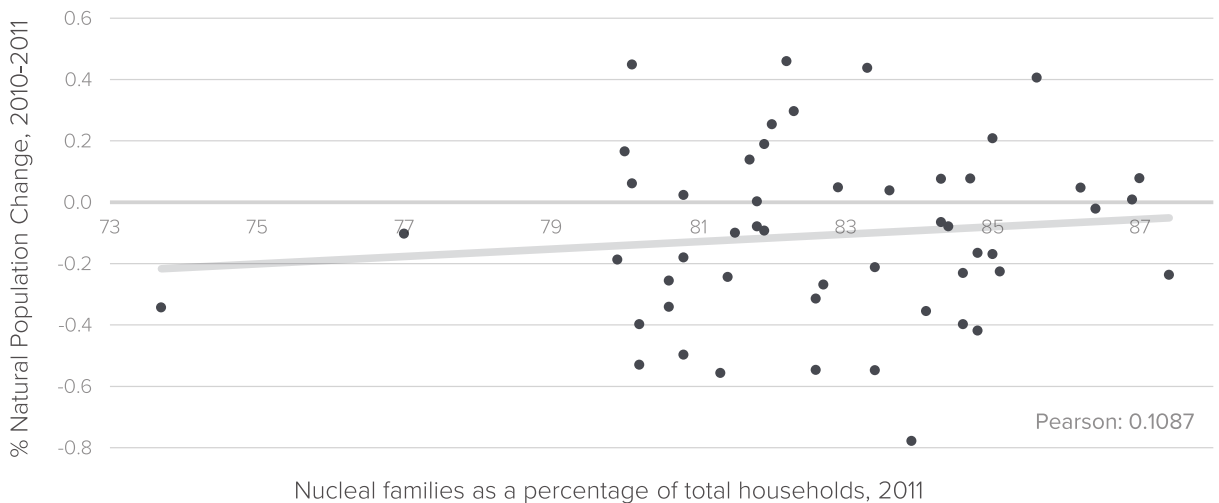
Source: Hellenic Statistical Authority, 2011 Census. E. Skoufoglou, 2018

Chart 11.12 Incoming Population, 2010-2011, as a function of Population Density, 2011, by non-metropolitan NUTS3 Regions



Source: Hellenic Statistical Authority, 2011 Census. E. Skoufoglou, 2018

Chart 11.13 Natural Population Change, 2010, as a function of the percentage of Nuclear Families among Total Households, 2011, by NUTS3 Regions



Source: Hellenic Statistical Authority, 2011 Census, Civil Registry Offices. E. Skoufoglou, 2018

Incoming population and socio-economic features

It would be interesting to revise the charts of the previous chapter, substituting the estimated population change with the incoming population over the period 2010-2011, according to the census. We thus come up with a series of charts presenting the incoming population by NUTS3 regions as a function of the unemployment rate in 2011 (Chart 11.4), of the GDP per capita in 2010 (Chart 11.5), of the (absolute) GDP in 2010 (Chart 11.6), of the relative change in the GDP during the period 2010-2011 (Chart 11.7), of the rate of owner-occupied housing (Chart 11.8), of the percentage of employees among the employed population (Chart 11.9), of the percentage of nuclear families among all households (Chart 11.10), of the permanent population recorded in the census of 2011 (Chart 11.11) and of population density at that same year (Chart 11.12).

The new charts provide information about how each quantity or feature might relate to the ability of a region to attract newcomers, regardless of its overall population change. Of course, migration flows are part of the population change, and it is thus reasonable to expect that, at least in some cases, the recorded tendencies will be similar to the ones detected in our previous elaboration.

Indeed, this is clearly the case with charts 11.4, 11.5, 11.7 and 11.8. Trend lines follow the same direction as the ones in the respective charts about estimated population changes, with not much different angles. The degree of correlation of the data, as measured by the Pearson correlation coefficient but also visually observed in the dispersal of the values around the trend line, is apparently of the same scale as well. However, the situation in the other charts is not exactly the same.

A first divergence regards the GDP in 2010. If all 51 regions were included in the respective charts, both the incoming population during the last year before the census and the estimated population change between 2010 and 2014 would appear as negatively related to the absolute level of the GDP. However, as already mentioned in the relevant chapter, the proportion of the regions of Thessaloniki and, most importantly, Attica is so big as to fully distort the charts. We have, therefore, chosen to include only the 49 non-metropolitan regions. Among those regions, there is apparently no particular relation between estimated population changes and the GDP at the beginning of the period under consideration. On the contrary, in the new chart, the incoming population as a percentage of the permanent population in 2011 is virtually reversely related to the level of the GDP achieved in 2010, although no linear correlation between the two can be established. This difference is not particularly important, if one considers, among other things, what has been repeatedly underlined throughout this thesis: the relations that we are exploring in the charts are not real functions, as there is no evidence that any of the quantities under scrutiny depends exclusively or mainly on any other of the remaining quantities. All this aside, however, the new finding reinforces the conclusion that the GDP in absolute numbers has not been a decisive factor in attracting internal migration, although, among non-metropolitan regions, a higher GDP per capita means also a slightly higher possibility to attract population.

The second differentiation is about the proportion of nuclear families. A negative relation is recorded between the percentage of such families among the households by NUTS3 regions

and the incoming population since 2010, measured by the inter-regional relocations declared in the census. On the contrary, the respective relation between the former percentage and the estimated population change between 2010 and 2014 is neutral or even slightly positive. If estimates are accurate enough, this divergence probably means that, despite being somewhat connected to population growth, a big proportion of nuclear families is not an attraction for new inhabitants. That is, rejoining a nuclear family household doesn't seem to be an important incentive to change one's place of residence on the inter-regional level. And yet, the question is: why does a high proportion of nuclear families correspond to an even marginally bigger possibility to enjoy population growth? Immigration doesn't seem a sufficient reason, especially since a high percentage of nuclear families is not consonant with a high proportion of immigrants from abroad, who are rarely members of such households. Natural population change surpluses may be an explanation, and indeed it would be reasonable to assume that nuclear families, as the dominant form of family, are related to higher levels of fertility. A relevant graph (Chart 11.13) does show a somewhat positive relation between the proportion of nuclear families and the possibility for a better balance sheet in the natural population change, although the Pearson correlation coefficient is very low once again. However, it is possible, and in some regions, in fact, certain, that the above phenomenon is also explained by low numbers of outgoing internal migrants. This is apparently the case in Corinthia and Pieria, which combine high proportions of nuclear families and positive estimated population growth rates with rates of incoming population below average, and negative (the former) or hardly positive (the latter) natural population change balance sheets. In the cases of Chalkidiki and Thesprotia, it is doubtful whether the high percentage of incoming population is enough to explain the strong upward tendencies in the estimated population, given the marginal surplus (in the first instance) or even deficit (in the second one) of births over deaths. If all this is correct, it means that, at least in such cases, an existing nuclear family household is a reason to avoid an inter-regional change of residence, although it is not a sufficient reason to attract residents in the region. Therefore, it is possible that the tendency to rejoin family households in the region of origin is over-exaggerated in the public discourse.

One more remark should be probably added here, as it is somehow relevant to the previous one. We have already demonstrated a negative relation between the rate of home-ownership (owner-occupancy), according to the 2011 census, and estimated population changes in the period 2010-2014 (not in the sense of a linear or other mathematical correlation, but of the possibilities for a high value in the two quantities moving in opposite directions). The same pattern can be distinguished in the chart relating the rate of owner-occupancy to the proportion of the incoming population over the period 2010-2011 (Chart 11.8); however, the downward trend line is visibly less sharp here. This fact may suggest that, as soon as house rents have started decreasing, and taxation has started increasing, the already detected negative correlation between population moves and the rate of home-ownership has been further reinforced.

Finally, an interesting reversal emerges concerning population densities. According to Chart 8.7, the bigger the population density of a NUTS3 region is, the more probable it is for

its estimated population to have grown during the period 2010-2014. On the contrary, Chart 11.12 demonstrates that the proportion of domestic newcomers among the regional population tends to be much lower as population densities grow. The picture remains approximately the same when examining regional populations instead of densities, except that, in this case, we switch from an almost neutral to a negative tendential relationship (Charts 8.5 and 11.11). Again, all four charts only include non-metropolitan NUTS3 regions, because the disproportionately big populations and high densities of Thessaloniki and Attica would make it impossible to read them – besides, there are plenty of other sources to monitor the two metropolitan regions through. Among non-metropolitan regions, though, internal migration tends to be directed towards more thinly populated regions. This picture is further reinforced by the depopulation process detected in both metropolitan regions. And yet, more densely populated non-metropolitan regions tend towards population growth (though metropolitan ones don't). This fact must be attributed to immigration, to lower rates of internal outmigration and/or to natural population change surpluses. The latter feature is definitely favoured by high densities, as our previous analysis, common sense, as well as the strongly upward trend line in Chart 11.14 certifies (if the specific case of Corfu is excluded, we even take a Pearson Coefficient that suggest a certain level of correlation between the two quantities).

Mapping incoming population

A more concise overview of the geographical distribution of incoming internal migration may be given in Maps 11.1 and 11.2, which refer to the period 2010-2011 and 2006-2011 respectively. In each map, NUTS3 regions are classified into quantiles symmetrically distributed around a point of reference, the median value. It is important to examine these maps along with the one depicting estimated population changes over the period 2010-2014 (Map 8.6).

According to Map 11.1, regions with a high or relatively high proportion of incoming population may be divided into the following categories:

- Island regions, or at least most of them (except for Zakynthos, Corfu, three out of the four regions of Crete). Apart from hosting intensive summer tourist activities, some of these regions (Lesvos, Samos, Chios, the Dodecanese) also bear the characteristics of border areas (high proportions of temporary population, military camps and infrastructure, specific incentives to counterbalance isolation such as tax exceptions etc.). In most cases, high rates of incoming population are combined with an estimated population growth during the period 2010-2014, but this is not the case in the regions of Lesvos and Samos.
- Certain regions adjacent to Thessaloniki (Chalkidiki, Pieria, Kilkis). While the two former regions are among the most dynamic in the years of the crisis, functioning as satellites around Thessaloniki, the latter is losing population despite its high level of incoming residents.
- Regions by the North-Eastern borders of the country (the three regions of Thrace plus

Drama). Those mainland distant regions share some of the characteristics of border island areas but not their isolation in terms of transports (neither their tourist attractions, though). This may be relevant to the ability of all 3 regions of Thrace to translate their high rates of incoming population into population growth, according to the ELSTAT estimates (although Xanthi also presents one of the biggest natural population change surpluses across the country). This is not the case in Drama, on the contrary. If we consider the map referring to the period 2006-2011, we find Kavala instead of Drama among the regions with a proportion of incoming population higher than the median value, but again this is not reflected in population growth.

- Most regions of Epirus (Ioannina, Thesprotia, Preveza). The Northern part of Epirus has been favoured by the new highway that extends across all the northern part of Greece, transforming Igoumenitsa into a key port on the way from Turkey and the Balkan peninsula to Western Europe, although only Thesprotia has recorded an estimated population growth. On the contrary, Arta is one of the more disadvantaged regions in the country altogether.
- The two southern regions of the Peloponnese (Laconia, Messinia). Both of those regions comprise mountainous areas (Mani) that used to be nearly deserted, but their accessibility has improved substantially since the construction of the highway leading to Athens. They both include areas of special tourist interest, which are easy to approach from the Capital city. We have also seen that Laconia had the lowest unemployment rate across the country in 2014.
- Certain thinly populated mountainous regions (Phokis, Grevena, Florina). We have already made some assumptions about the possible reasons attracting residents in such regions (the return of pensioners or young people after their university studies, winter tourism etc.). However, it is important to underline that Phokis constitutes an extraordinary case in the category, as the only one that can juxtapose a strongly positive population trend to the sharp estimated decline of all the rest.
- Pthiotis, which is a region of remarkable industrial and rural activities, within the broader sphere of influence of Athens. It is interesting that in Map 11.2, it is Boeotia, the leading manufacturing region in the country, that is included among the regions with high incoming population instead of Pthiotis. Being a satellite region to Athens, Boeotia has recorded an estimated population growth amid the crisis, which is not the case in Pthiotis. However, given its characteristics, the recent increase in the incoming population of the latter region might indicate an expansion of the phenomenon of Boeotia to the North, to an even more distant satellite region around the Athens Metropolitan Area – although this is still a very precarious assumption.

In the final analysis, the above remarks may be regrouped into three basic spatial processes:

- The influx of seasonal or temporary population.
- A type of relatively close-range de-metropolisation which mostly favours the regions around the two metropolitan agglomerations. It is also a fact that on Map 11.1 one can distinguish a circle of high incoming population regions around Attica, broader than the respective circle distinguishable on the map of estimated population changes throughout the period 2010-2014.
- An additional counter-urbanisation effect favouring distant and relatively isolated regions, which is not distinguishable in the figures about the estimated population, probably due to higher rates of deaths in the respective areas (aged population).

Conclusions

This chapter has been an attempt to examine internal migration flows, first based on the annual population estimates of ELSTAT and their juxtaposition with the available data about the natural population change (births minus deaths), and then based on the published data of the census of 2011. The census provides actual data instead of estimates, but it covers a shorter period within the crisis. It was, therefore, useful to consider both sources and compare the findings.

After the outbreak of the crisis, births have been seriously restricted nationwide, whereas deaths have somewhat risen, although the deficit of the natural population change is not the main reason for the depopulation of the country meanwhile. What is more interesting for this study, though, is a classification of the regions of the country according to their combination of estimated population growth and natural population change balance.

Out of the 51 NUTS3 regions, only 4 combine a positive natural population change with positive apparent migration rates throughout the period 2010-2014, and all four are island regions. Most regions that have apparently attracted migration, including the most dynamic ones in terms of population change as well as the leading ones in several sectors of the economy, exhibit negative natural population change rates and probably ageing population. It seems that the main bulk of internal migrations is not directed towards regions with a surplus of births over deaths. Since, as a rule, more urbanised regions also present better balance sheets in their natural population change, the above finding an indication of counter-urbanisation, reinforced by the fact that no major mainland city is included in the regions with a positive estimated balance sheet throughout the period 2010-2014.

On the other hand, almost all regions surrounding the two metropolitan ones have recorded apparent migration surpluses, regardless of their natural population change. An even more telling fact is that all peri-metropolitan regions have presented positive apparent migration balance sheets, apart from two regions around Thessaloniki, which nevertheless recorded only a marginal deficit. On the contrary, Attica and Thessaloniki have suffered clear apparent migration deficits and concomitant estimated population losses, despite their natural population growth. The only two other cases that have followed the same pattern are the regions of the

two biggest mainland cities behind them, Achaia and Larissa. This finding explicitly suggests a counter-urbanisation effect at the top and higher level of the urban hierarchy.

The clearest expression of the above effect is the de-urbanisation of Attica, that is the metropolitan area of Athens. According to the data of the 2011 census, Attica presented the lowest incoming internal migration rate of all NUTS3 regions between 2010 and 2011. During the same period, it recorded a significant population deficit due to internal migration, which was not the case back in 2001. We shall monitor this deficit in detail in the next chapter. The same applies to the periods 2006-2011 and 1996-2001 respectively.

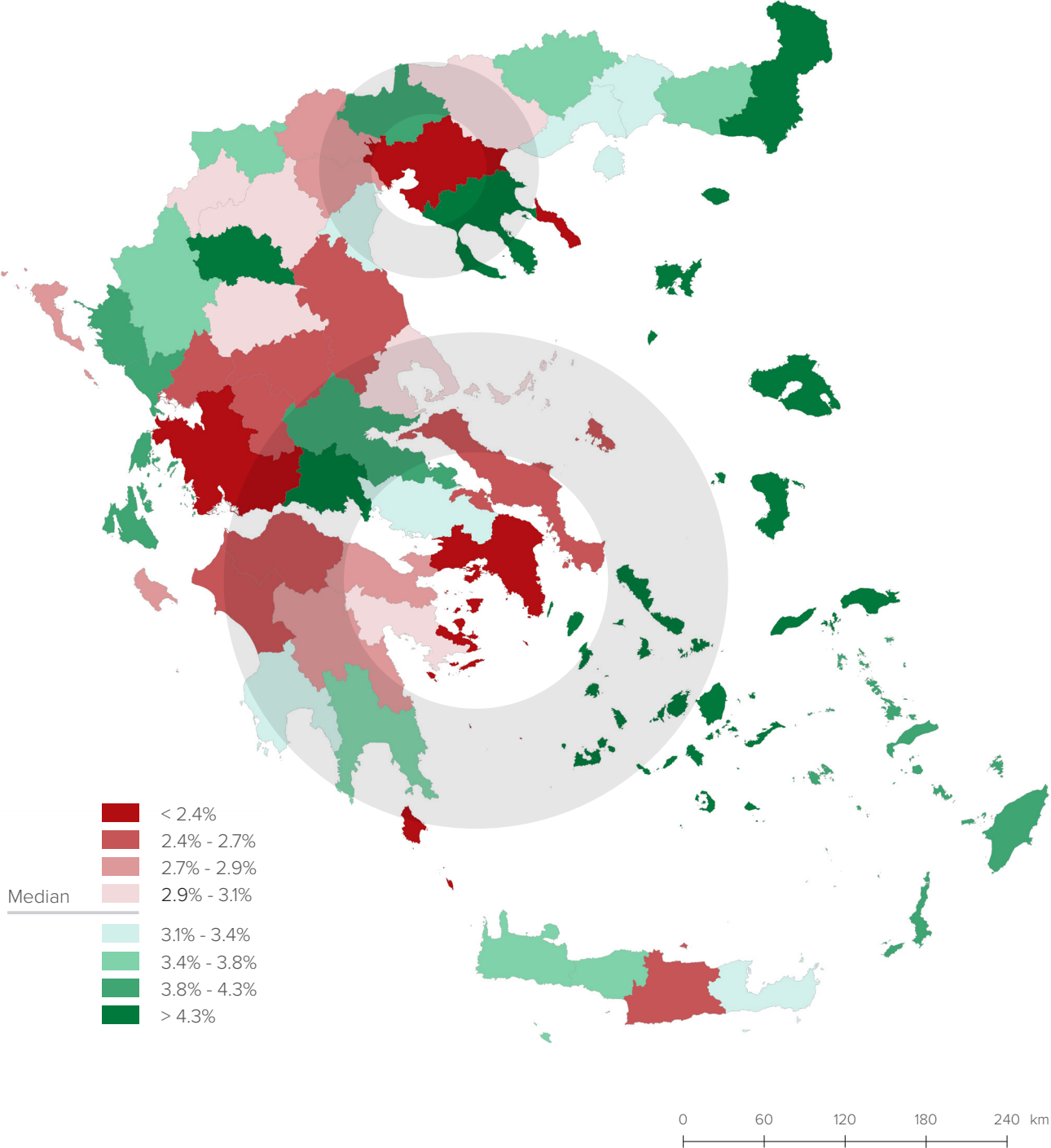
It is interesting that Attica's internal migration deficit is rather due to a collapse in the number of incoming residents than to an increase in the number of outgoing ones. Of course, a process of metropolitan exodus cannot be denied, but only in a relative rather than an absolute sense, that is in the sense of a clear internal migration deficit, which was not the case before, rather than of an increase in the numbers of the outgoing population compared to the past (in fact, those numbers have been restricted in the crisis). Vice versa, it seems that, in many cases, the relative advantage of regions that are apparently gaining ground in terms of their population stems from their ability to preserve their existing population rather than to attract newcomers.

In general, inter-regional mobility, in the sense of inter-regional relocations, was lower in the period 2010-2011 than in the period 2000-2001, while it was higher in the period 2006-2011 than in the period 1996-2001, following a long-term upward trend. This is a piece of evidence that the restriction of distant or relatively distant relocations is a phenomenon related to the crisis. In combination with the previous finding suggesting that the exchange of population between urban and rural areas was significantly higher in 2011 than in 2001, this might indicate a trend of urban exodus towards rural areas at a short distance, that is within the same prefecture.

An examination of the same economic and social features as in the previous chapter, against the incoming population by NUTS3 region at the time of the census instead of their estimated population change over the period 2010-2014, provides a somewhat differentiated picture, while of course not pointing at any strict correlation or determining factor either. The regional GDP does not seem to be decisive for attracting migration. Existing nuclear family households seem to contribute to retaining migration but not to be a factor of population pull towards certain regions. There is a tendency of migration being attracted by less populated regions, although this is neither a universal phenomenon nor necessarily translated in population growth.

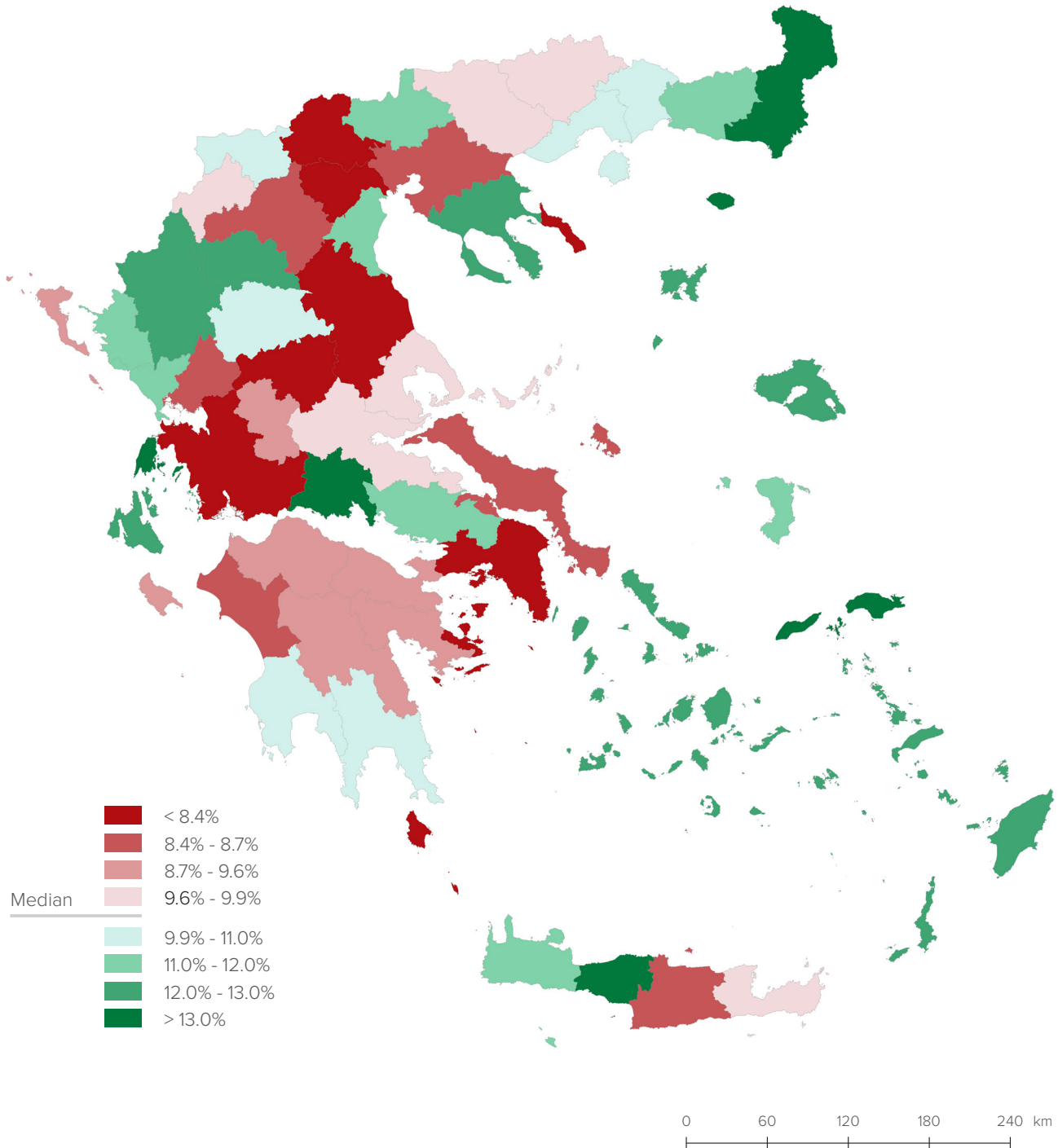
Finally, a cartographic examination of incoming migration patterns in the years just after the outbreak of the crisis offers a number of interesting observations, which may be reduced to three main geographical processes: the influx of seasonal population; a process of de-metropolisation of Athens and Thessaloniki that mostly favour regions nearby the two metropolises, but within a range larger than the patterns of the estimated incoming population would suggest; and a supplementary counter-urbanisation effect favouring certain distant and disadvantaged regions.

Map 11.1 Incoming Population, 2010-2011, as a percentage of the Permanent Population, 2011, by NUTS3 Regions



Source: Hellenic Statistical Authority, 2011 Census
 E. Skoufoglou, 2018

Map 11.1 Incoming Population, 2006-2011, as a percentage of the Permanent Population, 2011, by NUTS3 Regions



Source: Hellenic Statistical Authority, 2011 Census
E. Skoufoglou, 2018

CHAPTER 12

Internal migration: further analysis based on unpublished data

Unpublished ELSTAT data

Following the conclusions drawn from the published data of the Hellenic Statistical Authority (ELSTAT) it has been deemed necessary to apply for access to certain unpublished data that could be used to either confirm and reinforce or disprove the previous findings of the present research, and to examine tendencies in more detail. In particular, the demand concerned further data about internal migration during the last year before the 2011 census, that is during the first year of the Greek Structural Adjustment Programme (1st Memorandum), as reflected in the question regarding the place of residence one year ago. Thus, a convention was signed with ELSTAT, after which the Authority delivered two unpublished tables containing data about:

- Permanent population of more than 1 year of age, by current regional unit or residence, gender, age group and unit or residence one year before the census.
- Permanent population of more than 1 year of age who used to live in a different regional unit one year ago, by current regional unit of residence, labour status (employed, unemployed, economically inactive), professional status, and occupation (1-digit ISCO-08 codes) among the employed.

For ease of analysis, we shall follow the two tables in the above order, processing the data and reaching the respective conclusions.

Table 1: Exchange of permanent population among regional units, 2010-2011

The first unpublished ELSTAT table provides the number of residents above 1 year old by regional unit and their distribution in all regional units of the country one year before the census. Thus, one can monitor exactly the number of residents who have left any particular regional unit for any other unit during the period 2010-2011. The published tables only provided the number of residents who had moved in their current (at the time) NUTS3 region of residence from within the same region, from another region or from abroad. Therefore, one could merely calculate the incoming population by NUTS3 region in general, that is without knowing their particular region of origin – this was possible only on the NUTS2 level, which is too much

abstract. By processing the unpublished table, we can work out also the outgoing population by regional unit in that year, and thus the balance sheet of internal migration for each of those units. Moreover, we can calculate the balance sheet in the exchange of residents between any couple of regional units.

Another extra feature of the unpublished table compared with annual estimates is that it provides data by regional unit instead of NUTS3 region (former prefecture). While in most parts of the country this makes no difference, it does offer the opportunity to look closer at the islands (since the Kallikratis administrative reform cut the large island prefecture into much smaller regional units), as well as in the interior of Attica region (which has been divided into 8 regional units, since Attica accounts for more than 1/3 of the national population).

A first adjustment of the table is necessary before we proceed. The permanent population of each regional unit at the time of the census includes a certain number of residents who used to live abroad one year before the census, i.e. it has an immigration (external migration) component. On the contrary, no emigration component is included in the table, which is reasonable as it is not possible to measure the opposite, i.e. the number of residents who left any regional unit to move abroad during the period 2000-2011, since those people were not present at the time of the census (and since, as explained previously, no data about emigration are available since 1977). Thus, the present population of more than 1 year of age is not readily comparable with the figures regarding the regional unit of residence one year before the census, and a full balance sheet of incoming and outgoing population is not available. However, we can obtain a balance of internal migration by removing the effect of immigration – besides, internal migration is what really concerns our study. The solution, therefore, is to subtract the number of current residents who have moved in from abroad (immigrants or repatriated emigrants) from the current permanent population (of more than 1 year of age) for each regional unit and for the country in total, so as to isolate internal migration.

Using the data of the adjusted table, we have mapped the rates of incoming population anew (Map 12.1). Apart from depicting NUTS3 regions instead of regional units, the map examined previously (Map 11.1) included incoming residents both from within and outside the country. Based on the columns of the table, we have also calculated the rates of outmigration (outgoing residents divided by the number of residents one year ago) by regional unit and depicted them in Map 12.2.

Both the Capital city and the region of Thessaloniki display anaemic rates of incoming population. It is evident again that regional units surrounding Athens are attracting far more residents than Athens, only this time one can see the circle around Athens starting within Attica region already, with the regional units of East Attica, West Attica and the islands displaying particularly high scores and the city (especially central Athens and Piraeus, that is the most urbanised and densely populated areas) sinking in very low ones. This is an indication of a distant suburbanisation process. We would probably obtain the same picture if the interior of Thessaloniki region was examined. On Map 12.1, one can see Thessaloniki surrounded by regional units with visibly more incoming population, the circle being interrupted again, though.

Other regional units scoring high in terms of their rate of internal incoming population can be found in Epirus and West Macedonia NUTS2 regions, in Thrace and especially Evros on the borderline with Turkey, and in many islands. In the first instance, the finding should probably be attributed to the relative isolation (in terms of geography as well as transport infrastructure) of the Northwestern part from the rest of the country, which means that changes of residence tend to stay within the broader area and be directed towards neighbouring regional units. This picture might have already changed, due to a recent upgrade in transport infrastructure in the area. In the case of Evros and, to a lower extent, the rest of Thrace NUTS2 region, high rates of incoming population are connected, as already mentioned, with a strong presence of armed forces, as well as with teachers, doctors and other professionals who are encouraged or required to serve in distant and/or disadvantaged region for a certain period. This may also explain the fact that some less developed islands in North Aegean, but with massive army facilities (Limnos, Lesvos, Samos), seem to attract more people than more developed ones (South Aegean Sea). In general, the map is confirming previous findings.

An additional remark that may be of some interest is that all regions including university cities except for Ioannina and, marginally, Xanthi, have incoming population rates below average. This might be due to different reasons, acting separately or combined. One of them may be the already relatively big size of university cities, which reduces the analogy of university students. Another one may be the reduction of admissions to the universities as a result of government budget cuts in the context of the crisis and of restructuring policies that raise more class barriers in education.¹ A third one could be the tendency to avoid moving for study purposes, opting for solutions available at the preexisting place of residence instead, in order to reduce costs, a tendency naturally affecting mostly households and young people of low income. In any case, university studies don't seem to be a factor of such importance as to secure incoming internal migration above the national average.

The map of outgoing population (Map 12.2) is far flatter than the one of incoming population, suggesting that the balance sheet of internal migration is in most cases due to the numbers of newcomers rather than the ones of residents moving away. It is interesting that in most cases high rates of outgoing population are combined with low rates of incoming population, and vice-versa, except for the cases indicated just before: the Northwestern part of the country, Evros, and certain islands. In the latter cases, high rates of incoming residents coexist with high rates of outgoing ones, suggesting people coming and leaving frequently, which reinforces the assumptions made above. A similar picture in certain other islands probably reflects a high proportion of seasonal population for reasons of tourism. The centre of Athens is again a marked case, with its strongly negative tendency, surrounded by regional units with minor rates of outmigration. The same phenomenon appears milder in Thessaloniki, but the picture would be certainly different in one could look at the interior of the region.

¹ According to the figures of the Ministry of Education, 68,330 persons were admitted to public universities in 2016, whereas the number of admissions back in 2008 was as high as 83,200, which represents a cumulative reduction of nearly 17,9% - www.minedu.gov.gr. Let us remind here that there are no private universities in Greece, for the time being.

It is possible now to draw up a map of internal migration balance sheets during the period 2010-2011 (Map 12.3), based on accurate census data and not estimates. Of all maps created until now, this is probably the one most relevant to the main question and the core hypothesis of our study. A counterurbanization effect on the top and higher levels of urban hierarchy is more than evident. Athens, in the core of Attica, and the region of Thessaloniki (since it is impossible to monitor the city on this level of analysis) present the sharpest internal migration deficits. The balance sheet of the regional unit of the third largest city in the country, Patras, is also strongly negative. The regional unit of another city among the next-6, Larissa, also records a deficit. On the contrary, the regional units of the remaining next-6 largest cities seem to be recording relatively mild internal migration surpluses, except for Rhodes, where the surplus appears larger (however, Rhodes has the advantage of being an island). Those surpluses might be associated either with the relatively smaller size of the respective cities (Volos, Ioannina) or with the fact that the cities are situated on islands (Heraklion). In the case of Rhodes, both the above apply. Most regional units in the countryside seem to have profited from internal migration. Worst case scenario, they suffer only marginal losses. It is interesting that the areas mentioned before for combining high rates both of incoming and of outgoing population (Epirus, Thrace, North Aegean islands) do tend to also display significant surpluses, so the latter rates don't suffice to counterbalance the former – though this is not the case in most parts of West Macedonia.

A specific finding is that all regions where industry was the leading NACE Rev.2 activity in 2014, except for Kozani, as well as almost all regions with considerable industrial activity in general, have positive balance sheets, although in most cases they don't exhibit particularly high rates of incoming internal migration. This is an additional indication that, in the crisis, industry is more effective in relatively protecting the existing population of a region rather than in attracting newcomers.

Again, we find Athens surrounded by regional units with strongly positive balance sheets, especially to the North, starting from the interior of the Attica region. Within the administrative boundaries of Athens (Attica basin) all regional units are negative, apart from North Athens, where the balance sheet is practically neutral. A Burgess commuter ring is visible around Athens, even at this very abstract level. Around Thessaloniki one can see the same imperfect circle of positive balance sheets (Kilkis, Imathia, Pieria, Chalkidiki), interrupted by strongly negative ones (Serres, Pella). Nearly all islands present significant surpluses. The map, therefore, reaffirms the basic conclusions made so far through the examination of other parameters and measurements under the conditions of the crisis: an advantage of islands and a process of metropolitan exodus leading to a peripheral pattern of inverse circles or rings around metropolitan areas.

Although this latter pattern is visible around metropolitan centres, though, in the general picture it is obscured because of the high surpluses of certain distant regional units, in the Northeastern part of the country (Epirus, Grevena, Trikala), in Thrace and in the Southern Peloponnese (Messinia, Laconia). Overall, the pattern is less clear here than in the map showing the evolution of population shares, according to the annual estimates. This might be

due to a relative disadvantage of those distant areas in their natural population change and/or in their balance sheet of external migration. Be that as it may, the outcome is a pattern of three concentric circles around both Athens and Thessaloniki: a first circle of high surpluses (interrupted in the case of Thessaloniki), a second circle of regional units with a deficit or a marginal surplus of internal migration and a third one of distant regional units, where significant surpluses appear again. It is interesting how those circles around the two top cities overlap.

As explained before in this study, no concrete data are available anymore about emigration, and thus about external migration balance sheets. Besides, the present study is focused on internal migration. However, it is worth to take a quick look at the data regarding the inverse movement, that is residents who have moved in from abroad during the last year before the census, as a percentage of the total permanent population (of more than 1 year of age) of each regional unit.² The respective ratios are depicted on Map 12.4. It is clear that bigger masses of immigrants (or repatriated Greek citizens) in proportion to the local permanent population are directed towards less urbanised and less populated regions. Indeed, the regions of most big cities rank low in that respect: Attica, Thessaloniki, Achaia (Patras), Larissa, Volos. Ioannina and Heraklion are doing somewhat better, although Heraklion falls short of the other, less urbanised regions of Crete. The only big city whose region seems to have attracted an important percentage of residents from abroad is Rhodes.

The regional unit of Central Athens also records a high percentage, which coexists with its drain of residents due to internal migration. It is reasonable that the Capital city is also a major gateway for immigrants, who may move further to other regions afterwards. Anyway, the high ratio of newcomers from abroad in Central Athens is counterbalanced by the low respective ratios in the remaining regional units of Attica.

Certain regional units around the two metropolitan regions are receiving much more newcomers from abroad proportionally to their population. It is interesting that, apart from a few exceptions (Boeotia, Chalkidiki, partly Pieria), those peri-metropolitan regional units are not the same as the ones profiting the most from the process of urban exodus in the nearby metropolitan agglomerations. In fact, some of the regional units with the highest rates of immigration even exhibit negative balance sheets of internal migration (Serres, Pella). The overall advantage of peri-metropolitan regions in their population balance sheets is not mainly due to immigration. Besides, on the inter-regional level, newcomers from other regions are on average nearly 370% more than newcomers from abroad, so it would be difficult to imagine that the redistribution of population could be due to external migration. Of course, both the numbers and the spatial distribution of immigration has changed a lot after the refugee crisis of 2014, but this is out of the scope of our study here.

Population exchange between metropolitan centres and the countryside

The first table of unpublished ELSTAT data offers the possibility to examine not only the general balance sheet of internal migration for each regional unit, but also their exchange of

² Of course, this time the incoming population from abroad is not subtracted from the permanent population.

population with any particular regional unit. It is, therefore, possible to obtain a clear picture of the number of residents who have left each regional unit to move to Athens or Thessaloniki during the period 2010-2011, and, vice versa, the number of residents who moved to each of those units coming from Athens or Thessaloniki during the same period. We have thus produced six maps to monitor the origin of incoming internal migration to Attica and to Thessaloniki, the destination of their internal outmigration and the balance sheet of the two metropolitan regions with each regional unit. Since absolute numbers would not tell us much, in the case of incoming and outgoing residents we have used shares, whereas the balance sheets have been expressed in relative terms (incoming residents to metropolitan regions less outgoing ones divided by the number of the former).

Map 12.5 illustrates the shares of all other regional units among the residents who have abandoned Attica during the last year before the 2011 census for other places within the country. Most of those residents have moved in any of the following three groups of regional units: mainland regional units adjacent or relatively close to Attica (Boeotia, Euboea, Corinthia, Argolis but also Phthiotis, Aetolia-Acarnania, Elis, Messinia); on a second level, regional units comprising large cities (Thessaloniki, Patras, Ioannina, Larissa, Volos, Heraklion); and finally, certain islands or island regions. To this we should add the already explained specific case of Evros. Given the comparatively big population of the regional units of the second category, the numbers they have attracted are not as important as they seem on the map. For the same reason, the number of former Attica inhabitants that have moved to the islands is more important than it appears, since most islands are thinly populated. We can see that if we divide the newcomers from Attica in each regional unit by the unit's permanent population (of above 1 year of age, less newcomers from abroad) (Map 12.5a). In this case, both the advantage of islands and the pattern of a ring around the metropolitan region of Attica are much more evident.

Map 12.6 shows the inverse movement, that is the provenance of the residents who have moved to Attica at some point in the last year before the census. The map doesn't provide any particularly new or impressive information, apart from the fact that regional units that have lost relatively more residents to Attica tend to be somewhat further away from the capital than the ones that have gained a lot of residents from it. This is not unimportant, since it shows that, while Athens still attracts its (reduced) incoming residents from almost all around the country, its outgoing ones are mostly headed towards a ring of regions around it (note that, as we shall see, this is not the case with Thessaloniki, which is both recruiting newcomers and losing residents within a relatively limited radius around it). The peri-metropolitan regions around Attica, therefore, seem to be partly and indirectly profiting from the capacity of Athens to be a pole of attraction nationwide. It is quite clear, though, that most regional units who have attracted large numbers of former Attica residents also tend to display relatively high rates of internal population towards Attica. The distinction is among regional units with a high and with a low rate of population exchange with Attica rather than between regional units receiving population from the capital and regional units sending population to it.

The crucial map in order to understand internal migration flows, therefore, is the map of

the population balance sheets of Attica with any other regional unit of the country (Map 12.7). It is impressive, even though expected according to our previous conclusions, that Attica has a negative balance sheet with almost all other regional units across the country, including all regional unit adjacent to the capital. It only records a relatively small surpluses in three cases: Thessaloniki, Kozani and Achaia, while in two other cases (Larissa, Kastoria) Attica's surplus is so marginal as to allow us to speak of a practically neutral balance sheet. It should be underlined that this is all about absolute deficits: Attica has lost residents to nearly all regional units in absolute terms, never mind its far sharper losses in proportion to its permanent population. Attica's balance sheets with most island regional units is strongly negative.

Let's now consider the case of Thessaloniki. Regarding the outmigration, the picture is similar with the one in Attica, only even more explicit (Map 12.8). Most residents who have abandoned the region of Thessaloniki during the period 2010-2011 have moved to a close range of regional units around it (Imathia, Pella, Kilkis, Pieria, Serres, Chalkidiki, Kozani, as well as Larissa, Drama and Kavala a little further away). The circle around Thessaloniki is clearer than the respective circle around Attica. Again, the highly militarised regional unit of Evros has also attracted a significant number of former Thessaloniki residents. Apart from that, it is only the centre of Athens that exhibit a high rate of incoming residents from Thessaloniki. Again, the significance of this finding dwindles because of the high permanent population of Athens, which means that its gains from Thessaloniki are much smaller in relative terms. Another interesting observation is that the flee of residents towards the islands is far more limited in the case of Thessaloniki than in the case of Athens. In fact, we shall see next that the phenomenon of people leaving the metropolis to move to an island is restricted to Attica, while it doesn't occur in Thessaloniki. Of course, this is not irrelevant with the poor maritime transport connections between Thessaloniki and most Aegean islands, whose main access to the mainland is the port of Piraeus. However, it probably reflects certain socio-economic and spatial differences between Thessaloniki and the Capital as well.

In Map 12.8a the number of newcomers from Thessaloniki in each regional unit is weighed by their population, with the same methodology as in Map 12.5a regarding Attica. In this case, changes in the pattern in comparison with Map 12.8 are not significant, except that the ring around Thessaloniki is somewhat larger and less visible to the south. This higher degree of resemblance is because most regional units receiving important shares of the outgoing population of Thessaloniki have a similar population. A difference is about Larissa, where the comparatively large share of former Thessaloniki residents fades away when divided with the population of the region.

The map of incoming population from other regional units (Map 12.9) has an almost identical structure as the one with that about the outgoing population. This means that the regional units providing new residents to Thessaloniki are, more or less, the same as the ones attracting former residents of Thessaloniki. In other words, the same regional units combine relatively high rates of both incoming population from Thessaloniki and outgoing population to Thessaloniki. The critical issue is the balance sheet between the two.

Those balance sheets are depicted on Map 12.10. Again, one can see Thessaloniki having negative balance sheets with a large majority among the regional units across the country, including all adjacent and neighbouring ones. However, there are some differences with the case of Attica. While recording rather large deficits in its exchange of residents with certain adjacent regional units (Chalkidiki, Pieria, Imathia, Kilkis), Thessaloniki exhibits equally important, and sometimes even larger, deficits with several distant regional units. On the other hand, it has a surplus in its exchange with a few other distant regional units. As a result, there is no apparent pattern observable on the map.

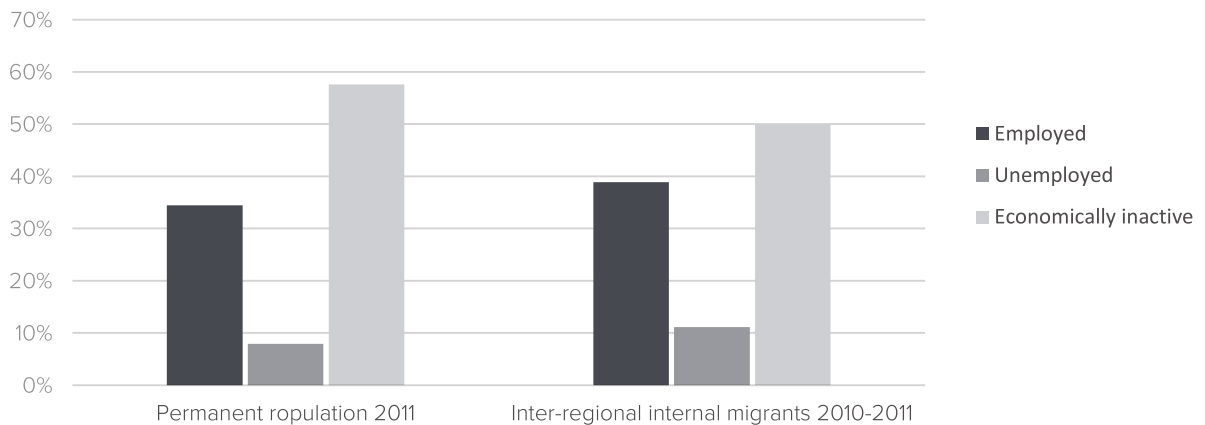
However, this finding turns out to be much less significant if actual numbers are examined. Most surpluses are only marginal and, most importantly, they result from very low volumes of population exchange. Because of those low overall volumes, even marginal absolute surpluses might appear quite large in relative terms (that is newcomers divided by outgoing residents). Actual surpluses only consist in a few dozens of individuals, or even less, which is particularly the case in island regional units. The only partial exception is in the case of Arta. In most cases, the same applies to distant deficits, as well. In many cases, moderate or low deficits (in absolute numbers) between Thessaloniki and distant regional units in Central or South Greece are translated in largely negative rates, because of the very small overall numbers in their exchange of inhabitants (a possible exception being Boeotia). Those distant regional units tend to record positive balance sheets of population exchange with Thessaloniki not because they really attract significant numbers from the latter, but because very few of their own inhabitants would abandon them to move to Thessaloniki. In short, it seems that the lack of any meaningful pattern among distant regional units in Map 12.10 is due to the rather limited scope of the urbanisation of Thessaloniki, which, unlike Athens, is probably not capable of affecting the whole territory of the country. Thus, deficits or surpluses at this distance are rather insignificant.

What is more interesting is the pattern of the balance sheets of Thessaloniki with the regional units within Attica. As evidenced before, Thessaloniki has a negative balance sheet with Attica as a whole. However, it has a surplus in its exchange with Central Athens, which is the core of the Capital. It records minor deficits with the rest of the Attica basin (Piraeus, West, North and South Athens), while suffering larger deficits with the outer ring of the region (West and East Attica). This is a clear indication that the deficit of Thessaloniki in its population exchange with Attica is due to the suburbs and exurbs of the Capital city, instead of its urban core. The large deficit in the population exchange with Boeotia can be deemed an extension of this phenomenon of the periphery of Athens being more attractive than its core.

Table 2: Internal migration according to employment status, professional status and occupation

As already mentioned, the second table obtained in the context of the convention with the Hellenic Statistical Authority associates the number of newcomers in each regional unit during the last year before the census with their labour status (employed, unemployed, economically inactive) and, among those employed, with their professional/employment

Chart 12.1. Labour status among the Permanent Population and among Residents who changed Region between 2010 and 2011



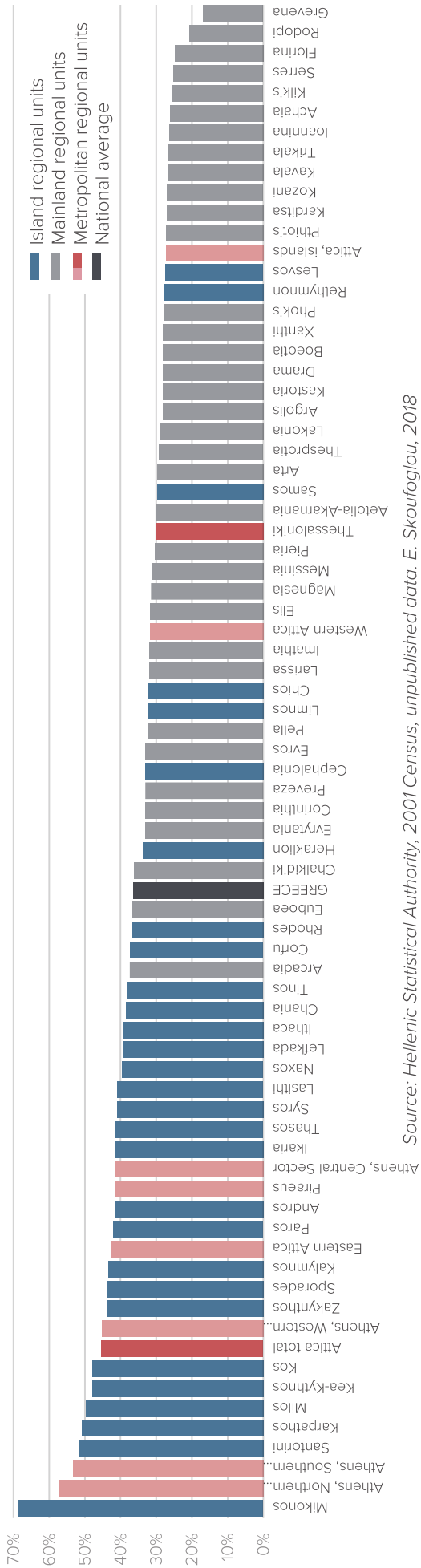
Source: Hellenic Statistical Authority, 2001 Census, unpublished data. E. Skoufoglou, 2018

status (employers, employees, self-employed persons without employees, contributing family members, members of producers' cooperatives) and occupation (1-digit ISCO-08 codes)³. Based on those data, a series of charts has been created, shedding light to some key social features of internal migration. The table and its categories are not sufficient to determine social classes, which would be important given that the theoretical approach of the present thesis is based on the concept of social classes. As already stressed in the relevant chapter about the class stratification in Greece, the definition of a social class requires more information than the professional or employment status alone: not all employees belong to the working class, not all own-account workers should be classified as petit-bourgeois etc. It could be possible to collect such information from other unpublished census data or from the quarterly labour force surveys, but this would be a demanding task exceeding the objectives and potential of our research at this point. Besides, the data of the second unpublished ELSTAT table can already provide a rough approximation of tendencies among social classes. For, example, if a large number of employees was found to be directed towards a particular region, it would be reasonable, at this level of analysis, to assume a high proportion of the working class among the incoming population.

In Chart 12.1. one can see that nearly 50% (49.94%) of those who have changed their regional unit of residence during the last year before the 2011 census were economically inactive at the time of the census, whereas only a little more than one third (38.41%) were employed. Despite being a minority, though, the proportion of employed persons is higher among recent internal migrants than among the permanent population in general (34.46%), and the same holds true for the proportion of the unemployed (11.74% as compared to 7.94%). Or, inversely, the proportion of economically inactive persons is lower than their national quota (57.60%). This means that the economically active have been more mobile than the economically inactive. Another

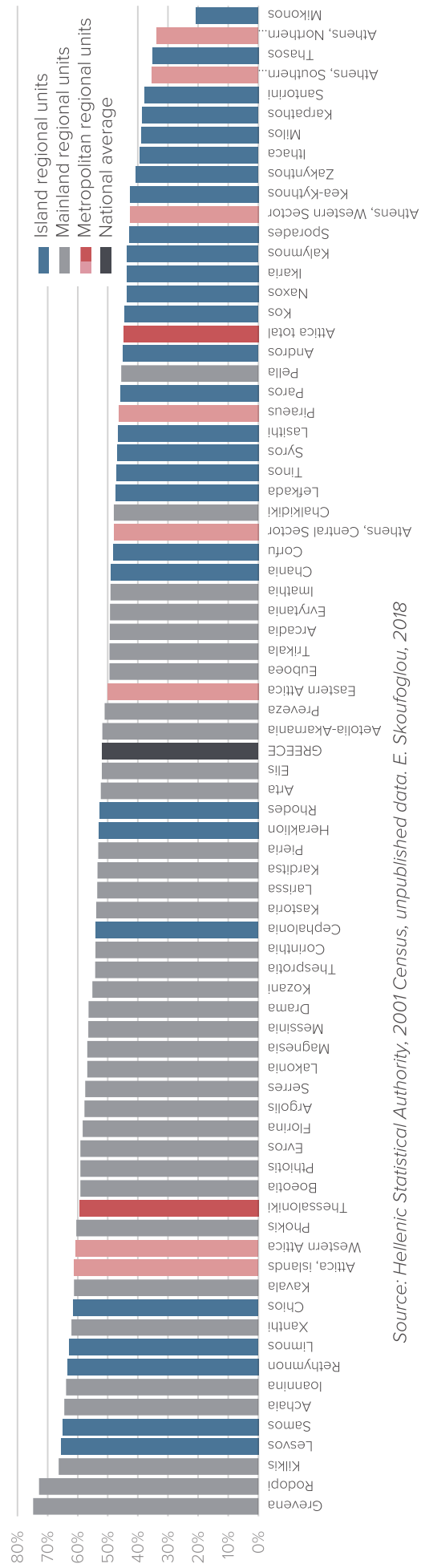
3 Managers, 2. Professionals, 3. Technicians and Associate Professionals, 4. Clerical Support Workers, 5. Services and Sales Workers, 6. Skilled Agricultural, Forestry and Fishery Workers, 7. Craft and Related Trades Workers, 8. Plant and Machine Operators and Assemblers, 9. Elementary Occupations (no data available for code 0, Armed Forces Occupations).

Chart 12.2 Employed persons among Incoming Inter-regional Internal Migrants, 2010-2011, by Regional Unit



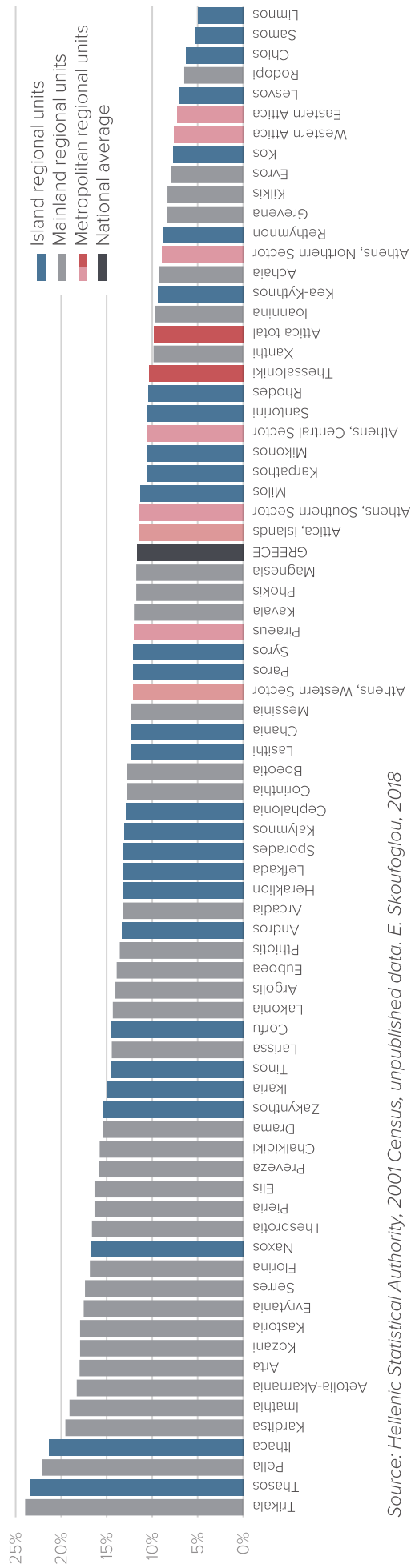
Source: Hellenic Statistical Authority, 2001 Census, unpublished data. E. Skoufoglou, 2018

Chart 12.3 Economically Inactive persons among Incoming Inter-regional Internal Migrants, 2010-2011, by Regional Unit



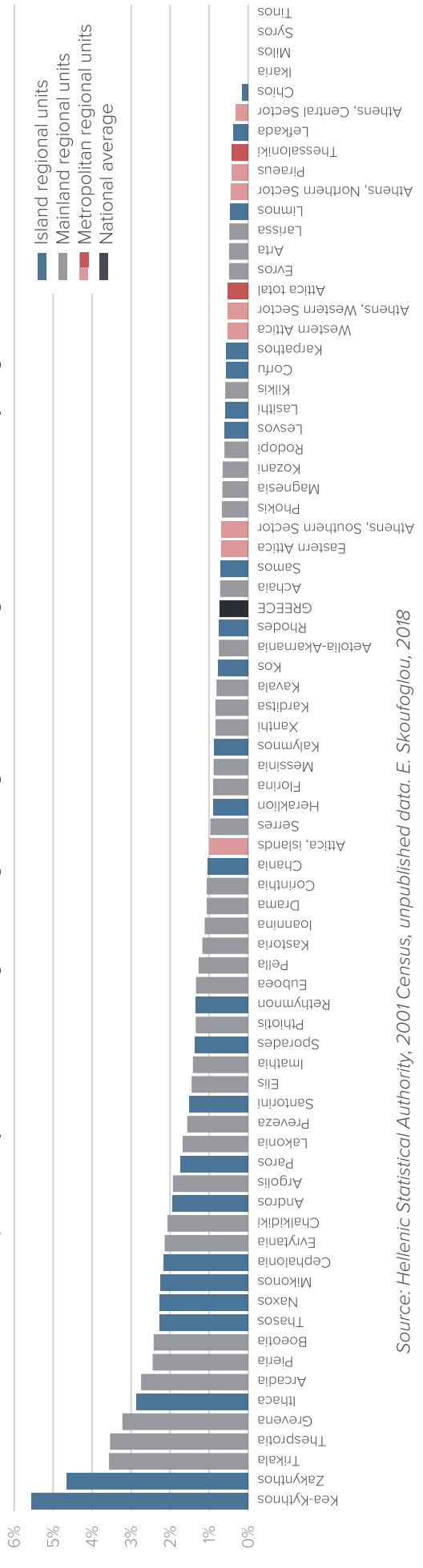
Source: Hellenic Statistical Authority, 2001 Census, unpublished data. E. Skoufoglou, 2018

Chart 12.4 Unemployed persons among Incoming Inter-regional Migrants, 2010-2011, by Regional Unit



Source: Hellenic Statistical Authority, 2001 Census, unpublished data. E. Skoufoglou, 2018

Chart 12.5 Unpaid family workers among Incoming Inter-regional Migrants, 2010-2011, by Regional Unit



Source: Hellenic Statistical Authority, 2001 Census, unpublished data. E. Skoufoglou, 2018

interesting observation, though, is that the proportion of the unemployed among economically active persons who have recently moved to another regional unit (22.26%) was visibly higher than the national unemployment rate at the time of the census (18.73%, a rate that is still low compared to the rates in the following years). People who had changed their regional unit of residence during the last year before the census and were unemployed by the time of the census logically fall into one of the following categories: unemployed who have moved hoping to find a job, without having already found one; unemployed who did find a job in a different regional unit (or formerly employed who changed their job or place of work) but have lost it meanwhile, because they were fired, or because it was a temporary job in the first place etc.; unemployed who have moved for reasons other than finding a job, including lower living costs.

Overall, the above findings don't contradict our previous conclusion that finding a job is neither the only nor the most frequent reason to move to another region or regional unit, at least in the mainland. It seems to be the main reason indeed only in the case of people moving to an island. In fact, the data of the unpublished ELSTAT table provides a very concrete piece of confirmation of this distinction between islands and the mainland, as demonstrated in Chart 12.2. The column chart depicts the share of employed persons among the newcomers in each regional unit of the country, as well as the respective proportion at national level. Regional units are ranked according to their shares. It is impressive that all places exceeding the national ratio are either island regional units, or sub-regions of Attica. The only exceptions to this rule are Arcadia and Euboea, which if fact is also an island but, being very close to the mainland, is more akin to a mainland region (anyway, both regional units are only slightly above the national ratio). On the contrary, one can only find 5 island regional units below the national ratio, and only one of them among the bottom 30 regional units of the country. The pattern clearly confirms the advantage of islands in terms of employment. It also highlights another fact that has been already indicated: by the time of the census, Attica was still more attractive in terms of employment compared to the rest of the mainland. If somebody was to move to find a job, he or she would be more likely to find it on an island or in the metropolitan region of the Capital city, at least until 2011, when Attica exceeded the national average of unemployment for the first time. It appears that the search for a job cannot explain why residents abandon Athens for other places in the mainland, at least during the first years of the crisis.

On the contrary, regional units in the mainland display large proportions of economically inactive (Chart 12.3) and/or unemployed (Chart 12.4) newcomers. Although no pattern as clear as the one in Chart 12.2 is observable in this case, mainland regional units that rank low in terms of economically inactive persons among their newcomers do tend to rank high in terms of unemployed newcomers, and vice versa. In fact, this already derives from the fact that all mainland regional units (except the ones in Attica) rank low in terms of their share of employed persons among their incoming domestic population. A more specific observation is that no peri-metropolitan regional unit ranks below the national average in both categories. Kilikis is the only such regional unit that lags behind the national average in its share of the unemployed, while Pella, Chalkidiki, and Euboea are the only ones to fall short of the national

average in their share of economically inactive persons. In the latter two cases, high shares of unemployed coexist with relatively high shares of employed persons among the incoming population. Unpaid family workers seemingly tend to follow a pattern rather closer to those of the unemployed or economically inactive internal migrants than to the one of the employed (Chart 12.5).

Since the previous charts have only offered ambiguous conclusions, the respective maps have been created, showing the shares of the unemployed (Map 12.11) and of the economically inactive population (Map 12.12) among the incoming population by regional unit. Since percentages are very different in the two categories, the values have been stratified in the same number of quantiles in each map, in order to achieve a certain level of comparability between the two. High shares of unemployed newcomers are generally found further away from the two metropolitan centres than high shares of economically inactive ones. The regions of almost all major mainland cities (particularly Athens, Thessaloniki, Patras, Volos, and Ioannina) exhibit low shares of unemployed among their incoming population, which probably reflects limited expectations in moving to a large urban centre to start looking for a job under the conditions of the crisis, if none is already tracked down.

Except around the two metropolitan centres, high shares of economically inactive persons among the incoming population are found in Patras, in the relatively independent distant regions of Epirus and Thrace and in the Northern Aegean Sea, which is an additional indication of the distinction between North and South Aegean islands. Among metropolitan regional units, one can find only three attracting a significant proportion of economically inactive population: West Attica, Attica Islands and Thessaloniki. The first two cases constitute the most remote regional units of Attica, while the latter region, as already repeatedly indicated, comprises both the urban agglomeration of Thessaloniki and a periphery around it, meaning that the general share of the region might well be concealing an uneven internal pattern of incoming population, expectedly with a higher percentage of employed in the core and a higher percentage of economically inactive residents in the outer ring.

Overall, though, the map is not particularly meaningful. A reason for this is that the “economically inactive population” is a very broad and rather vague category in the first place, comprising completely different sub-categories: pensioners, minors, or people of working age (14-64) who are neither employed nor in search of employment, including long-term unemployed who have lost hope in finding a job. This latter sub-category overlaps with Map 12.11 and suggest that the distinction between unemployed and economically inactive population can’t be always strict. Thus, there is no point in insisting further on the analysis of the two maps.

A specific category of some interest, partly connected with the economically inactive population, would bring us briefly back to the first unpublished ELSTAT table. Age groups among those who have changed their regional unit of residence during the last year before the census can offer an approximation of the share of pensioners among that population, or, more accurately, of economically inactive people due to their advanced age. The age group of above 64 years (which is the highest group age available in the table) can give an indication

about the flows of people who retire and return to their region of origin or move to another region than the one they used to work in. In fact, the number of people in this category will be significantly different than the number of pensioners, in both ways: not everybody who is older than 64 is a pensioner; and there were retired people of less than 64 years of age, especially at the time of the census, when retirement ages were still relatively low and, on top of that, a large project of motivating public sector workers to retire was underway, so as to restrict the public sector and pave the way for the subsequent pension reforms. Quite a lot of pensioners, therefore, would fall into the age group 55-64 (which will not be the case in the future, since retirement ages have skyrocketed meanwhile). However, this doesn't alter the general picture a lot: after having mapped both the shares of people above 64 (Map 12.13) and above 54 years of age (Map 12.14) among the incoming population by regional unit, it has been found out that their patterns are similar. We can thus stick to Map 12.13.

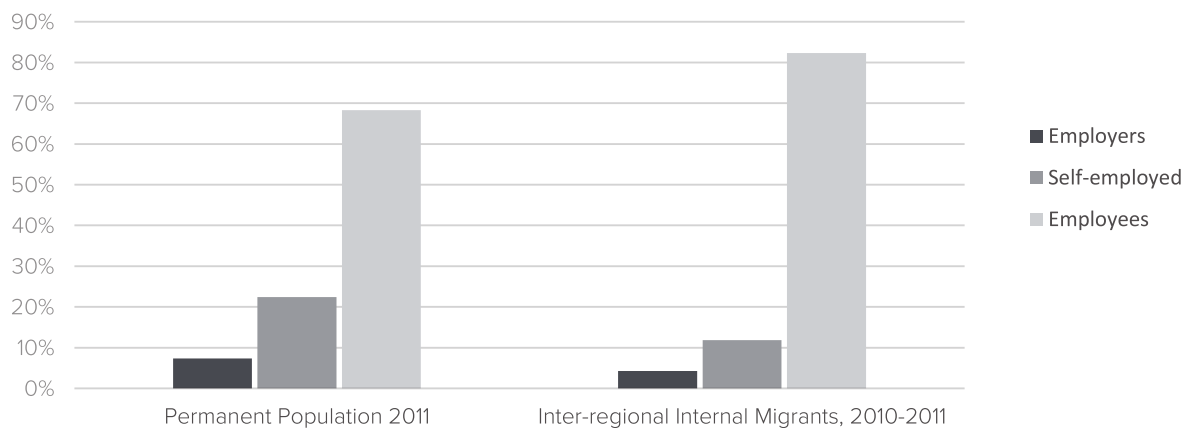
In some cases, it seems that newcomers of advanced age are the leading group among the economically inactive incoming population. This is the case in mountainous regional units such as Phokis and Evrytania, in the central and southern Peloponnese, as well as in Drama, Serres, certain regions of Western Macedonia and certain islands (Lesvos, Limnos). In other cases, the two tendencies are rather opposite, with regional units combining high or relatively high proportions of economically inactive newcomers with low numbers of people of advanced age among them (e.g. Boeotia, Phthiotis, West Attica, Achaia, Ioannina, Kilkis, Samos, Chios) or high rates of newcomers of more than 64 years of age combined with relatively low rates of economically inactive incoming population (e.g. Pella, Chalkidiki, Elis, Preveza, Lasithi, and certain islands in the Cyclades). If a conclusion was to be drawn, this would be that the economically inactive population that has moved in the regional units around Attica doesn't basically consist of pensioners, the latter following a pattern closer to that of the unemployed than to that of the rest of the incoming population. Apart from that, there is the rather obvious conclusion that cities with big universities (Patras, Ioannina, Volos, Heraklion) generally attract younger ages of economically inactive population, that is students. To some extent this is also the case in Xanthi and Komotini (Rodopi), although those two regional units constitute a special case because of the large proportion of their Turkish minority, as well as other minorities (Pomaks, Muslim Roma), whose population combine high fertility rates with high rates of poverty and social exclusion.

Tendencies among employed newcomers by regional unit

We shall now go back to the second ELSTAT table to examine people who were employed at the time of the census and had changed their regional unit of residence during the last year before it. This section will provide particularly interesting conclusions.

In Chart 12.6 and, more explicitly, in Map 12.14 one can see the share of the salaried employees among the employed incoming population (2010-2011) by regional unit. Top executives have been deducted from the total number of the employees, as they obviously belong to the bourgeois class, although this doesn't alter the overall picture, since their proportion in the category is

Chart 12.6. Professional status among the Permanent Population and among Residents who changed Region between 2010 and 2011

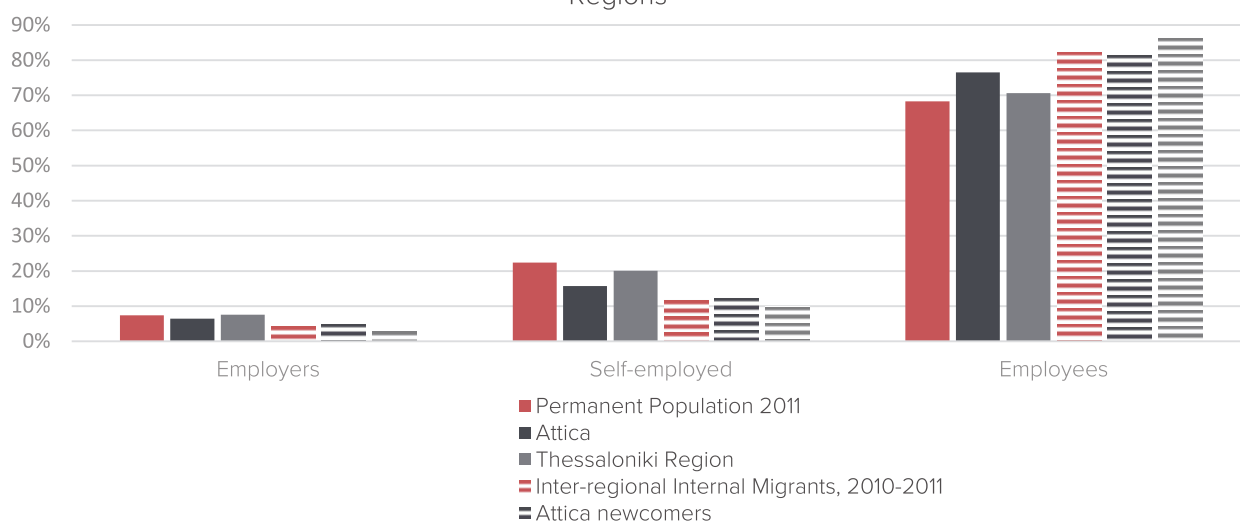


Source: Hellenic Statistical Authority, 2001 Census, unpublished data. E. Skoufoglou, 2018

very small anyway. A first striking finding is the very large proportion of salaried employees among the employed newcomers in most islands, particularly in the most remote ones (North Aegean, Dodecanese, Creta). In some cases (Creta, Dodecanese), the larger proportion in those islands compared to the ones closer to the mainland may relate to larger-scale tourist activities while in other cases (North Aegean, Dodecanese again) it might also reflect the specificities of border regions (economic incentives and inducements, military camps). The latter specificities should be also associated with the increased rates of employees in Thrace (Xanthi, Rodopi, Evros). Apart from the above regional units, the highest ratios of salaried employees among the incoming population are recorded in the regions of metropolitan areas or large cities (Athens, Thessaloniki, Patras, Heraklion, Larissa, Volos), in line with their high rates of employees in general, as well as in certain peri-metropolitan regional units (West Attica, Kilkis, Imathia – to which we could add Elis next to Achaia). The pattern is quite clear. Note that the shares of assistant family workers among newcomers follow approximately the same pattern.

It is reasonable that employers will tend to be found in the same places as employees, since the latter work for the former. Therefore, there is no particular reason to follow their exact moves. On the contrary, it would be interesting to monitor the contribution of the self-employed in the inter-regional mobility over the last year before the census. The respective shares by regional unit are shown in Chart 12.7 and in Map 12.16. Of course, the pattern will be akin to the inverse of the previous map, since the employees and the self-employed make up for the largest part of the total number of the employed population. Indeed, the largest shares of self-employed persons among the newcomers can be found in regional units of the mainland, particularly among those less populated, less urbanised, and with a lower level of economic development. Indeed, very few of them are situated on the main transport axis (S) of the country, which includes most developed regions. Apart from Ioannina, all regions of the remaining next-6 cities of the country have recorded low percentages of self-employed newcomers, and obviously the same applies to Athens and Thessaloniki. Percentages are high in some of the peri-metropolitan regional units, though (East Attica, Chalkidiki, Corinthos,

Chart 12.7 Professional Status among the Permanent Population and among Residents who changed Region between 2010 and 2011, Greece, Metropolitan Regions



Source: Hellenic Statistical Authority, 2001 Census, unpublished data. E. Skoufoglou, 2018

Chalkidiki, Serres, Pella, Pieria), as well as in a few islands in the Cyclades and the Northern Sporades (plus Thasos in the Northern end of the Aegean Sea), where they are probably related to smaller-scale tourism enterprises.

A general conclusion is that, at the time of the census, high proportions of self-employed persons among the population who had recently moved in from other regional units are recorded in regional units that have mainly attracted economically inactive or unemployed internal migrants rather than employed ones (or formerly unemployed who found a job in their new regional unit of residence). This is an indication that the self-employed are generally less mobile than salaried employees and/or that starting a business is less of an incentive to move to another region than finding a paid job. This finding can be cross-checked by examining Chart 12.8. The chart shows the percentages of employers, employees and self-employed persons among the total employed population and among newcomers from other regional units in particular, for Greece as a whole, Attica, Thessaloniki and the rest on the country. The conclusion is indisputable: the share of the self-employed among newcomers is far lower than their share among the employed in all four cases – and vice versa, the share of employees among newcomers is everywhere higher than their share among the employed. It is particularly interesting that the gap is bigger in the rest of the country than in Attica or Thessaloniki. This is a strong indication that the hypothesis of metropolitan residents moving to the countryside to start a business or a farm is not confirmed. Contrary to common belief, starting a business doesn't seem to be among the main incentives to leave Athens or Thessaloniki. Once again, it appears that this is rather a myth, reflecting the vague dream of a flee towards an innocent countryside and a self-sufficient lifestyle. It stems from the disappointment and anger about metropolitan life rather than from any concrete expectation for a better future in the countryside. We shall soon come back to this issue to examine particularly the hypothesis of new farmers.

Let's now examine briefly the data regarding the occupation of the employed inter-regional

Chart 12.8 Occupations (1-digit ISCO codes) among the Employed Population and among Inter-regional Internal Migrants, 2010-2011, Greece



Source: Hellenic Statistical Authority, 2001 Census, unpublished data. E. Skoufoglou, 2018

internal migrants during the period 2010-2011. As already mentioned, the second unpublished ELSTAT table provides 1-digit ISCO codes for the incoming population by regional units. This classification is in broad strokes; however, it is sufficient for our study (again, more detailed data could be obtained from the quarterly labour force surveys). The analysis of the data is based on a series of spider diagrams.

In the first spider diagram (Chart 12.9), the shares of each 1-digit ISCO occupation among those who have changed their regional unit of residence are compared with their shares among the national employed population. Shares above the national average indicate a higher degree of mobility of the given occupation, while the opposite is the case with respect to shares below the national average. Mobility is significantly higher in two categories of occupations: service and sales workers, on one hand, and professionals, on the other. In the former case, the high ration among the employed inter-regional internal migrants is probably associated with tourism activities. Indeed, the analytical data of the table indicate very high rates of employees in the service sector and of salaried professionals among newcomers in the islands. In the latter case, it may refer to professions that are either required or encouraged to work in distant regions for some time (teachers, doctors), to engineers that work in road construction (the only branch of construction that has somewhat resisted a total collapse), energy infrastructure, or telecommunication projects in regions different than their original place of residence etc. In general, it seems that, compared to other occupations, professionals are in a better position to find a job amid the crisis and defend their employment by moving geographically. An increased proportion among newcomers in the various regional units is also recorded for technicians

Chart 12.9 Occupations (1-digit ISCO codes) among Inter-regional Internal Migrants, 2010-2011, Greece, Attica



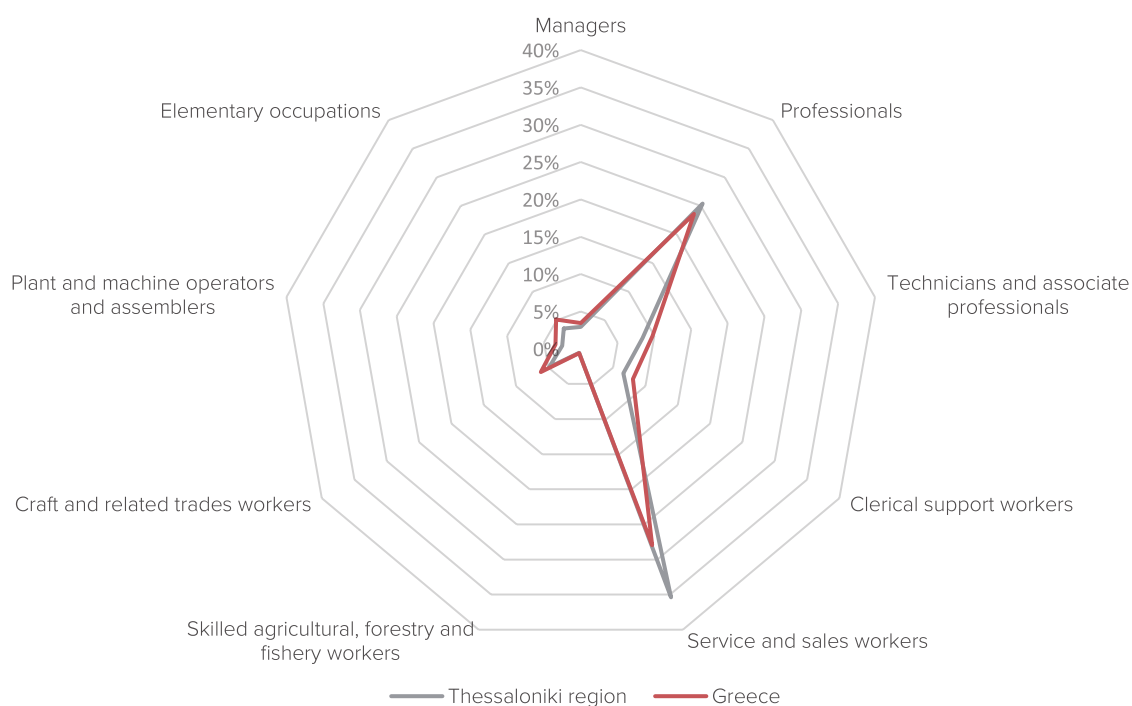
Source: Hellenic Statistical Authority, 2001 Census, unpublished data. E. Skoufoglou, 2018

Chart 12.10 Occupations (1-digit ISCO codes) among the Employed Population and among Incoming Internal Migrants, 2010-2011, Attica



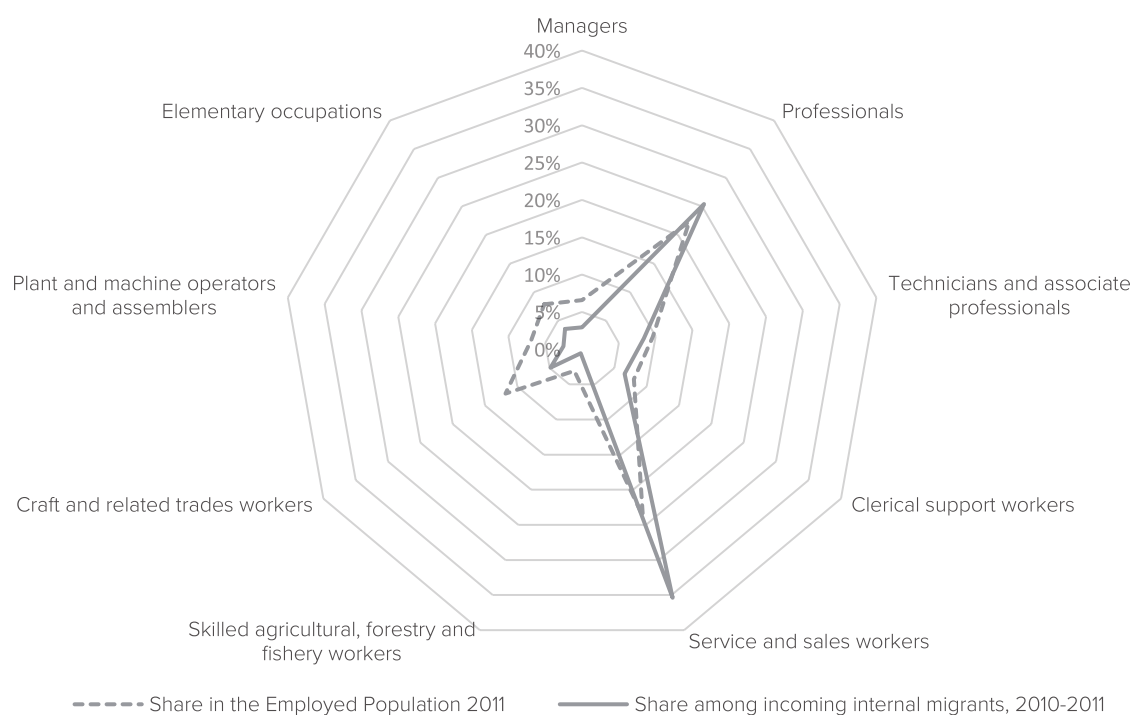
Source: Hellenic Statistical Authority, 2001 Census, unpublished data. E. Skoufoglou, 2018

Chart 12.11 Occupations (1-digit ISCO codes) among Inter-regional Internal Migrants, 2010-2011, Greece, Thessaloniki Region



Source: Hellenic Statistical Authority, 2001 Census, unpublished data. E. Skoufoglou, 2018

Chart 12.12 Occupations (1-digit ISCO codes) among the Employed Population and among Incoming Internal Migrants, 2010-2011, Thessaloniki Region



Source: Hellenic Statistical Authority, 2001 Census, unpublished data. E. Skoufoglou, 2018

and associate professionals, who are most probably connected with the same activities as professionals. Finally, clerical support workers are slightly more among newcomers than among the employed in total.

At the other end of the spectrum, the least mobile category of all is skilled agricultural, forestry and fishery workers. This finding, combined with the low degree of mobility among elementary occupations, where agricultural, forestry and fishery labourers are included, is a concrete confirmation that the hypothesis of an urban exodus towards the primary sector is incorrect.

Simultaneously, very low degrees of mobility are observed among craft and related trades workers and among plant and machine operators. Those two categories include the core of the “traditional” (or industrial) working class. In what could appear to be a historical paradox, the traditional working class, the class that first broke its links to the ground, seems rather attached to its place of residence today. This is not something newly discovered: in fact, it has been highlighted that (in Athens, but presumably in the other cities of the country too) the residents of traditional working-class districts tend to remain to those districts even when they enjoy the fruits of social mobility, moving to higher ranks in the social hierarchy, that is to the petit-bourgeois class (Maloutas, 2018, pp. 171-192). The historical process through which the working class has been given access to small-scale private property and home ownership is certainly one of the causes of this phenomenon.

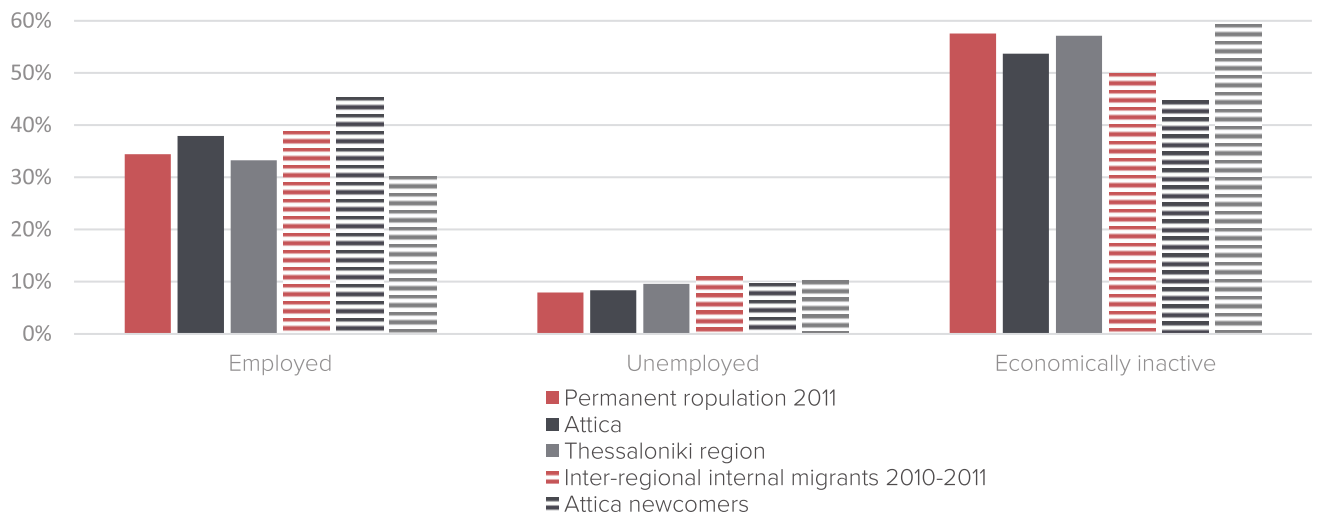
On the other hand, since the crisis has mostly affected social classes and groups closely associated with the capitalist mode of production and its core surplus-value producing activities, it is reasonable that those social categories have less opportunities to find a job anywhere, and thus to defend themselves by means of internal migration. The traditional working class has hardly any chance to improve its condition by moving to another regional unit, since the activities it is involved in have been severely restricted (industry) or even totally collapsed (construction). Besides, this is also reflected in the low degree of mobility in the opposite pole of capitalist production, that is managers.

In conclusion, neither the primary nor the secondary sector of the economy can be considered as the driving force of internal migration in the context of the crisis. It should rather be concluded that the main bulk of inter-regional mobility among the employed population is due to middle-class salaried employees and to the working class of the tertiary sector.

Before we conclude the chapter, let’s briefly turn our attention to Attica and Thessaloniki again. The data about 1-digit ISCO occupations have been gathered in four spider diagrams, two for each metropolitan region, showing the share of each occupation among the employed newcomers in each region compared to the shares in the national total of newcomers (Charts 12.11 and 12.13) and in the total employed population in the region (Charts 12.10 and 12.12) respectively.

The charts indicate that, as far as occupations are concerned, tendencies among the newcomers in Attica align with the respective tendencies throughout the country more than tendencies among the newcomers in Thessaloniki. In Thessaloniki, the predominance

Charte 12.13 Labour Status among the Permanent Population and among Residents who changed Region between 2010 and 2011, Greece, Metropolitan Regions



Source: Hellenic Statistical Authority, 2001 Census, unpublished data. E. Skoufoglou, 2018

of service and sales workers and of professionals against any other category is even more explicit. Simultaneously, the shares of craft and related trades, plant and machine operators, and elementary occupations are smaller than the national average among newcomers – and much smaller than their share in the total employed population of Thessaloniki. In a certain sense, it may be considered that the tendencies recorded in the national scale are found in an even more pronounced form in Thessaloniki, while in a milder (and closer to the national average) version in Attica, where the share of service and sales workers as well as of professionals among newcomers is smaller than their shares among the inter-regional incoming population in the rest of the country, although larger than their shares among the total number of the employed in the region.

Besides, in Attica, the share of occupations connected with industry and the core of capitalist production (shares of craft and related trades, plant and machine operators, elementary occupations as well as, at the other end of the spectrum, manages) among newcomers is slightly larger than the national average. The same applies to clerical support workers as well as technician and associate professionals. Both of the latter categories in Thessaloniki lag behind the national average among newcomers.

All the above findings combined probably reflect the relative economic advantage of Attica which was maintained even after the crisis (let us remind that the regional GDP in Attica started shrinking in comparison with the national average only a couple of years afterwards). While all occupations connected with the core surplus-value producing activities, and particularly with the secondary sector of the economy, saw their share among inter-regional internal migrants shrink virtually everywhere, Attica still attracted somewhat higher proportions of them at the time of the census. This is in line with the fact that the share of the employed among newcomers in Attica was higher than both the respective share on the national scale and the share of the employed among the permanent population of Attica at the time, while in Thessaloniki the opposite happened in both cases (Chart 12.14).

Conclusions

The unpublished census data acquired through a special convention with ELSTAT shed more light upon internal migration throughout the year 2010-2011, that is the first year of the austerity programme in face of the sharp manifestation of the global capitalist crisis in Greece. Offering the possibility to monitor internal migration balance sheets by former prefecture (NUTS2 region) as well as to correlate internal migration with age groups, the labour status, the professional status, and occupations, the new tables provide a quite detailed and accurate picture about inter-regional relocations over that critical year. Of course, the timespan covered is again restricted; however, this problem can be dealt with by juxtaposing our new findings with the previous conclusions drawn from the examination of official annual population estimates.

For the most part, the unpublished 2011 census data confirm both our basic previous findings: a counter-urbanization effect at the top and higher levels of the urban hierarchy; and a relative advantage of the islands and of peri-metropolitan regions over the rest of the country.

It is characteristic that most regional units (which in the mainland almost coincide with the former prefectures) in the countryside have profited from internal migration. A closer look reveals a pattern of three concentric circles around both Athens and Thessaloniki: a first ring of high internal migration surpluses, a second ring of deficits or only marginal surpluses, and a third, distant ring with high surpluses again. This distant ring, including border regions as well as certain relatively isolated mountain and/or rural regions, depicts the supplementary process of distant counter-urbanisation detected in the previous chapter too. This process is often not translated in population change, due to the aged population and the negative natural population change in the respective regions. In border regions, in particular, it emerges that high incoming population rates are not only due to the large proportion of seasonal or temporary residents but also reflect an overall positive dynamic in terms of internal migration.

In addition to the previous findings, it turns out that less urbanised and less populated areas are attracting larger proportions of immigration (or repatriation) compared to their population. However, this is not the main reason for the advantage of peri-metropolitan regions that fall into this category.

Apart from anything else, the unpublished tables offer the possibility to examine the balance of the population exchange between the two metropolitan regions and each and every other NUTS3 region around the country. This is instrumental in determining the features of the de-metropolisation process under the conditions of the crisis.

An interesting general conclusion derived from the balance sheets is that the basic distinction is between regional units with a high or with a low rate of population exchange with metropolitan regions rather than between regional units receiving population from them and regional units sending population to them. Within this context, regional units who basically profit from the process of metropolitan exodus are located on a ring around each metropolitan region. A Burgess commuter ring is visible around Athens even at the very abstract level of regional units – we shall see that being confirmed when our analysis proceeds to the intra-regional level in Attica.

Another interesting finding is that the already highlighted phenomenon of people abandoning the metropolis to move to an island is restricted to Attica, whereas it is not observable in Thessaloniki. This certainly reflects that Thessaloniki is located further away from the main bulk of the Aegean islands and poorly connected with most of them in terms of transport, as well as that its neighbouring North Aegean islands are less attractive than the ones in the south. However, it is also an expression of the fact that, as it stems from the trends detected in the mainland too, unlike Athens, the scope of urbanisation (or de-urbanisation) processes in Thessaloniki is geographically limited and not enough to affect the whole national territory. Finally, contrary to what one might have expected based on the assumption as well as the previous indications that the counter-urbanisation of crisis affects Athens more than Thessaloniki, the latter has a deficit in its population exchange with Attica. However, this overall deficit is exclusively due to the suburbs and exurbs of Athens, whereas, from its exchange of population with the Athens city centre, Thessaloniki is gaining residents.

Apart from the total numbers, it is also important to know which layers of the population are mostly involved in internal inter-regional migration. In general, the economically active population appears to be more mobile than the economically inactive. However, the employed are still a clear minority among those who have changed their regional unit of residence during the year 2010-2011. According to the available data, having found a job is neither the only nor the most frequent reason to move to another region or regional unit, unless this regional unit is an island. This confirms the indications derived from the surveys examined previously in the respective chapter.

Job-led internal outmigration can even less explain the de-metropolisation process, as at the time of the census Attica had a rate of unemployment lower than the national average, and even lower than the average of the regional units in the mainland. The only destination where jobs seem to be the main attraction for residents of the Capital city is, again, the islands – and this is mainly about paid jobs, as the large proportions of salaried employees among the employed newcomers suggest. What does not appear to be a key incentive to leave Athens or Thessaloniki amid the crisis, particularly, is starting a business in the countryside. A different trend might have appeared afterwards, when the effects of austerity were consolidated, but it might also be the case that opportunities in the countryside are more of a fantasy among metropolitan residents than something real. Besides, this chapter has provided evidence that the self-employed are generally less mobile than salaried employees all around the country.

On the other hand, limited expectations in finding a job in a large urban centre under the conditions of the crisis are reflected in the low shares of the unemployed among the incoming population in Attica as well as in major mainland cities. Of course, the proportion of the employed, particularly employees, among the newcomers in Attica is elevated, but this is more likely to involve internal migrants that have moved in because they have found a job rather than in search for a job. In striking difference with what was the case in the past, opportunities in the large cities are not a major factor of population pull: people from the countryside seem to be unwilling to risk moving to a large city in search for a better future, unless they have already

found a job there. This is probably the main aspect of the counter-urbanisation effect at the higher and highest levels of the urban hierarchy.

Regarding the composition of the employed newcomers in the regional units across the country, apart from most islands, increased rates of employees are also recorded in Thrace, in metropolitan areas or large cities, as well as in certain peri-metropolitan regional units. On the other hand, the largest proportions of self-employed recent internal migrants are generally found in less populated, less urbanised, and less developed regional units in the mainland, as well as in a few islands and tourist regions, in that latter case probably reflecting the existence of smaller-scale tourism. Finally, large proportions of retired newcomers are gathered in certain mountain, rural, and/or relatively isolated regional units, which reflects a trend towards the place of origin.

It is impressive that, at the inter-regional level, the least mobile category among the employed is skilled agricultural, forestry, and fishery workers. This concrete finding reinforces the picture that metropolitan residents have not turned to the land and agriculture, at least to start with. Once again, narratives suggesting a massive wave of new farmers coming out from the metropolis is rather a fantasy or a myth.

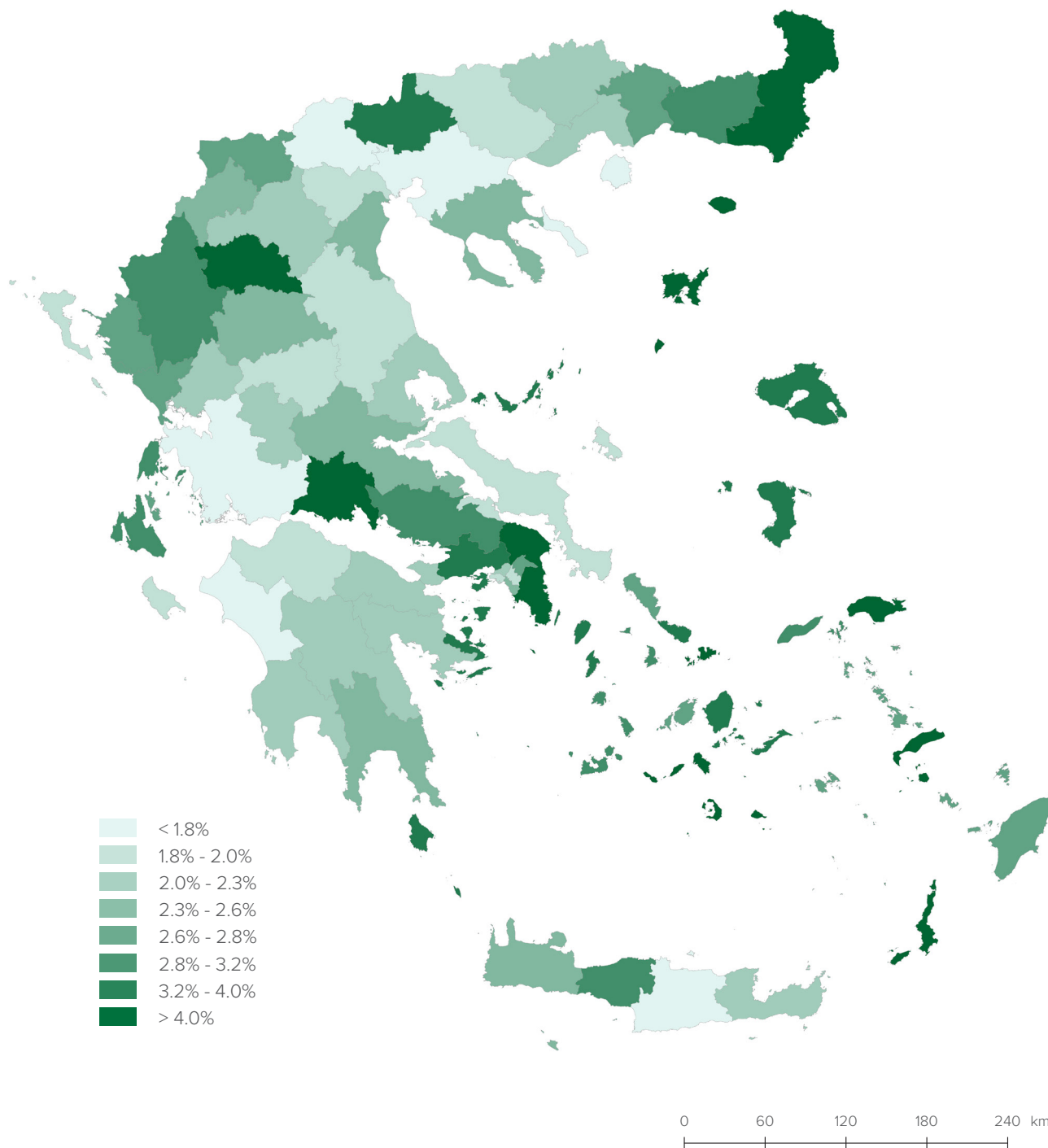
On the other hand, as already pointed out by authors in the past, the “traditional” working class of the industrial sector seems rather attached to its place of residence, which is still the case under the conditions of the crisis too. We saw that the residents of the working-class districts and suburbs of the Capital city, in particular, tend to remain to those areas even when they enjoy the fruits of social mobility, upgrading to more wealthy social classes. Likewise, they appear reluctant to abandon their area of residence to move to the countryside as a means of defence against the consequences of the current crisis. This certainly reflects the historical conditions under which the urban industrial working class was formed, with the prominent role of owner-occupied housing and local family networks, but it might also reflect, to a certain extent, a relatively higher durability of existing workplaces in the secondary sector, despite the devastating effects of the crisis that came on top of an already existing prolonged structural crisis in industry. Besides, Attica is still attracting a proportion of secondary-sector workers slightly higher than the national average, although we shall see that the traditional working-class districts and sectors of Athens display low rates of incoming population, which suggests a serious restriction of the traditional ability of the Capital city to attract industrial workers (the above-mentioned slightly higher proportion might reflect the relative dynamic of certain working-class areas in the periphery of the region).

On the contrary, the working class of the tertiary sector apparently makes up for the main bulk of inter-regional mobility among the employed population, along with the middle-class salaried employees. As a rule, those branches of the tertiary sector that are apparently attracting people to the countryside (tourism, services) require relatively low and short-term capital investment, that is they are characterised by a lower organic composition of capital than industry. This enables short-term profits as well as enhanced geographical mobility of activities, although the long-term sustainability of those activities can be seriously questioned, which also

means that the patterns of relocations associated with them are subject to abrupt changes in the near future too.

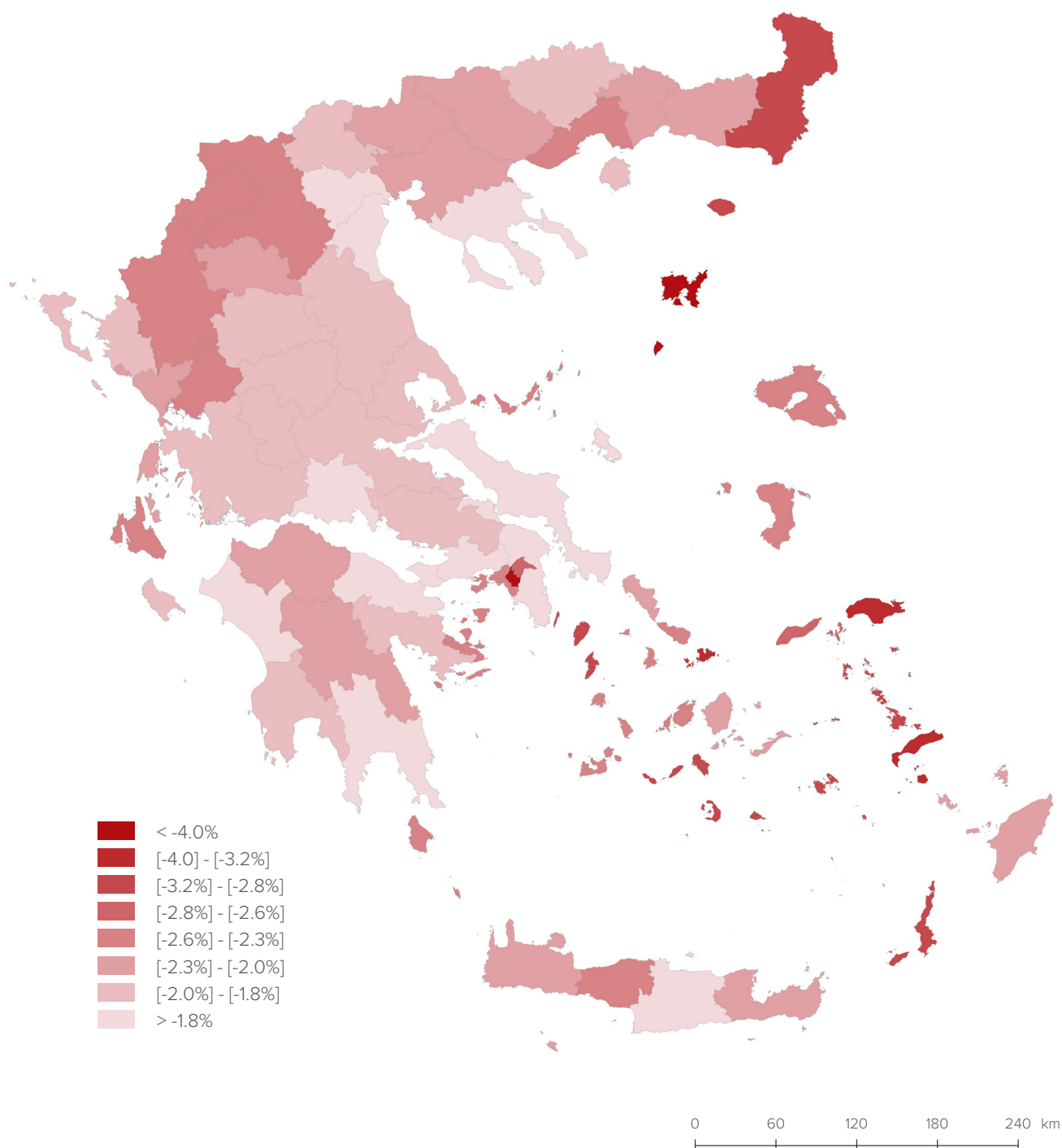
It should be underlined that, while the determining factor of the current counter-urbanisation/de-metropolisation effect is the crisis, this doesn't mean that the only social groups pressured by the crisis are those that also present a high degree of mobility. Internal migration is not an option for all social classes and groups. There is no rule saying that the more affected a social group is by the crisis, the more probable it is to react by moving to another regional unit across the country. Besides, we saw that, amid the crisis, the restriction of relocations and its geographical distribution is a more substantial phenomenon than that of the metropolitan exodus. Despite not in a mechanical manner, though, our analysis of inter-regional relocations, as well as of their restriction too, generally confirms that it is mostly those classes more intimately linked to the capitalist mode of production that determine the current counter-urbanisation/de-metropolisation process.

Map 12.1 Incoming Internal Migration, 2010-2011, as a percentage of the Regional Permanent Population above 1 year of age (excluding newcomers from abroad), by Regional Unit



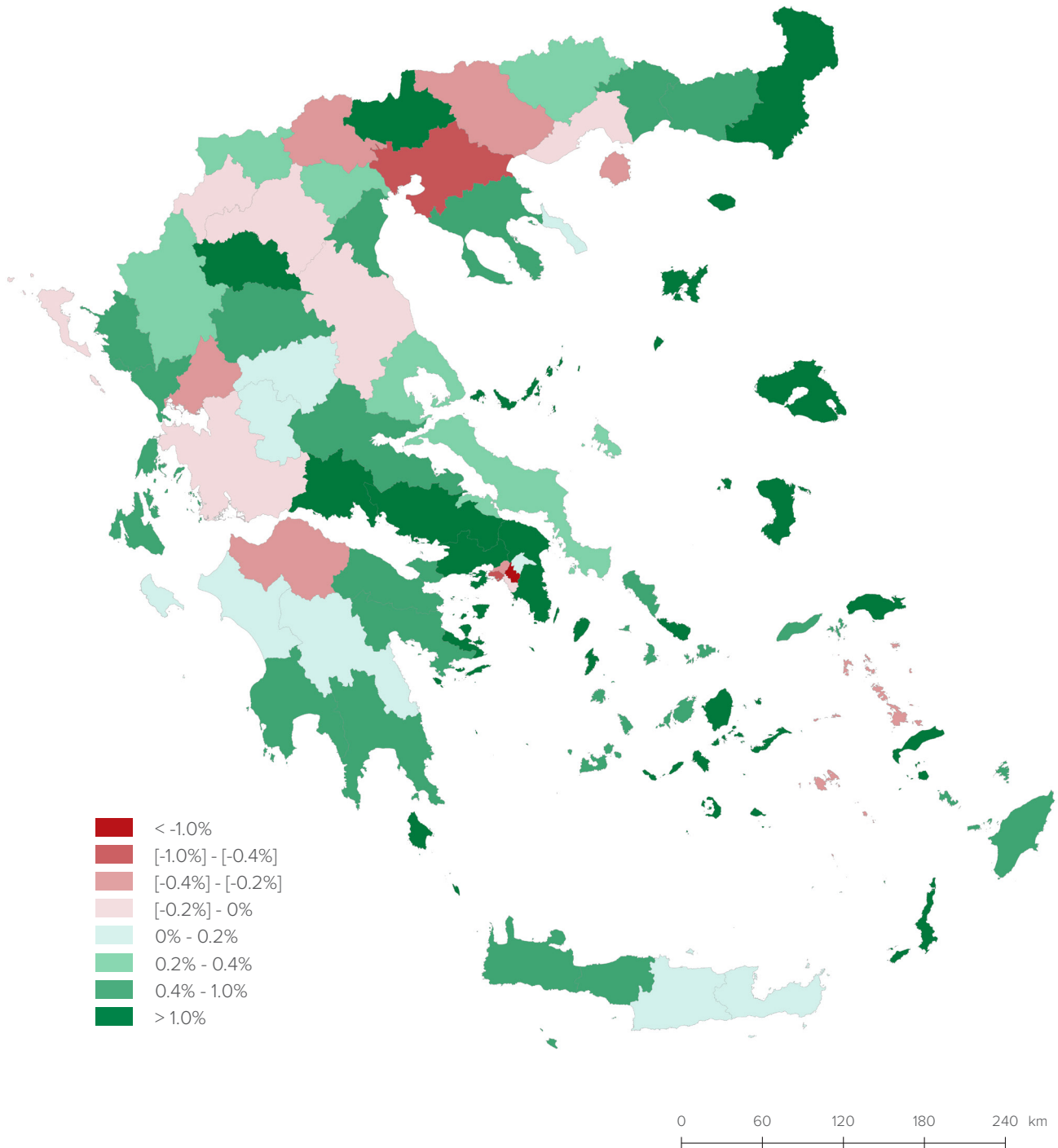
Source: Hellenic Statistical Authority, 2011 Census unpublished data
E. Skoufoglou, 2018

Map 12.2 Outgoing Internal Migration, 2010-2011, as a percentage of the Regional Permanent Population above 1 year of age (excluding newcomers from abroad), by Regional Unit



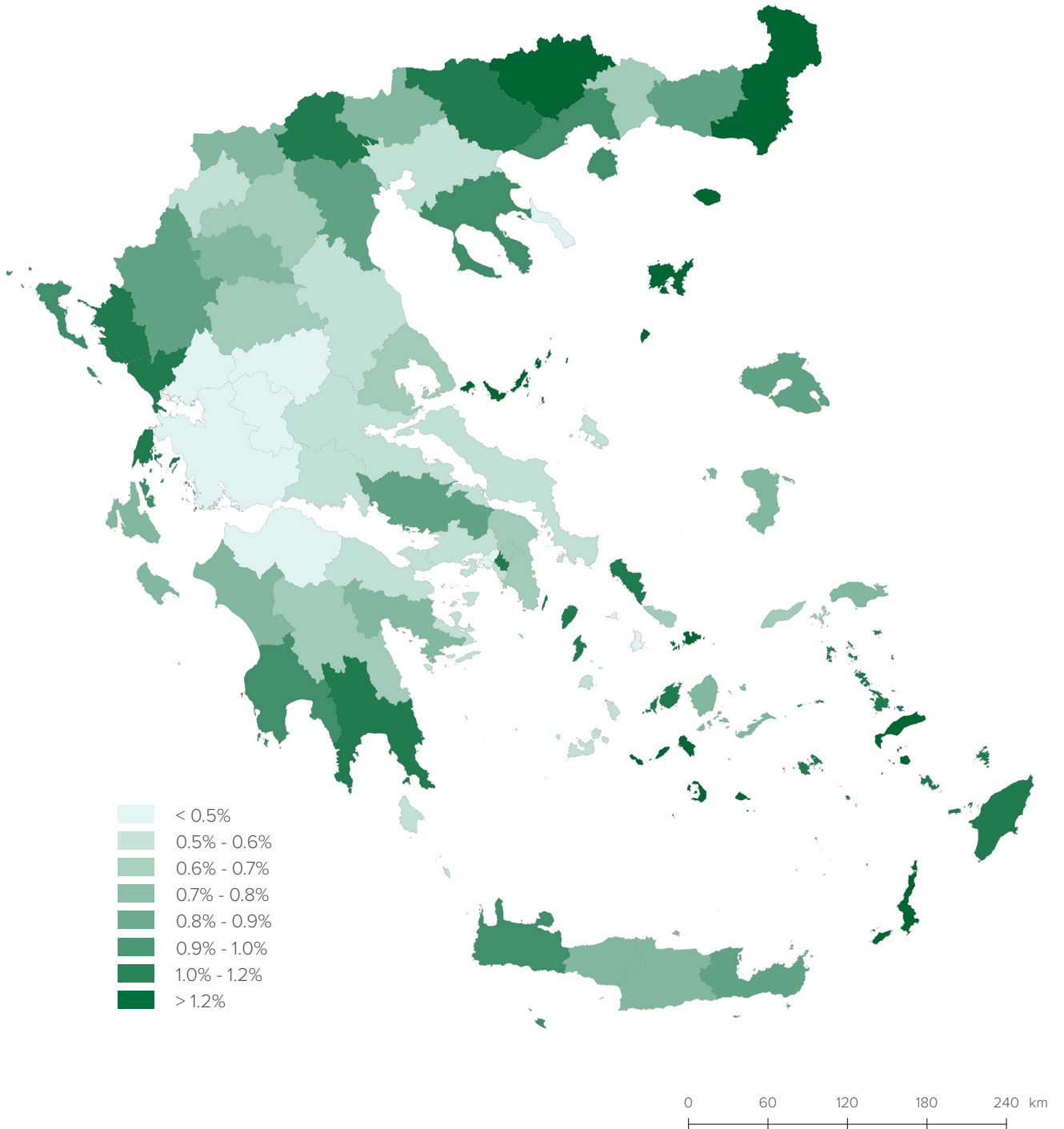
Source: Hellenic Statistical Authority, 2011 Census unpublished data
E. Skoufoglou, 2018

Map 12.3 Balance Sheet of Internal Migration, 2010-2011, by Regional Unit



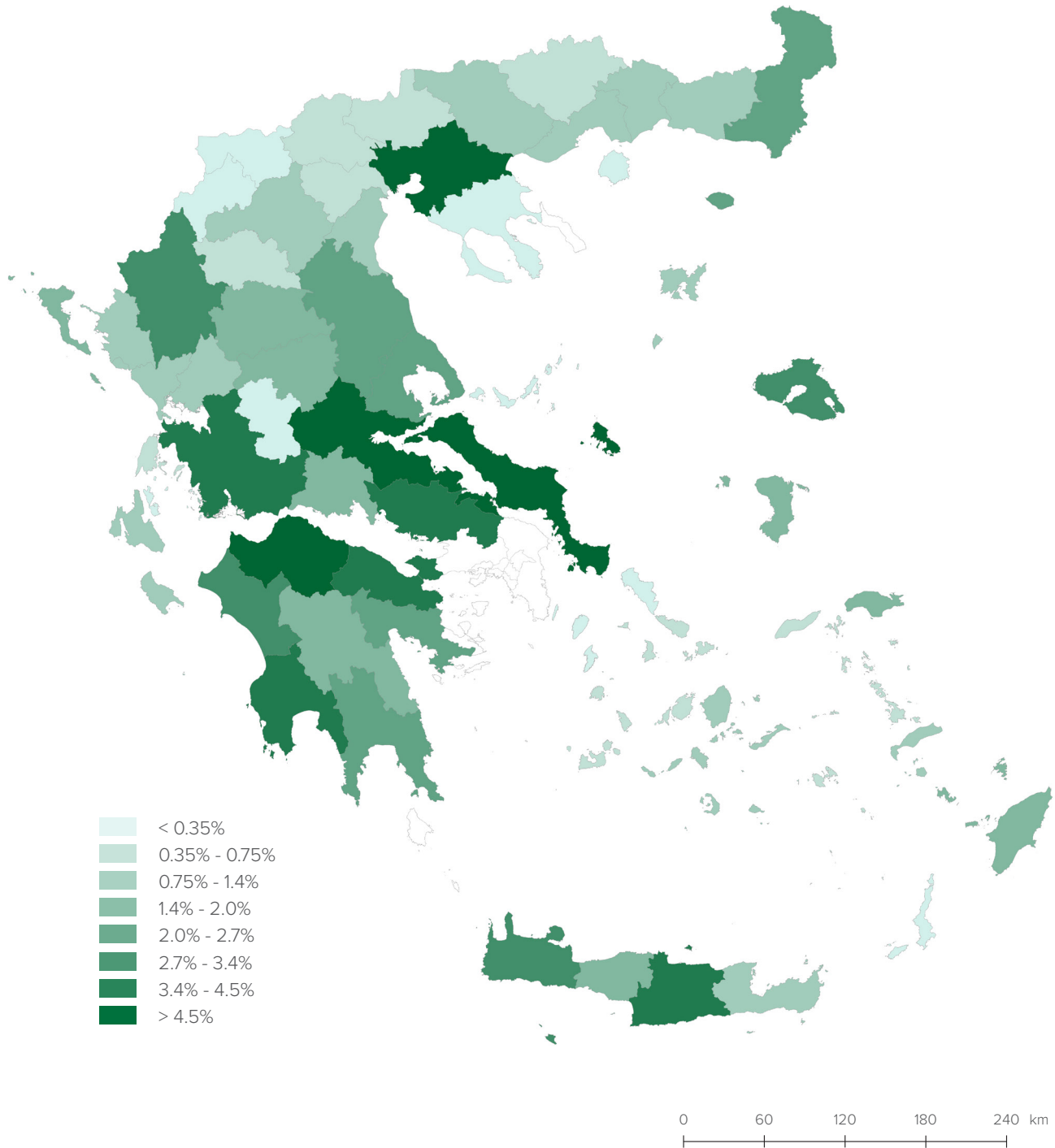
Source: Hellenic Statistical Authority, 2011 Census unpublished data
E. Skoufoglou, 2018

Map 12.4 Immigration by Regional Unit of destination, 2010-2011, as a percentage of their Permanent Population above 1 year of age



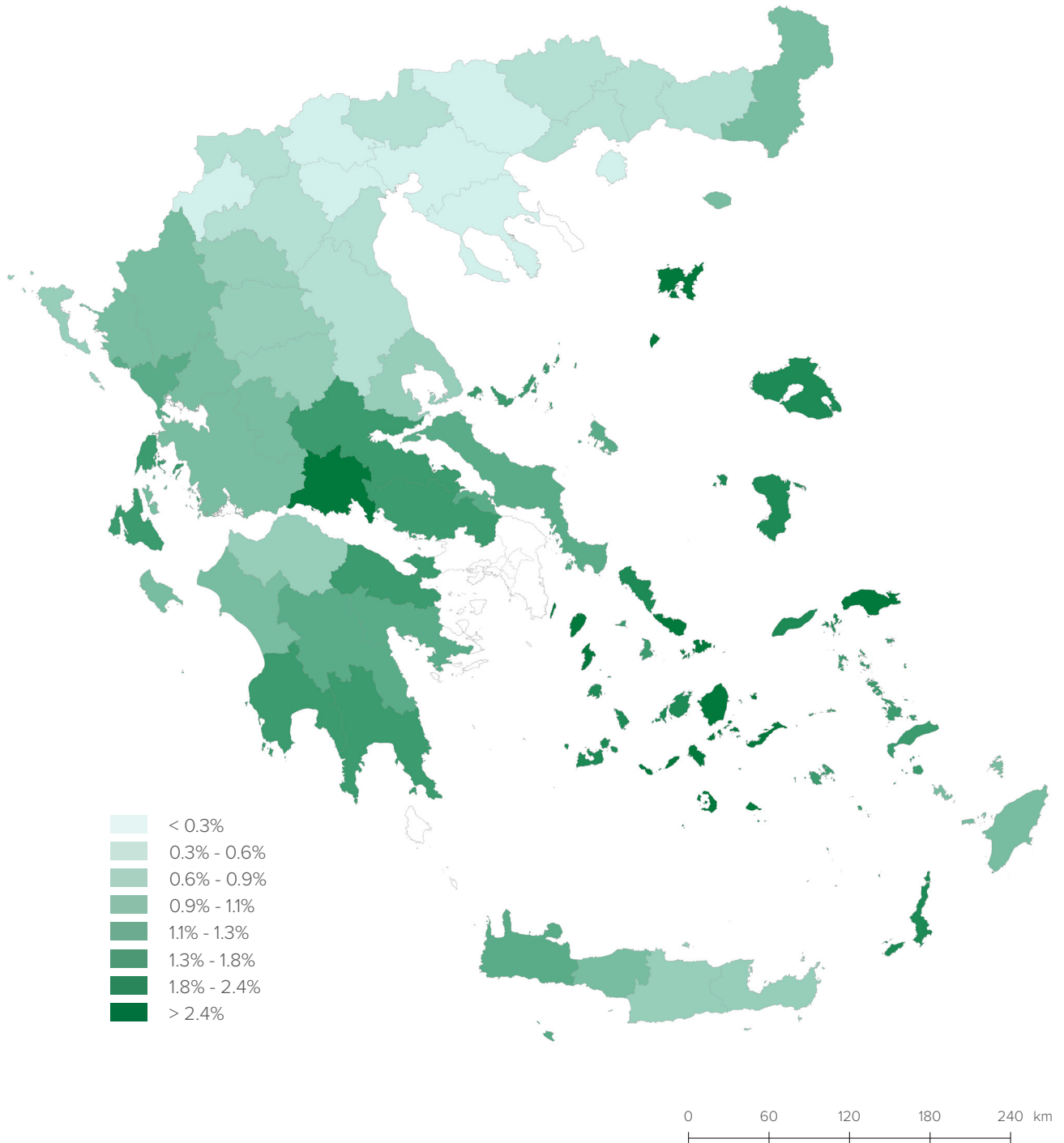
Source: Hellenic Statistical Authority, 2011 Census unpublished data
E. Skoufoglou, 2018

Map 12.5 Outgoing Internal Migration from the Region of Attica, 2010-2011, shares by Regional Unit of destination



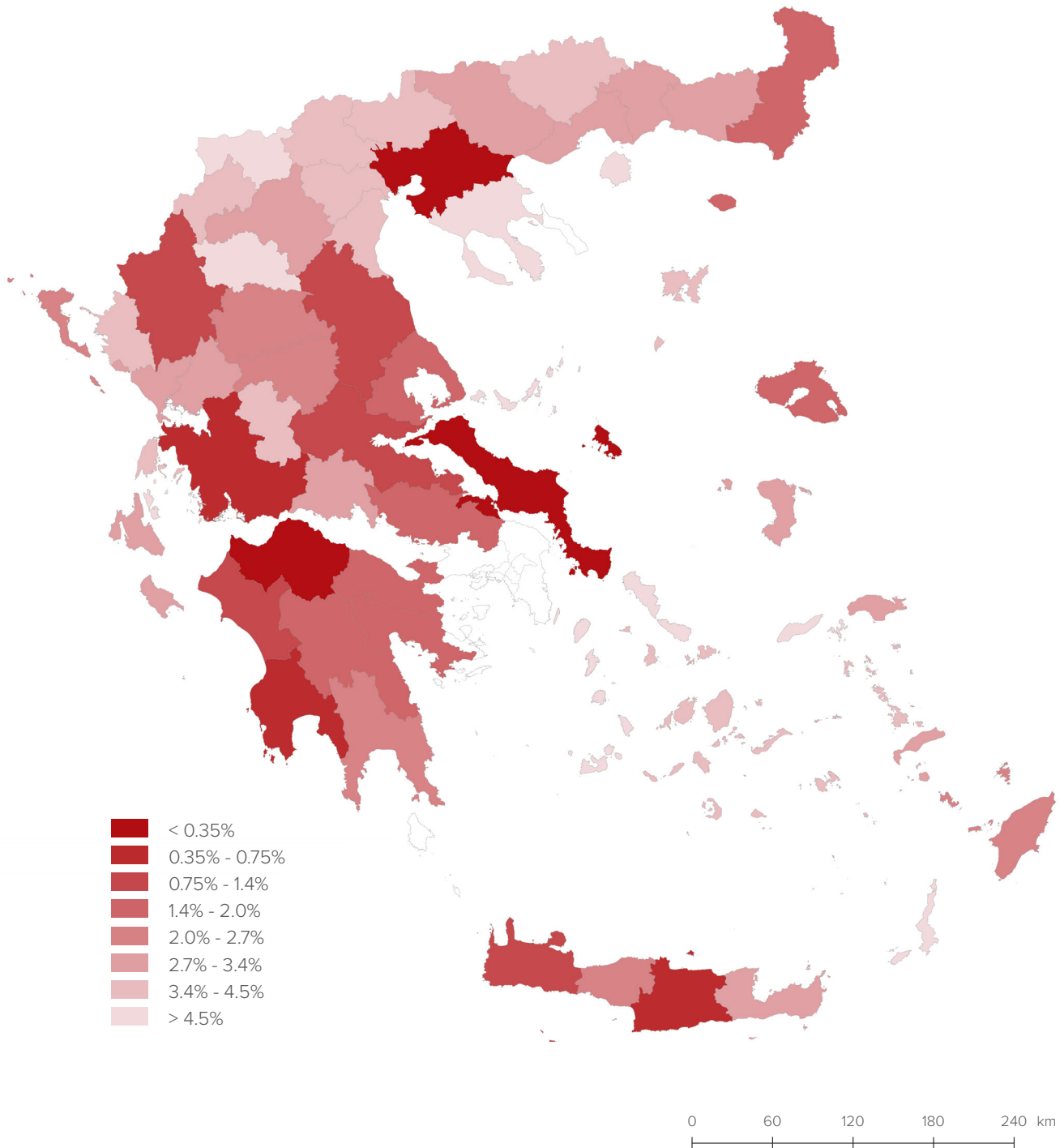
Source: Hellenic Statistical Authority, 2011 Census unpublished data
E. Skoufoglou, 2018

Map 12.5a Outgoing Internal Migration from the Region of Attica, 2010-2011,
by Regional Unit of destination,
as a percentage of their Permanent Population above 1 year of age



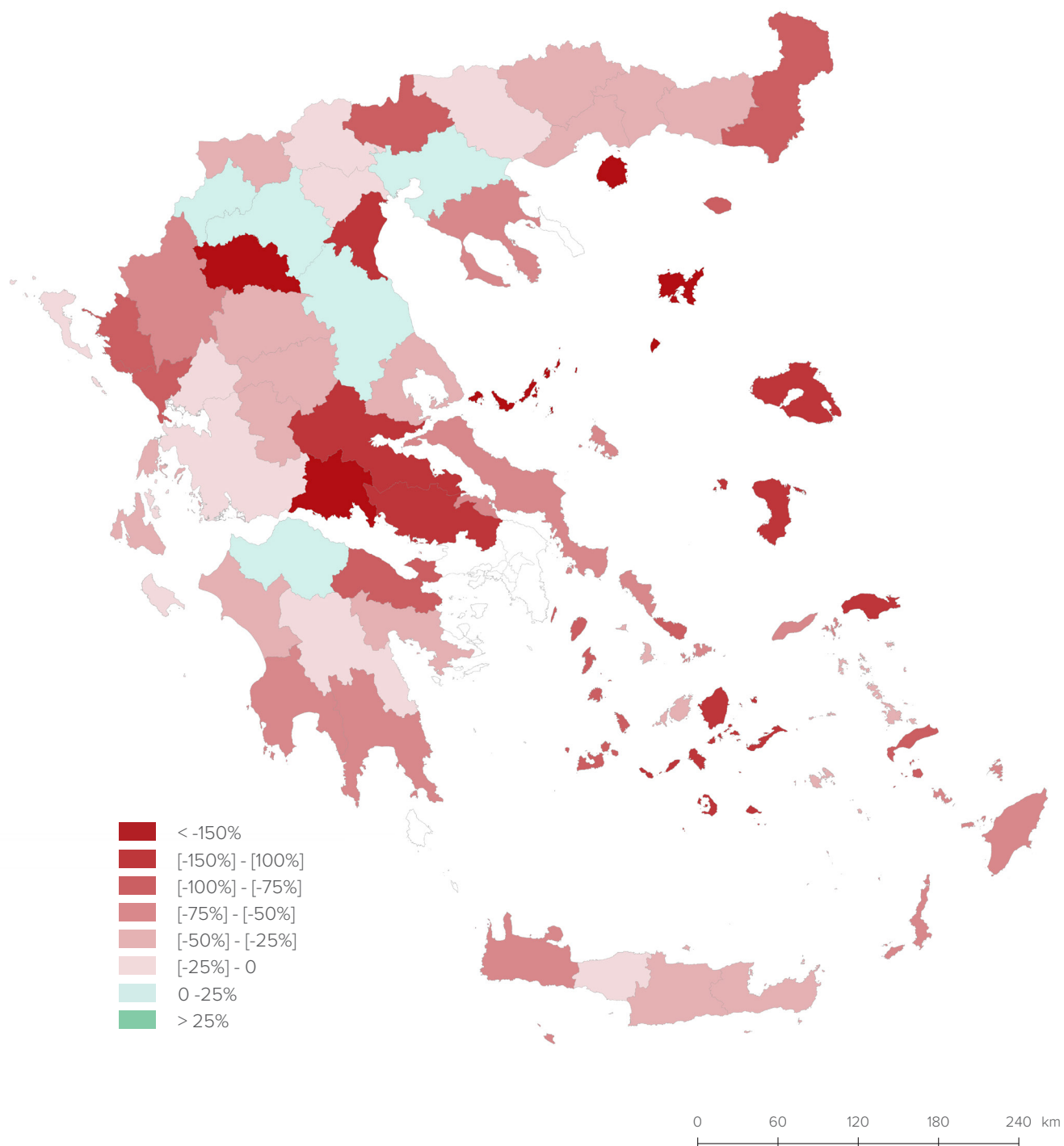
Source: Hellenic Statistical Authority, 2011 Census unpublished data
E. Skoufoglou, 2018

Map 12.6 Incoming Internal Migration to the Region of Attica, 2010-2011, shares by Regional Unit of Origin



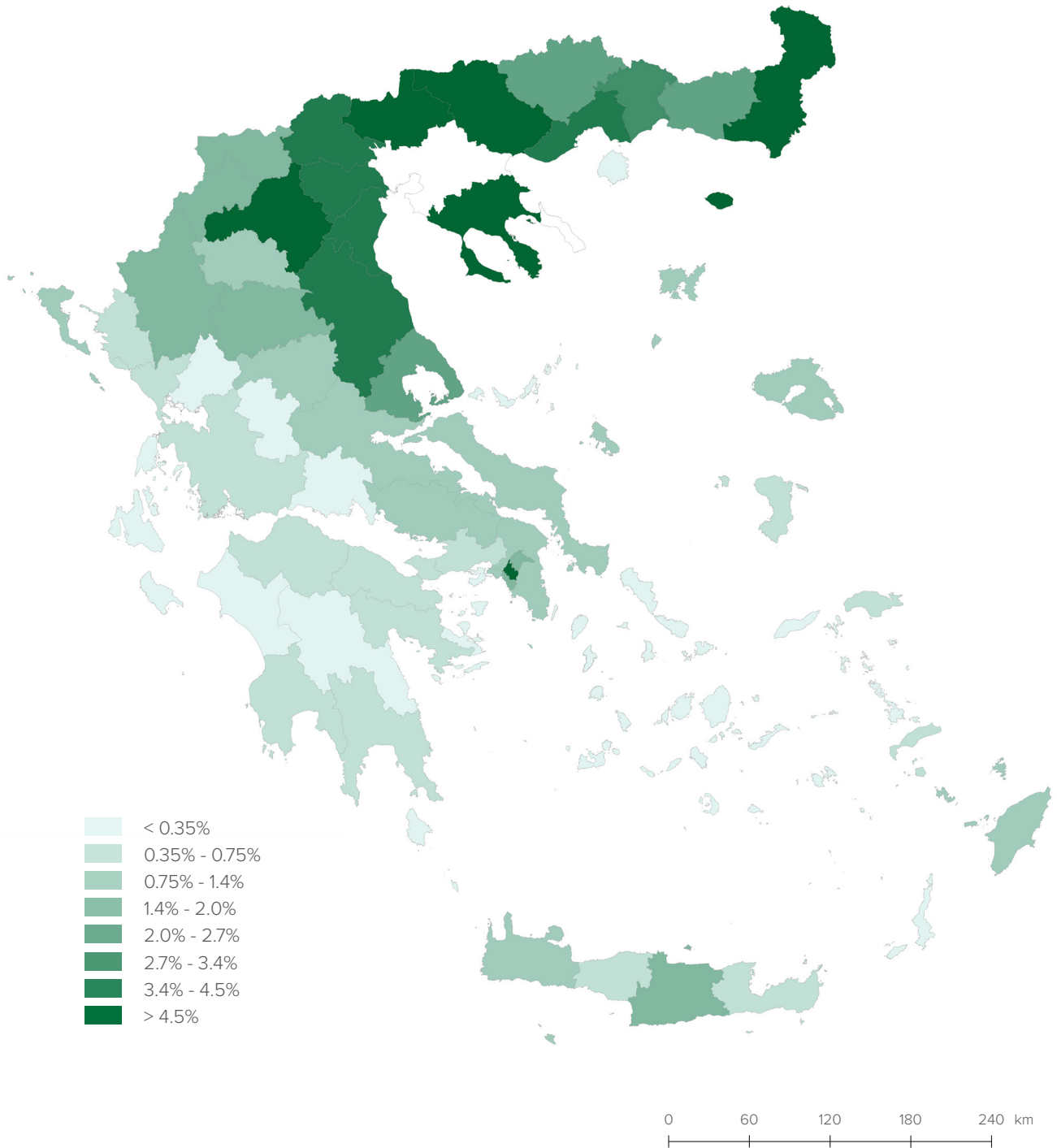
Source: Hellenic Statistical Authority, 2011 Census unpublished data
E. Skoufoglou, 2018

Map 12.7 Balance Sheets of Population Exchange between Attica and other Regional Units, relative to the Incoming Population in Attica, 2010-2011, by Regional Unit



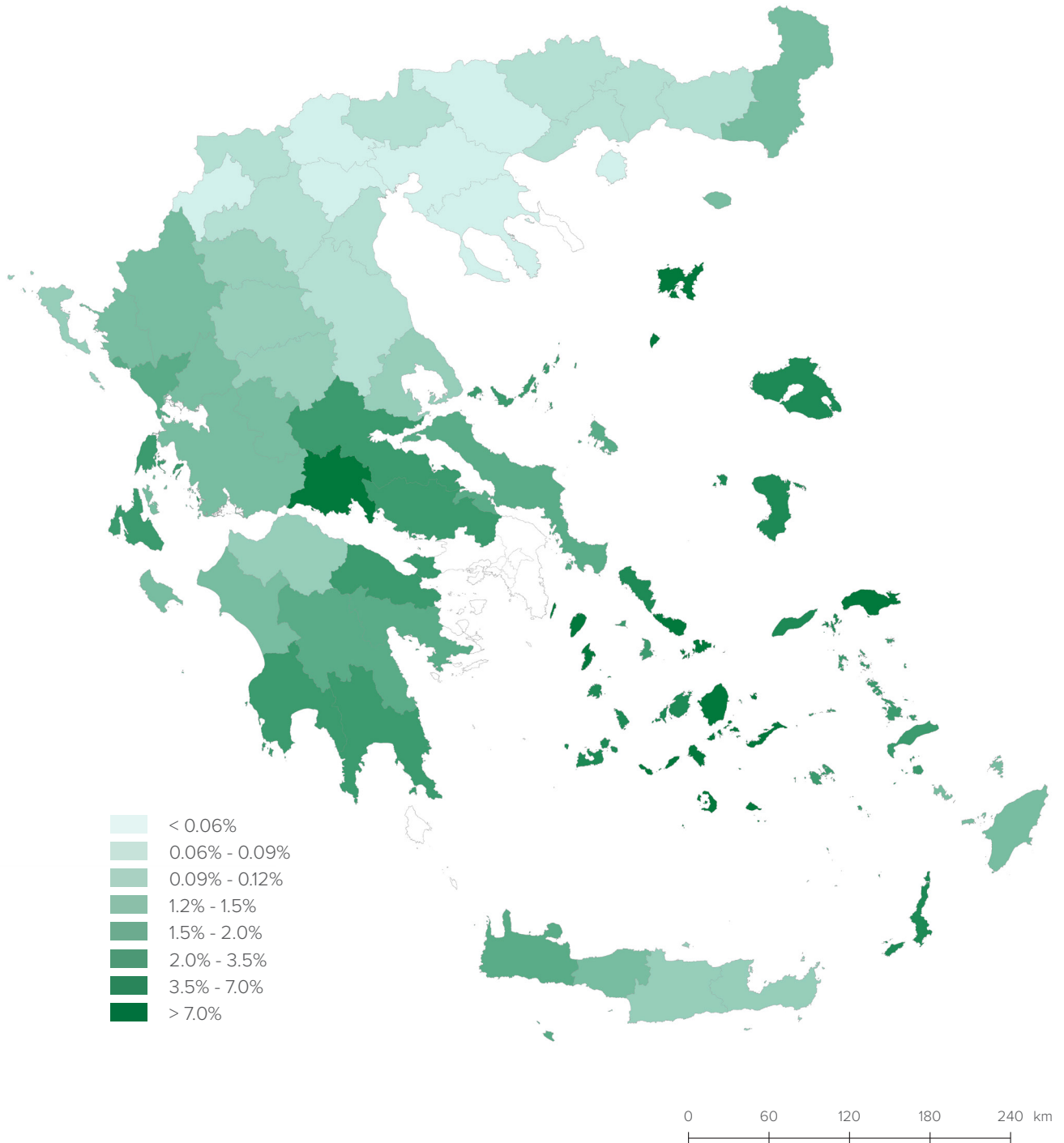
Source: Hellenic Statistical Authority, 2011 Census unpublished data
E. Skoufoglou, 2018

Map 12.8 Outgoing Internal Migration from the Region of Thessaloniki, 2010-2011, shares by Regional Unit of destination



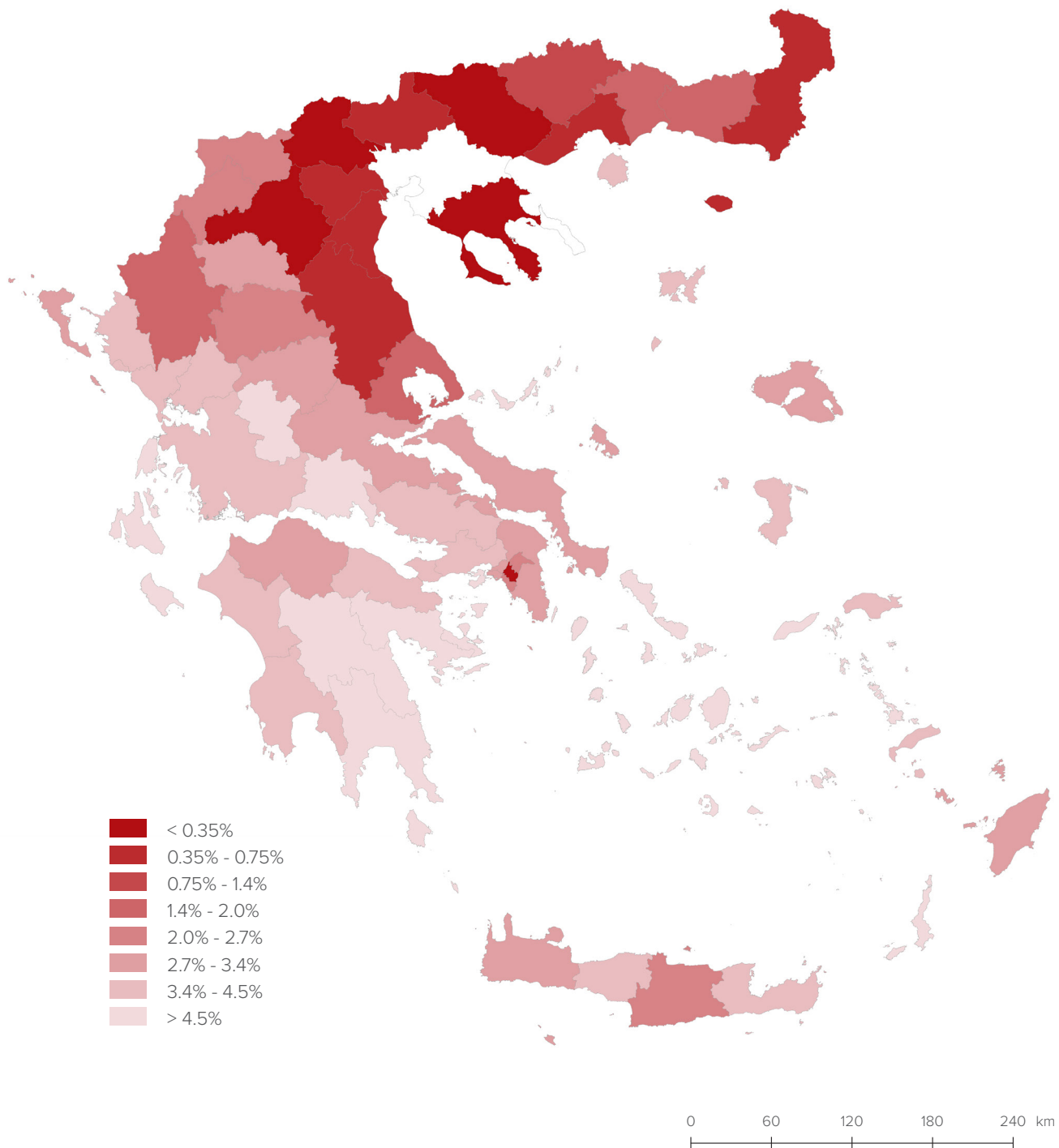
Source: Hellenic Statistical Authority, 2011 Census unpublished data
E. Skoufoglou, 2018

Map 12.5a Outgoing Internal Migration from the Region of Thessaloniki, 2010-2011,
by Regional Unit of destination,
as a percentage of their Permanent Population above 1 year of age



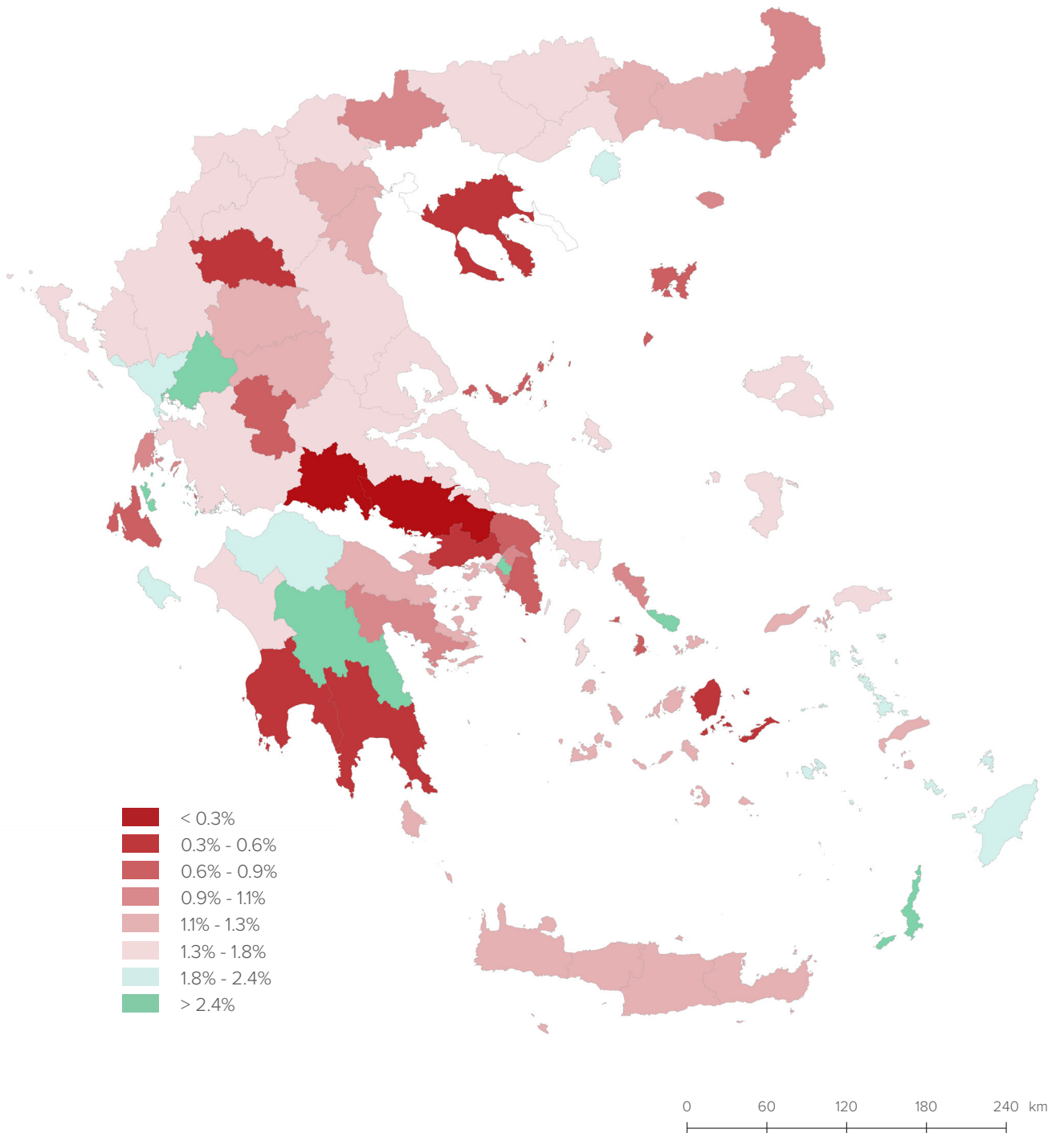
Source: Hellenic Statistical Authority, 2011 Census unpublished data
E. Skoufoglou, 2018

Map 12.9 Incoming Internal Migration to the Region of Thessaloniki, 2010-2011, shares by Regional Unit of Origin



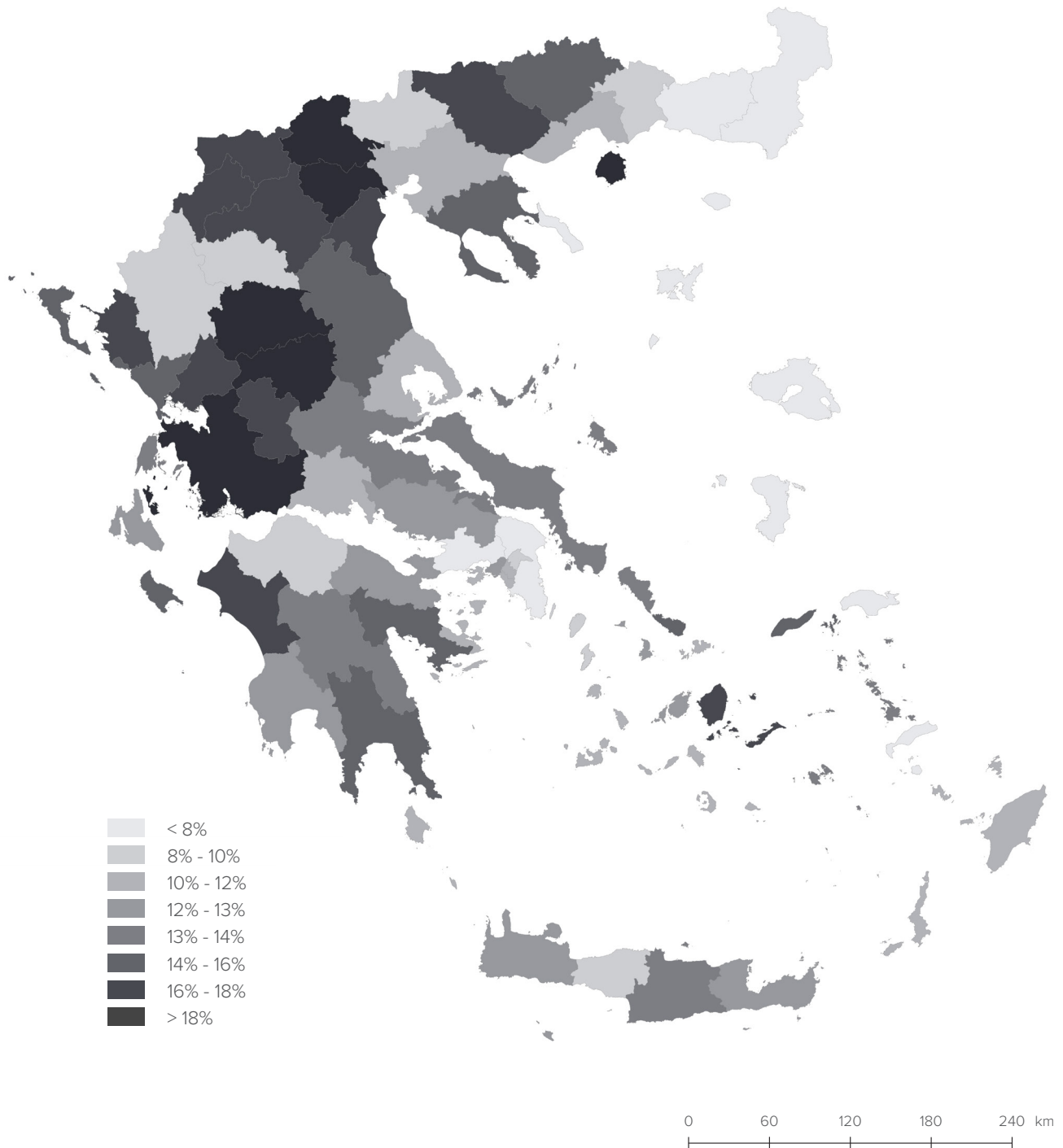
Source: Hellenic Statistical Authority, 2011 Census unpublished data
E. Skoufoglou, 2018

Map 12.10 Balance Sheets of Population Exchange between the Region of Thessaloniki and other Regional Units, relative to the Incoming Population in the Region of Thessaloniki, 2010-2011, by Regional Unit



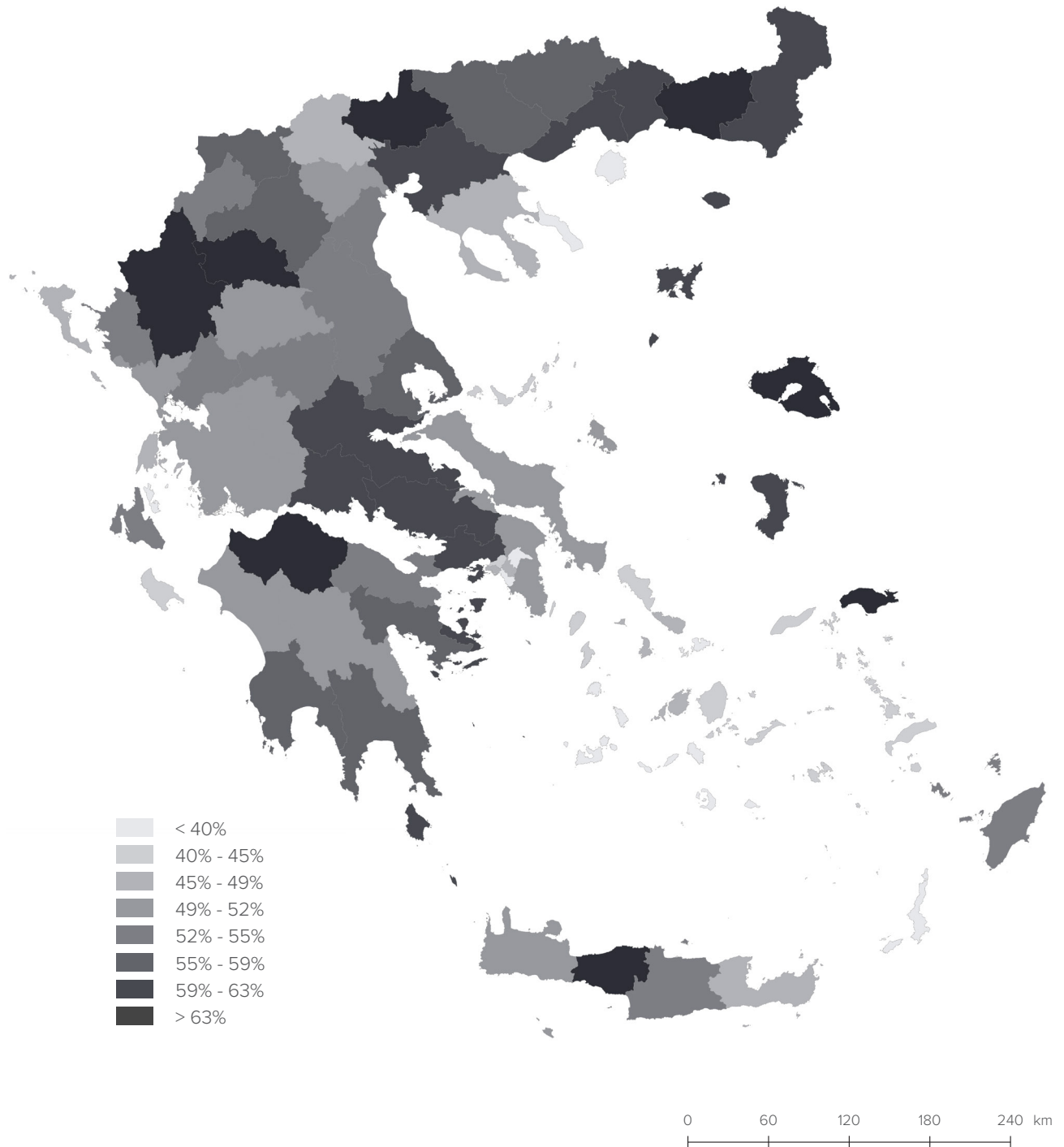
Source: Hellenic Statistical Authority, 2011 Census unpublished data
E. Skoufoglou, 2018

Map 12.11 Unemployed Persons among the Incoming Population above 1 year of age (excluding newcomers from abroad), 2010-2011, by Regional Unit



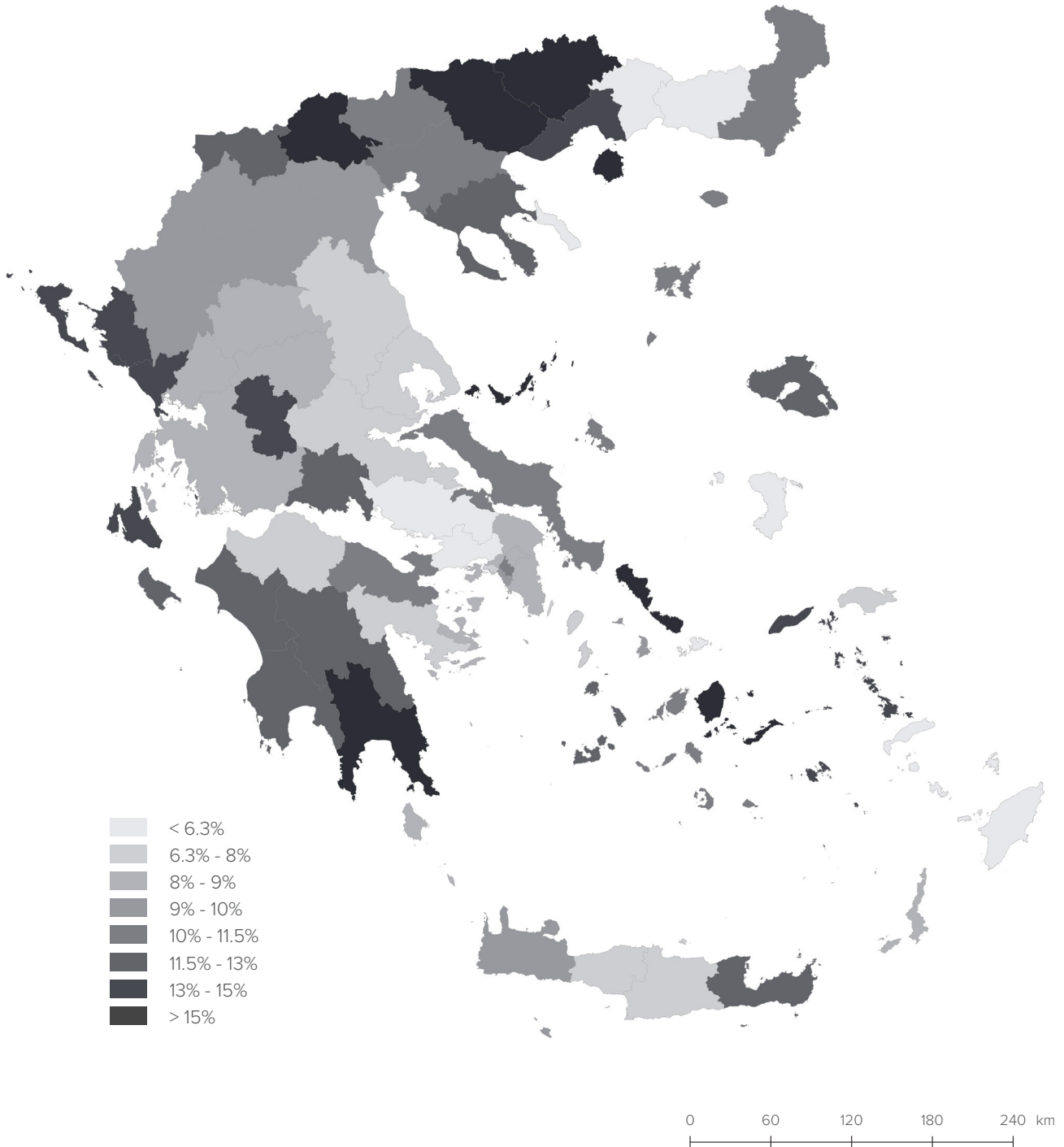
Source: Hellenic Statistical Authority, 2011 Census unpublished data
E. Skoufoglou, 2018

Map 12.12 Economically Inactive Persons among the Incoming Population above 1 year of age (excluding newcomers from abroad), 2010-2011, by Regional Unit



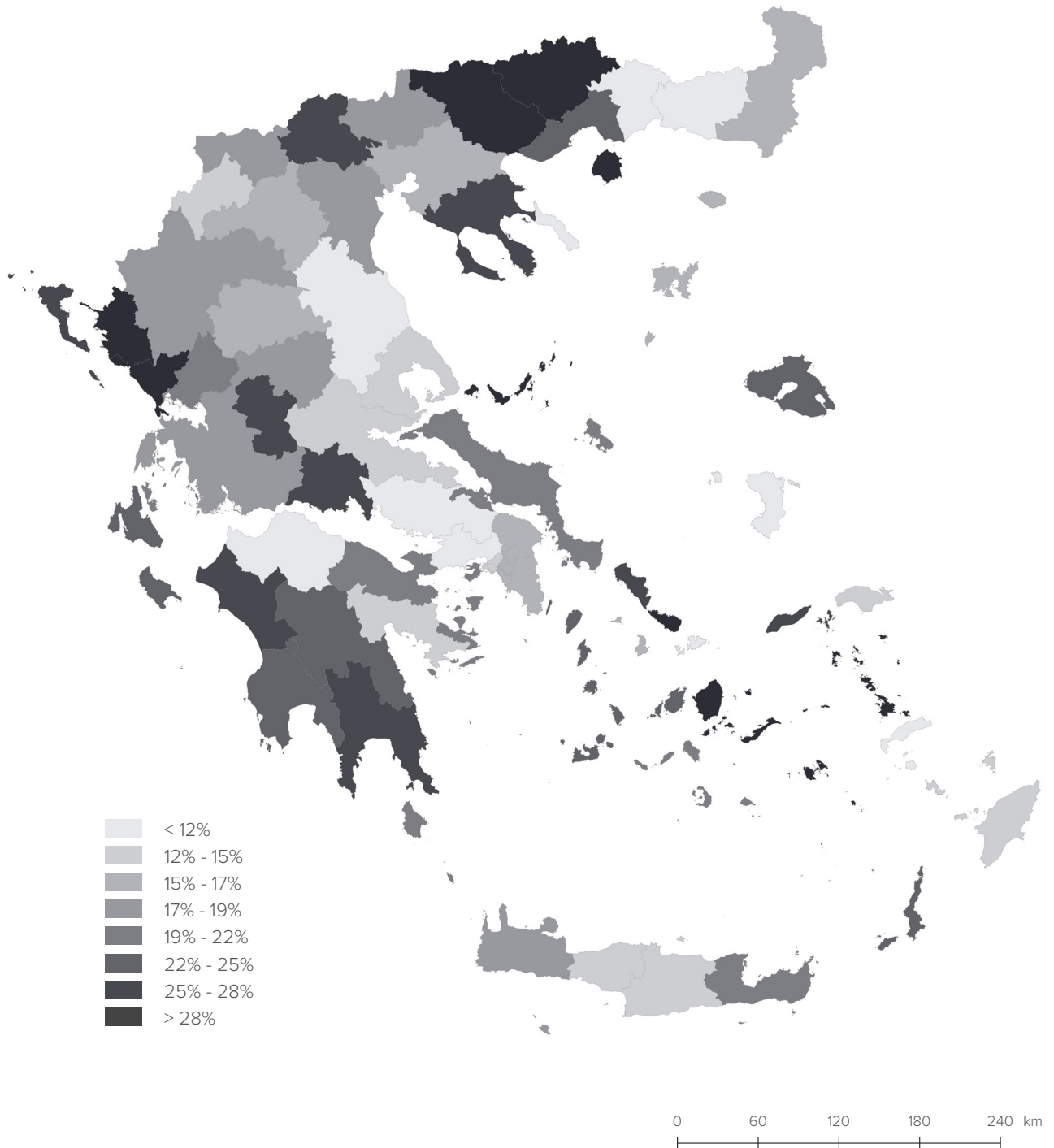
Source: Hellenic Statistical Authority, 2011 Census unpublished data
E. Skoufoglou, 2018

Map 12.13 Persons above 64 years among the Incoming Population above 1 year of age (excluding newcomers from abroad), 2010-2011, by Regional Unit



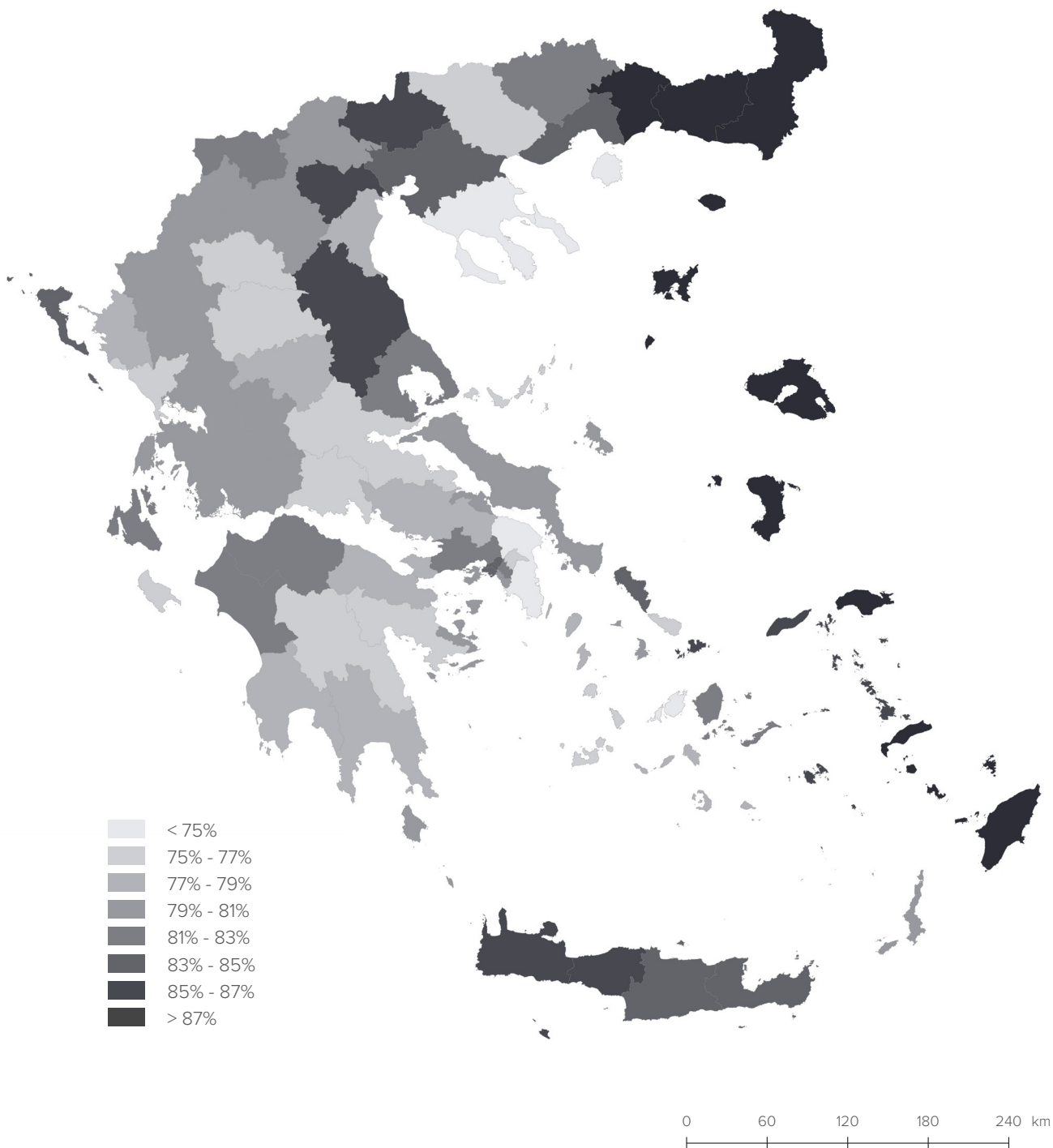
Source: Hellenic Statistical Authority, 2011 Census unpublished data
E. Skoufoglou, 2018

Map 12.13 Persons above 54 years among the Incoming Population above 1 year of age (excluding newcomers from abroad), 2010-2011, by Regional Unit



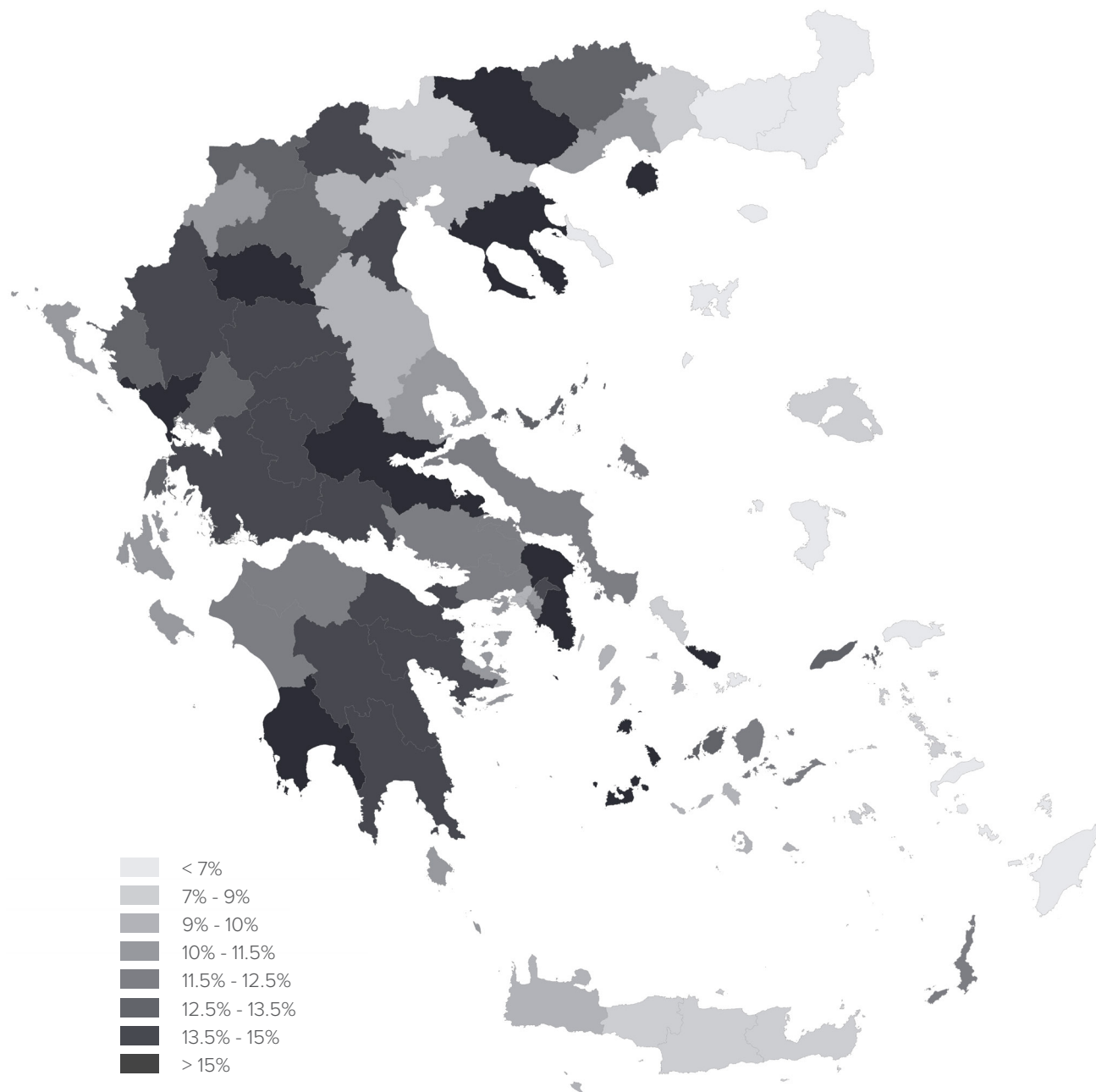
Source: Hellenic Statistical Authority, 2011 Census unpublished data
E. Skoufoglou, 2018

Map 12.15 Salaried Employees among the Employed Incoming Population above 1 year of age (excluding newcomers from abroad), 2010-2011, by Regional Unit



Source: Hellenic Statistical Authority, 2011 Census unpublished data
E. Skoufoglou, 2018

Map 12.16 Self-Employed Persons among the Employed Incoming Population above 1 year of age (excluding newcomers from abroad), 2010-2011, by Regional Unit



0 60 120 180 240 km

Source: Hellenic Statistical Authority, 2011 Census unpublished data
E. Skoufoglou, 2018

CHAPTER 13

Construction as a measure of the change in urbanisation patterns

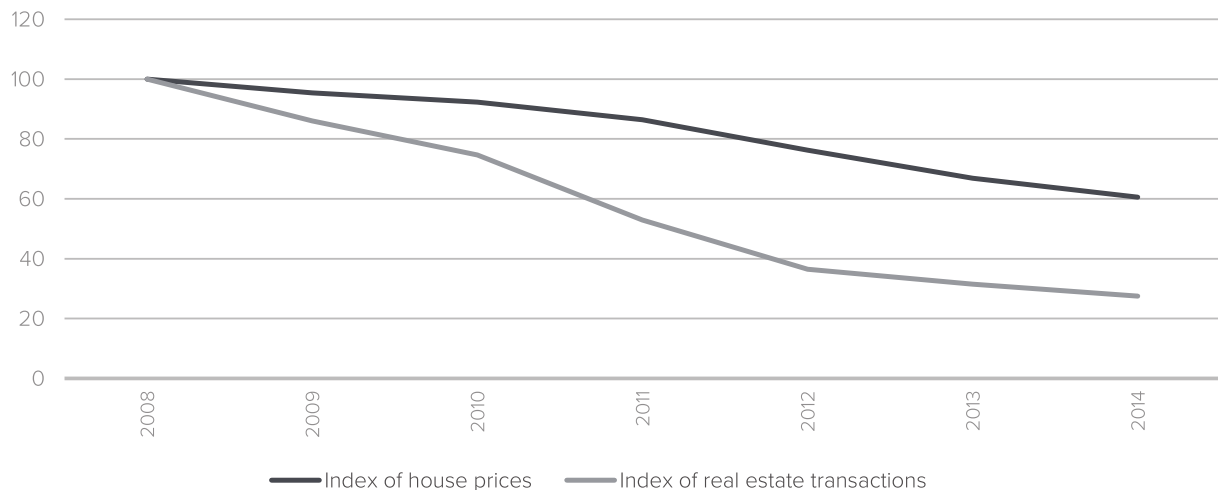
Which alternative circuit within construction has been the weak link?

In the chapter regarding the connection between capitalist crises and space, it has been mentioned that land and housing represent, in a certain sense, four alternative “circuits of capital”, where capitals may turn to when profitability in the leading sectors of capitalist economy (principally manufacturing, energy etc.) is suffering a decline: rent on landed property; speculation on land and house prices; residential lending; and housing construction. All those activities have been part of a capitalist strategy to confront the long-term pressures in the context of the depressive long wave phase since the 1970s (regardless whether a brief intermediate expansive wave is assumed or not). The collapse of this conjunction of circuits, as well as this strategy, has signified the generalised capitalist crisis of 2008, although it has not been its deeper cause.

All four circuits are factors that have played a role of particular significance in the process of the crisis in Greece as well. This is not only because of the global role of housing before the crisis, which has been described previously in this study, but also because of the already-mentioned specificities in Greece: small-scale landed property, a relatively big rate of owner-occupancy (with more than $\frac{3}{4}$ of the population living in their own house), and a large number of small or medium-size companies that prevail in the housing construction sector.

Even the quickest glance at the data would be adequate to certify that all four circuits are in great decline after the outbreak of the crisis. A collapse in the sector brought activity at a historic low as soon as 2014 approximately, and recovery was never achieved again until these lines were written, except a marginal increase in construction and house prices since 2016, which is nevertheless exclusively due to specific hardly sustainable factors, such as the introduction of the golden visa and the inclusion of a substantial number of houses in homestay platforms for tourists. In this chapter, we will focus on the years of the collapse and not of the subsequent stagnation, as was the case in previous chapters regarding other aspects too. The question is: has this decline been symmetrical? And, if not, which “circuit” has suffered the greatest decline? And what does this mean? Let’s imagine housing as something like the complex of a button, a piece of cloth, and the stitch which connects them. In these terms, the question is: if we pull the button, how will the damage be distributed between the button itself, the stitch, and the cloth?

Chart 13.1 Indices of House Prices and Home Sales (base year = 2008)



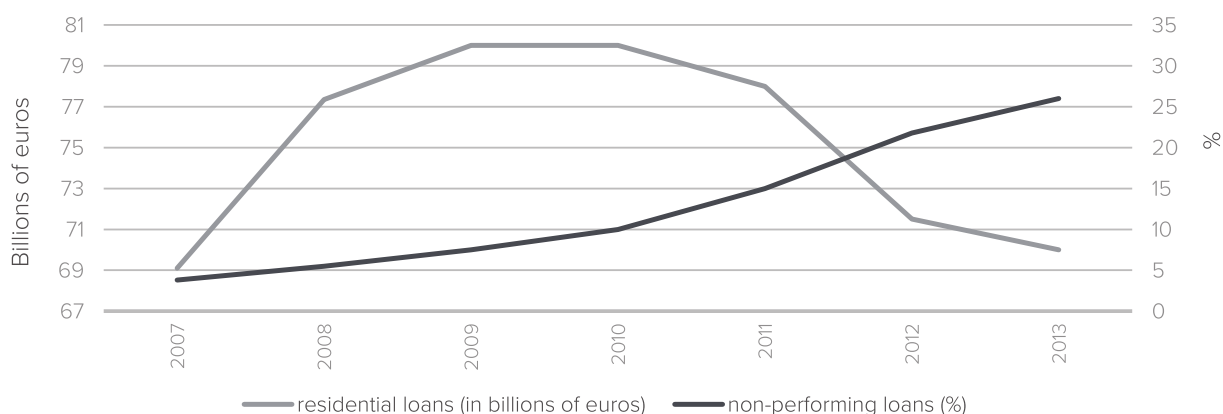
Source: Bank of Greece. E. Skoufoglou, 2018

Regarding house prices, during the first years of the crisis, there has been some discussion about their supposed resistance against downward pressures.¹ This was not exactly true. There has been some durability in the prices until 2010 indeed, with only a relatively small annual reduction. Despite the decline in demand, considerable limitations in supply (caused by factors like the unwillingness to sell houses, which are considered a stable and secure asset, in the midst of a crisis) kept land values relatively high. However, we have witnessed an abrupt fall in house prices afterwards. The outcome has been a cumulative fall of about 35% between 2008 and 2013 (Chart 13.1). This rate was somewhat bigger in the two major metropolitan areas, Athens and Salonika, and smaller in non-urban areas (Mitrakos & Akantziliotou, 2012, p. 86). It was also somewhat bigger in expensive than in cheap areas within the biggest cities.

It is interesting that the fall in prices was much smaller than the rapid decline of home sales, which have suffered a decrease of more than 70% in the first years after the outbreak of the crisis. This is partly explained by the fact that possible investors were expecting a greater fall in prices. A factor that was expected to contribute in this future fall in prices was house auctions for debts towards banks are permitted (according to a law of 2010, they were forbidden for some years). In this case, a radical redistribution and concentration of the scattered land and house ownership would occur. In fact, according to real estate companies, one of the government's motives in order to restrict auctions has been to prevent house prices from collapsing. The interests of banks were very contradictory over this matter, because, on one hand, auctions would secure revenues from problematic loans, but, on the other, an abrupt collapse in house prices due to massive auctions would also mean a collapse in the assets of banks themselves or of the mortgages guaranteeing previous loans. It would take several

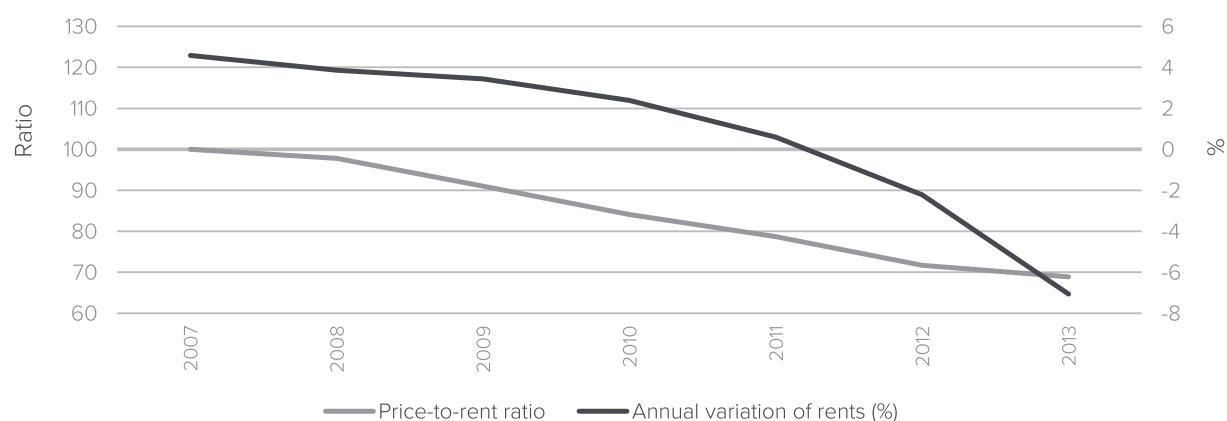
¹ Sampaniotis and Hardouvelis, for example, estimated in 2012 that the fall in property prices was relatively mild, while their rise before the crisis was not disproportionate to the economic fundamentals in Greece. They thus concluded that there was no housing bubble in Greece and that the real estate has fallen victim of the crisis instead of provoking it, and they predicted that home sales were to recover before the rest of the economy. Neither this prediction was confirmed in the following years, nor did the authors explain why construction was already declining before the crisis (Sampaniotis & Hardouvelis, 2012).

Chart 13.2 Residential and non-performing loans



Source: Bank of Greece. E. Skoufoglou, 2018

Chart 13.3 Annual Variation of Rents and Price-to-Rent Ratio (base year = 2007)



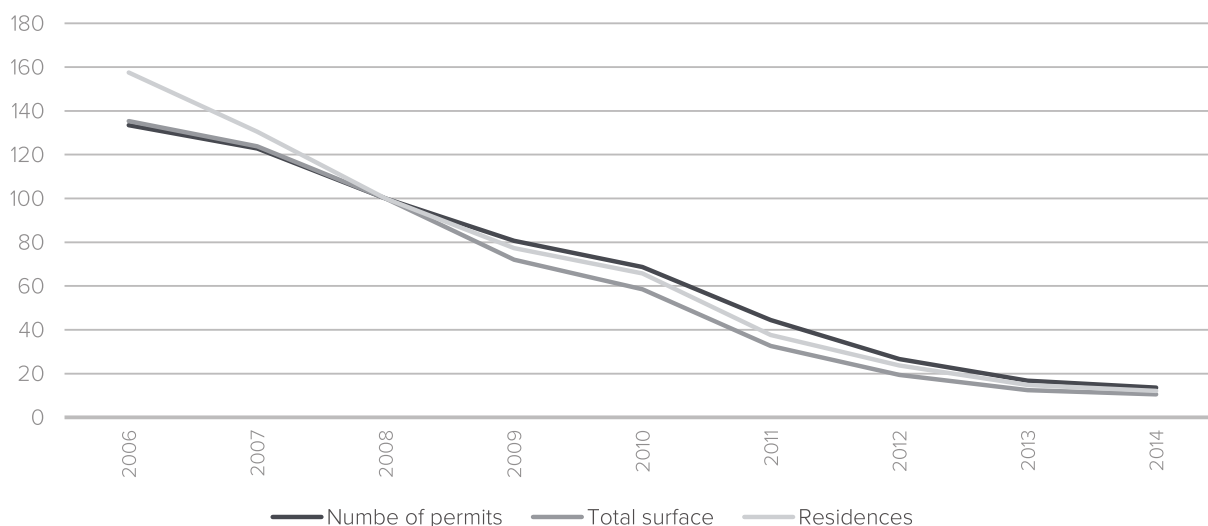
Source: Bank of Greece. E. Skoufoglou, 2018

years before the framework permitting massive auctions would be created, and, starting from 2018, thousands of houses are being auctioned indeed. The history, the economic aspects, and the heavy social repercussions of this process is a subject requiring careful examination in itself, which can't be done here.

Restrictions in residential loans have also been a factor contributing to the exceptional decrease of home sales (Chart 13.2). However, the decrease in residential loans was not equally impressive. In fact, during the first years of the crisis, the total financing of households for housing by Greek banks was still rising, even at a rate much lower than the annual average of 20-30% which prevailed in the last decade, as a consequence of the integration in the Euro zone and the massive fall of interest rates. After 2010, this rate has clearly fallen – it decreased by 12.5% in three years. At the same time, non-performing loans were multiplying, and multiplied further afterwards.

Now, what about house rents? It could be expected that rents should have decreased greatly due to the collapse in wages (more than 25% between 2010 and 2013), the rise of unemployment to unprecedented levels, and the decline in house prices. However, the actual picture is nothing like that. Rents went on rising until 2011, and then they started decreasing only at a very modest pace (by 2013 they had decreased by about 7%) (Chart 13.3). This brought

Chart 13.4 New Building Permits (base year = 2008)



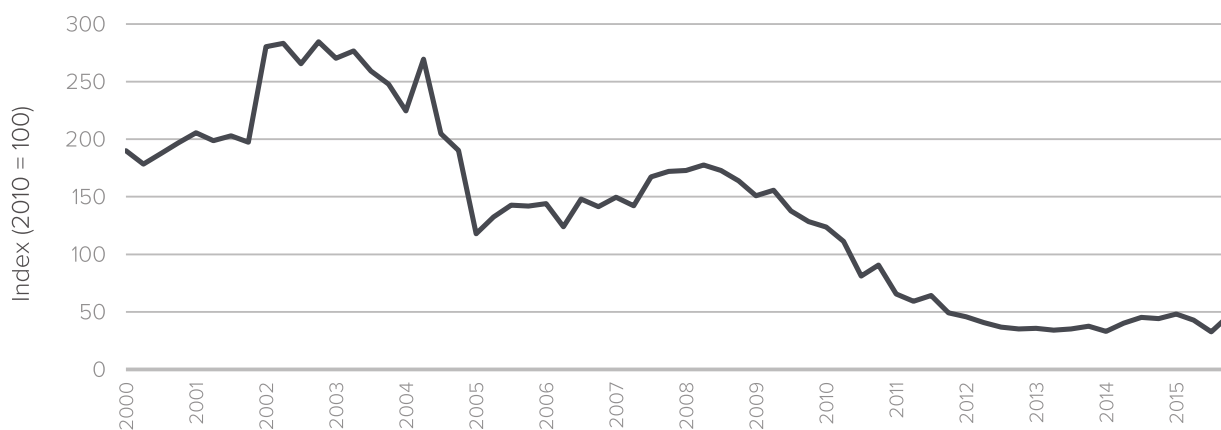
Source: Hellenic Statistical Authority, Local Planning Authorities. E. Skoufoglou, 2018

the price to rent ratio down to 68.9 in 2013, with a baseline of 100 in 2007. In simple words, in 2013 one had to pay the same rent for a house that was worth only 2/3 of its price back in 2007. This phenomenon partly reflects that house prices were overrated before the crisis. But, above all, it reflects a big disadvantage for people who must live in a rented house. Recently, the already-mentioned widespread use of homestay platforms for tourist is driving up rents again in certain areas, including the centre of Athens. This situation gets even worse if we consider that owner-occupancy has been reduced due to the crisis, even if this reduction has been rather mild initially.

Let's now proceed to construction as a sector of the production. In this field, the situation is really devastating, as evidenced both by the numbers of new building permits (Chart 13.4) and by the production index in construction (Chart 13.5). The radical restriction of the contribution of construction in the Gross Value Added has been already pointed out (Table 10.7) and can be monitored in further detail in Chart 13.6. The same applies to the contribution of the sector in employment: construction fell from 8.62% in 2008 to 4.29% in 2014, while the respective rates regarding the construction of buildings, in particular, were 3.37% in 2008 and 1.37% in 2014 (Chart 13.7). Throughout this period, almost 62% of the jobs in construction were lost, while in the construction of buildings the decrease was either bigger, almost 69%.

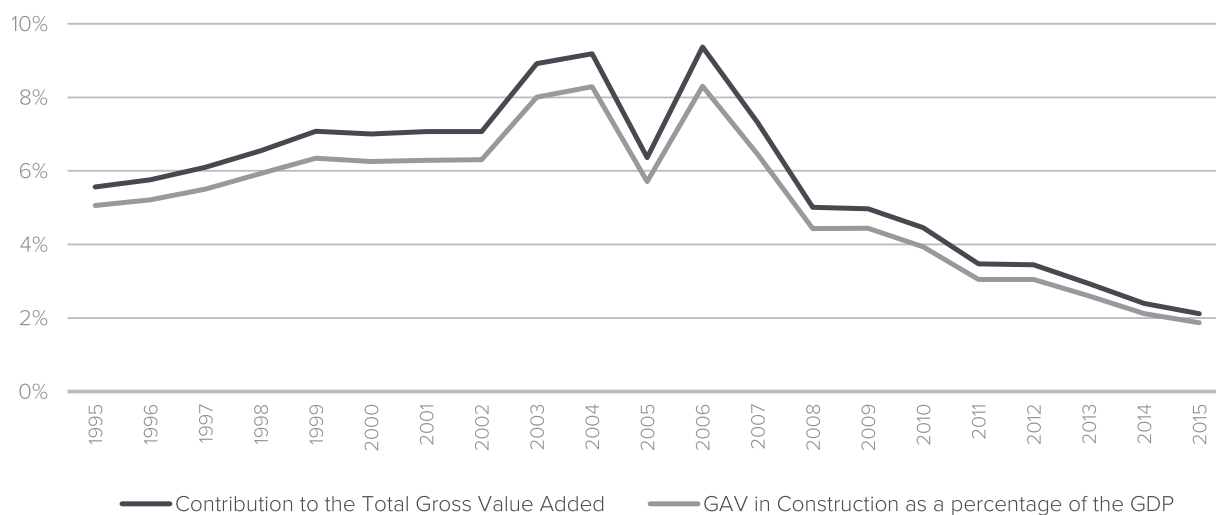
Since the first year of the crisis, there has been a constant annual decrease in new building permits, resulting in an overall reduction of nearly 86.5% between 2008 and 2014. The fall has been even sharper in the permits for new residences in particular. Moreover, the decrease in terms of built surface has been bigger than the decrease in the number of permits – nearly 88% throughout the same period. This is also reflected in the average number of floors per building, which has gone down from 1.92 in 2008 to 1.56 in 2014. In the metropolitan areas, this decrease has been considerably bigger: in the centre of Athens, starting from an average of about 5 floors per new building it has sunk down to 2.17.

Chart 13.5 Production Index in Construction, 1995-2015 (base year = 2010)



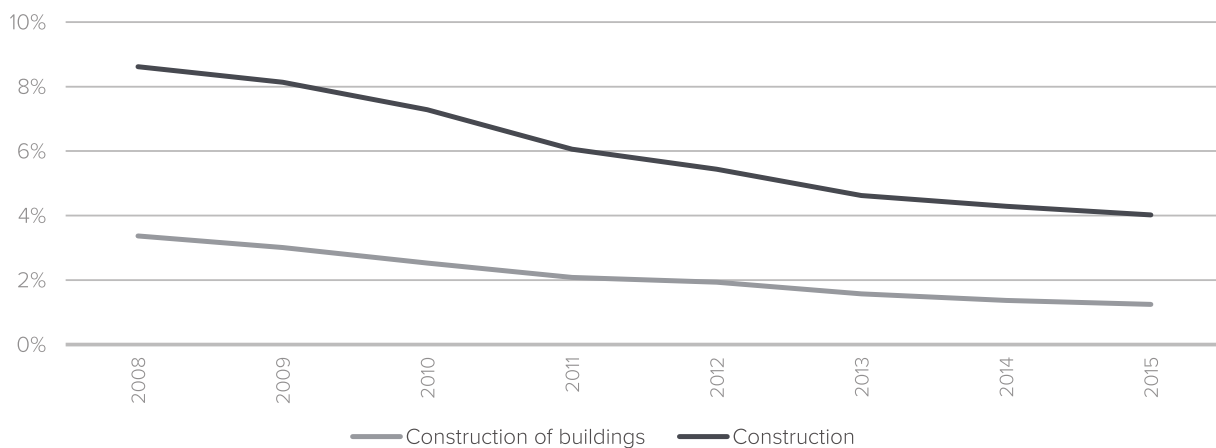
Source: Hellenic Statistical Authority, Quarterly National Accounts. E. Skoufoglou, 2018

Chart 13.6 Gross Value Added in Construction as a percentage of the Total Gross Value Added and of the GDP, 1995-2015



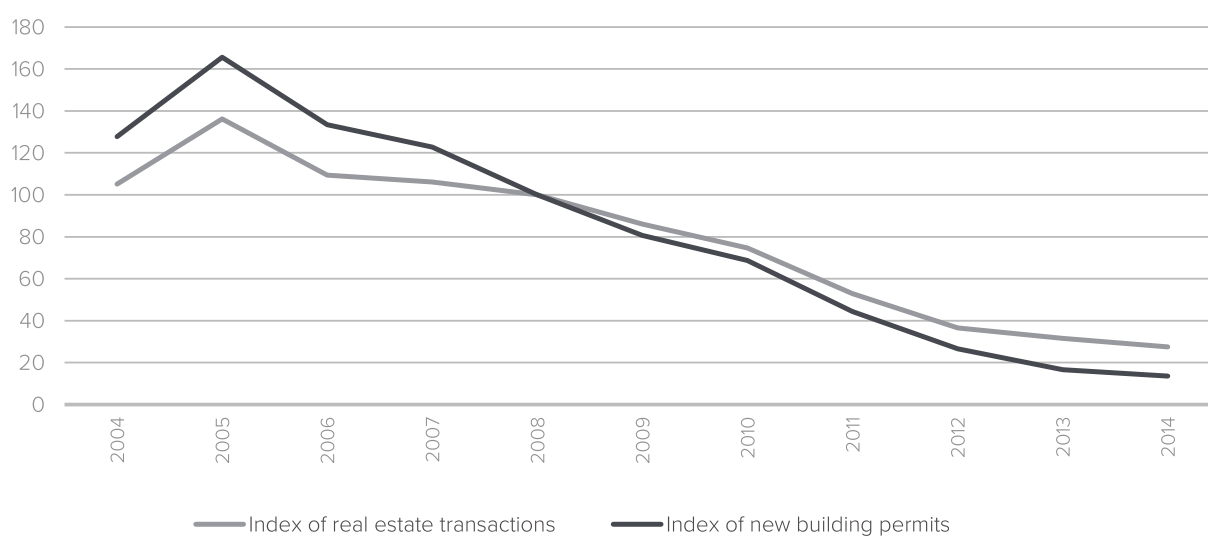
Source: Hellenic Statistical Authority, Labour Force Surveys. E. Skoufoglou, 2018

Chart 13.7 Employment in Construction as a percentage of Total Employment, 2008-2015



Source: Hellenic Statistical Authority, Labour Force Surveys. E. Skoufoglou, 2018

Chart 13.8 Indices of Real Estate Transactions and New Building Permits, 2004-2014 (base year = 2008)



Source: Hellenic Statistical Authority, notarial deeds, Bank of Greece. E. Skoufoglou, 2018

The decline in construction regards the whole country. However, its geographical distribution is not equal, as it is visibly (though not enormously) bigger in metropolitan areas than in smaller cities and towns. Therefore, new building permits, both in general and for new residences particularly, have decreased quicker in Athens and Thessaloniki than in the rest of the country, as we shall see later. This finding is an indication that the crisis of residential urbanisation is more acute in big than in small urban areas.

As shown in Chart 13.6, the contribution of construction in the total Gross Value Added and the GDP has been constantly shrinking after 2006 (a small recovery after 2015 has brought the contribution of the sector nowhere close to its contribution 10 or 20 years ago). In addition, an examination of building activity and real estate transactions (according to the number of notarial deeds) in the years before the crisis shows that, in fact, they have both been in decline since the end of 2005, which means two years before the outburst of the crisis, and, what's more, at a rate comparable to the one during the crisis (Chart 13.8). Although the same is not the case with respect to the production index, investment, house prices, or employment in the sector, these facts means that recession in the housing construction has been not only a result but also a cause for the crisis. Despite the dominant discourse that describes the Greek crisis merely as a matter of public borrowing, the real picture is not so different than what happened, for example, in the USA. We too had a housing bubble in Greece, which did not explode in a few weeks as happened there, but it gradually deflated.

It derives from all the above that construction itself has been the weakest link among all the alternative "circuits of capital" which housing represents. It has assumed the greatest bulk of that damage that housing as a conjuncture of circuits is suffering in Greece. The collapse of construction and particularly of housing is a collapse of an instrumental aspect of material urbanisation.

The consequences of this non-symmetrical crisis of the activities associated with housing

are not only economic, but equally, and maybe even more, social. Unemployment in the sector of construction is galloping; evictions are multiplying and so are homeless people; home rents remain at relatively high levels despite the sharp loss of income or working people and the unemployed. In a context of social disintegration and massive deprivation, it is a scandal that, according to official data, more than one-third of the existing housing remains empty, at a time when people are thrown out of their homes because they cannot afford the rent or lose their shelter because of debts.

Residential and demographic urbanisation

Residential urbanisation is a specific aspect of material urbanisation, which can be monitored through the evolution of building activity. As a matter of fact, “residential urbanisation” is not a well-defined term. It could be broadly described as the concentration of housing and construction in urban areas. In the context of the present study, residential urbanisation, and thus counter-urbanisation or de-metropolisation, is determined by the number of new residences built in urban areas (or, respectively, at the highest level or the urban hierarchy) as opposed to the number built in rural ones (or, respectively, at the lower levels of the urban hierarchy).

Residential urbanisation is not necessarily coincident with demographic urbanisation. This is a relation to be explored. Housing bubbles and the boom in construction, which were both a spark for the meltdown of 2008 and a symptom of a deeper long-term economic pressure in the context of the depressive long wave phase since the 1970s, have probably granted housing a certain degree of autonomy from population growth. Even in developed countries that were not among the ones with the most spectacular house bubbles, as is the case of France, it has been argued that the correlation between demographic developments and of housing sprawl has loosened lately (Guérois & Pumain, 2002, p. 37). In Greece, researchers have observed that after the year 2000 (but before the crisis), housing in Athens was growing at a rate bigger than the rate of population growth (Belavilas, 2012, p. 310).

We shall try to explore the relationship between building construction and demographic urbanisation starting from an overview of the data provided by the national census of 2011. Among this data, there are two fields of particular interest for our study: the number of existing buildings per settlement and the age of existing buildings.

The age of buildings is classified into categories, the last of which covers the period since 2006, thus the quinquennial 2006-2011 (Table 13.1). This renders the figures comparable with the figures regarding the change of residence in the same period. On the other hand, the same problem comes about: this reference period includes years both before and after the outbreak of the crisis. However, in this instance the problem is smaller, as it has already been pointed out that in Greece the crisis in housing, in the form of a slow bubble deflation rather than of a bubble explosion, has preceded the fiscal and economic crisis of 2009-2010, being closer to the timing of the initial outbreak of the global capitalist crisis. In fact, construction has been declining steadily starting from 2007, with 2006 as its last year of growth. After the Olympic Games of 2004, public investment in infrastructure, which also stimulated the construction

Table 13.1: Existing Buildings in 2011 by Period of Construction

Total	Before 1919	1919-1945	1946-1960	1961-1970	1971-1980	1981-1985	1986-1990	1991-1995	1996-2000	2001-2005	2006-2010
4105637	144006	324701	573250	639475	704340	402368	316799	259394	254797	237460	186861

Source: Hellenic Statistical Agency, 2011 Census. E. Skoufoglou, 2018

of housing, ceased abruptly. The rise in residential construction was maintained for another couple of years largely by means of bureaucratic manipulations, such as the promulgated substantial increase in the taxation for new building permits after 2006.

The period 2006-2011, therefore, includes only 1 year of growth as opposed to 4 years of recession in housing. Without eliminating difficulties and doubts, this means that the findings in this period will most probably reflect tendencies subsequent and not prior to the crisis. Besides, it is already indicative that, according to the census, the period 2006-2011 is the quinquennial that has seen the smallest number of the currently existing completed buildings at least since 1981 (before that year, the age of buildings refers to larger periods), and most probably since 1961. In other words, the period 2006-2011 has probably contributed less than any other quinquennial in the existing building stock for half a century.

A choice to be taken regards the scale at which one should group the data. Most elaborations throughout this study have been conducted at the level of former prefectures (NUTS3 regions) or of regional units. In most cases, no data is available at more detailed scales. In this case, though, there is the opportunity to monitor certain spatial structures and developments in more detail. We have thus chosen to overview the census data by municipalities.

The number of buildings completed during the period 2006-2011, plus the number of the buildings that were being erected by the time of the census, by municipal unit, were gathered and visualised into maps. They were afterwards correlated with the total building stock and with the population by municipal unit.

First of all, a glance should be given at the existing building stock as a percentage of the population. This offers some indications about the question posed earlier, regarding the relation between housing and population growth. (Map 13.1).

The number of existing buildings in each municipal unit ranges greatly from 6,4 per 1,000 inhabitants up to more than 3,5 per inhabitant. The two extremes are Zografou, a dense residential area in East Athens, where the greatest university campuses are located, and the municipal unit of Dotsiko, a mountainous area in the former prefecture of Grevena. According to the map, it is obvious that the areas where the rate of existing buildings per inhabitant is high are mainly in the inland, on the mountains that cross the country from the North-West to the South-East, and in certain coastal zones and islands. The explanation in the two cases is

qualitatively different. The mountainous inland has been severely depopulating at least since World War II, and, apart from a few areas that have more recently attracted wintertime tourist activities, it is still underpopulated or even abandoned. On the contrary, the big percentage of building stock per inhabitant in areas situated by the seashore generally reflects seasonal tourist activities, as the temporary population in the summertime may exceed the population in the winter by many times. On the islands, both situations can be found. There are also desolate mountainous settlements there, but nevertheless, the most striking phenomenon is small islands (mostly in the Cyclades) with only a few hundreds of permanent inhabitants that attract thousands of tourists in the summer. Therefore, a large part of what appears to be idle housing on the islands should be attributed to its exclusively seasonal use. It must be noted that cases where both phenomena (seasonal use and depopulation) converge can be also found in the mainland, on the mountains Pelion and Ossa in Thessaly, in Zagorochoria in Epirus, on the Mount Parnassus, on the mountains of Arcadia or Mani in the South end of the Peloponnese etc., that is in areas where desolation coexists with a seasonal influx of tourists.

What is obvious is that all relatively big towns, with virtually no exception, and certainly all big cities in the country, display a low percentage of buildings per person, which indicates bigger densities. It is interesting that one can tell the capital city of each end every NUTS3 region (or former prefecture) on the map, with almost no chance of error, by its light color in relation with the adjacent and neighboring areas. In some cases, these capital cities form the center of a sequence of concentric circles with ever darker colors, i.e. with ever bigger proportions of buildings per inhabitant. Ioannina in Epirus and Tripoli in the Peloponnese, two cities situated in regions with high mountains, are maybe the most characteristic examples. It is also clear that, due to higher densities and to the bigger average height of buildings, the core of the largest urban agglomerations, most obviously of Athens and Thessaloniki, appears in particularly light colors.

Now, what about construction since 2006? As absolute numbers would not mean much, two different maps were fabricated, displaying respectively the number of new buildings per 1,000 inhabitants (Map 13.2) and the percentage of new buildings as a share of the total building stock (Map 13.3) in each municipal unit. It should be underlined that the first rate refers to the population as it was in 2011, that is at the end of the quinquennial. We have used the total number of buildings, without examining residences in particular. However, the total amount of construction is already a very significant measurement of urbanisation processes.

A primary overview of the first map demonstrates, before anything else, that variations in the rates across the country are not particularly intense. The coloring is quite homogeneous and the largest part of the territory, especially in the mainland, displays light colors, i.e. small rates. This is consistent with the big picture, both instinctively verified and documented previously, of housing and construction declining and eventually shrinking into almost null activity in all over the country. However, the existing variations still offer telling conclusions. Areas that appear to have the highest rates of new building activity as a percentage of their population include:

-
- Areas of tourist interest, such as islands (mostly the Cyclades, the southern Dodecanese, the Ionian islands apart from Corfu, but also Limnos and Thasos in the Northern Aegean), western Creta, certain coastal zones (in Pelion, Larissa, Kavala, Chalkidiki, Euboea, Mani and some other areas in the Peloponnese, Thesprotia in Epirus) and certain mountains that attract wintertime tourism (in Ioannina, Trikala, Arcadia, certain places in both West and East Macedonia and, most spectacularly of all, Arachova on Mount Parnassus). Some attention should be given, though, to the eventuality that in some cases a high percentage of new buildings in relation with the local population may indicate a population decline rather than a substantial growth in construction.
 - Areas surrounding the cores of big cities and towns. This is absolutely obvious in the case of Athens, were not only the old city centre (corresponding to the municipality of Athens), but also the whole Attica basin, that is more or less the Athens urban area, including the ring of traditional suburbs, display low rates of recent building activity, whereas surrounding areas, especially to the North and to the East (in the so-called Mesoghaia), appear much more vigorous.² The same picture emerges in Thessaloniki, though in a smaller scale: the urban core forming a crescent moon around the port appears more or less stagnant, whereas surrounding areas, particularly to the North and to the East, have been reinforced in terms of building stock. In both cases, a process of peri-urbanisation or exurbanisation is evident. Mutatis mutandis, all big cities display a similar relative reinforcement of areas surrounding the urban core. This is the case in Patras, Heraklion in Creta, Larissa, and Volos, that is the 4 remaining cities with a population of more than 100,000, as well as in smaller towns such as Kavala, Ioannina, or Serres.
 - Coastal zones near the two Metropolitan Areas, which serve as poles of attraction of weekend vacationers in the summer, including a substantial number of secondary residences. Around Athens, such locations are located mostly across the Corinthian bay, on the northern and eastern coasts of Attica, as well as in some of the nearby islands. In the case of Thessaloniki, they are mostly in the western part of Chalkidiki. The coastal fronts of Ossa and Pelion on the Aegean may be considered to form a minor third pole, serving the urban dipole of Larissa-Volos. It is reasonable to assume that, amid the crisis, these nearby locations may also function as a cheaper substitute to summer vacations.

If juxtaposed to this map, the map of new buildings as a share of the total building stock doesn't provide very spectacular differentiations. Again, the largest part of the territory displays light colors and moderate rates, with only a few dark highlights. The general trends detected before are also confirmed here, and darkest areas approximately coincide with dark areas in the previous map. However, no matter how moderate they may be, existing differences can still be of some importance. In general, one can distinguish between three cases:

² According to Belavilas, the massive expansion of the Athens Metropolitan Area beyond the Attica basin is a phenomenon that came about after the year 2000 (Belavilas, 2012, p. 317).

- Areas displaying low rates of new buildings both as a percentage of the population and as a percentage of the existing building stock. This pertains to most of the territory, which echoes the general decline in construction due to the crisis.
- Areas displaying high or relatively high rates in both cases. This is an indication that residential growth (or growth in construction in general) actually exceeds demographic growth, as the rate refers to the population at the end and not at the beginning of the period. This is clearer where the rate of new buildings as a percentage of the population exceeds the rate of new buildings as a share of the existing building stock. This situation corresponds to shrinking population densities or even to a net population decrease. In some cases, it is also due to the expansion of activities associated with tourism, that is of seasonal activities.
- Areas displaying low rates of new buildings as a percentage of the population, but high rates of new buildings as a share of the existing building stock. This is probably the most interesting case, as it means that, despite the increase in buildings, residential density has not been substantially modified. Therefore, expansion in terms of buildings was probably combined with an analogous growth in the population. This is an indication of net demographic growth.

Let's now try to see how these remarks can be associated with the observations made over the first map. Regarding the islands, the image is almost identical in both maps. This means that the advantage of the islands in the rate of new buildings in relation with the national median value should most probably be attributed to tourism and seasonal activities. There are a few exceptions, like Limnos island, where the rate of new buildings as a share of the existing ones falls short of the respective rate as a percentage of the population, which is an indication of depopulation; however, these exceptions are marginal. The situation seems similar regarding the third category, that is coastal zones near Metropolitan Areas: residential (or building) expansion in these zones is greater in relation with the total number of existing buildings than in relation with the population at the end of the period 2006-2011, or at least both rates are equal. Again, this is an indication of a relative increase in seasonal activities.

However, the situation alters remarkably when examining the second category, which is peri-urban areas around big cities. In Athens and Thessaloníki, the pattern remains the same, even if in the second map the contrast between urban cores and the periphery is greater. This is expected, as densities are lower in the periphery. However, things are different in the next level of the urban hierarchy. In Patras and Heraklion, cores still fall short of adjacent areas, but the contrast now is much weaker, as cores are relatively darker. Even more, in Volos and Larissa, the central core exhibits high shares of new buildings among the total building stock, exceeding some of the neighboring areas that displayed big rates in relation to their population. Among the smaller towns that have been mentioned before, Ioannina and Serres resemble the

situation of Volos and Larissa, whereas Kavala constitutes an exception exhibiting a pattern closer to the two Metropolitan Areas. These findings are particularly interesting, as they may imply that urban cores in middle scale agglomerations are more dynamic than the ones in the top level of urban hierarchy. If the amount of new buildings per 1,000 inhabitants is more or less the same, whereas the percentage of new buildings among the total building stock is higher, this means that new buildings don't mean lowering densities, but an analogous increase of inhabitants. Of course, this observation requires a lot of attention, as many more factors may be involved, but nevertheless, it is a very important hint.

Building permits

We have examined the general trends in construction, using, among other sources, the records of building permits for the country as a whole. Building permits could be also a valuable source for studying the distribution and the patterns of urbanisation (or counter-urbanisation) inside the national territory, that is among different regions.

Contrary to other data, like the ones about population changes, the numbers referring to building construction are relatively easier to approach on an annual basis, at least theoretically. Apart from the censuses of buildings, which take place along with the censuses of population, local planning authorities submit the number of building permits they approve every year. Permits may refer to the construction of new buildings, to the extension of previously existing ones, or to demolitions. These figures are, therefore, analogous to the figures about births and deaths, provided by the Civil Registry Offices. However, unlike people, buildings can't migrate. Therefore, new permits seem to provide a sufficient measurement of the annual change in the building stock, whereas the number of births and deaths (natural population change) does not suffice to estimate actual population changes.

All this in theory, because in practice there are two significant restrictions. Firstly, a building permit is not the same thing as a new building, as a building (or a building extension, or a demolition) may be completed quite a few years after the permit was approved, or even never be completed at all. In general, it is reasonable to suppose that tendencies in the number of permits precede tendencies in the actual building activity, since a permit comes before a building. Secondly, the figures provided by the local planning authorities don't include illegal construction, that is buildings without any permit. This category of buildings, which can only be recorded in a general census, is particularly numerous in the case of Greece, due to historical reasons and to social, economic, and political conditions that have been already explained. However, it is not currently as numerous as it used to be in the past.

There is, therefore, an expected discrepancy between the number of building permits and actual construction. However, the influence of both factors on our calculations is softened rather than accentuated since the crisis broke out. In the first instance, it is reasonable that after the crisis one should expect a higher percentage of incomplete constructions due to budget restrictions, due to the stricter conditions required for bank loans, due to the abrupt fall in demand etc. This tendency is in line with the sharp reduction in new building permits.

Therefore, it doesn't alter the general tendencies detected, it may only accentuate them even further. There is no particular reason to suppose any significant variation in the relation between the number of new building permits and actual construction in different regions of the country. The only remaining reservation regards the period exactly prior to the crisis, for which it is justified to assume a rate of failed permits even higher than usual, because of permits that had already been issued before the crisis and failed to be completed due to the meltdown that broke out meanwhile. However, both the gap between the years before and after the crisis and the downward trend after 2006 are so explicit that they can't be seriously altered either. As for illegal construction, one may have expected that it could grow due to the crisis. However, the crisis coincides with a period during which a large-scale state campaign has unfolded in order to minimise building without permits and to legalise or "regularise" the existing unrecorded building stock. Besides, the increase in illegal buildings should have been huge if it was to outnumber the unprecedented shrinkage of legal construction, something that is obviously not the case, even with the naked eye.

In any case, the number of building permits is an important figure, as it depicts the current demand (on the part of users and principals) or the expectation for demand in the near future (on the part of contractors). Despite all deficiencies, it is certainly an important measurement of urbanisation in terms of built space.

Although data about the building permits issued are available at all scales, we shall move back to the level of former prefectures. The main reason for that is to achieve comparability with the findings of the previous chapters, where it was impossible to go into further detail. Besides, the collapse in construction is such that, in recent years, there would be numerous municipal units or even whole municipalities to present zero permits, which would give a picture that doesn't lend itself for drawing conclusions.

Apart from the total number of permits, the Hellenic Statistical Authority, based on the records of the local planning authorities, also provide data about the number of residences or establishments, the number of storeys, the volume and surface, a distinction between residential and non-residential buildings, as well as the total budget of the buildings to be built. Indications have already been spotted that all other quantities have declined even faster than the number of permits under the conditions of the crisis. It, therefore, suffices to examine the number of permits, without a significant risk to miss any basic tendency – only maybe to have it depicted in a milder form than otherwise. As benchmarks, we shall use the years 2013, 2009, and 2005. In all cases, we will compare the total number of building permits issued in the last year of the period under consideration compared with the respective number in the first year. The evolution of the number of building permits over the period 2009-2013 corresponds to the period 2010-2014 in terms of estimated population change, since estimates conventionally refer to the first day of each year. The period 2009-2013 will thus reveal tendencies after the Greek public debt crisis and the introduction of the austerity programmes (memoranda), the period 2005-2009 will give a picture of the crisis in construction before that, since the sector started declining already in 2006, while the period 2002-2005 will reflect the culmination of

building activity in the country in the pre-crisis era.

We shall thus examine three maps depicting the change in the number of building permits issued between the years 2002-2005 (Map 13.4), 2005-2009 (Map 13.5), and 2009-2013 (Map 13.6). It was impossible to regroup the values in common classes in all maps, since the dynamic, and thus the range of values, are completely different in each period. The only way to render the three maps comparable is to divide the values in the same numbers of quantiles so that each class comprises in all cases the same number of regions approximately. In Map 13.4 we have added a class to include the few cases with a negative balance, while we have done the opposite in Map 13.5 for the case with a positive balance (Map 13.6 presents only negative changes). We have thus ended up with the same number of classes above zero in the case of Map 13.4 and below zero in the case of the two remaining ones.

Let's now proceed to the examination of the maps.

In Map 13.4, one can see that the total number of building permits in the year 2005 were more than the respective number in 2002 in most NUTS3 regions throughout the country. The regions that have recorded a decrease, in contrast with the general trend, were Florina, Kozani, Grevena, Xanthi, Lefkada, Zakynthos, and the Cyclades. Apart from two of the top industrial regions around the country, it is a surprise to find among those cases the two most dynamic island regions in terms of their regional GDP (at the time as well as today): Zakynthos and the Cyclades. Since the map depicts the relative evolution and not the absolute number of permits, it is possible that this finding reflects an already high building activity in those regions at the beginning of the period or reference. However, islands, in general, have only to present modest scores in the map (except in Creta). The advantage of islands is not distinguishable yet, at that time and according to this criterion.

The advantage of peri-metropolitan regions (regions surrounding Attica and Thessaloniki) over the metropolitan ones is not recorded yet either. There is an inverse pattern of comparatively better performances around Attica, which has only enjoyed a modest increase throughout the period under examination. But the same is not the case around Thessaloniki. The region of the second biggest city in Greece has recorded greatest rate of growth in the building permits issued than most of its neighbouring regions, including Chalkidiki and Pieria, that is two of the regions that have done apparently better under the conditions of the crisis afterwards, in many aspects. In general, no negative relation between the degree of urbanisation and residential expansion seems to emerge in the map. The regions of Larissa and Heraklion have recorded remarkable rates of growth. Achaia, the region of the third largest city in the country (Patras), which has been suffering a sharp decline in terms of population and economic performance after the outbreak of the crisis, also had to present a considerable increase in the number of building permits at the time. Magnesia (Volos) and Ioannina recorded more modest rates of growth, but again they were not among the worst cases. In general, the rate of increase has tended to be lower in less urbanised and relatively isolated regions, including the mountainous regions in the North-West as well as the southern part of the Peloponnese, and tended to be higher along the most developed and urbanised S in the eastern part of the mainland.

It is interesting that some of the most dynamic regions, in terms of their estimated population growth at the time, presented low rates of increase in the number of new building permits: Phokis, Laconia, Thesprotia, as well as several islands. On the contrary, certain regions that were depopulating, according to the ELSTAT estimates, presented high rates of growth in this field: Arcadia, Kavala, Pella, Aetolia-Acarnania, as well as, at a somewhat lower level, Achaia or Larissa. This was a manifestation of the inconsistency between demographic and residential urbanisation (that is urbanisation in terms of constructions and housing).

Covering a period of overall decline in construction, Map 13.5 demonstrates a different situation. In 2009, almost all regions around the country had recorded a significant fall (as high as almost 60% in the extreme cases) in the number of new building permits in comparison with the last year of growth in the sector, 2005 (colours on the map are a little faint because, for reasons of comparability, we have used the same classes as in the next map, which regards a period of a much sharper collapse). There were only two regions to record a mild rise: Elis and Grevena. However, even in these cases, the change appears negative if the total surface is considered instead of the number of new permits. It is interesting to note that, now, the sharpest fall is to be found on the most developed and urbanised axis on the eastern part of the mainland, although, in this case, this does not extend as far as Achaia in the southern part, being more of a crescent moon than an S. In the northern part of the country, this crescent moon of sharp rates of decline extends to West Macedonia and Ioannina. New residential urbanisation has tended to avoid the already existing urban accumulation. Taking the maps discussed in the previous section into account, one could say, very abstractly, that the general tendency towards an equalisation (very imperfect, of course) of the regional ratios of buildings per resident recorded in the previous period has reversed, or at least been interrupted.

Attica and Thessaloniki are among the regions with the sharpest decline throughout this period. They have both declined more than their surrounding (peri-metropolitan) regions, but the gap is not particularly visible yet. The regions of most big cities, apart from Achaia and Heraklion, have also declined more than average. Islands have generally suffered a milder decline. The most dynamic ones in economic terms, Zakynthos and the Cyclades, are now among the regions that have resisted the general fall in construction the best.

In the 4 years to follow, the Structural Adjustment Programmes and massive austerity measures are added to the effects of the global capitalist crisis to induce a total collapse in construction. The rates of decrease in the number of new building permits are significantly greater, more than 90% between 2009 and 2013 in several cases (Map 13.6). But there are some interesting modifications in the pattern too.

Attica and Thessaloniki are now doing clearly worse than their surrounding regions, in a context of a total breakdown, of course. However, peri-metropolitan regions have also done worse than average. This was not the case in terms of estimated population change or in the rates of incoming population. This finding is an indication that residential de-metropolisation is a process affecting a broader geographical radius than demographic de-metropolisation. In the next chapter, we shall see that it is also prior to it.

This way, no pattern of S or crescent moon appears on the map anymore. A pattern of nuclei of rates of collapse sharper than average emerges instead: one around Attica, one around Thessanolyki, and one around Ioannina in the North-West (where a quasi-autonomous centre of gravity has been observed in other aspects as well), plus a number of individual regions (Elis, Evros, Chania).

If there is any sense in speaking of a relative advantage amid such a collapse, one should mention most of the island regions, the southern Peloponnese, and, among peri-metropolitan regions, the cases of Boeotia and Serres. It is interesting again that certain regions that have apparently gained population throughout this period, despite the general depopulation in the country, have to present only very poor performances in terms of building permits (Phokis, Pieria, Corinthia, Chania, Evros, Cephalonia), while, on the contrary, others that have depopulated have resisted the general fall in construction somewhat more effectively (Evrytania, Kastoria, Arta, Arcadia). This is probably connected with different features, which could be examined by the methods of correlation we have used for other factors as well. However, the shrinkage in construction is such that it is highly doubtful if there is anything left to draw conclusions from. When everything approaches zero, differentiations are eliminated.

Conclusions

We saw that, in Greece, the crisis in construction has preceded the crisis in the other sectors of the economy. There is sufficient evidence of a pre-crisis housing bubble, which has deflated relatively slowly over some years, conventionally starting from the beginning of 2007, rather than bursting all at once. Of course, the total collapse in construction only took place after the outbreak of the international capitalist crisis and its manifestation in the country.

Against this background, though, not all activities directly or indirectly associated with construction have declined at the same speed and degree. Despite a massive restriction of home sales, house prices have demonstrated a certain degree of durability until 2010, to fall significantly afterwards. The number of residential loans has continued increasing for a couple of years after the outbreak of the crisis, although much slower than before the crisis, to start declining afterwards as well. At the same time, the number of non-performing loans multiplied starting from 2011.

A particularly interesting point is that house rents have continued rising until 2011, and started falling afterwards, but only at a modest pace, much slower than the decline of house prices. In 2013, the price to rent ratio had been reduced by 1/3 compared to the period before the crisis. Tenants have apparently taken on a larger part of the burden of the crisis than owners, which is something usually omitted in the public discourse.

Of course, construction itself has declined more than any other index or quantity associated with housing, as it has suffered a complete collapse in every respect: employment, investment, contribution to the GDP, the number of new building permits across the country. As a result, the quinquennial 2006-2011 has probably contributed less than any other quinquennial in the existing building stock since 1961. This is a striking expression of the deep crisis of residential

urbanisation that is taking place in the midst of the economic crisis.

As hard as it is to seek distribution patterns in the context of an almost total collapse, it emerges that the highest rates of new building activity as a percentage of the population, at the time of the census, are found in areas of tourist interest, in residential areas surrounding the largest urban cores (suburbs or exurbs), and in coastal zones around the metropolitan centres of Athens and Thessaloniki. In addition, a juxtaposition of the number of new buildings (constructed in the period 2006-2011) per 1,000 inhabitants with the number of new buildings as a share of the existing building stock offers an indication that urban cores in the middle ranks of the urban hierarchy were more dynamic than the ones at the top at the time of the census.

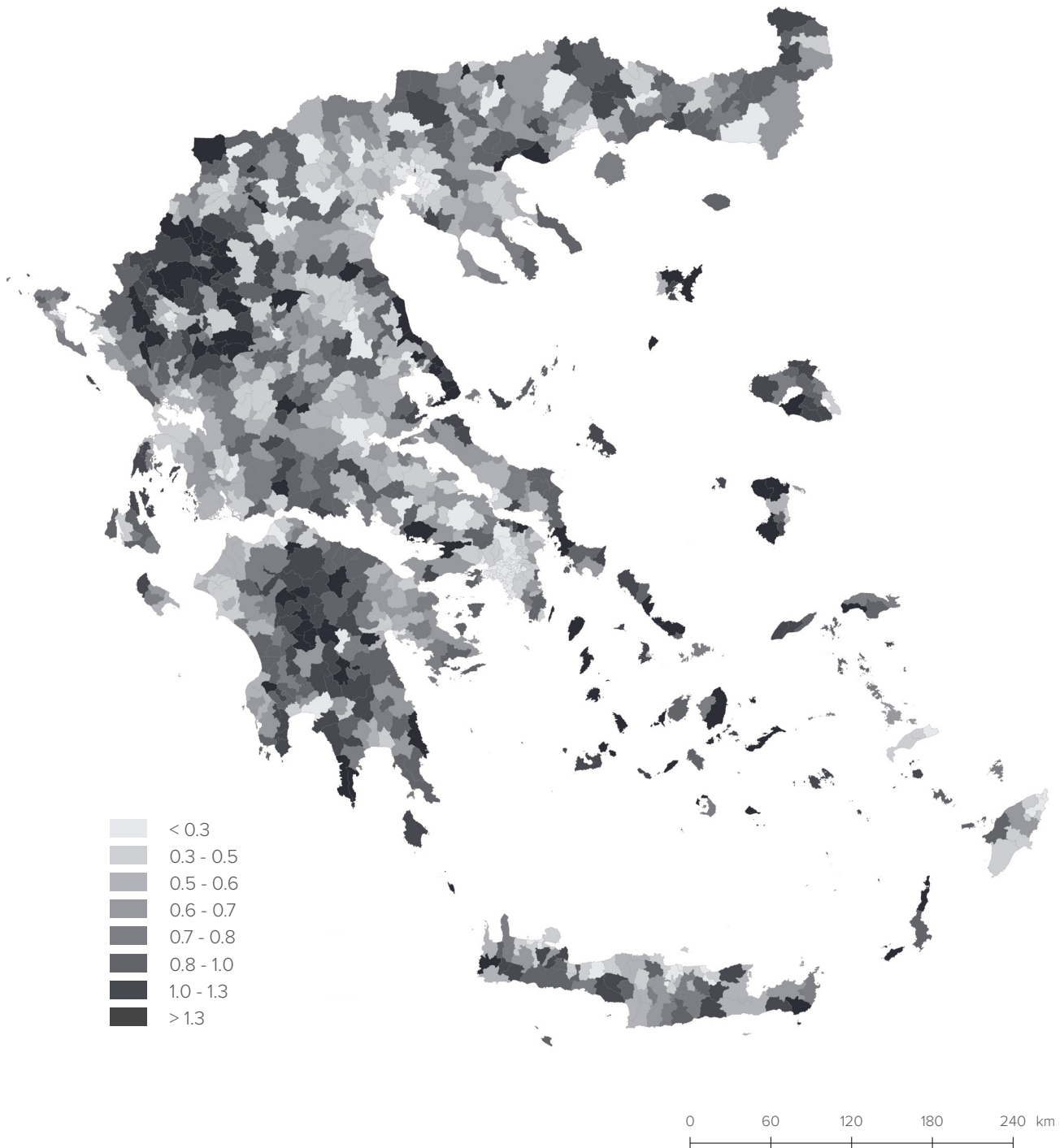
The above findings point in the same direction as our previous conclusions regarding the demographic aspect of counter-urbanisation. However, a thorough examination of the maps illustrating the evolution of residential urbanisation before and after the crisis reveals certain differences with the respective evolution of demographic urbanisation.

Most NUTS3 regions of the country have recorded a significant rise in the number of new building permits throughout the period 2002-2005, which reflects the boom in construction, as well as the housing bubble, at the time. During that period and according to this criterion, the advantage of the islands and the peri-metropolitan regions was not distinguishable yet. Throughout the same period, the main bulk of new building permits has tended to concentrate in the most urbanised regions of the country, especially along the developed S in the eastern part of the mainland, although Attica did not have to present a particularly high rate of increase.

During the period 2005-2009, practically all regions around the country have suffered a massive decline in their building activity, although not as catastrophic as the one that would occur in the following four years. The most abrupt fall happened exactly across the most developed and urbanised axis of the country, where construction was expanding the most in the previous period. Throughout the period 2005-2009, the number of new building permits in Attica and Thessaloniki has declined much more than average. Their surrounding regions have suffered somewhat less, but the gap with the metropolitan regions was not particularly large. Islands, and especially the most dynamic ones among them in economic terms, have somehow resisted the general collapse.

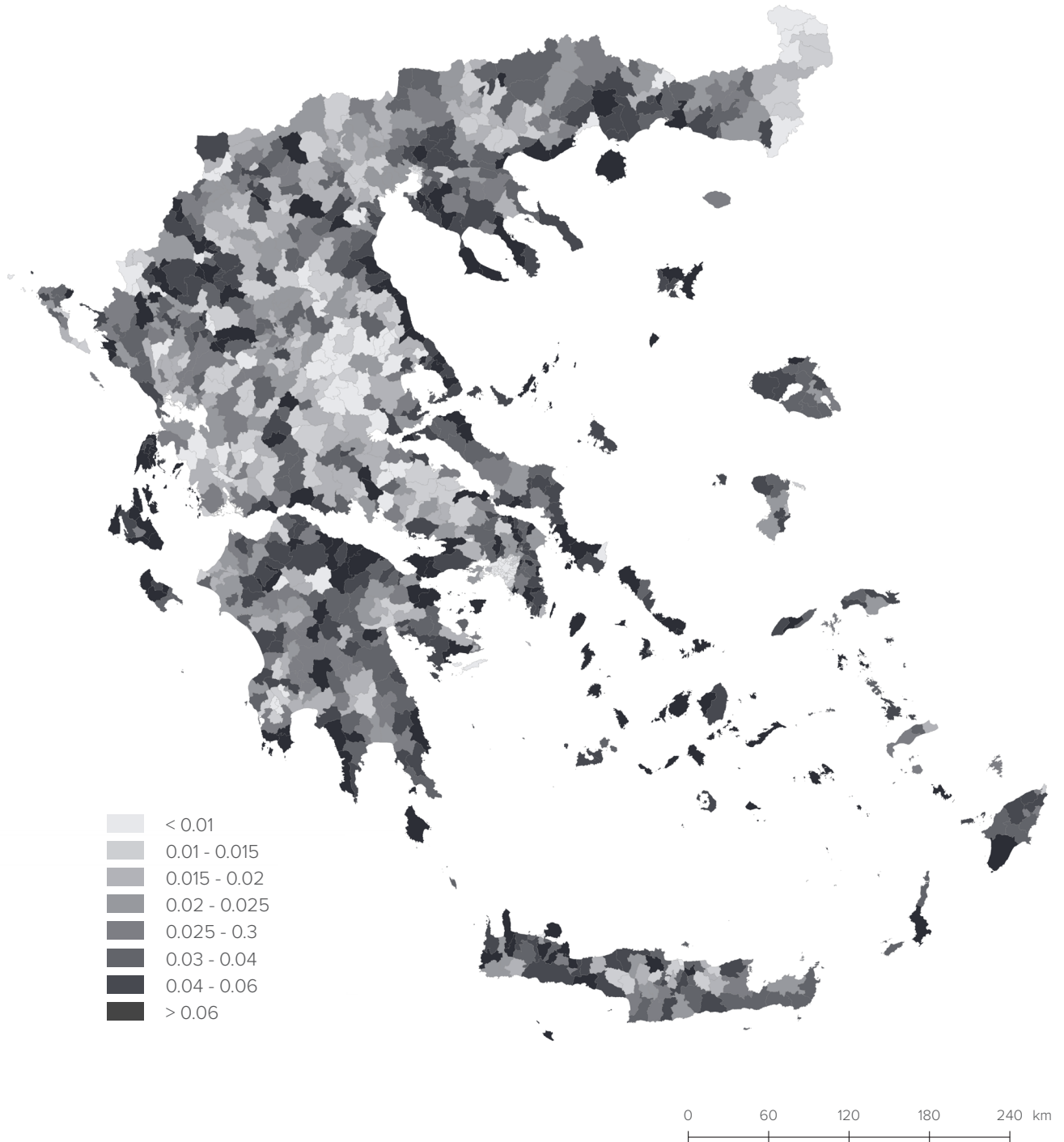
Finally, the period 2009-2013 was one of almost total elimination of building activity. Throughout this period, the decrease in the number of new building permits does not follow a pattern of a declining axis anymore, but one of nuclei of a collapse even worse than average, around the two metropolises and a few other regions. Attica and Thessaloniki have declined clearly more than their surrounding regions. However, those peri-metropolitan regions have in turn declined more than average, unlike their general progress in terms of population and incoming internal migration during the same period. This is an indication that residential de-metropolisation is a spatial process of a bigger geographical radius than demographic de-metropolisation.

Map 13.1 Buildings per Inhabitant, by Municipal Unit, 2011



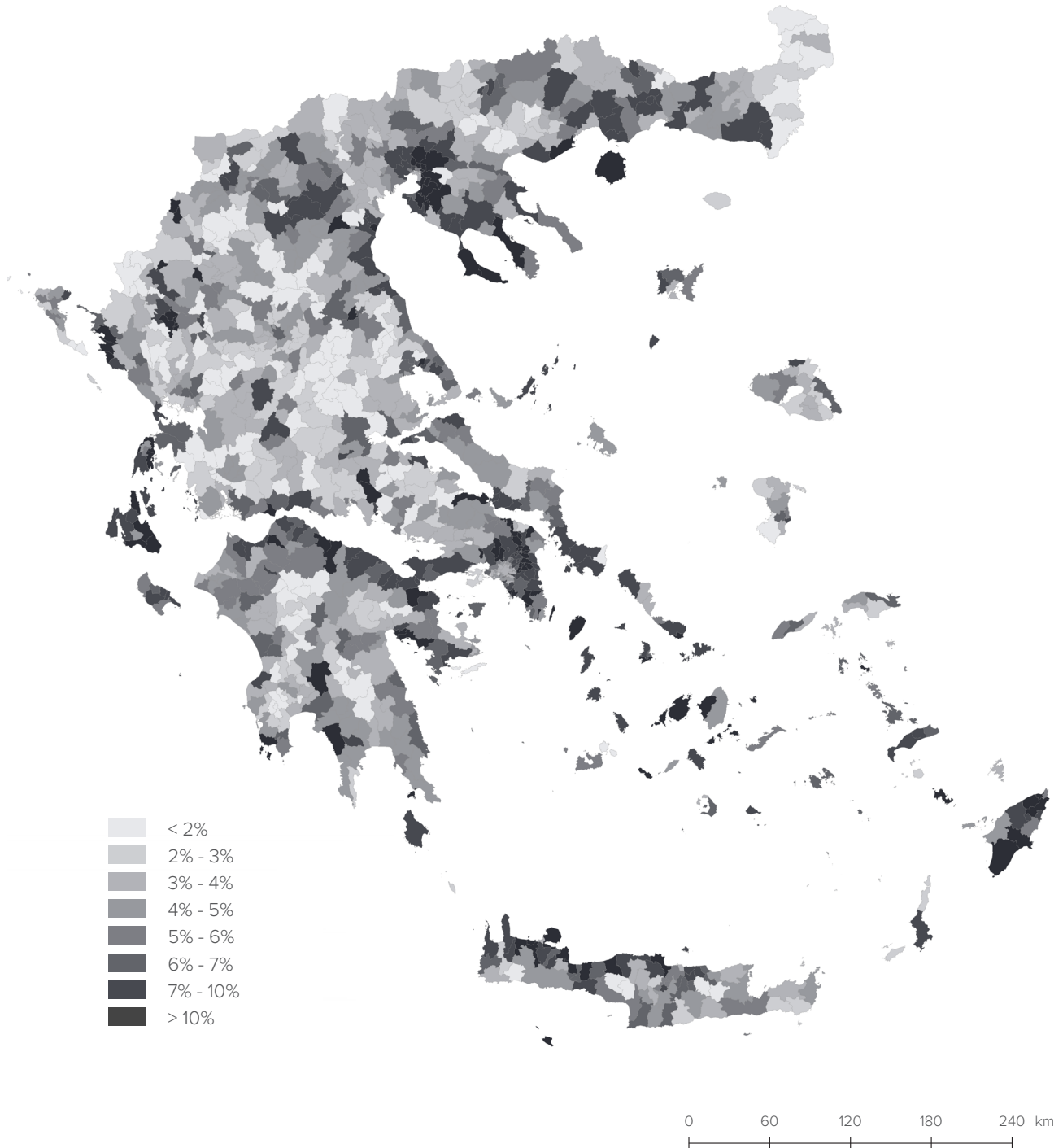
Source: Hellenic Statistical Authority, 2011 Census
E. Skoufoglou, 2018

Map 13.1 Buildings after 2006 per Inhabitant, by Municipal Unit, 2011



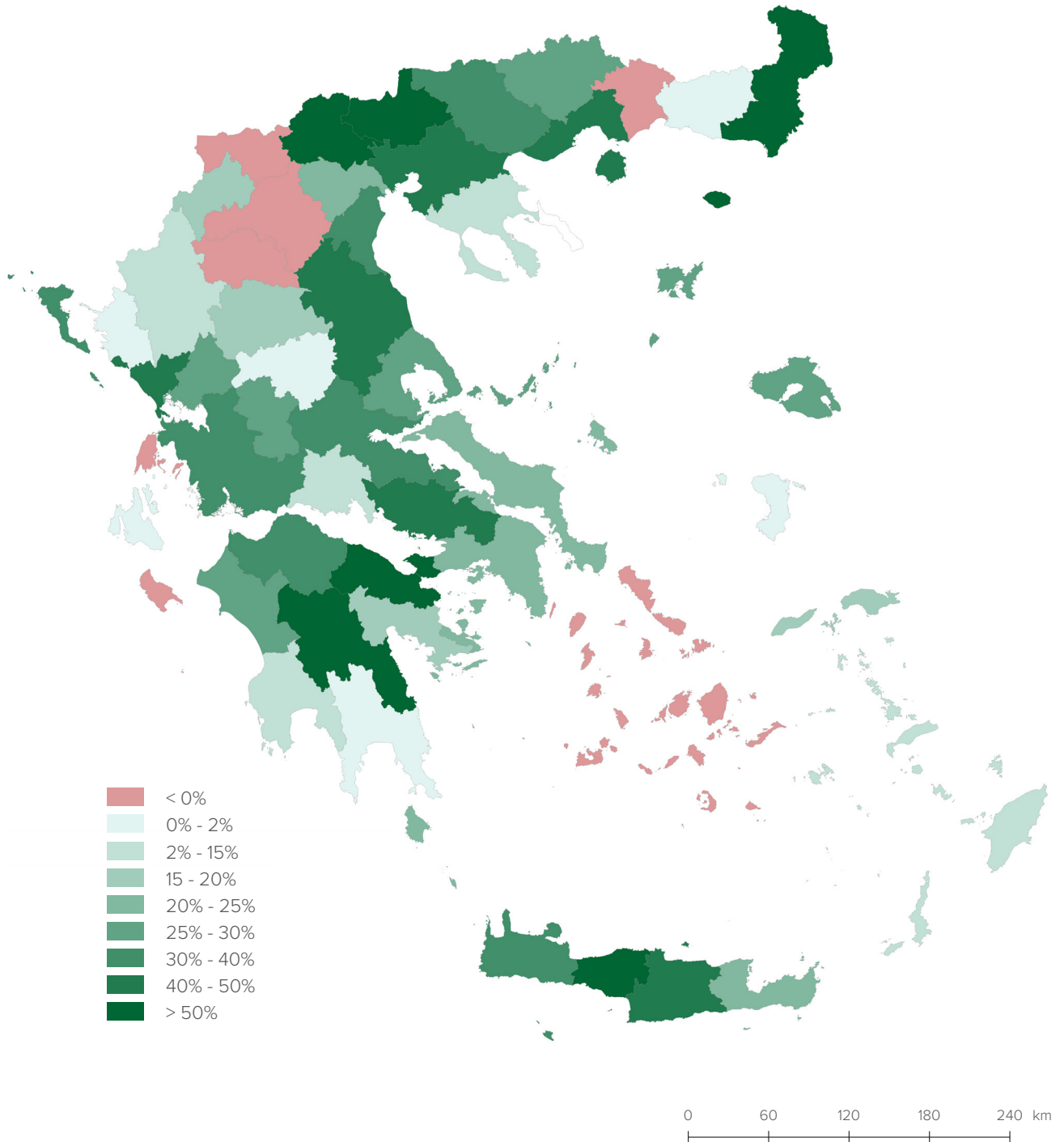
Source: Hellenic Statistical Authority, 2011 Census
E. Skoufoglou, 2018

Map 13.3 Buildings after 2006 as a percentage of the Total Building Stock, by Municipal Unit, 2011



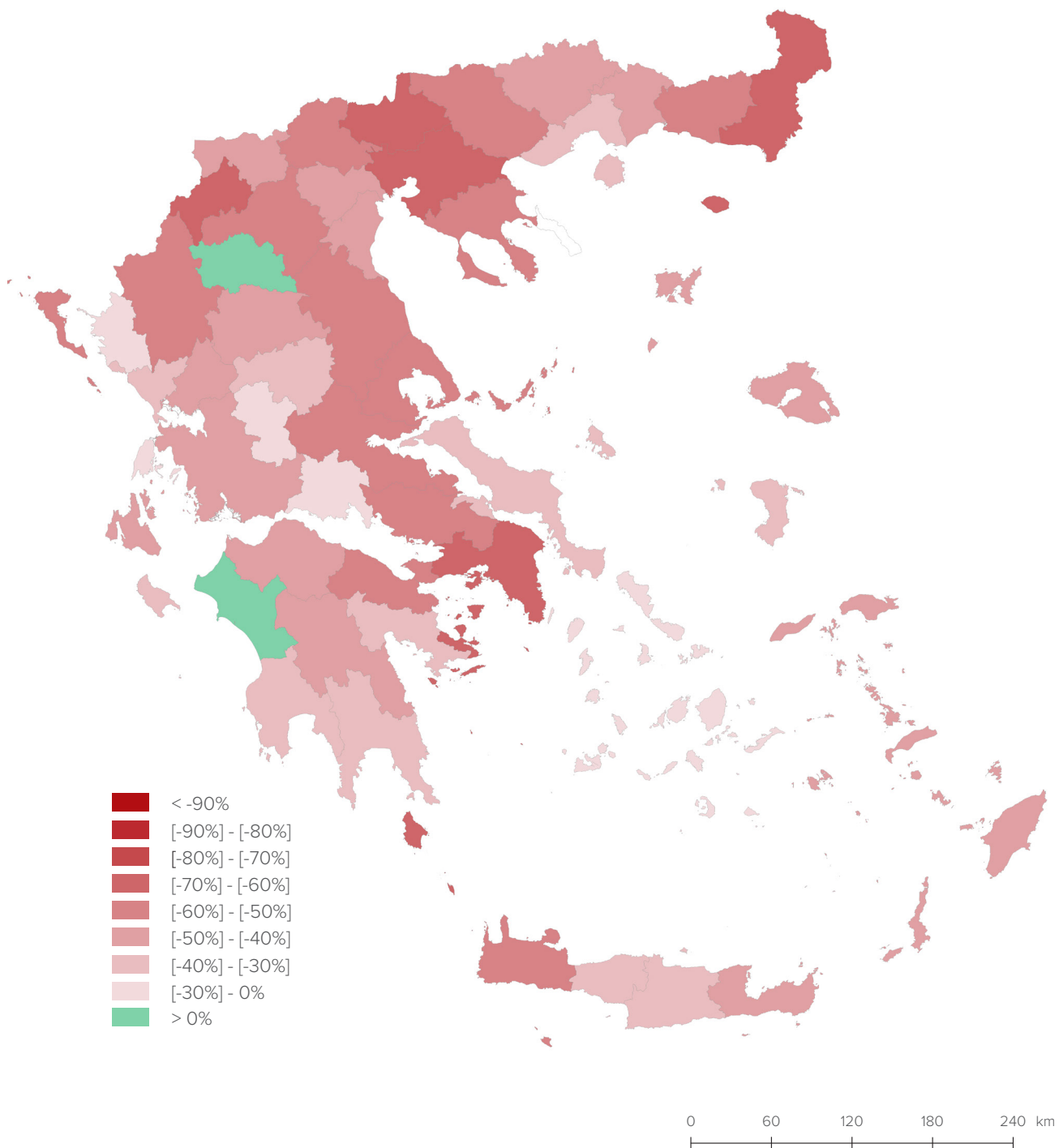
Source: Hellenic Statistical Authority, 2011 Census
E. Skoufoglou, 2018

Map 13.4 Change in the number of new Building Permits issued, by NUTS3 Region, 2002-2005



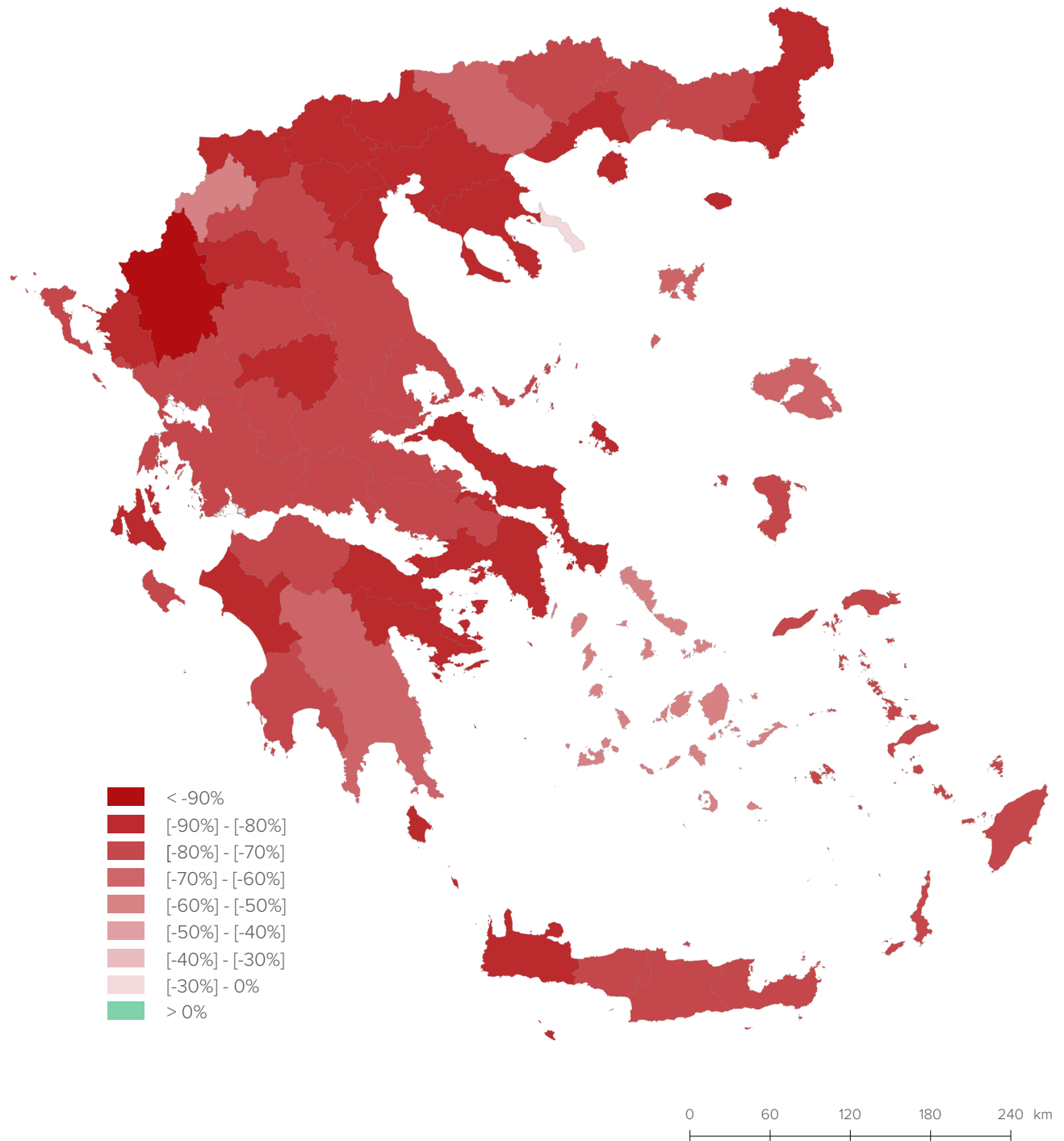
Source: Hellenic Statistical Authority, Local Planning Authorities
E. Skoufoglou, 2018

Map 13.5 Change in the number of new Building Permits issued, by NUTS3 Region, 2005-2009



Source: Hellenic Statistical Authority, Local Planning Authorities
E. Skoufoglou, 2018

Map 13.6 Change in the number of new Building Permits issued, by NUTS3 Region, 2009-2013



Source: Hellenic Statistical Authority, Local Planning Authorities
E. Skoufoglou, 2018

CHAPTER 14

Counter-urbanisation tendencies at the top level of the urban hierarchy

Three aspects of de-metropolisation

In the previous chapters, we have outlined the general population and spatial tendencies in Greece on the inter-regional level. We shall now focus on the relation of Attica, the region of the Capital city, to the rest of the country, before we attempt to shortly enter the intra-regional level. Since the Athens metropolitan area represents the top level of urbanisation within the spatial structure of the country, this examination could offer a better understanding of the top level of the current counter-urbanisation effect, or what we have also called de-metropolisation.

The examination of urbanisation tendencies at this top level of the urban hierarchy has a couple of significant advantages in comparison with monitoring urbanisation in general, that is in its most rudimentary sense. Firstly, while determining urban settlements in general as opposed to rural (or semi-urban, according to the older classification) ones is always based on conventional criteria and is thus not particularly safe, there is nothing conventional or unsafe in recognising that Athens is the largest city by far, with no other comparable agglomeration across the country, and that Attica is a region of metropolitan character. Secondly, much more data is available at this level (that is about Attica compared to the rest of the country) than about urban settlements in general or about other cities in particular. This is partly¹ because Attica constitutes a distinct region on all three levels of the Nomenclature of Territorial Units for Statistics as defined by the EUROSTAT, being simultaneously classified as a distinct NUTS1, NUTS2, and NUTS3 region. This means that all statistical data or estimates provided for any of those levels are available for Attica, while this is not the case for the region of any other city in the country. We shall later see that the lower-level administrative divisions are similarly favourable for examining Athens at the intra-urban level, as municipalities and municipal units in the Capital city correspond to clearly defined sections of the metropolitan area, whereas in most other parts of the country they regroup both urban and rural settlements.

Since, according to the conclusions drawn so far, the top level of urbanisation displays similar, only clearer, tendencies and periodicities as urbanisation in the broader sense, one can assume that at least some of the observations that can be made about the former would

¹ Partly, since there also other reasons for that, such as the fact that, as a metropolitan agglomeration, Athens is often included in international comparative studies and statistics or that the Capital city attracts the interest of researchers of every kind more than any other Greek city does.

be valid about the latter as well. However, an examination of the region of the Capital city is already important regardless of this assumption.

The relevant data suggest that three different aspects of deconcentration of the metropolitan area of Athens have been recorded in the last decade, corresponding to three different aspects of the process of urbanisation: demographic, residential, and economic urbanisation (and therefore also counter-urbanisation). We have defined “residential urbanisation (or counter-urbanisation)” as the concentration (or deconcentration) of housing and construction in urban areas. There is no doubt that those three aspects are connected, as they are rooted in the very same conditions and in the historical background of cycles that have been described in the pertinent chapters. However, they did not emerge simultaneously. The process of de-urbanisation of Attica in the period of the crisis has revealed itself in three consecutive phases or stages, in the following order:

- residential de-metropolisation
- demographic de-metropolisation
- economic de-metropolisation.

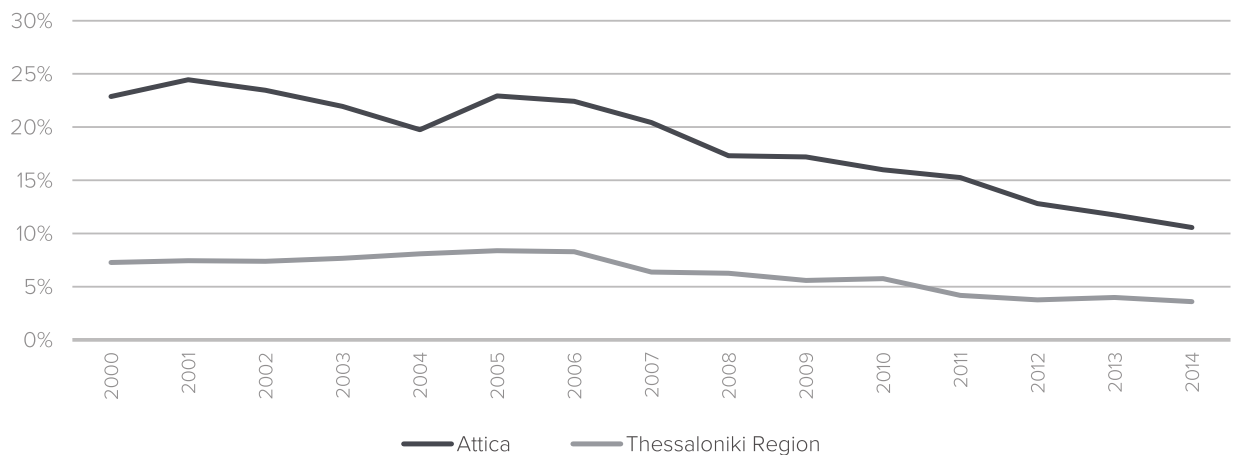
Residential de-metropolisation

The share of both Attica and Thessaloniki in the total number of new building permits in the country starts decreasing more or less along with the beginning of the decline in construction in general, that is before the formal outbreak of the global capitalist crisis. Attica records a relative decrease already between 2005 and 2006, whereas Thessaloniki follows next year (Chart 14.1). In fact, the share of Attica had presented a slight downward tendency in the first years of the 21st century, before a brief boost just after 2004, whereas this was not the case in Thessaloniki, whose share was constantly raising before 2006. The findings would be approximately the same if we considered the total number of floors or the total surface instead of the number of new building permits – with the only exception that the downward tendency before 2004 doesn’t appear in the total number of floors.

In Chart 14.2, one can see the relative evolution of the number of new building permits in Greece, in Attica and in Thessaloniki, with 2008 as the base year. It is evident that, ever since the beginning of the downturn in construction, new permits in both Attica and Thessaloniki have been reducing much more abruptly than the already abrupt national rate of decline. The regions of the Capital city and of the second largest city seem to have followed a similar trajectory in this aspect.

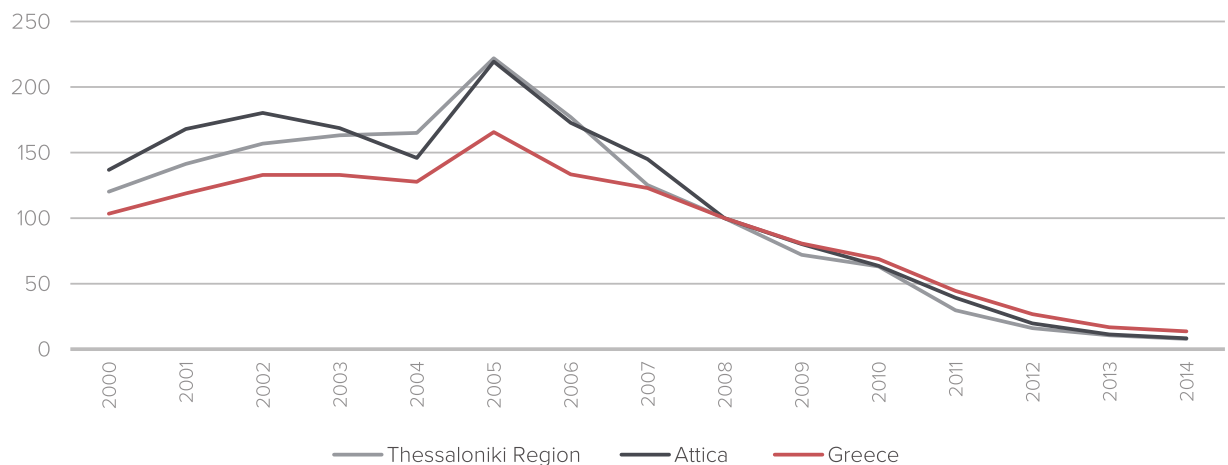
Now, is this relative decline of Attica reflected in a comparable relative decline in the number of new residences? Indeed, it is, as demonstrated in Chart 14.3: the share of Attica in the number of residences predicted in the new building permits has been falling visibly since 2006, and the same applies for the region of Thessaloniki. In this case, the year of turnaround coincides for both regions. Chart 14.4 is the equivalent of Chart 14.2 for the number of residences instead of building permits, and it confirms the same trend: the relative decline for both Attica and

Chart 14.1 Shares of Attica and Thessaloniki Region in the total number of New Building Permits, 2000-2014



Source: Hellenic Statistical Authority, Local Planning Authorities. E. Skoufoglou, 2018

Chart 14.2 Index of New Building Permits, Greece, Attica and Thessaloniki Region, 2010-2014 (base year = 2008)

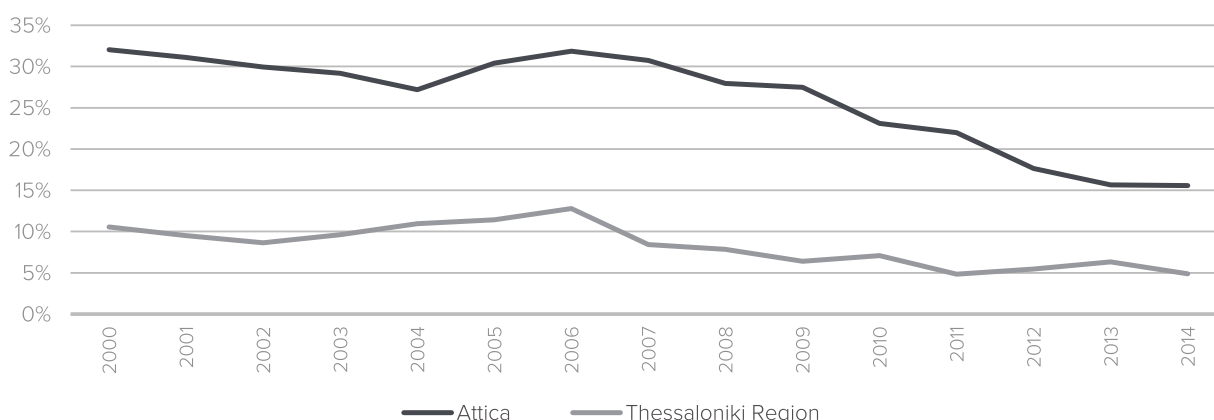


Source: Hellenic Statistical Authority, Local Planning Authorities. E. Skoufoglou, 2018

Thessaloniki has been more rapid than the one on the national level.

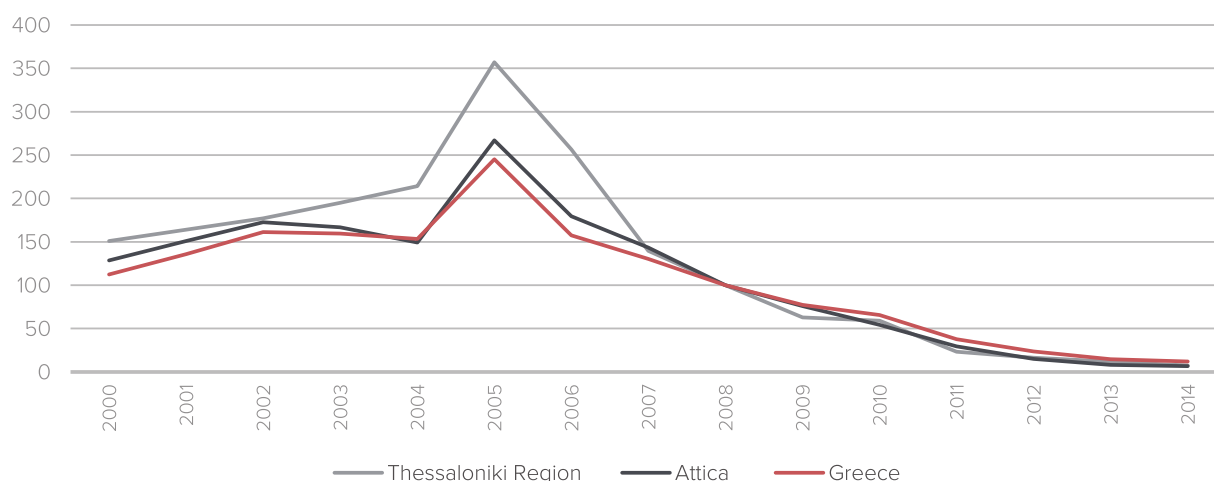
In simple words, all the above mean that a smaller proportion of the new residences to be built, according to the building permits issued, is located in the region of the Capital city (as well as in the region of the second largest city of the country). As already mentioned, the beginning of this relative decline has preceded the global economic crisis. However, this doesn't mean it is disconnected from the crisis. It has been underlined in this study, and it is well-known anyway, that housing has been, along with risky lending, a basic proximate cause (though not the deep or underlying cause) of the crisis. It has been also stressed that Greece has witnessed a housing bubble, even if, unlike other international examples, the Greek housing bubble deflated relatively slowly rather than bursting at once. Besides, the outbreak of the global capitalist crisis and, especially, of the Greek fiscal crisis a couple of years afterwards has obviously impacted back on construction and on the number of permits for new residences, in particular: after 2010, the rates of decline have much greater than before, with those of Attica and Thessaloniki steadily exceeding the national one.

Chart 14.3 Shares of Attica and Thessaloniki Region in the total number of Permits for New Residences, 2000-2014



Source: Hellenic Statistical Authority, Local Planning Authorities. E. Skoufoglou, 2018

Chart 14.4 Index of Permits for New Residences, Greece, Attica and Thessaloniki Region, 2010-2014 (base year = 2008)



Source: Hellenic Statistical Authority, Local Planning Authorities. E. Skoufoglou, 2018

Demographic de-metropolisation

The examination of empirical data throughout this study has indicated a process of demographic decentralisation in the form of negative urbanisation tendencies. At the top level of the urban hierarchy, that is in the Capital city, a process of depopulation due to a negative balance sheet in internal migration is revealed in both absolute and relative terms. We have seen that the relative demographic pressures that Attica had been suffering already before the crisis, in the context of a downward long wave in urbanisation parallel to the depressive long wave of capitalist development, have turned into absolute and relative decline as soon as the global capitalist crisis manifested itself in Greece, that is in 2009-2010. This fact is reflected in the estimates for apparent migration,² as Chart 14.5 demonstrates: since 2009, apparent migration rates are negative and declining, whereas they have been constantly positive before

² Apparent migration data by NUTS2 and NUTS3 region are provided in a comprehensive form by the platform e-demography of the University of Thessaly - available at: <http://www.e-demography.gr>

the crisis, even if the trend line, in the long run, was already downward. In Chart 14.6 one can see that the same phenomenon is recorded in the case of Thessaloniki as well.

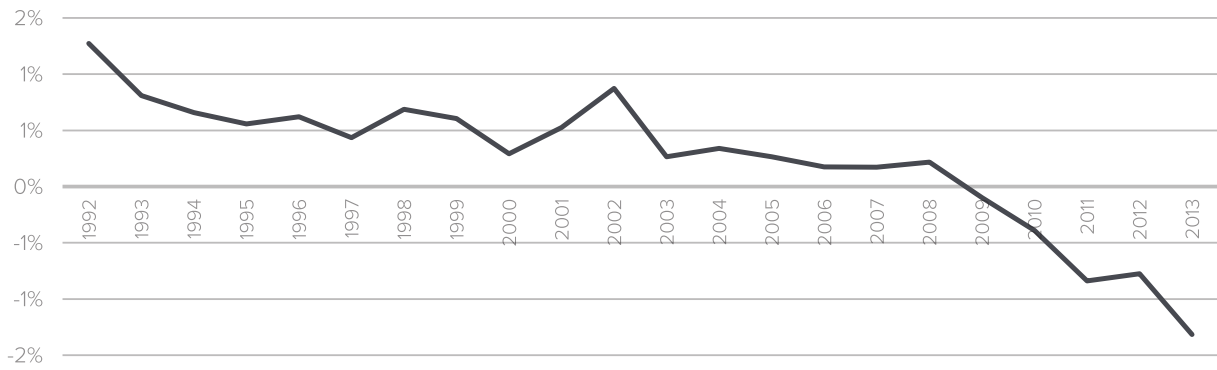
Plenty of evidence in support of the demographic de-metropolisation effect of the crisis has been provided by the analysis of the unpublished tables of census data in the relevant chapter. Before that, we have seen that a clear indication derives from an examination of the published data offered at the NUTS2 level (the 13 regions of the country). It suffices to add here that, according to the census of 2001, during the last year before the census (2000-2001), Attica had recorded a surplus in its exchange of inhabitants with all the remaining regions of the country, except for Macedonia and Crete, where the balance sheet was practically neutral (Chart 14.7). In the census of 2011, the situation is fully reversed: Attica now presents a clear deficit in the exchange of inhabitants during the last year before the census (2010-2011) which each and every region (Chart 14.8). It should be noted that the regions in 2001 were only 9 and don't coincide with the ones of 2011, due to the administrative reforms carried out meanwhile. However, the finding is so crystal clear that it can't be put into question because of this fact. The turnaround is undoubted.

If the change of residence during the 5 last years before the 2011 census is considered (2006-2011), we obtain a picture somewhere between the findings of the two previous charts (Chart 14.9), and yet closer to the situation in 2010-2011 than to the one in 2000-2001. In this case, the balance sheet of Attica is negative (though not always too much) with 9 out of the 12 remaining regions and marginally positive with 3 of them. This suggests that the turnaround in the internal migration to and from Attica is recent and, in all likelihood, due to the crisis.

The de-urbanisation of Attica represents both an intensification and a turnaround in the previous pressures that the Capital city has been already suffering. The share of Athens in the national population has been declining mildly since the 1980s already, although probably at a slower pace than under the conditions of the crisis; however, its region, Attica, was still growing in relative terms throughout the 2000s, according to the findings of the census of 2011 (Chart 14.10). Its relative depopulation started after the outbreak of the crisis. This means that the relative depopulation of Athens can't be attributed to exurbanisation within the region anymore. Long-term "depressive de-urbanisation" tendencies have been transformed into a de-metropolisation crisis, manifested in the depopulation of Athens also in absolute terms, in the depopulation of Attica in both absolute and relative terms, in negative net migration, as well as in non-demographic aspects of de-urbanisation.

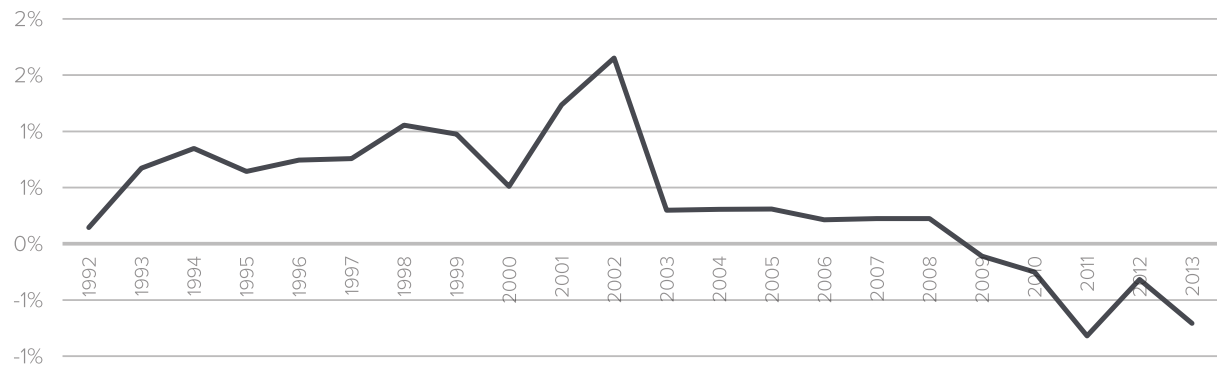
There is also evidence that the relative depopulation of Attica is due to an abrupt decrease in the incoming population rather than a massive wave of outmigration. In other words, it is more due to the collapse of the factors of population pull rather than to the intensification of the factors of population push. Of course, in the final analysis, it is due to a negative balance sheet, so both parts play their role. Nevertheless, it is more correct to speak of de-metropolisation rather of metropolitan exodus.

Chart 14.5 Apparent Migration, Attica, 1992-2013



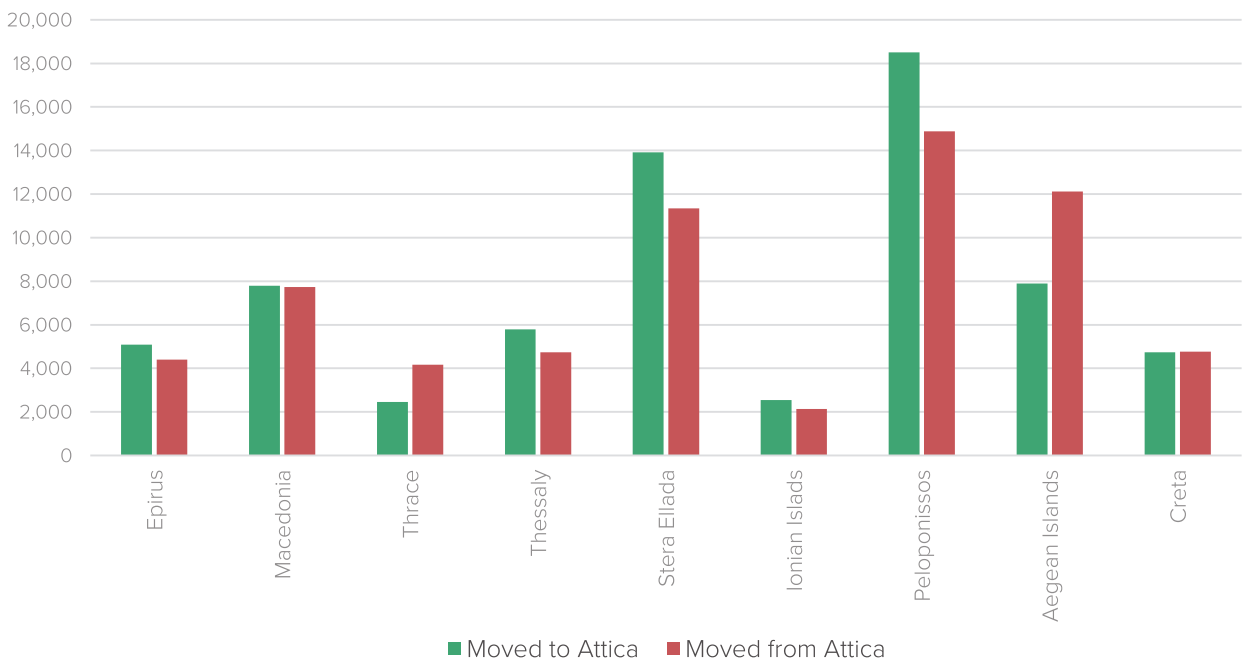
Source: e-demography, University of Thessaly. E. Skoufoglou, 2018

Chart 14.6 Apparent Migration, Thessaloniki Region, 1992-2013



Source: e-demography, University of Thessaly. E. Skoufoglou, 2018

Chart 14.7 Population Exchange between Attica and other NUTS2 Regions, 2000-2001



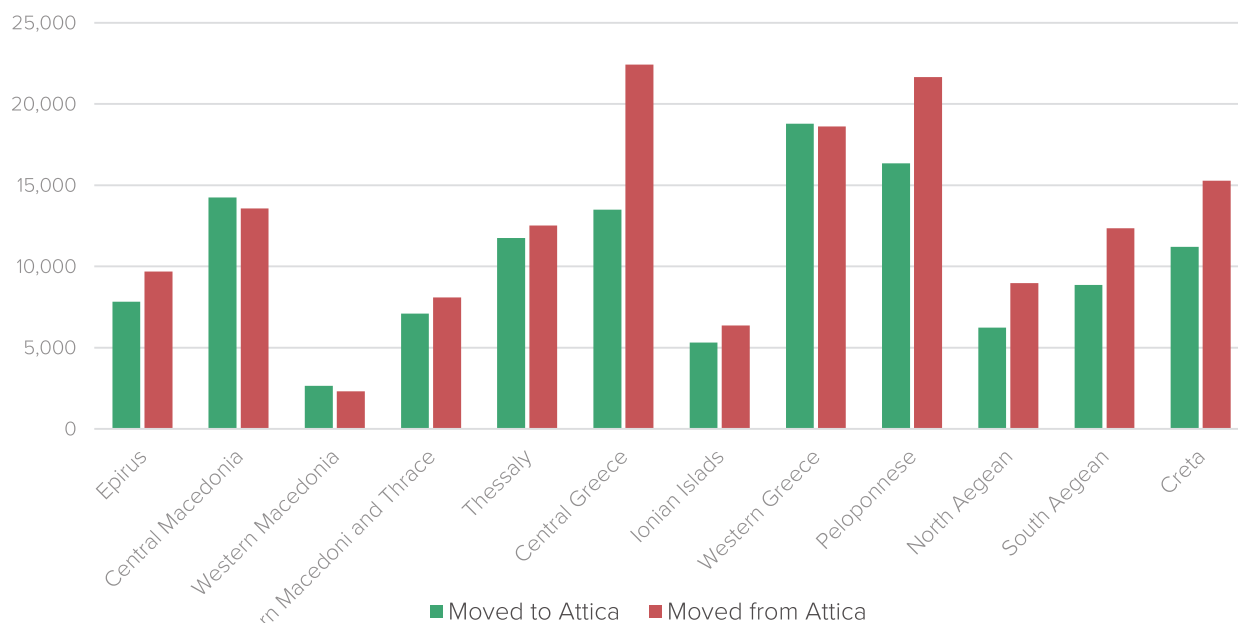
Source: Hellenic Statistical Authority, 2001 Census. E. Skoufoglou, 2018

Chart 14.8 Population Exchange between Attica and other NUTS2 Regions, 2010-2011



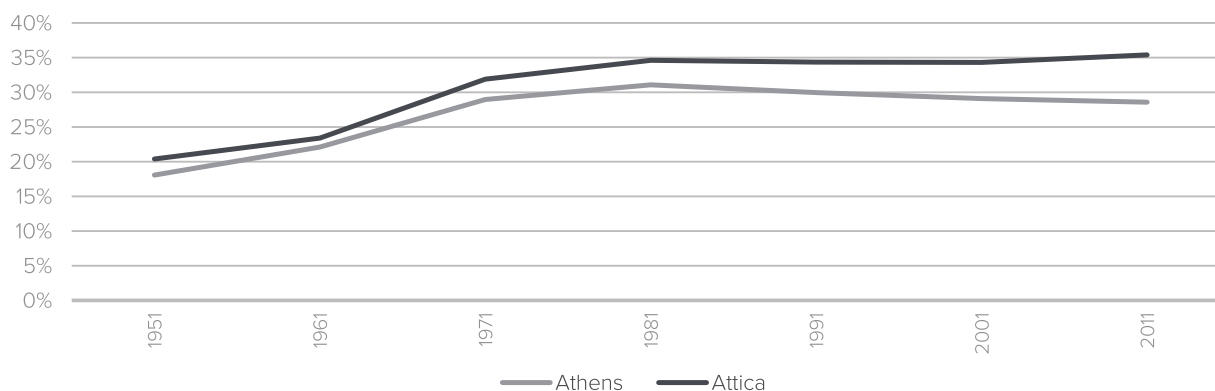
Source: Hellenic Statistical Authority, 2011 Census. E. Skoufoglou, 2018

Chart 14.9 Population Exchange between Attica and other NUTS2 Regions, 2006-2011



Source: Hellenic Statistical Authority, 2011 Census. E. Skoufoglou, 2018

Chart 14.10 Evolution of the Shares of Athens and Attica in the National Population, 1951-2011



Source: Hellenic Statistical Authority, General Censuses 1951-2011. E. Skoufoglou, 2018

Economic de-metropolisation

Economic de-metropolisation is less evident and, basically, only appears after 2011. As mentioned in the relevant chapter (and demonstrated in Chart 10.1), the share of Attica in the national GDP started decreasing only in 2011. The ratio of the GDP per capita in Attica to the national average reduced next year for the first time, to slightly rise again in 2013. Overall, in the years of the crisis (at least until 2014), the GDP per capita has remained overwhelmingly higher than the national average (more than 4/3) and, in fact, its ratio to the national average was still higher than before the crisis. However, amid its fluctuations, this advantage has remained practically stable since 2011, after an uninterrupted increase at a remarkable pace for at least one decade (Chart 10.5). We have thus concluded that the decline of Attica in terms of its share in the GDP is not only due to its depopulation, which has been clearly higher than average throughout the crisis, but also because its relative advantage in terms of GDP per capita has ceased expanding.

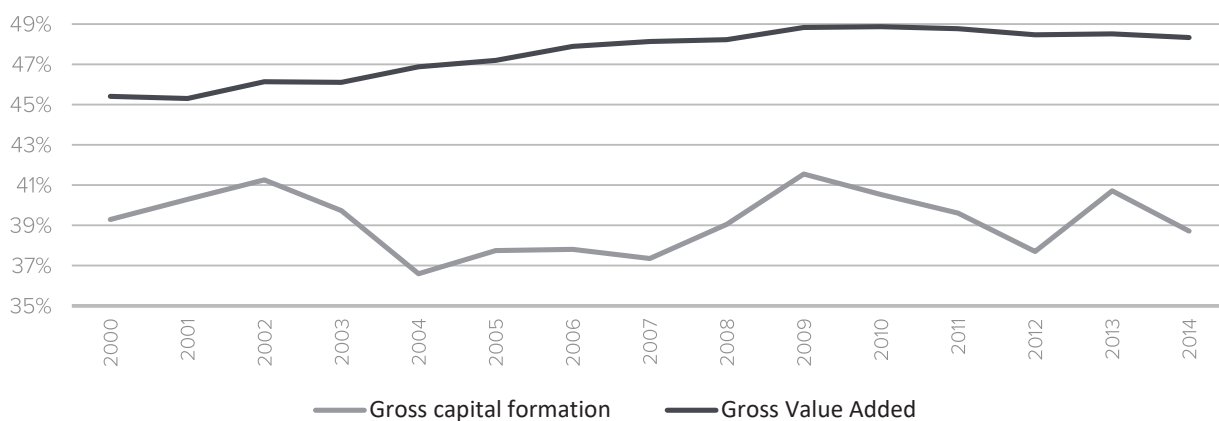
On the other hand, the share of Attica in the national Gross Value Added has started declining even before its share in the GDP, that is in 2010 (Chart 14.11). Similarly, the share of the Capital region in the national Gross Fixed Capital Formation has been falling since 2010, except for a temporary recovery in 2013. The reduction of this share reflects a relative decrease in investment (namely, a sharper decline than the one recorded at the national level) and/or investment in sectors with low organic composition of capital, that is in sectors with a lower proportion of constant capital (machinery, raw materials, facilities) compared to variable capital (labour).

Let's now consider another criterion: the total number of new establishments (commercial, industrial etc.) according to the accounts of the local planning authorities. Again, this is measured by the number of issued building permits, which means that estimates are subject to all the limitations mentioned before. However, they still serve as an indication of economic activity. In Chart 14.12, one can see that the share of Attica in the total number and in the total surface of building permits for new establishments (and, to a lesser extent, in the total value of those permits as well) has been shrinking since 2012 (included), while it had already suffered a visible fall in 2010 before a brief recovery in 2011. In 2014, it was already at its lowest point in the 21st century. It is interesting that the same picture is given if the number of new establishments in urban areas in general, as compared to rural ones, is considered: the share of urban areas has been decreasing since 2012 (included), although at a milder pace (Chart 14.13). Again, it should be reminded that shares are changing within a context of an extremely sharp decline of construction and economic activity in all regions of the country.

The year 2011 marks a turning point in unemployment too: it is the year when the rate of unemployment in Attica exceeded the national average for the first time, to remain above it ever since. This fact is depicted in Chart 14.14, where it is also evident that the rate of unemployment in Attica has generally remained above the rates of all adjacent regions since 2010.

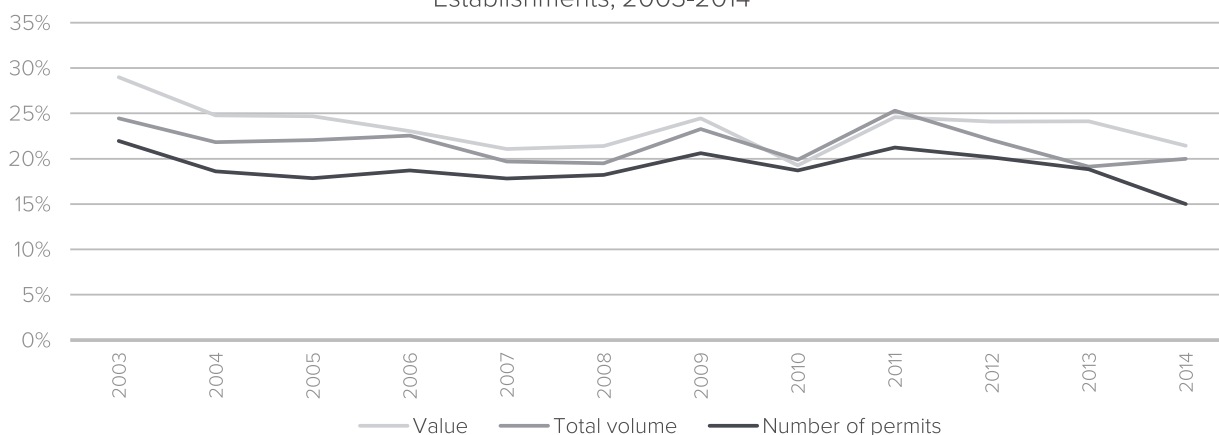
Finally, it has been already commented that the relative increase in the share of the primary sector of the economy in both the GDP and employment at the national level also represents a

Chart 14.11 Share of Attica in the total national Gross Value Added and Gross Capital Formation, 2000-2014



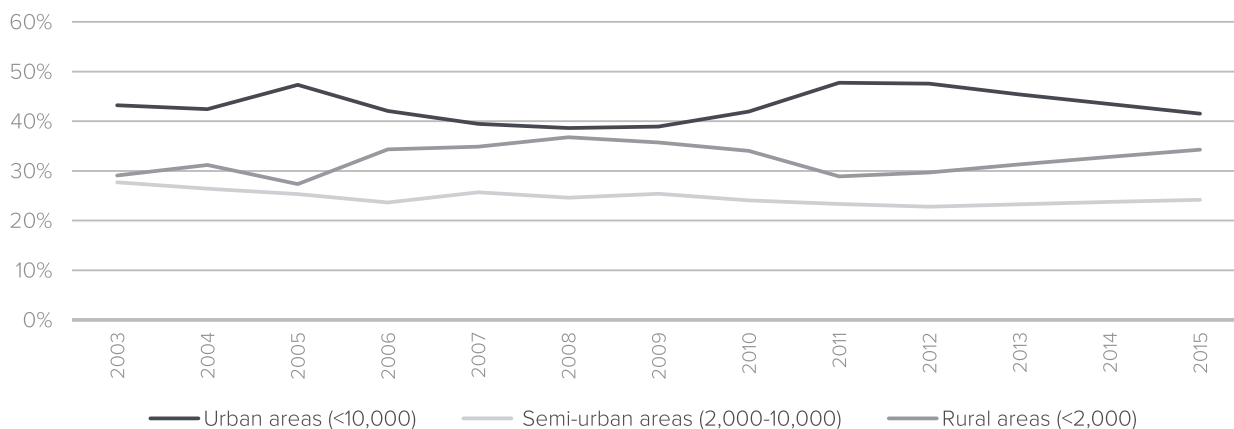
Source: Hellenic Statistical Authority, Annual National Accounts. E. Skoufoglou, 2018

Chart 14.12 Share of Attica in the total number, volume and value of New Establishments, 2003-2014



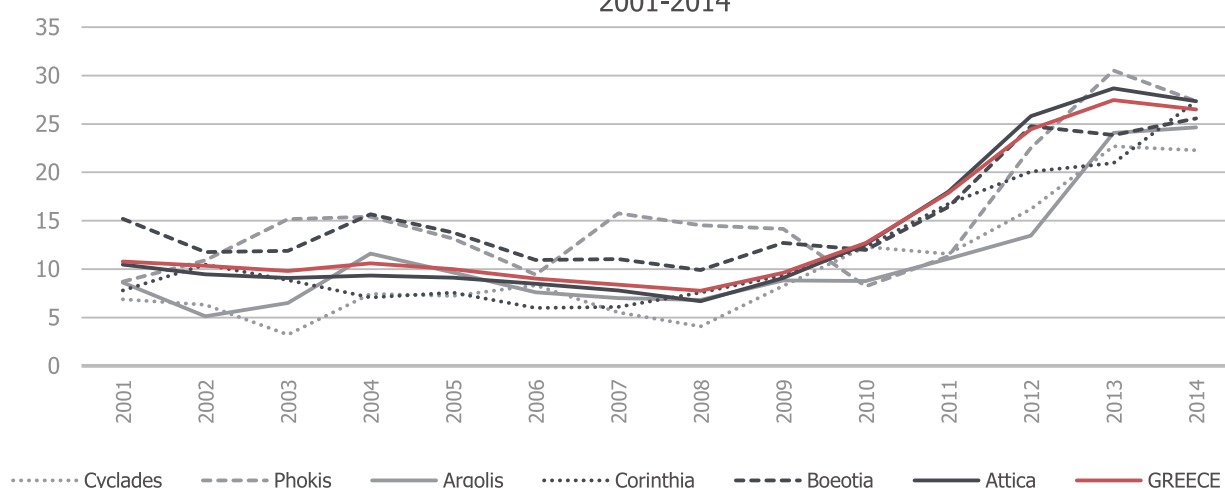
Source: Hellenic Statistical Authority, Local Planning Authorities. E. Skoufoglou, 2018

Chart 14.13 Share of Urban, Semi-urban and Rural Areas in the total number of New Establishments, 2003-2015



Source: Hellenic Statistical Authority, Local Planning Authorities. E. Skoufoglou, 2018

Chart 14.14 Unemployment Rates, Attica, Greece and selected NUTS3 Regions, 2001-2014



Source: Hellenic Statistical Authority, *Annual Regional Accounts*. E. Skoufoglou, 2018

counter-urbanisation effect, in a certain sense. Attica is the region with the lowest contribution of the sector (1.21% in employment and 0.40% in the Gross Value Added in 2011). However, we have seen that the phenomenon of metropolitan residents leaving Athens to work in agriculture in the countryside has not been substantial. The inverse might be the case: under the conditions of the crisis, residents of rural regions what would have otherwise considered moving to the Capital city don't.

In short, one could say that various indicators, though not all of them, suggest a process of relative economic decline of the region of Athens, which could be called economic de-metropolisation to make a parallel with demographic and residential de-metropolisation. This aspect of de-metropolisation is less evident and more contradictory than the previous ones, it comes after them, and yet it reflects real spatial tendencies.

What has triggered de-metropolisation?

It is interesting that, according to all indications, economic de-metropolisation, at least in the case of Attica, has followed residential and demographic de-metropolisation. In certain respects, the former may be even at least partly due to the latter. On top of that, it seems that between the two categories of regions (on the NUTS3 level) that are apparently doing better under the conditions of the crisis, that is regions around the two largest urban agglomerations of the country and island regions, it is rather the former category that is steadily improving in terms of population growth and incoming population, although the latter is generally achieving comparatively better economic performances. Besides, although the evolution of unemployment in island regions, according to the annual estimations, doesn't offer very cohesive conclusions, it is still a fact that practically all island regions that we have data about have almost always maintained rates of unemployment below the national average, whereas no particular pattern can be found in mainland regions around Attica, some of which seem to be gaining population despite exhibiting unemployment rates quite higher than the national average (Table 10.8).

All the above suggest that it was not some relative disadvantage in economic performances that triggered the process of de-metropolisation of the Capital region, neither was a respective advantage of the regions surrounding Attica that caused their relative demographic improvement. On the contrary, according to what has been argued before in this study, it may well be exactly the previous advantages of the top level of the urban hierarchy that explain its deeper crisis of urbanisation. Athens is more closely connected to the global capitalist economy, and thus expectedly more susceptible to a global capitalist crisis.

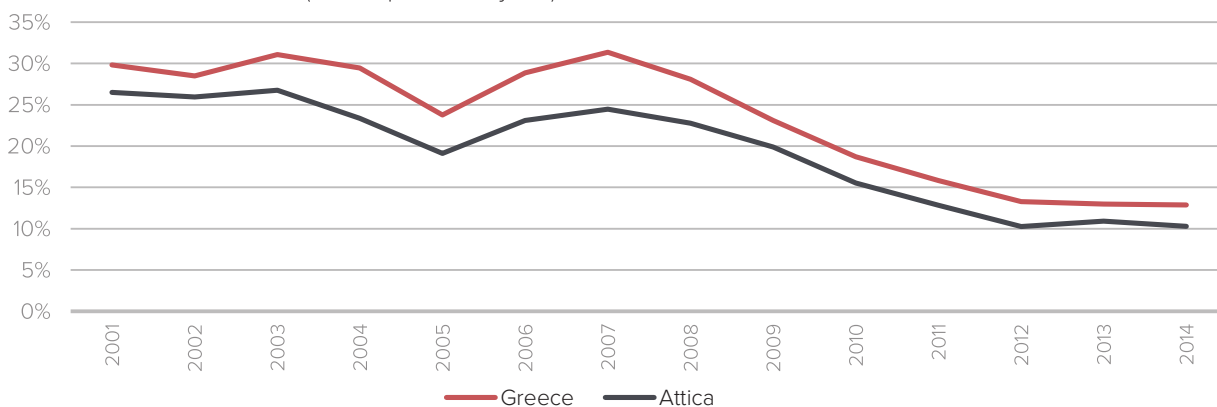
The previous observations, therefore, don't contradict in any way the fact that the crisis in urbanisation stems from the economic crisis. A capitalist crisis involves all spheres of production and reproduction and not just economic performances as measured by conventional indicators. There may well be reasons other than economic, and yet equally interwoven with the capitalist crisis, to abandon (or to not move to) the Capital city. However, in the final analysis, the mechanism of de-metropolisation is still to be found basically among economic factors. In the general sense, this has been already discussed in detail in this study. What we shall attempt now is to examine some specific economic factors to find out possible relative disadvantages of Attica that might relate to the process of de-metropolisation.

On the production side, it was just demonstrated that the GDP, the GDP per capita, the Gross Capital Formation and the rate of employment in Attica, while of course having been constantly shrinking in absolute terms since 2008-2009, have only started declining more than the national average a few years after the relative demographic decline of Attica was first recorded. In other aspects, such as the Gross Value Added, the share of Attica has even increased, although, of course, again in a context of sharp absolute decline. On the other hand, the ratio of the Gross Fixed Capital Formation to the Gross Value Added of the last year, which can provide a crude indication of the proportion of the value added that is invested in fixed capitals, has collapsed in Attica but not more rapidly than it collapsed nationally. It has remained below the national average throughout the crisis, but this was also the case before the crisis (Chart 14.15).

None of the above indicators alone, therefore, could explain why people are eager to leave Attica or hesitant to move there. Of course, it could be assumed that there might be an absolute threshold in one or more of the above quantities beyond which it is impossible or undesirable for some people to live in the region of the Capital city, regardless of the shares or the ratios to the national average, that is the relative level of those quantities. However, this is only an assumption and, even if it could be verified, the question would remain: why would those thresholds apply in Attica and not elsewhere?

Let's now turn to the side of reproduction, that is consumption, living costs etc. In Charts 14.16 and 14.17, based on EUROSTAT data, one can see that, starting from 2010, the percentage of people at risk of poverty or social exclusion in Attica has risen significantly both in absolute terms (which is of course perfectly predictable) and relative to the national average. It is interesting that this development is more in pace with depopulation pressures than the developments in production. However, the risk of poverty and social exclusion in Attica remains lower than the

Chart 14.15 Gross Capital Formation as a percentage of the Gross Value Added (of the previous year), Greece and Attica, 2001-2014



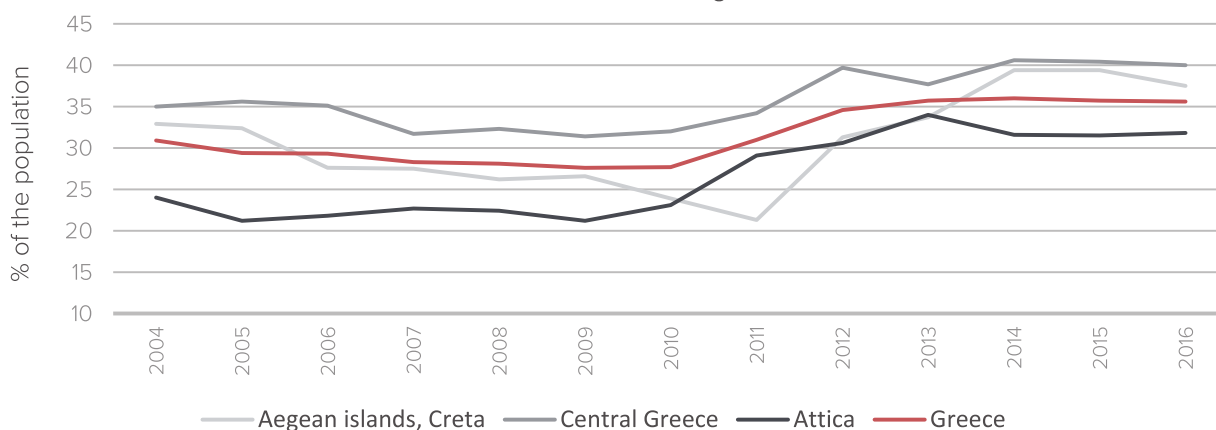
Source: Hellenic Statistical Authority, Annual National Accounts. E. Skoufoglou, 2018

14.16 People at risk of poverty or social exclusion, Attica, ratio to the National rate, 2004-2016



Source: EUROSTAT. E. Skoufoglou, 2018

14.17 People at risk of poverty or social exclusion, Greece and selected NUTS2 Regions, 2004-2016



Source: EUROSTAT. E. Skoufoglou, 2018

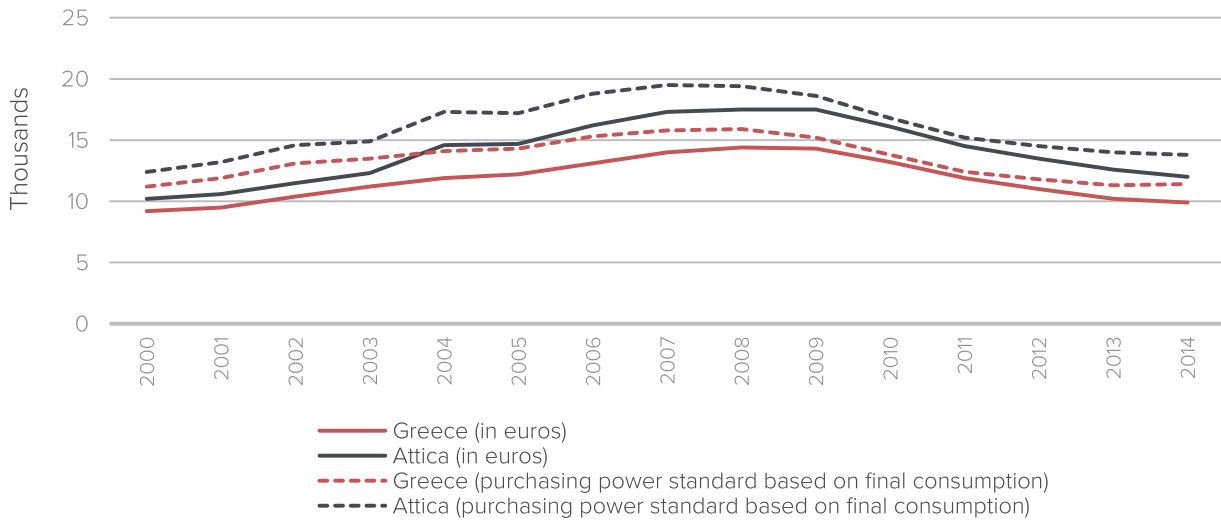
national average, even if the gap has narrowed. Besides, it is maybe a surprise that the same index for the Aegean islands and Creta, which had relatively fallen during the first 2 or 3 years of the crisis and was comfortably lower than the national average and the rate of Attica in 2011, abruptly rose again afterwards, to exceed both rates since 2014. If the islands are resisting the crisis and depopulation better, this is not because they can offer safety to their inhabitants.

A finding that is not much different is obtained when the purchasing power is examined. Chart 14.18 shows the purchasing power per inhabitant in Athens and in Greece, both in euros and based on final consumption. Of course, the average purchasing power is an abstraction of not much use, since it ignores the huge disparities in the income of different social classes and groups. However, it serves as a crude approximation of the geographical allocation of wealth. It is evident in the chart that the purchasing power per inhabitant in Athens always remains visibly higher than the national average, and the gap between the two rates is more or less stable throughout the crisis. The latter aspect can be better monitored in Chart 14.19, where the ratio of Attica to the national average in terms of purchasing power can be found, both in euros and based on final consumption. If there is any contraction of this gap, this only happened after 2013.

It sounds reasonable, though, to assume that a lower than average risk of poverty or social exclusion and a higher than average purchasing power per inhabitant may be still intolerable in Attica because of the higher living costs. An indication of that can be given by the total disposable income less the total final consumption expenditure. In Chart 14.20 we can take a look at the development of this difference for Greece, for Attica and for Central Greece, from 2008 on (unfortunately, no data is available before this year to permit a longer-term overview, neither published nor on demand from the Hellenic Statistic Authority). In 2008, the total disposable income in Attica was only marginally smaller than the final consumption expenditure in the region. There was dissaving of no more than 0,5%, this marginal deficit being replenished either by past saving or by borrowing. In the same year, the whole country recorded dissaving of 1,5%. From 2009 on, the situation reverses so that Attica presents a quickly increasing deficit, bigger than the national one, which is also growing (apart from the year 2009, when saving across the country appears marginally positive). On the contrary, in Central Greece (Sterea Ellada), a NUTS2 region that seems to be demographically profiting out of the depopulation of Attica, saving has been always positive since 2008, meaning that the final consumption expenditure has been constantly significantly less than the total disposable income in the region. In short, throughout the crisis, Attica is spending on average above its earning capacity, whereas its neighbouring region is spending less than what it earns. Since the income per capita is still significantly higher in Attica, the advantage in the latter case should be that less spending is needed, which indicates reduced living costs.

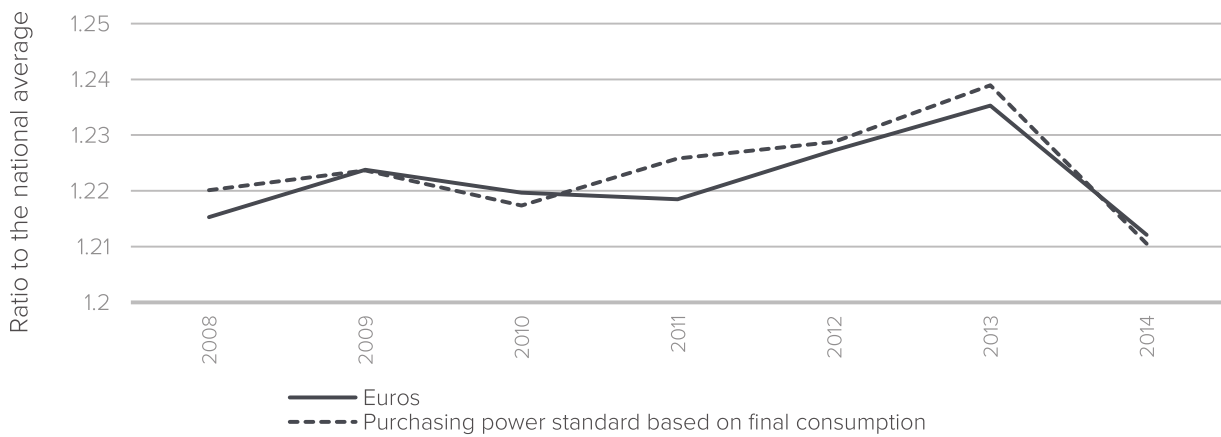
This is a particularly interesting finding, as it suggests that, under the conditions of the crisis, a number of inhabitants of the region of the Capital city are attracted by its surrounding regions, where living is cheaper or, inversely, a number of inhabitants of the surrounding regions are not attracted by Attica anymore, because living there is more expensive. It seems that this

Chart 14.18 Purchasing Power per Inhabitant, Greece, Attica, 2000-2014



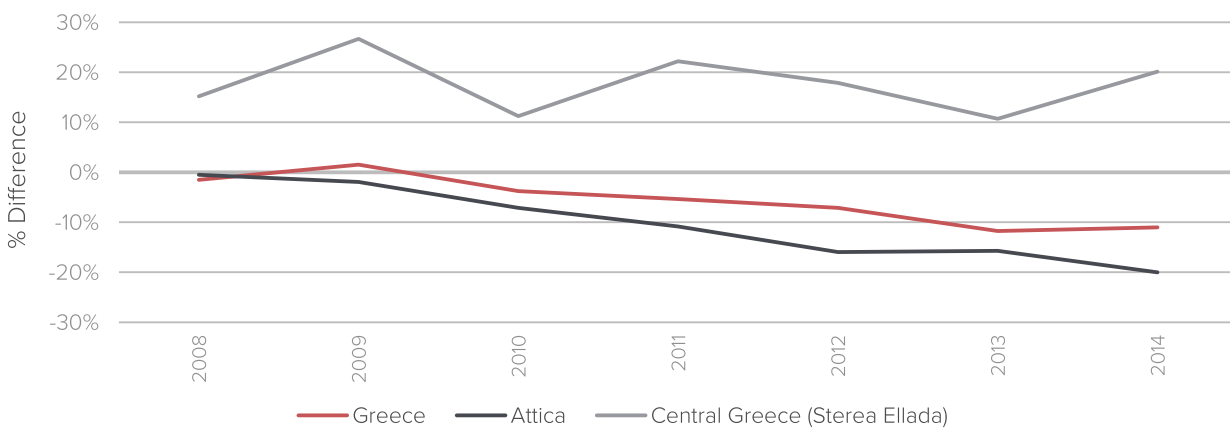
Source: EUROSTAT. E. Skoufoglou, 2018

Chart 14.19 Purchasing Power per Inhabitant, Attica, ratio to the National Average, 2000-2014



Source: EUROSTAT. E. Skoufoglou, 2018

Chart 14.20 Disposable Income less Final Consumption, Greece, Attica and Central Greece, 2008-2014



Source: EUROSTAT. E. Skoufoglou, 2018

advantage of the regions around Attica, combined with their proximity to the Capital city, outweighs the advantage of Attica in terms of income and GDP per capita, Gross Value Added etc. It is a reasonable idea to live in one of those cheaper regions while being at the same time close to Athens, with its services, workplaces, infrastructure, and potential opportunities. Besides, it is consonant with the finding of the opinion survey about possible intentions to abandon the two largest cities of the country, which has been analysed previously.

Of course, this doesn't mean that we could claim to have discovered the very factor that activated the depopulation of Attica. It is unlikely that such a composite socio-spatial process could have been caused by a single factor. However, this chapter has highlighted what seems to be an instrumental wheel of what we have called de-metropolisation.

Internal migration within Attica

Before we conclude, we shall attempt a quick glance at the interior of Attica. In the years of the crisis, much more research and literature have been produced about Attica or Athens than about the national territory in general.³ We don't need, therefore, to go into detail; we shall confine ourselves to a few remarks concerning the intra-regional dynamic of the de-metropolisation process found throughout our study.

We shall monitor the distribution of incoming internal migration at the intra-regional level, by examining the incoming population by municipality in Attica during the last year before the census. This includes newcomers that moved from other municipalities within Attica, those who came from other regions across the country as well as persons who have moved in from abroad (immigrants or repatriated citizens). Since they comprise intra-regional changes of residence too, the new maps are not just about the internal distribution of the population recorded in the previous maps of inter-regional migration.

The elaborated data has been visualized in four maps, showing:

- The incoming population by municipalities during the last year before the census of 2001, as a percentage of their permanent population in 2001 (Map 14.1).
- The incoming population by municipalities during the last year before the census of 2011, as a percentage of their permanent population in 2011 (Map 14.2).
- The ratio of the per cent incoming population in all municipalities compared to the regional average for Attica, in 2001 (Map 14.3), using the principles of location quotient analysis.
- The ratio of the per cent incoming population in all municipalities compared to the regional average for Attica, in 2011 (Map 14.4).

3 An important number of such studies can be found in the Athens Social Atlas, launched in 2016 with the contribution of the Harokopio University, the French School at Athens (École française d'Athènes), the National Centre for Social Research (EKKE), and the Hellenic Statistical Authority (ELSTAT) - <http://www.athenssocialatlas.gr>. On October 20-22, 2017, the Greek Association of Architects (SADAS-PEA) has organised a congress about the repercussions of the crisis on the Capital region, titled Attica in Crisis - <https://atticaincrisis.com>. For an interesting volume focusing particularly on the Athens centre under the conditions of the crisis, see Maloutas, Kandyliis, Petrou, & Souliotis (2013).

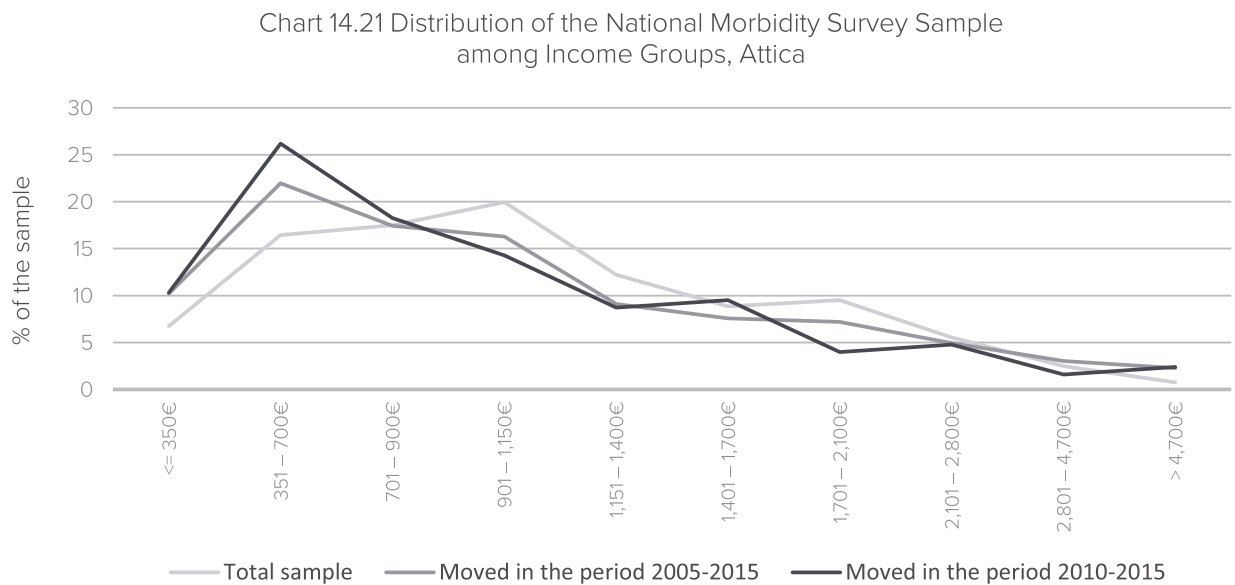
It was possible to use the same classes for the maps about 2001 and for those about 2011, for ease of comparison. In the maps of the ratios, tones of red have been used for values below average and tones of blue for the values above average.

An initial observation is that mobility, as measured by the incoming population, appears much lower in 2001 than in 2011. This is consonant with the findings at the inter-regional scale for the whole of the country. The crisis tends to restrict mobility.

At this point, we could add a finding coming from a source other than ELSTAT. We have worked on the primary data of the National Morbidity and Risk Factor Survey, organised by the Athens Medical School in the period 2013-2014, in collaboration with all other university medical schools around Greece. The survey (in which the author of the present study was personally involved) used a large random representative sample of nearly 6,000 persons (5,966 interviews), designed on request by ELSTAT and distributed over 19 former prefectures across the country, including Attica. The main purpose was to record morbidity rates, especially regarding cardiovascular diseases, respiratory diseases, sexually transmitted diseases, and diabetes. However, the survey also monitored the impact of environmental conditions on morbidity. In this context, the interviews included detailed questions about all changes of residence during the past 10 years.

In most prefectures, the number of answers is not large enough to draw meaningful conclusions about relocations, however, this is not the case in Attica. Among the 1311 respondents in the region, 264 stated that they have changed their place of residence at least once in the last decade before the interview, and 126 stated that they have done so after 2010 (included), that is after the outbreak of the crisis and the introduction of the austerity programmes. Those numbers are probably underestimated because not everybody answered to the question in detail,⁴ and therefore there is no point in trying to examine the rates of incoming and outgoing population since more credible sources are available for this purpose. However, it is still interesting to associate the changes of residence with the income of the participants, according to their own statements (participants were requested to indicate their income group among 10 classes available in the questionnaire) (Chart 14.21). It emerges that, at the time of the survey, those who had moved at least once between 2005 and 2014 tended to have lower incomes than those who didn't. This means that, throughout this period, lower incomes tended to be more geographically mobile than high ones (although mobility is also high among the top income group as well, both before and after the crisis). Moreover, those who have changed their place of residence at least once after 2010 (included) tended to be poorer than those who did so before 2010. This might be considered an indication that the mobility of the poor has increased even further compared to the wealthy incomes under the conditions of the crisis (probably, that the former has been restricted less than the latter).

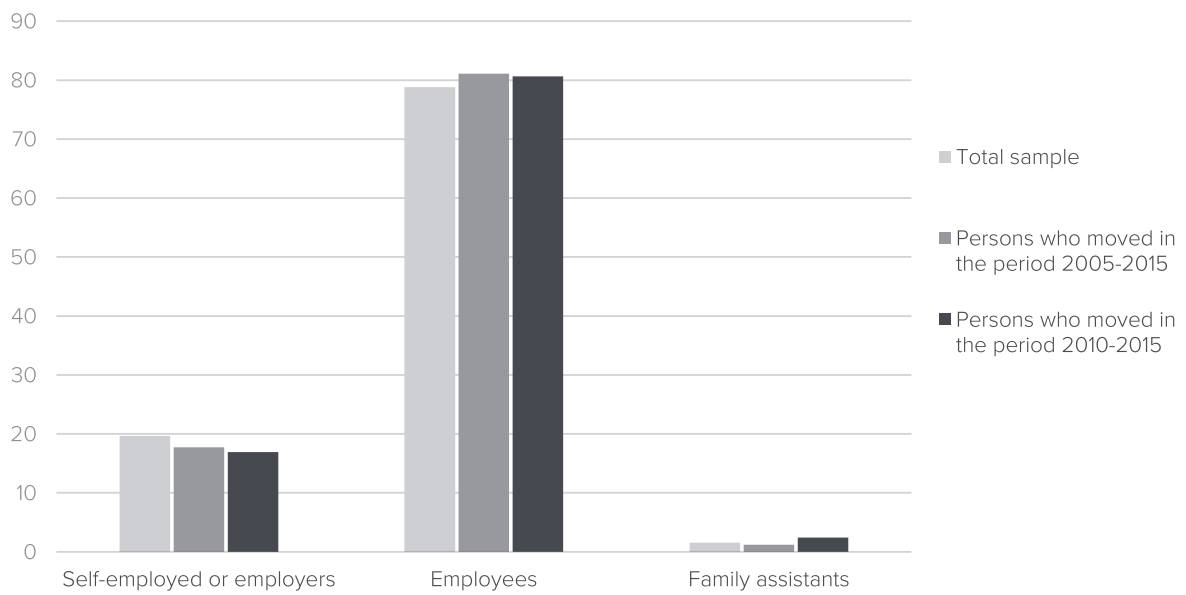
4 The question about the changes of residence demanded time-consuming answers, as specific addresses were requested too. Moreover, it seemed irrelevant to many participants, given that the main subject of the survey was morbidity. It is certain, thus, that the question was not always treated carefully by participants and interviewers. For example, a considerable number of respondents stated that they have moved at some point during the last decade, without determining the year of their change or changes of residence.



In addition, in Chart 14.22, one can see that employees currently living in Attica tend to be somewhat more mobile than self-employed persons and employers (the survey made no distinction between the two latter categories), although this does not seem to have changed due to the crisis. A somewhat different picture is given, though, when the sample of the survey is associated with educational levels (Chart 14.23). The survey data demonstrate that the lowest educational levels (elementary school or lower) are significantly less mobile than the higher and highest levels, although the gap has apparently closed slightly after 2010 (in fact, a closer look also reveals a supplementary process of polarization, with the proportions of both the lowest category - those who have not graduated from elementary school - and the second highest one – those with a master degree – among metropolitan residents who have moved at least once since 2010 increasing). Combined with the previous ones, this finding indicates that it is mostly the highly or relatively highly educated poor strata that tend to get relatively more mobile under the conditions of the crisis.

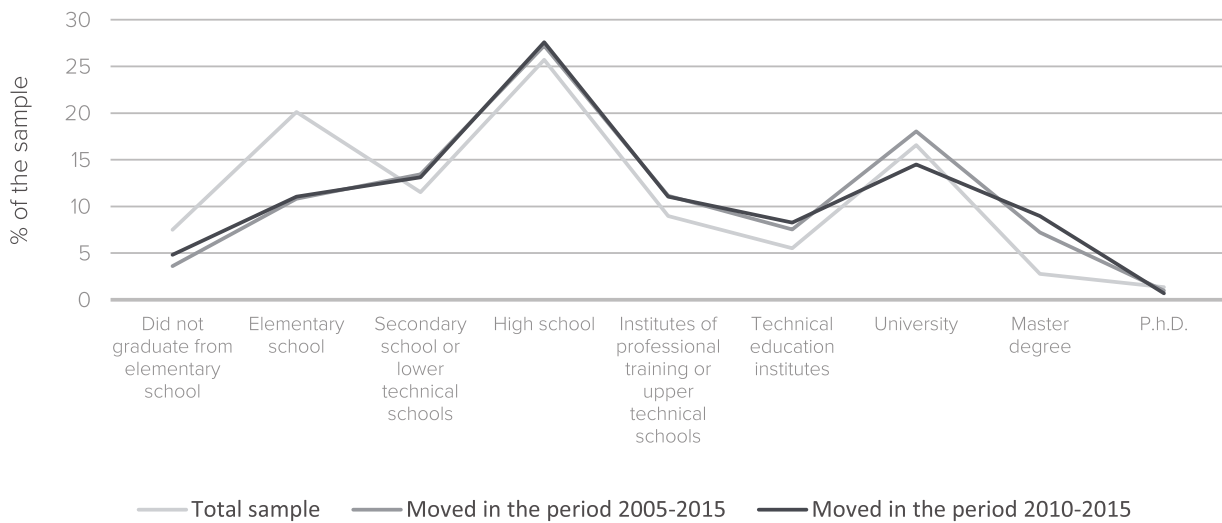
Let's now return to the examination of the four maps. Only a few among the municipalities that were enjoying incoming population rates above average in 2001 had switched to rates below average in 2011, and vice-versa. However, the general pattern and dynamic has changed meanwhile. In 2010-2011, one can distinguish a pattern of an outer ring, in the periphery of the region and mainly along the coastlines to the North, East, and West, which is attracting more population, and, in the middle, the Attica basin (that is the Athens urban area, the core of the metropolis) plus a first ring of municipalities outside the basin, especially to the North and West, which are attracting obviously fewer newcomers. Within the basin, only a group of municipalities in the northern part of the urban area, as well as Haidari and Korydallos in the western part, present a rate of incoming population somewhat higher than average, but

Chart 14.22 National Morbidity Survey Sample by Professional Status, Attica



Source: National Morbidity Survey, primary data. Skoufoglou, 2018

Chart 14.23 Distribution of the National Morbidity Survey Sample by Educational Level, Attica



Source: National Morbidity Survey, primary data. Skoufoglou, 2018

again nothing to compare with the periphery. The pattern is not perfect, but it is, nevertheless, distinguishable.⁵ In the period 2000-2001, although the urban core was already attracting less incoming population than certain dynamic municipalities in the periphery, that quasi-concentric pattern was not visible yet. Certain municipalities within the Attica basin were still attracting considerable numbers, whereas all West Attica, as well as certain municipalities in East Attica, presented very low rates.

⁵ The islands (apart from Salamina) and the regional units on the coasts of the Peloponnese that administratively belong to Attica are not really part of its metropolitan area and should be thus left out of scope here.

In order to obtain a clearer view of the development of the situation throughout the first decade of the century, we have also made the respective map regarding the incoming population during the last 5 years before the census, that is throughout the period 2006-2011 (Map 14.5). Since it depicts the ratios to the regional average, the map is directly comparable to the previous ones. The general layout is closer to the map for the period 2010-2011 than to the map for the period 2000-2001, which is reasonable, because most of the timespan covered in the new map was already under the conditions of the crisis (and, of course, it also includes the year 2010-2011 itself). The outer ring of regions attracting population is already visible, a difference being that it is not exactly a ring, but a crescent moon, since it is limited to the North, East, and South, while West Attica presents rates below average, although by no means as low as in 2000-2001. Another difference is that the periphery of higher incoming population rates starts within a closer range now, that is in a smaller radius around the city centre. The decline of Athens is expanding to its suburbs as well.

In 2000-2001, the Attica basin was receiving less incoming population relative to its permanent population than East Attica, but more than West Attica. In 2010-2011, this was not the case anymore: the Attica basin did worse than both. Moreover, Megara in West Attica presented a rate of incoming population much higher than average, which was not at all the case before.

It should be noted that the centre of gravity of the inverse concentric pattern distinguishable in Maps 14.2 and 14.4, and partly in Map 14.5 concerning the quinquennial 2006-2011, is not the municipality of Athens, which is the centre of the city, but rather Piraeus and a group of densely populated municipalities to the West. This reflects the fact that the city centre is still the gate for newcomers in the whole region, as much as this rate has declined. This is evident if the incoming population due to intra-regional relocations is isolated, by omitting newcomers from other regions and from abroad. This is done in Map 14.6.⁶ The concentric pattern is almost perfect now, apart from the low rates in West Attica.⁷ It is evident that people are leaving the Athens urban area to move to distant suburbs and exurbs. Of course, it is normal (and it was the case before the crisis, as well) for the newcomers to first come to the city centre, and then gradually move to the suburbs or exurbs.

The advantage of Eastern over Western Attica is clear in all maps, although in 2010-2011 it is somewhat mitigated by the rise of Megara to the West. This reflects the continuation of the well-known historic dichotomy between East (and North) Athens/Attica, where the bourgeois class and the wealthy middle strata reside, and the West, where the mass of the working class and the poor lives. While middle and upper-class suburbs were flourishing, the population in the working-class districts and suburbs in the West were already rather stagnant since the early 1980s (Maloutas T. , 2018, p. 136). The gap is also evident in the distribution of incomes,

6 The map refers to the period 2006-2011, because the distinction between intra-regional and inter-regional incoming population by municipality is not made in the published tables for the period 2010-2011. It could be possible to apply for the respective unpublished table, but anyway it is very improbable that this would change anything in our conclusion here.

7 According to our previous findings, those rates would be higher in the period 2010-2011.

both before and after the crisis (Pantazis & Psycharis, 2015).⁸ Working class districts are less attractive than average, and, within the Attica basin, it even seems that they have declined faster in terms of incoming migration. This is reasonable since they have far fewer means to resist the crisis than the wealthy suburbs, despite the pressures that the latter have also suffered. This sectoral overlaps with the inverse concentric pattern, changing the dynamic of both. We saw that the western part of the periphery of the region is less attractive than the eastern part. On the other hand, it seems that the disadvantage of the western part of the outer circle is rather mitigating, unlike the disadvantage of the western part of the urban core (always in terms of incoming population): in 2001, West Attica appeared to be more disadvantaged than in 2011, whereas west Athens appeared less disadvantage at the beginning of the century than now.

The inverse concentric pattern detected in Attica forms a continuum with the pattern found in our previous analysis at the inter-regional level, according to which there is a ring of former prefectures (NUTS3 regions) around Attica that are profiting out of the demographic decline of the Capital city amid the crisis. Maps 14.7 and 14.8 offer the opportunity to look at the interior of those peri-metropolitan regions. It should be underlined that the ratios in Map 14.8 do not coincide with the ratios in the previous maps, since their denominator is the national, and not the regional average. It is clear in the maps that the inverse concentric pattern spills over and extends beyond the limits of Attica, to the municipalities of Tanagra and Thebes to the North, and of Loutraki and, to a lesser extent, Corinthos to the South. Most probably, the high rates of incoming population of the regions of Boeotia and Corinthia are due to their areas closer to Attica, although it should be reminded once again that the maps make no distinction between intra-regional and inter-regional migration. The high rates of the respective municipalities highlight Thebes and Nafplion as satellite cities attracting population (besides, they have both grown in population throughout the decade 2001-2011). A nucleus of municipalities with high rates of incoming population appears further away to the North and West, in the regions of Phokis and Phthiotis.

The (imperfect) concentric pattern of growing rates of incoming population as one moves away from the Athens urban area, which appears in Attica in 2010-2011, consists in part of the accentuation of already existing tendencies and in part of the emergence of new ones. The municipality of Athens was already declining in 2001: it had lost some 27,000 inhabitants since 1991 (3.35% of its population in 1991), but it then lost more than 125,000 until 2011 (14.85% of its population), which, according to our findings, is mainly due to the last years of this period of reference, i.e. under the conditions of the crisis. The same happened with Piraeus and other densely build districts of the urban core. On the contrary, the population of the region of Attica was growing in the 1990s, but it declined in the following decade.

The relocation of metropolitan residents to the periphery of the Attica region has accelerated. A process of a declining urban core and rising suburbs was already underway before the crisis, although apparently at a smaller radius around the urban core. However, this doesn't mean that

8 For a discussion concerning the distribution of incomes in the whole national territory, including extended quantitative analysis, see Kalogirou (2011).

the current depopulation (and deconcentration in general) recorded in the centre of Athens can be just deemed a process of suburbanisation, even in an intensified form.

Firstly, because the suburbs are also suffering from the urban crisis, while the dynamic areas within the region of Attica are, as a rule, beyond the contiguous built-up area of the Capital city, or what we have defined as “exurbs”. The Attica basin, where most suburbs are situated along with the city centre, was left behind all other sub-regions in 2011 (East Attica, West Attica, the islands) in terms of its incoming population rate (see Map 12.1), which was not the case in the past. Besides, we have seen from our previous analysis that most residents that have abandoned the Capital city don’t belong to those social strata that have given rise to the suburban phenomenon in the past: the bourgeois class and the upper middle class to the rich northern and eastern suburbs, and the working class working in industry and construction to the western suburbs. It is now mostly relatively low income middle-class salaried employees, the working class of the tertiary sector, pensioners, and the unemployed who seem more eager to abandon Athens and Attica. The two groups overlap only partly. Not only the spatial but also the social content of the phenomenon is different.

Secondly, because, unlike the previous phases of suburbanisation, the depopulation of Athens is accompanied with a depopulation of the whole metropolitan region, even at a lower degree. The increase in the population and the incoming internal migration in the nearby municipalities of the surrounding NUTS3 regions is not enough to explain the decline of Attica. One could not assume, thus, that the phenomenon can be reduced to an expansion of the limits of the metropolitan area beyond the region. Of course, most of the inhabitants that left the municipality of Athens between the two last censuses must have remained in Attica, since the reduction in the population of the latter (66,000 approximately) is half the decline of Athens. But a remarkable number did not. The periphery of Attica is not enough anymore to contain the depopulation of the region. We are thus justified to speak of a process of de-metropolisation, or counter-urbanisation at the top level of the urban hierarchy, which is a phenomenon of the crisis.

A last remark regards the relation between the demographic and residential deconcentration within Attica. In Map 14.9, one can see the number of new building permits issued in 2010 in each municipal unit relative to its population, that is approximately throughout the same period covered by the question about changes in the place of residence during the last year before the census. The same inverse concentric pattern is observable, although not all dynamic areas in the periphery of the Attica region coincide with the dynamic ones in terms of incoming population. However, if one looks back at the year 2006, which was the first year of a (modest, at the time) decline in construction, it is evident that the inverse concentric patterns was much clearer than in 2010 (Map 14.10). Practically all municipal units within the Attica basin (the urban core) had to demonstrate only modest rates of new building permits relative to their population, whereas almost all regions around it were doing remarkably better. This is reasonable, since there is very limited space for new buildings within the urban core. On the contrary, in 2014, following the general collapse in construction, the advantage of the periphery

was insignificant (Map 14.11). It is characteristic of the situation that, in 2014, there were several municipal units where not a single new building permit was issued.

It seems that the advantage of the periphery of Attica over the Athens urban area in terms of incoming population is expanding at a time when its advantage in terms of building activity is contracting, due to the general meltdown. Under the condition of the crisis, residential urbanisation is not a factor attracting internal migration anymore. Or, to put it another way, the demographic deconcentration of the Capital city is not accompanied with a residential expansion in the exurbs. People are moving away from Athens, but not in newly built houses. This is an additional indication that the phenomenon underway is qualitatively different than the older process of suburbanisation.

Conclusions

In this last chapter, we have focused on Attica in order to shed light on some important features of the de-metropolisation effect detected throughout our study. To start with, we have distinguished three different aspects of de-metropolisation, in three consecutive phases: residential, demographic, and economic de-metropolisation. Residential de-metropolisation started first, in 2006-2007, along with the deflation of the housing bubble, that is before the formal outbreak of the global capitalist crisis, to intensify significantly after 2011. The emergence of demographic de-metropolisation apparently coincided with the manifestation of the global crisis in Greece, in 2009-2010. And, finally, economic de-metropolisation, which has anyway been a less evident process, came about after the two previous aspects, starting from 2011-2012. To employ a term originally utilised in a different context, de-metropolisation seems to have proceeded in three consecutive tidal waves.

As already implied by the fact that economic de-metropolisation was the last aspect to come about, an examination of the basic indices associated with production or employment demonstrated none of them suffices to indicate in itself a relative disadvantage of the region of the Capital city that could explain the process of demographic de-metropolisation. What does seem to be a relevant factor, which only emerged under the conditions of the crisis, though, is high, and higher than the national average, dissaving. Conversely, the positive rates of saving in the NUTS2 region of Central Greece, which absorbs an important part of the bulk of de-metropolisation, can at least partly explain its advantage in relation with Attica. It appears that, unlike the situation in certain peri-metropolitan region, the disposable income in Attica under the conditions of the crisis is not enough to meet final consumption, which probably means that a large number of metropolitan residents are gaining less than what they need to spend, given the increased living costs in the Capital city. These findings are an additional confirmation of the assumption that, among the two legs or mechanisms of counter-urbanisation/de-metropolisation distinguished previously, the prevailing one is reproduction-led urbanisation/de-metropolisation.

If one moves on to a quick examination of intra-regional patterns, a first observation is that the crisis generally tends to restrict mobility within Attica, as measured by the number of

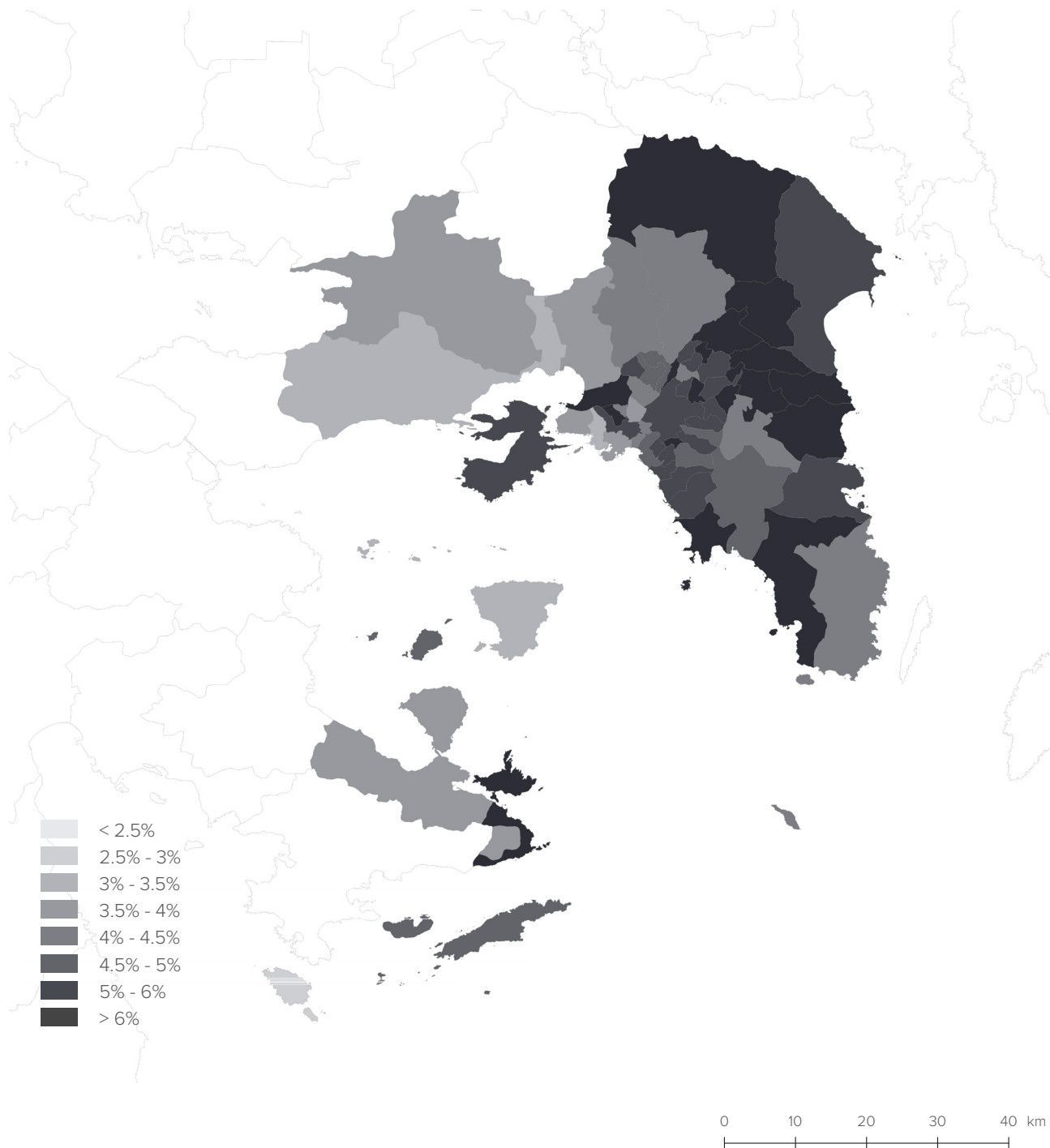
newcomers by municipality. We have seen that the same is the case with inter-regional mobility too. A closer look, though, offers more interesting information.

Over the year 2010-2011, a ring of municipalities with high rates of incoming population is recorded in the periphery of Attica, while the urban core (the Attica basin), including most suburbs, has substantially lower rates. The pattern assimilates a Burgess ring of a large radius. Although the urban core was already presenting rates lower than certain dynamic municipalities in the periphery in 2001, such a clear pattern was not visible at the time. When relocations between 2006 and 2011 are examined instead of the last year before the census alone, the inverse ring in the rates of incoming population is already clear, but it starts at a closer range around the urban core. Moreover, the ring is now incomplete, since rates of incoming population in West Attica are generally low. In any case, the inverse concentric pattern of incoming population is clearer if only internal (intra-regional) relocations are examined since the centre of Athens is still a gate for immigrants and inter-regional internal migrants. In addition to this ever more explicit inverse ring, finally, the pattern of incoming population in Attica reflects the historic division between the upper-class East and the working-class West. In terms of the rate of incoming population, this division was sharper within the Athens urban area in 2011 than in 2001, but it was mitigated in the periphery of the region, due to the overall advantage of the periphery.

The findings of our intra-regional analysis of relocations indicate a process of distant suburbanization and exurbanisation that existed already before the crisis but has expanded further away from the Athens urban area after the crisis broke out. This modern-day process of exurbanisation seems to be expanding beyond the limits of Attica, to the closest municipalities of the bordering NUTS3 regions (Boeotia and Corinthia). Indeed, the overall advantage of those regions in terms of incoming population is probably due to those municipalities close to Attica.

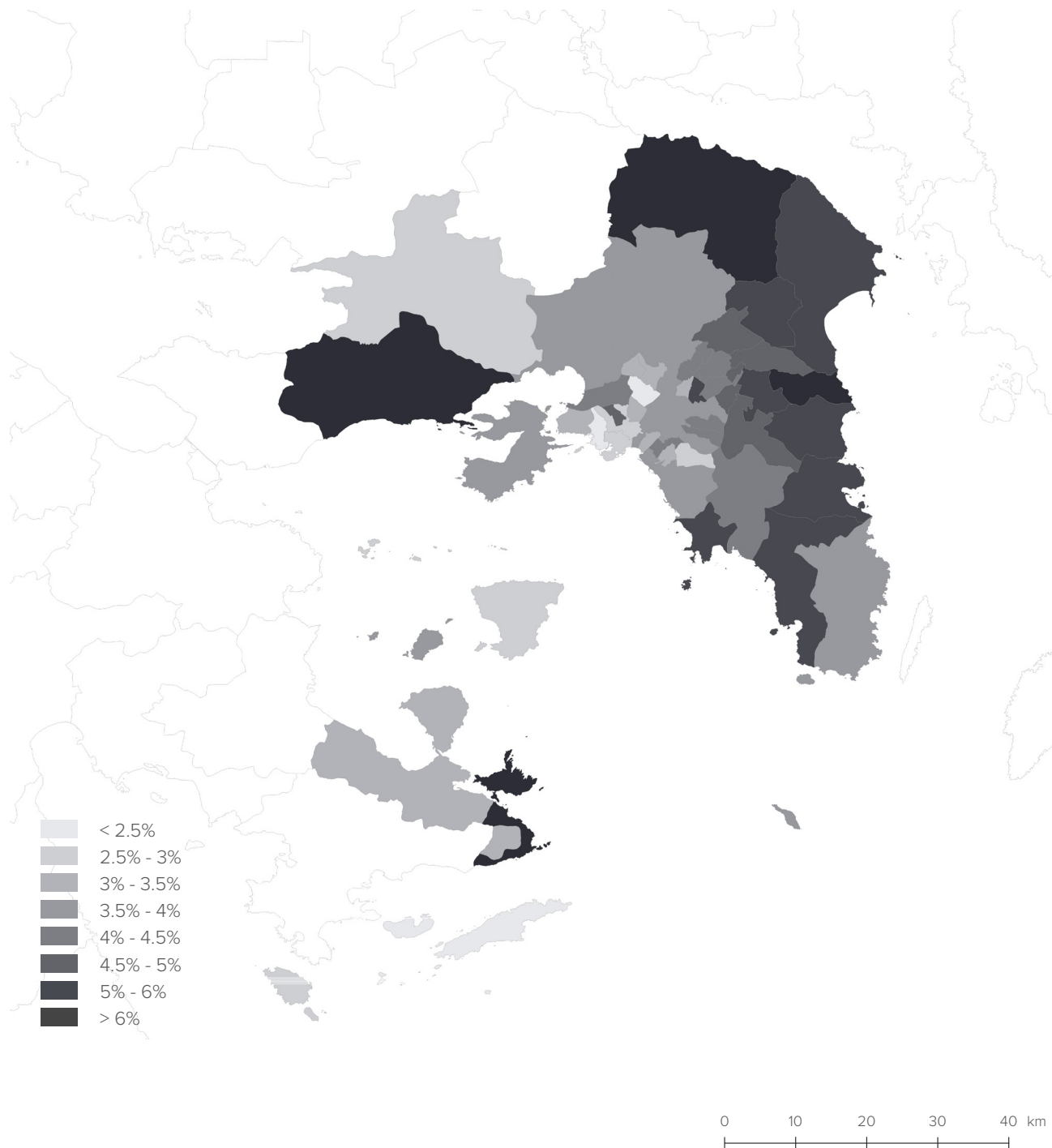
However, the current decline of Athens cannot be reduced to a process of further suburbanisation or even exurbanisation. It is a process of a much larger geographical scope and, as evidenced in the relevant chapter, it involves different social strata, at least partly. Besides, this time it is not only the centre but also the suburbs, as well as the whole region of the Capital city that are suffering the crisis of urbanisation. And, finally, the current decline of the Capital city is triggered by different mechanisms: unlike the classic suburban phenomenon, the de-urbanisation of Athens under the conditions of the crisis is not attracted by residential expansion in the distant suburbs and exurbs, including those ones that are gaining population. Indeed, while the advantage of the periphery of Attica over Athens in terms of incoming population is expanding, its advantage in terms of building activity is contracting. It seems that, while suburbanisation has formed the material background where the de-metropolisation effect has manifested itself, de-metropolisation is a distinct phenomenon.

Map 14.1 Incoming Population from other Municipalities, by Municipality in Attica, 2000-2001



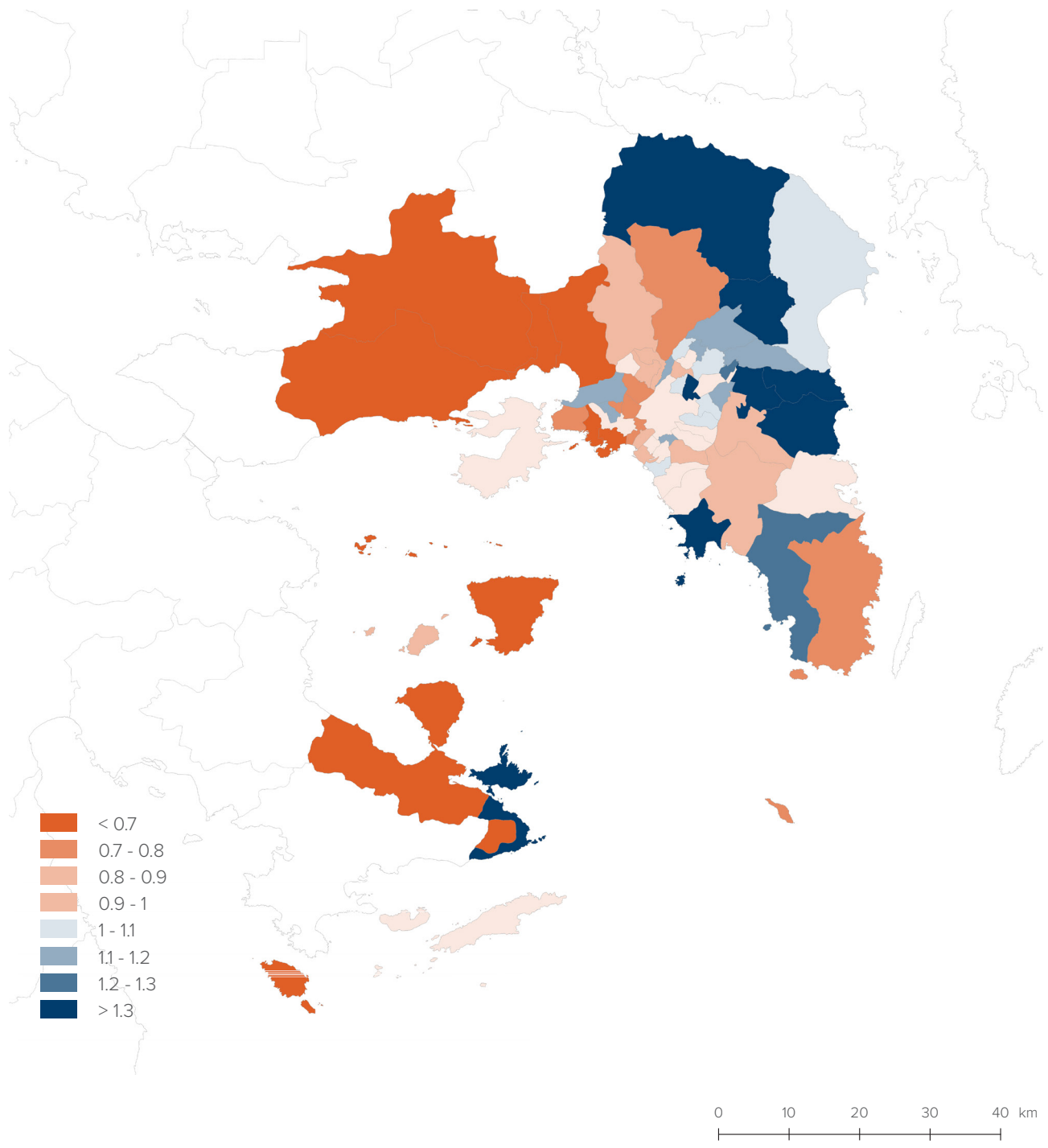
Source: Hellenic Statistical Authority, 2001 Census
E. Skoufoglou, 2018

Map 14.2 Incoming Population from other Municipalities, by Municipality in Attica, 2010-2011



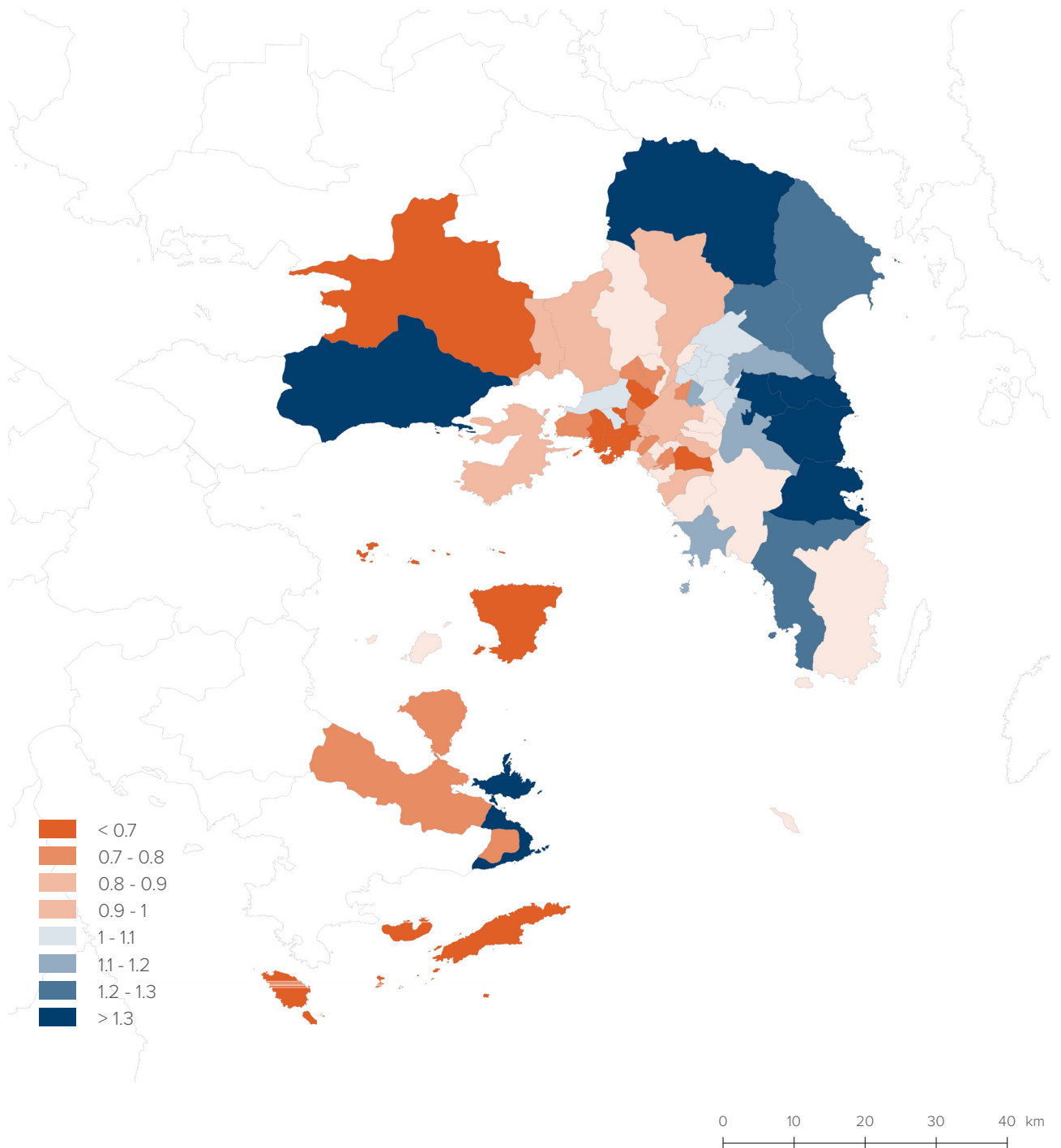
Source: Hellenic Statistical Authority, 2011 Census
E. Skoufoglou, 2018

Map 14.3 Ratio of the Rate of Incoming Population to the Regional Average, by Municipality in Attica, 2000-2001



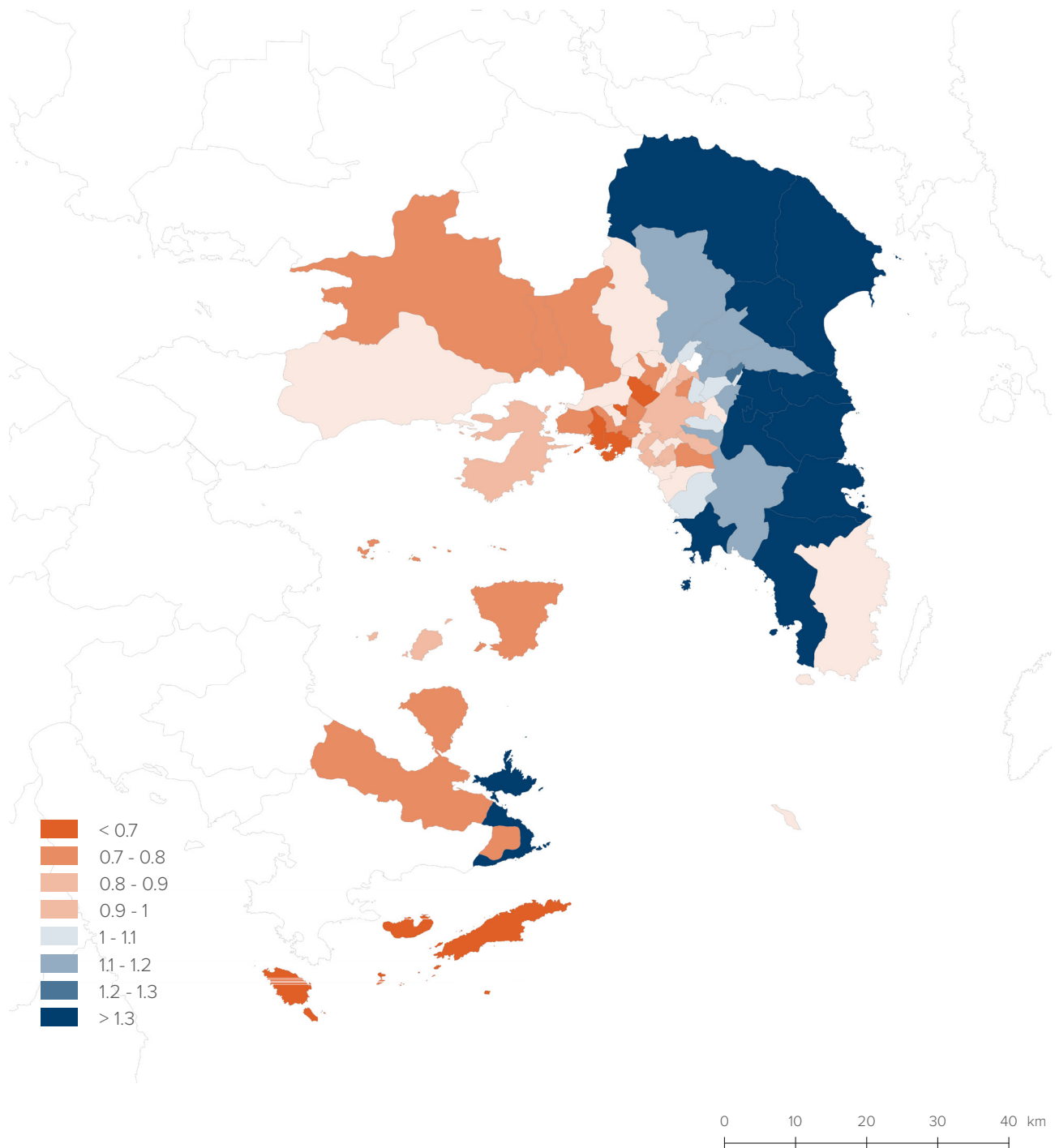
Source: Hellenic Statistical Authority, 2001 Census
E. Skoufoglou, 2018

Map 14.4 Ratio of the Rate of Incoming Population to the Regional Average, by Municipality in Attica, 2010-2011



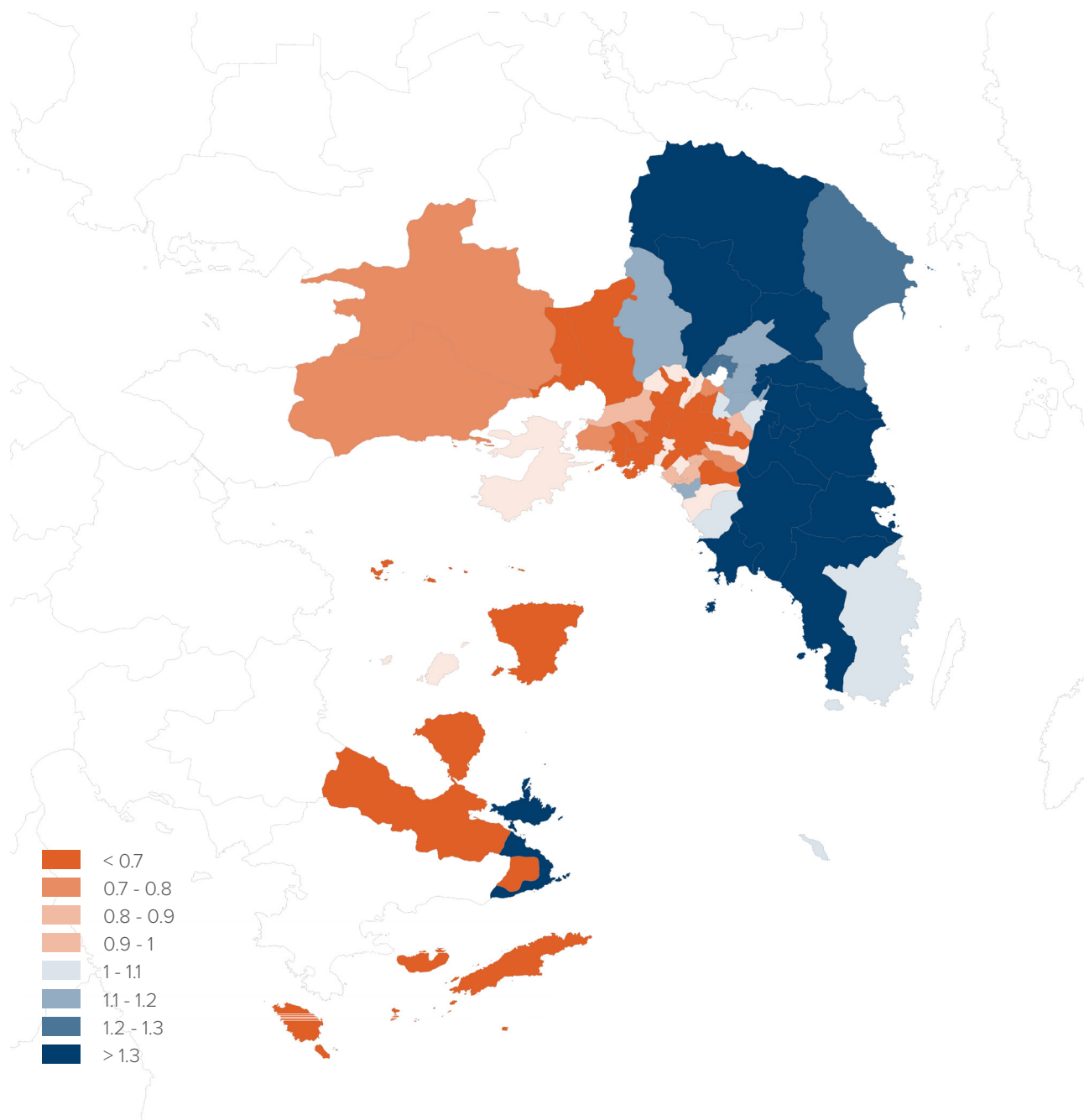
Source: Hellenic Statistical Authority, 2011 Census
E. Skoufoglou, 2018

Map 14.5 Ratio of the Incoming Population to the Regional Average, by Municipality in Attica, 2006-2011



Source: Hellenic Statistical Authority, 2011 Census
E. Skoufoglou, 2018

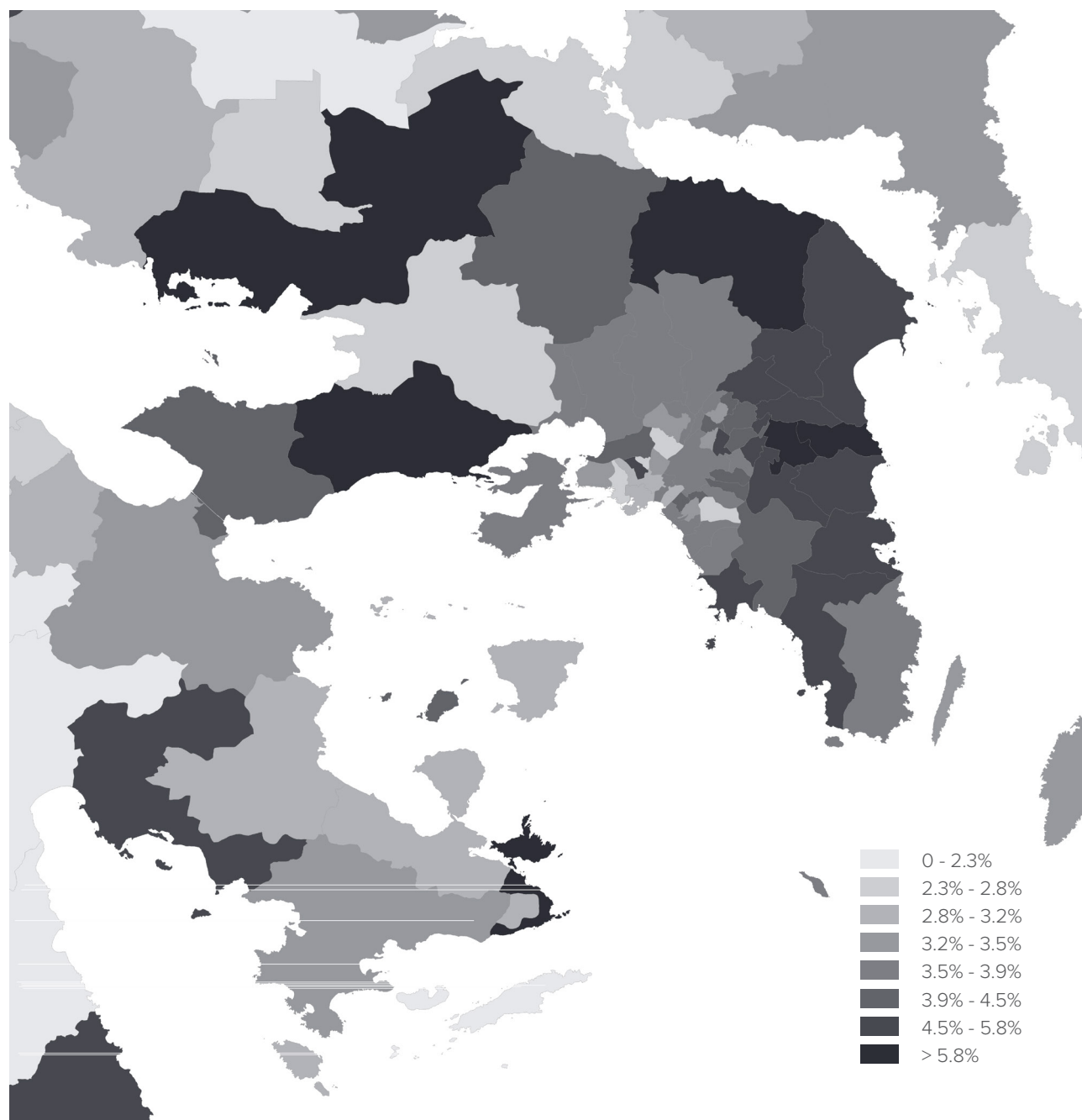
Map 14.6 Ratio of the Rate of Incoming Population to the Regional Average (intra-regional relocations only), by Municipality in Attica, 2010-2011



0 10 20 30 40 km

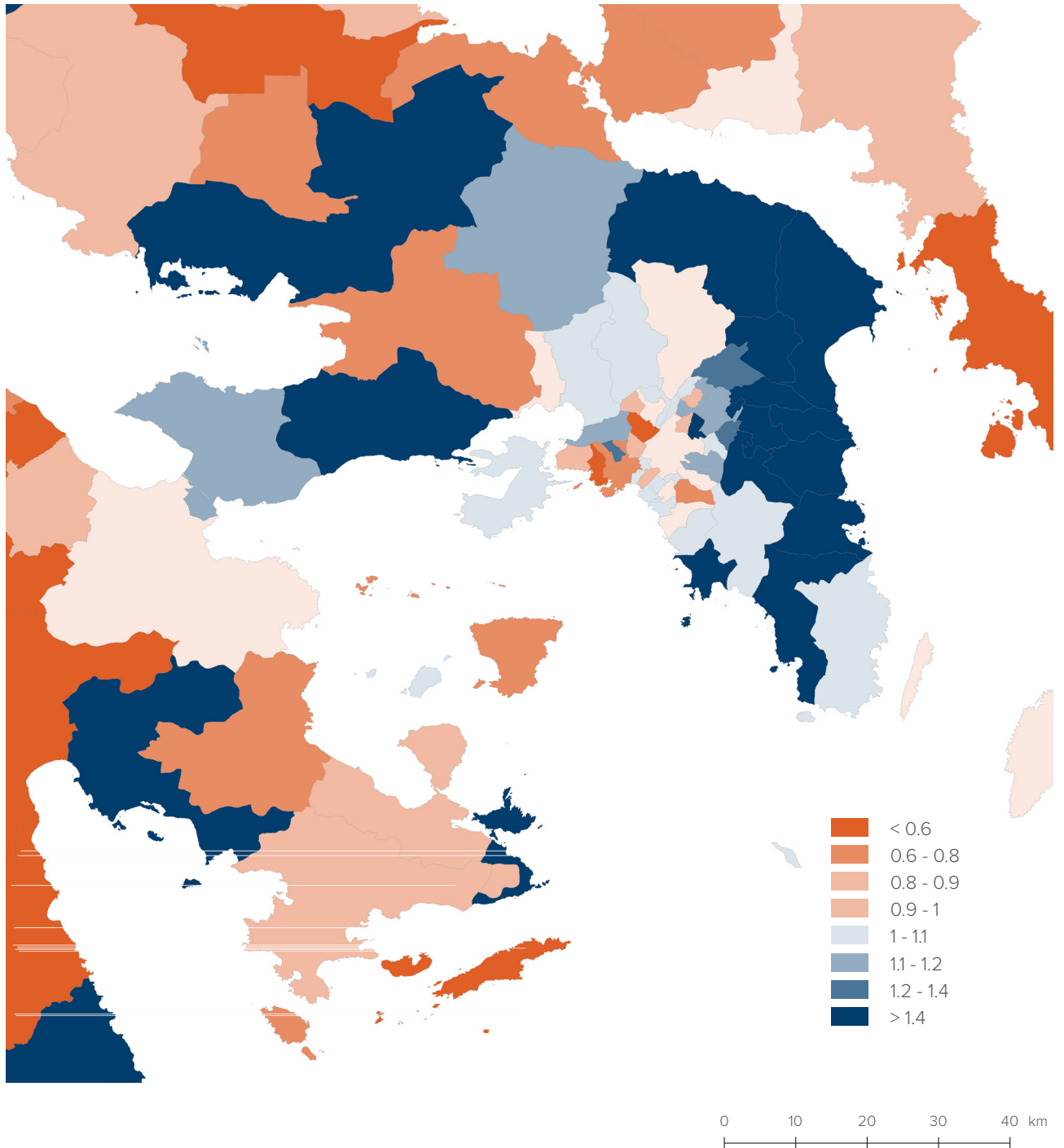
Source: Hellenic Statistical Authority, 2011 Census
E. Skoufoglou, 2018

Map 14.7 Incoming Population by Municipality, Attica and peri-metropolitan Regions, 2010-2011



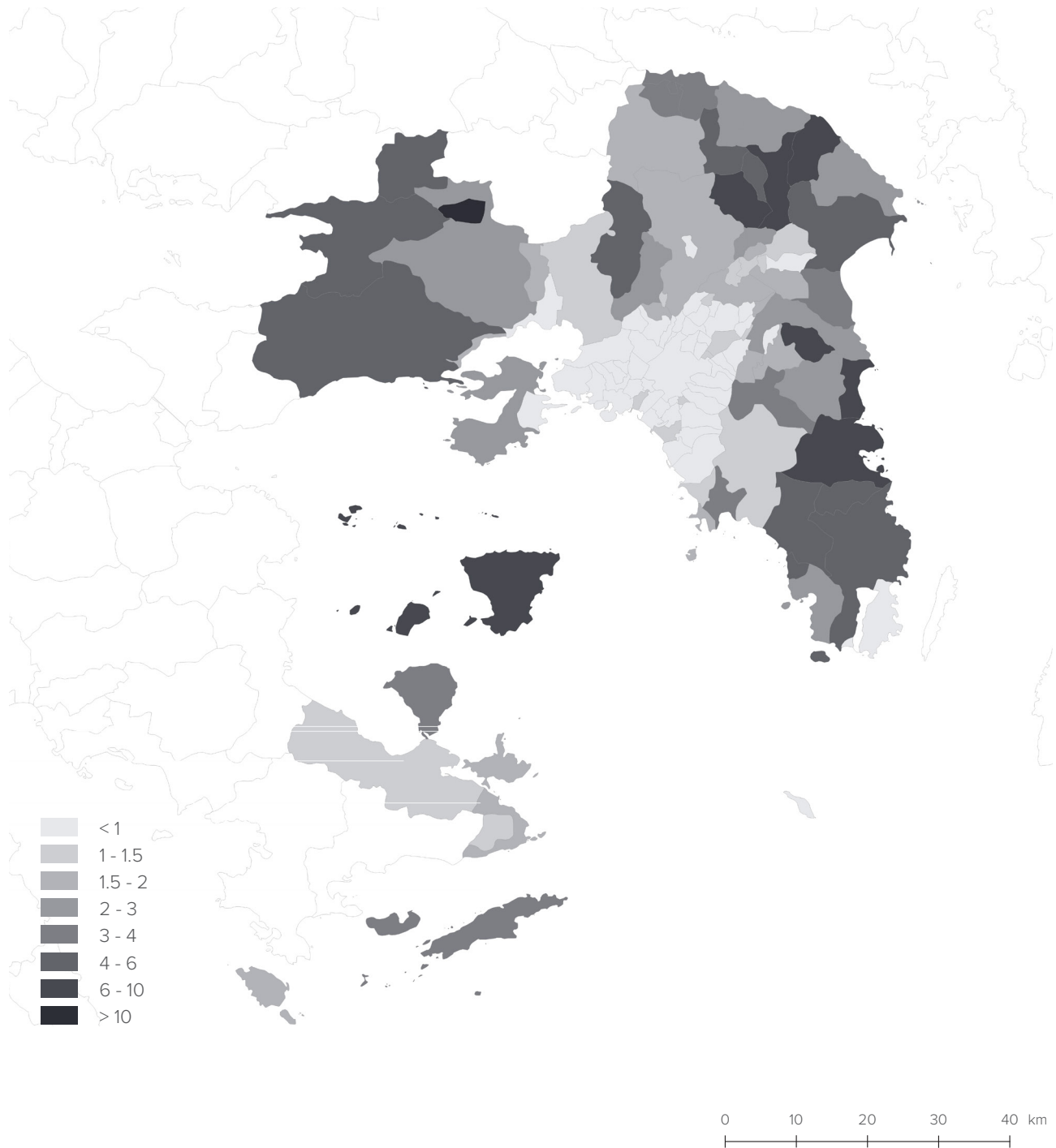
Source: Hellenic Statistical Authority, 2011 Census
E. Skoufoglou, 2018

Map 14.8 Ratio of the Rate of Incoming Population to the National Average by Municipality, Attica and peri-metropolitan Regions, 2010-2011



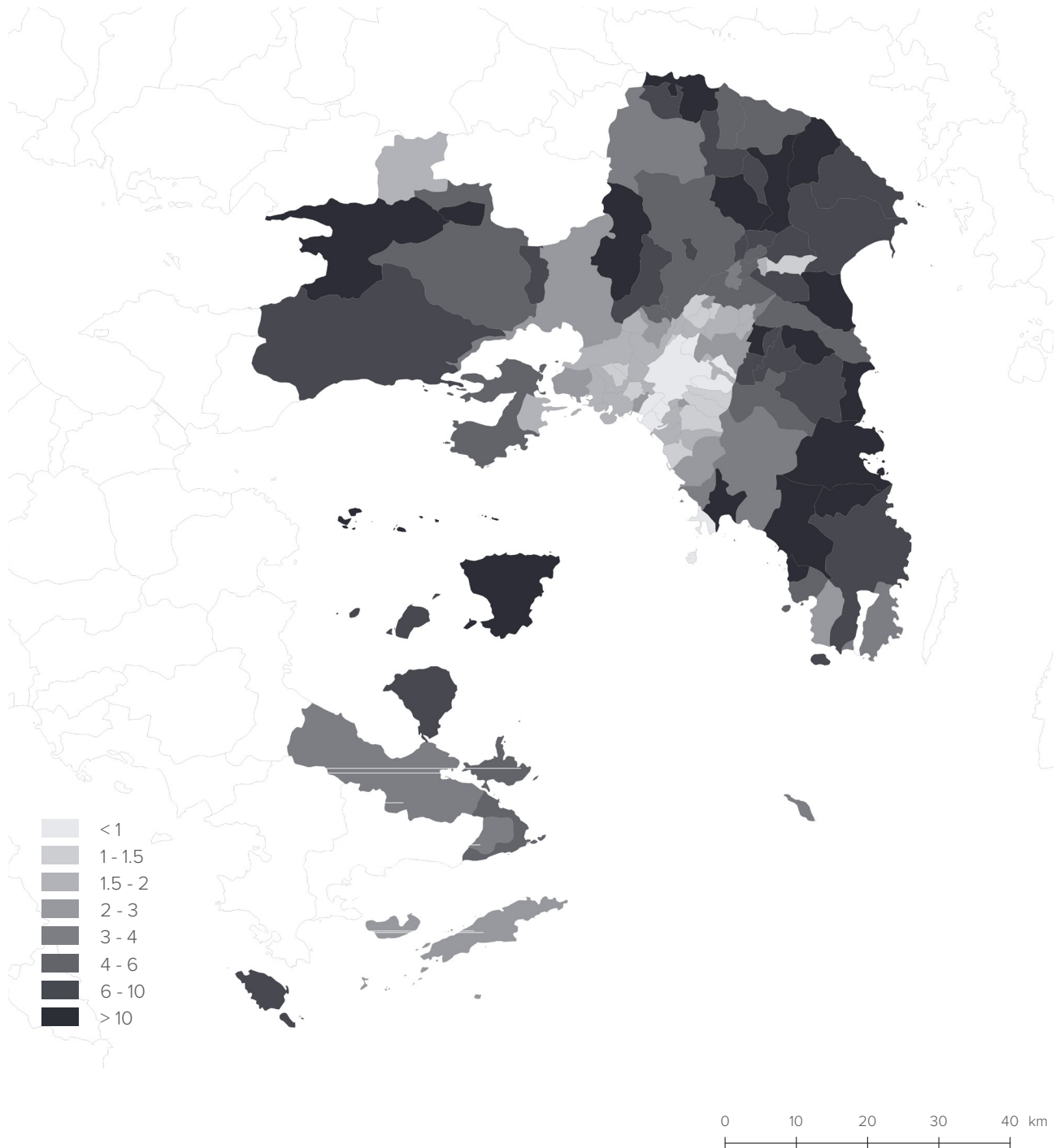
Source: Hellenic Statistical Authority, 2011 Census
E. Skoufoglou, 2018

Map 14.9 New Building Permits throughout 2010 per 1,000 inhabitants (in 2011),
by Municipality in Attica



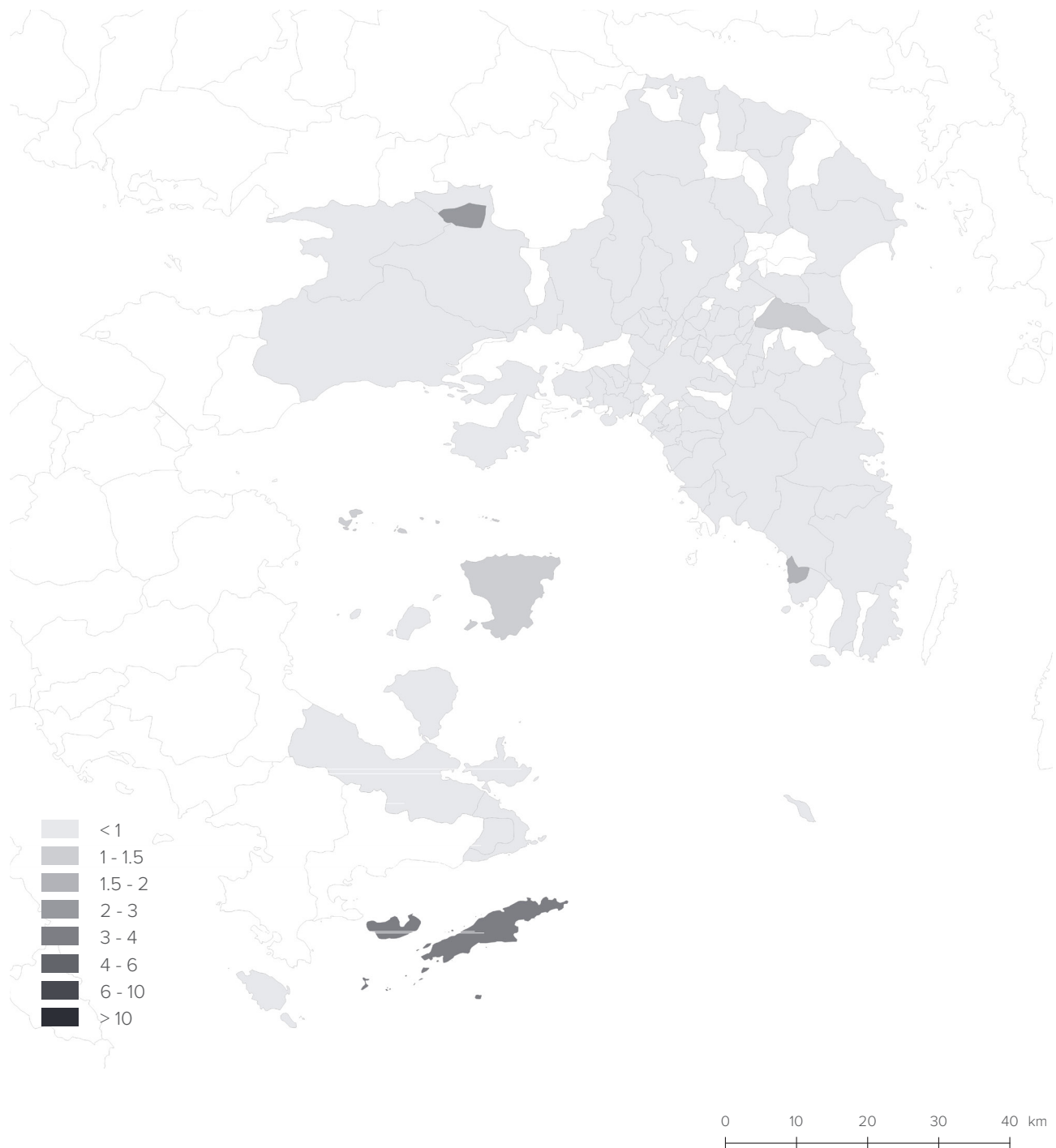
Source: Hellenic Statistical Authority, 2011 Census, Local Planning Authorities
E. Skoufoglou, 2018

Map 14.10 New Building Permits throughout 2006 per 1,000 inhabitants (in 2011), by Municipality in Attica



Source: Hellenic Statistical Authority, 2011 Census, Local Planning Authorities
E. Skoufoglou, 2018

Map 14.9 New Building Permits throughout 2014 per 1,000 inhabitants (in 2011), by Municipality in Attica



Source: Hellenic Statistical Authority, 2011 Census, Local Planning Authorities
E. Skoufoglou, 2018

General conclusions

Throughout the present study, we have examined the relation between urbanisation and the capitalist crisis in Greece. Our analysis has confirmed the hypothesis of a crisis of urbanisation in the form of a counter-urbanisation effect, in parallel to the ongoing economic crisis and the demographic crisis that it has resulted in, with the country losing population for the first time since the Greek state was founded. This counter-urbanisation of crisis is mostly manifested at the highest levels of the urban hierarchy. We have called this process “de-metropolisation”.

For the purposes of our study, we have monitored data about the economic, spatial, and demographic developments in the country until at least 2014, and in some cases even further. When these lines were written, the global capitalist crisis and its effects were still underway. This means that at least some of the phenomena and tendencies detected during the first years of the crisis might be extended or even intensified over the years to come, or they might mature into new ones. On the other hand, at some point, one way or another, the capitalist crisis will be overcome, even if the price for this will be enormous, unless a radical social transformation takes place meanwhile. There are some indications that, after 2014, some of the implications of the crisis, including the collapse of employment in metropolitan areas, are somewhat mitigated.¹ The partial shift of Athens to tourism, albeit a precarious affair subject to the abrupt changes in global tourist destinations, may well be a reason for this latter alleged trend. The census of 2021 will offer the possibility to access a balance sheet of a turbulent decade. However, even if certain findings of our study are rendered obsolete by facts in the future, this will not mean that they were irrelevant or insignificant in the first place. They will still highlight specific processes and tendencies that unfolded during a global capitalist crisis, in the specific framework of a country that was hit by this crisis with great intensity, and they may thus contribute to understanding the interconnections between urbanisation and crises, as well as and the ups and downs of the capitalist economy in general.

Moreover, many of the series and quantities examined in the context of our analysis are subject to seasonal fluctuations and variations that are irrelevant to the crisis. However, this does not exclude the possibility to draw legitimate conclusions based on the longer-term trends throughout the period under consideration.

¹ For relevant information see, among other sources, EIEAD [National Institute Of Labour And Human Resources] (2018), ICAP (2018), and the ELSTAT weekly bulletin about the Greek Economy.

One of the main concerns of our approach has been to avoid the empiricism often characterising case studies in geography. The counterweight to this danger could only be a solid theoretical framework, starting from the nature and function of capitalist crises and the general interconnections between such crises and urbanisation. It was thus necessary to define our approach to the global capitalist crisis that outbroke in 2008. We have argued that, while it is not inaccurate to say that the proximate causes of the crisis have been housing bubbles and excessive risky financial activities, its underlying or ultimate cause has been something more fundamental: a long-term tendency of the average rate of profit to fall. Since this falling tendency is, in the final analysis, due to the rise in the organic composition of capital, which is the proportion of constant capital to variable capital, the objective function of the crisis is the massive destruction of capitals and productive forces. The capitalist mode of production cannot recover before this process of destruction is completed. Therefore, the concept of destruction has been instrumental in both our theoretical and empirical analysis.

We have also posited that, in order to understand the dynamic and extent of the current capitalist crisis, it is necessary to see it from a historical perspective. We have derived the historical framework to place the crisis in from the long wave theory, especially from the work of Ernest Mandel about the long waves of capitalist development. The crisis of 2008 is thus seen as the endpoint of a depressive long-wave phase, whose origins can be traced back in the crises of the 1970s and whose duration has been exceptionally prolonged due to various historical circumstances as well as strategies to avert a catastrophic crisis – in vain, as it finally turns out. This means that not only is the crisis expected to be deep, but it would also take large-scale non-economic events and factors for the capitalist mode of production to escape it.

As the hegemonic spatial process in the framework of the capitalist mode of production, urbanisation cannot escape its crises. From a certain viewpoint, urbanisation is a spatial equivalent of the accumulation of capital. It was reasonable, therefore, to assume that the process of destruction that is interwoven with any capitalist crisis should be also reflected in space, in the form of a crisis of urbanisation, particularly of the type of urbanisation that prevails in the advanced capitalist world. In essence, the examination of urbanisation patterns amid the crisis is the examination of the geographical distribution of the destructive effect of the crisis at the level of space. Indeed, we have pointed out that virtually all major crises throughout the history of the capitalist mode of production were connected with a crisis of urbanisation, of one or another type.

Similarly, it was reasonable to wonder whether urbanisation, in its most literal sense, which is the accumulation of population and activities in urban settlements, generally follows long-term fluctuations analogous to the ones in the capitalist economy. The question is important to also determine the dynamic and extent of the expected contemporary crisis of urbanisation, if any. Of course, it is impossible to substantiate the existence of long waves in urbanisation worldwide, or at least in the developed capitalist countries, in the limited scope of a study like the current one; however, we do have indications for the existence of such long waves of acceleration and deceleration of urbanisation in the leading capitalist countries, combined with

a secular upward trend, which nevertheless lately shows signs of saturation.

The current crisis should be therefore expected to bring about a crisis of urbanisation of such historical dimensions as to allow us to speak of a counter-urbanisation crisis, at least in certain countries. We do not maintain that such a crisis should necessarily happen in all countries or that it should be manifested in the form of counter-urbanisation or de-metropolisation. It is anyway impossible to examine that in a single study. Different economic, social, political, and spatial frameworks will also mean a different response of urbanisation to the crisis, and moreover international developments could also alter the situation – for example, refugees from countries suffering wars or devastating famine may give a boost to urbanisation that would otherwise decelerate. However, a counter-urbanisation crisis is at least a reasonable possibility under the conditions of the crisis, at least in the most affected countries.

In the context of this study, therefore, the concept and the hypothesis of counter-urbanisation are reformulated and transformed to denote a crisis of urbanisation linked with an overall major capitalist crisis. Such crises generally come about around the turning points of the long waves of capitalist development. We have also distinguished a second type of counter-urbanisation, which we have called tendential counter-urbanisation, referring to the long-term pressures on urbanisation exercised during depressive long wave phases, which do not induce crises of urbanisation all the time, but mature into such crises when the long wave is exhausted. In the same way that the depressive long-wave phases of capitalist development do not mean constantly sinking economic indices and performances but only a general long-term downward dynamic, which does not exclude short-term economic booms associated with the business cycle, the phenomenon that we have called tendential counter-urbanisation has its own counteracting factors (including certain policies, sociopolitical events etc., as well as business-cycle economic booms themselves) and, therefore, it does not exclude sub-periods of accelerated urbanisation and/or metropolisation.

Greece is a developed capitalist country, which nevertheless lags behind the top capitalist economies in terms of capital accumulation and productivity. It is thus a “weak link” in the imperialist chain or in the developed capitalist world, and not a third world or a “dependent” country. Moreover, the Greek crisis has not been an independent phenomenon, triggered by specific factors and circumstances alone, but an extremely sharp manifestation of the global capitalist crisis, aggravated by the specific features of Greek capitalism, its position within the international division of labour, and, mainly, an over-ambitious strategy for capitalist development and expansion before the crisis. It is thus legitimate to expect that Greece responds to the long waves observed in the developed capitalist countries, both in the economy and in urbanisation.

We have pointed out that there is indeed evidence that Greece has been responding to the long waves of capitalist development since the late 19th century, ever more closely as its process of capitalist modernisation was proceeding. No matter what objections could be raised about previous periods, it is very difficult to dispute its participation in the post-war long wave. Accordingly, based on our own elaboration of historical series, we have indicated the existence of long waves in urbanisation in Greece, both in general and at the top level of the urban

hierarchy, which is the Capital city, Athens. Those waves tend to coincide with the international long waves of capitalist development, and the degree of accuracy of this correspondence gets greater over the years. Again, it is difficult to dispute the post-war long wave in urbanisation in the country, even if the picture was not equally clear before that. Moreover, long waves in urbanisation are observable more clearly at the top level of urbanisation, which reflects a higher level of capital accumulation and a closer interconnection of metropolitan areas with the global capitalist economy. In short, the match with the long waves of capitalist development is probably better when recent times and when metropolitan areas, above all Athens, are examined.

The identification of long wave patterns is not meant to create an over-simplistic and over-deterministic schema that could supposedly fully quantify and predict the trajectory of the capitalist economy and/or urbanisation. Long waves constitute certain historical periods, with all the complexity of their contradictory factors. They do not explain the evolution of capitalist development, but they can nevertheless describe it and help estimate its expected dynamic in each period. The evidence for the existence of a post-war long-wave in urbanisation in Greece, thus, does not mainly derive from the statistics that we have adduced in this study, but from the concrete historical reality and experience, which has clearly recorded a phase of intensive urbanisation and metropolisation until the 1970s and a consequent inverse phase of slowdown.

Consequently, based on this theoretical approach, it was reasonable to assume that Greece should be nowadays undergoing an explicit process of counter-urbanisation, both due to the extraordinary intensity of the manifestation of the global capitalist crisis in the country and to the fact that the crisis comes on top of a prolonged long wave of depressive pressures on the economy, which has also been a long wave of tendential counter-urbanisation. The current counter-urbanisation crisis is thus expected to be particularly deep and bring about, apart from an intensification of already existing depressive tendencies, also phenomena only experienced in similar major crises in history. On the other hand, since it relates to the capitalist crisis, the counter-urbanisation effect should not be a permanent phenomenon, despite the relative historical saturation of urbanisation in the country and in the developed countries in general. However, this is not a crisis of urbanisation that could be resolved easily or automatically.

Since it stems from the periodic need of the capitalist mode of production to escape overaccumulation and renew itself through a process of destruction, the crisis affects first and foremost those classes that are more directly involved in the capitalist mode of production, which is the capitalist class, on one hand, and the working class, on the other. For the capitalist class, this means a reduction in their numbers, as only the most competitive capitals will survive, to grow stronger after the crisis. For the working class, this means poverty and massive unemployment, but, at the same time, growing numbers among the total population, even if this is not the case among the employed population. On the other hand, the middle strata (the petit-bourgeois class) have apparently resisted the crisis somewhat better, in contrast with a

common wide-spread idea, upon which specific political strategies have been based as well. However, a correct perception of the objective function of the capitalist crisis suggests that a future process of social polarisation is incubated under the present conditions. The relative resilience of the petit-bourgeois class is not viable in the long run.

A possible process of counter-urbanisation would be a sort of spatial equivalent of the above developments in the class stratification, in the sense that it would be a compression of those geographical areas most intimately related to the capitalist economy. In this case, this pertains to the top level of the urban hierarchy, and not to the other end of the spectrum, which is rural settlements, because it would be untenable to draw a parallel between the urban/rural dichotomy and the dichotomy between capital and labour: both classes at the ends of the social spectrum, capitalists and the working class, mainly reside in cities. The spatial equivalent of the capitalist crisis would thus be a crisis of the cities, mostly but not exclusively the large ones. From this perspective, counter-urbanisation is not a new era or stage in the western world or in Greece; as already pointed out, it is a phenomenon of crisis, which could turn into its opposite again as long as the objective function of the crisis is completed.

Once a consistent theoretical approach was worked out, therefore, our main hypothesis, as well as key research questions, emerged rather naturally. The important thing was now to see them confirmed, or negated, by the empirical data.

At the national level, the examination of the available census data has indeed revealed a crisis of urbanisation in Greece, in the most abstract sense, which is the concentration of people in urban areas according to the conventional definition, which consists in certain population threshold per settlement (currently, 2,000 inhabitants). Of course, conventional definitions cannot grasp the complexity of the urban phenomenon, but they nevertheless offer comparability with previous periods, on the basis of the respective census tables according to the same conventional criteria. We have thus detected an intensification, in relative terms, of the urban exodus that has been already taking place for several years before the crisis, in the context of what we have called tendential counter-urbanisation. This quantitative increase has turned into a qualitative change as the advantage of urban areas in terms of their natural population growth is no longer enough to make up for their losses due to their outmigration towards rural areas, as it was the case before the crisis. We have also seen that, during the last year before the census of 2011, immigration has apparently favoured rural areas more than urban areas, relative to their permanent population, for the first time.

At the regional level, under the conditions of the crisis, internal migration tends to be attracted by less populated and urbanised regions, although this is not always translated in population growth, and although the picture is not homogeneous everywhere. In any case, the largest mainland cities do not seem to be the main pole of attraction for urbanisation nowadays. No major city is included in the regions that appear most dynamic in terms of population change, as it was the case before the crisis. More generally, no positive correlation can be substantiated between the preexisting population or the degree of urbanisation of a

particular area (in this part of our spatial analysis, we have used LAU areas) and its growth after the outbreak of the crisis anymore.

However, the main finding of our research is a clear counter-urbanisation effect at the top level of the urban hierarchy, which is the two metropolises. In its demographic aspect, the de-metropolisation effect is reflected in the annual population estimates of ELSTAT, from the beginning of the crisis until at least 2014; in the census data regarding the incoming population by former prefectures (NUTS3 regions) during the period 2010-2011, which is a landmark year since it is the first year after the introduction of the Economic Adjustment Programmes (memoranda) for Greece; and in the regional internal migration balance sheets throughout this same period (2010-2011), according to the unpublished data of the 2011 census that ELSTAT has kindly provided for the purposes of the present study.

The phenomenon that we have called de-metropolisation constitutes the predominant form of the present counter-urbanisation crisis. In Athens, this tendency has appeared earlier and in a sharper form than in Thessaloniki. Attica, the region of Athens, has recorded the lowest incoming internal migration rate among all NUTS3 regions in the country during the last year before the 2011 census. Its sharp internal migration deficit is due to this collapse of incoming internal migrants instead of an increase in the outmigration towards other regions – besides, inter-regional mobility, in general, has been restricted in the crisis, and because of it. It is, therefore, more accurate to speak of de-metropolisation rather than of metropolitan exodus – although, given the overall restriction of the inter-regional mobility, the exodus is not insignificant either, albeit evidently rather stable in absolute numbers. In general, the main reason for the relative decline of Attica in the crisis is not that its residents leave it to move to the countryside, although some of them do, but that people in the countryside do not move to the Capital city to find their fortune anymore - and this is the case with Thessaloniki too.

Apart from emigration, which was out of the scope of our study, the de-metropolisation effects fuels two other distinctive geographical/spatial processes across the national territory: the creation of patterns assimilating rings of distant exurbs around the two metropolitan conglomerations, that extend beyond the boundaries of the metropolitan regions; and a clear progress of the islands and certain mainland regions associated with tourism in terms of population growth and internal migration balance, as well as in their relative economic influence, in comparison with the rest of the country. The two processes are reflected in the patterns of the most dynamic regions in terms of internal migration surpluses at the time of the census and in terms of estimated population change – in the latter case, shares in the national population are more characteristic than the population change in absolute terms, due to the overall depopulation of the country in the throes of the crisis. A distinction can be made between two different mechanisms or legs of de-metropolisation, corresponding to the two above spatial processes: a reproduction-led leg mostly towards peri-metropolitan regions (i.e. regions adjacent or close to the metropolitan ones), mainly aiming at reduced living costs; and a production-led, or more accurately job-led, one, mostly towards islands. Of course, those two legs overlap in space. One can enjoy social protection networks and reduced living costs

on an island, especially if it is his or her place of origin, or, respectively, one can find a job in a peri-metropolitan region. However, the analytical distinction is valid.

If we were to tell which of the above mechanisms is dominant, we should rather say that it is reproduction-led de-metropolisation and, accordingly, counter-urbanisation. Firstly, because, in the crisis, employment has collapsed in general, including the relatively advantaged regions, which makes it hard to imagine that finding a job is the most important incentive to relocate. Indeed, our analysis has demonstrated that it is not the most frequent reason to move to another region within the country, at least not in the mainland, which still absorbs almost $\frac{3}{4}$ of the relocations from Attica. Besides, surveys demonstrate that, for metropolitan residents, according to their own statements, the basic attraction to the countryside is quality of life, networks of social protection, and reduced living costs.

Secondly, because, among all series and quantities examined in this study, the factor that indicates a clear relative disadvantage of Attica compared to other regions, which emerged under the conditions of the crisis, is high dissaving rather than unemployment, although the latter has also risen compared to the national average. This means that what is particularly unattractive in the Capital region is the fact that the total disposable income is less than the final consumption expenditure, which was not the case before the crisis. This finding is reinforced by the fact that Central Greece, which is the NUTS2 region with the greatest surplus in its population exchange with Attica, displays positive rates of saving, despite its lower income per capita. It is apparently easier to live there rather than in the Capital city, even with lower earnings.

Thirdly, because the second mechanism, that is job-led de-metropolisation, is apparently a less stable process and represents a less evident turnaround compared to the period before the crisis – in fact, although it is significant, the pace of growth of the relative share of most islands in the non-metropolitan population has not risen during the crisis.

Attica is thus surrounded by an uninterrupted broad circle of former prefectures displaying growing shares in the national population and clear internal migration surpluses. This circle starts from within the region of Attica, in its periphery, although this periphery cannot make up for the clear decline of the region as a whole, which was not the case before the crisis. A similar situation appears around Thessaloniki, except that the circle of dynamic regions around it is now interrupted by a few declining ones, as well as that the pattern is now confined to a smaller radius. Certain distant mountain and/or rural regional units are also profiting from internal migration in the crisis. No universal advantage in economic activity or employment can explain the relative progress of all those mainland prefectures, apart from a couple of mainland regions of exceptional tourist interest. It should be attributed to factors associated with reproduction, such as reduced living costs or local networks of social protection.

Regarding the job-led leg of de-metropolisation, in particular, it should first be noted that agriculture has recorded some progress in terms of its share in employment and its contribution to the GDP, but, contrary to a widespread perception, this can hardly explain a significant part of the phenomenon of de-metropolisation. It is hard to imagine that agriculture is a real pole

of attraction for former metropolitan residents, given its very low productivity. Besides, there is a very explicit piece of evidence for that: skilled agricultural, forestry, and fishery workers are the least mobile among all 1-digit ISCO occupations, with their share among newcomers in any NUTS3 region of the country being far less than their share among the employed population in general. In simple words, people generally do not move to the countryside to start working in agriculture.

Tourism is probably the most attractive activity, probably because of the relatively low level of investment it requires and its low organic composition of capital, which enables a higher rate of profit, as well as of its ability to adapt to external demand. However, it is susceptible to sharp seasonal fluctuations and abrupt changes in demand. The demographic structure of the regions that are based on tourism is characterised by seasonal population boosts, which is obviously reflected in employment as well. In almost all islands, unemployment amid the crisis has been steadily lower than the national rate, but not always increasing slower than it. While the share of the most dynamic island regions in the national population has been rising throughout the whole period of the crisis, their contribution to the GDP only started growing a few years after its outbreak, as the first years of the crisis were years of a global contraction in tourism. In Greece, the sector is turning to external demand to an ever-larger degree, but international trends and preferences in tourism can change abruptly. All the above suggest that the economic advantage of islands and tourist regions is vulnerable, albeit indisputable. However, the seasonal character of tourist activities as well as the relatively few skills required for a temporary job in the sector make it easier to find a job on an island than in other regions, although this job will almost certainly be precarious and underpaid. It is, finally, interesting to note that the tendency to leave the metropolis to search for a job on an island is confined to Athens, while it is insignificant in Thessaloniki, for both geographical and socioeconomic reasons that have been pointed out in the relevant chapter.

On the other hand, industry has proven to be generally able to relatively protect its productivity as well as the income of its workers (as long as they do keep their job in the crisis) compared to other sectors. The four primarily industrial regions of the country, according to the contribution of industry to the regional value added, are to be found among the most dynamic regions of the country in terms of GDP along with the islands. Whereas in 2010 industry was the leading NACE Rev.2 activity in only 4 regions (which we have defined as industrial regions), in 2014 there were 8 such regions, mostly due to the sharp decline in trade and to the restriction of public sector activities. Of course, this does not mean that industry has escaped the crisis or even that it was affected less than other sectors: factories have closed, investments in the sector have shrunk considerably, and the industrial production index was in 2014 more than 12% lower than in 2010 and more than 28% than in 2007. It is no coincidence thus that industry does not seem to be an attraction for newcomers from other regions. It is true that, in the four industrial regions, according to the criterion of value added, as well as in the top five regions in terms of industrial employment, unemployment has been increasing slower than the national

rate. However, this is not because they have recruited new workers, but because they have preserved a larger part of their previously existing workplaces. Besides, the picture is not homogeneous in the remaining regions with considerable industrial activity and employment. It is seemingly easier for a newcomer to find a job in tourism than in industry, although in the latter case the job would be probably more stable and well-paid.

Nevertheless, it seems that regions specialised in manufacture tend to maintain an advantage in terms of population, although this is not the case with industrial regions specialised in energy. This is not always reflected in their population change in absolute terms, but it is evident in the evolution of their shares in the estimated population and in their internal migration surpluses. On the other hand, since the alternative industrial poles around second-level city across the mainland have long been through a structural crisis (Patras, Volos, Larissa, Kavala), the existing relatively dynamic regions with considerable manufacturing are concentrated around the two metropolitan regions, which are anyway favoured by the de-metropolisation effect. Further analysis would be required to associate employment and internal migration with the different branches of industry, their development under the conditions of the crisis, and their changing profit rates – but that should be the subject of another dissertation.

Apart from tourism and, possibly and partially, manufacturing, no economic activity or sector seems particularly attractive to internal migration flows at the regional level, except for the military facilities and public services (administration, education, human health) in border regions. Neither can any particular economic quantity or social feature fully explain why some regions are resisting the general depopulation tendencies better than others. We have indeed examined possible correlations of population change and incoming migration by NUTS3 region with a series of quantities: the regional GDP and its change throughout the period of the crisis, the regional GDP per capita, the rate of unemployment and its change over the same period, the share of employees among the employed population, the proportion of nuclear families among households, as well as the regional rate of home-ownership (owner-occupancy). Some features were found to be associated with a higher or a lower probability for a region to have recorded population surpluses or rates of incoming migration higher than average. For example, a large proportion of nuclear family households seems to help retain outgoing migration, but not to be a decisive factor for attracting newcomers. A high share of salaried employees among the employed population appears to be related to a higher probability for high numbers of incoming population etc. However, no strict correlation can be established in any case, and it would have been a surprise if it could, as urbanisation is a very complex process which is highly unlikely to depend on a single factor or to fit into a mathematical function.

Apart from population growth, urbanisation and, accordingly, counter-urbanisation may be also expressed in economic terms and/or in terms of housing/construction. Our analysis revealed a certain degree of inconsistency between those three aspects of counter-

urbanisation, demographic, economic, and residential, under the conditions of the crisis.

Economic counter-urbanisation can take two different (albeit interwoven) meanings: a possible return to the primary sector of the economy; and a relative economic advantage of rural or less urbanised areas compared to the most urbanised ones. Regarding the first meaning, we have already pointed out that there is a relative reinforcement of agriculture, forestry, and fishery both in employment and in the GDP, but this rather reflects a somewhat better ability to resist the crisis rather than a remarkable dynamic in the sector.

Regarding the second meaning, there are several factors to examine. Under the conditions of the crisis, unemployment has been rising quicker than average in both Attica and the Thessaloniki region. This has resulted in Attica exceeding the national rate of unemployment from 2011 on (Thessaloniki exceeded it already before the crisis). 2011 was also the year when the contribution of Attica in the GDP started declining for the first time. At the same time, the gap between the GDP per capita in Attica and the national average ceased to expand, although it is still too big to be bridged in a time span of a few years. At some point, key economic indices have thus started to reflect the fact that the Capital city suffered by the crisis more than other regions, which is also what our theoretical analysis of the capitalist crisis has assumed: since a major capitalist crisis is, in the final analysis, a manifestation of the tendency of the rate of profit to fall due to the increase of the organic composition of capital, it is reasonable to be sharper in top cities, where accumulation and the organic composition of capital are, on average, higher. However, the demographic crisis in Attica had already been evident before this turnaround in the economic indices. Demographic de-metropolisation was definitely caused by the crisis, but this does not mean that it can be explained by economic indices alone. A dialectical perception is necessary to understand it, involving reproduction costs too. In this dialectical context, it appears that an equal economic decline and deterioration of economic perspectives is less tolerable in Attica and Thessaloniki than in other regions around the country.

Construction, on the other hand, has been suffering a recession for a couple of years before the global capitalist crisis, i.e. since 2006, although its total meltdown came about only after the outbreak of the crisis. The period 2002-2005, which was a period of dynamic expansion in the sector, interwoven with the admission in the euro-zone and the Olympic games, did not offer the islands any extra advantage over the rest of country. At that time, residential urbanisation was being attracted by the most urbanised areas of the country. However, it was exactly the most urbanised areas, above all Attica and Thessaloniki, that suffered the greatest decline in construction starting from 2006. Islands, tourist areas, and coastal zones resisted this decline better, and so did peri-metropolitan regions, although in the latter case this was not substantial. After 2009, construction was almost eliminated, thus restricting the possibility to draw conclusions from its geographical distribution. In this period, while in peri-metropolitan regions the collapse was somewhat less complete than in the metropolises, it was sharper than in more remote regions. This indicates that residential de-metropolisation is not only prior to demographic de-metropolisation, and thus a geographical process indicating the rather neglected housing bubble in Greece prior to the crisis, but also a geographical

process manifested within a bigger radius. In any case, it is obvious that, amid the crisis, the de-metropolisation effect is not attracted by residential expansion in distant suburbs, exurbs, or further in the countryside.

Thus, the three different aspects of de-metropolisation have unfolded in three consecutive phases: residential de-metropolisation starting from 2006-2007; demographic de-metropolisation starting from 2009-2010; and economic de-metropolisation, the beginning of which should rather be placed in 2011-2012.

The roots of de-metropolisation patterns are found within the limits of the region of the Capital city. The examination of internal migration balance sheets in the municipalities of Attica and, more clearly, of relocations in between them throughout the last year before the 2011 census have revealed an inverse concentric pattern, with a ring of attractive areas in the periphery of the region and a declining core including both the Athens city centre and most of its suburbs. Resembling a Burgess ring, this pattern is familiar. However, while a process of relative decline of the urban core compared to certain exurbs within the region was already underway before the crisis, such a clear pattern did not exist. At the same time, under the conditions of the crisis, the division between the low-class West and the high-class East appears to have grown sharper in the urban core, although it seems mitigated in the periphery.

The above developments suggest that an already existing process of distant suburbanisation and exurbanisation has extended further away, into distant exurbs even beyond the boundaries of the Attica region. However, de-metropolisation amid the crisis cannot be reduced to an expansion of the suburban phenomenon. Firstly, it is not attracted by material urban sprawl, i.e. the construction of new housing and infrastructure around the urban core. Secondly, de-metropolisation favours not only areas that could be considered exurbs, but also areas further away, including islands and relatively remote inland regions, which is far beyond the commuting field of the Capital city. Besides, the decline is not restricted to the city centre of Athens, but it also extends to the suburbs. Thirdly, the current process of deconcentration involves different social strata than the suburban phenomenon in the Capital city, both at its dawn, with its industrial working-class districts, its refugee settlements in the urban periphery, and the first generation of bourgeois garden cities, and at its post-war phase, with its semi-illegal districts of poor newcomers from the countryside and its western-type high-class and petit-bourgeois or middle-class suburbs. This time, the main bulk of the inter-regional mobility, and consequently of de-metropolisation, consists of middle-class salaried employees and the working class of the tertiary sector, as well as of unemployed and pensioners, who do not seek to enjoy the typical suburban life, but are in search of the means to deal with the impact of the crisis.

In this context, the relative progress of certain former prefectures around Attica has a different meaning than in other historical periods. It is a phenomenon distinct not only from the residential expansion of the metropolis into areas in adjacent prefectures in the 1990s and 2000s, but also from the growing satellite cities in the 1950s (Thebes, Argos, Eleusis etc.) and in the 1960s (Chalkis, Lamia, Acharnes, Aspropyrgos, Salamis etc.), or even in the 1970s mostly around Thessaloniki (Giannitsa, Katerini, Edessa etc.). At the time, those cities were

profiting from the growth of Attica and Thessaloniki respectively, and not from their decline. If an analogy with a recent period was to be sought, that would be with the late 1970s and early 1980s, when certain satellite cities or regions (Boeotia, Corinthia, the periphery of Attica, Pieria, Kilkis, Chalkidiki) were growing in a context of economic crisis and stagnation of metropolitan areas.

To the extent that exurbanisation represents an expansion of suburbanisation, therefore, we should express, in the light of the findings of the last chapter, a reservation about the term “distant exurbanisation” that we have used in previous chapters to describe the concrete form of the de-metropolisation underway: while it was correct from the viewpoint of geographical patterns on the map, it does not correspond to the socio-political features of de-metropolisation. An analogous reservation holds true about the term “satellite urbanisation”: while technically small towns and cities around metropolitan areas seem to be growing indeed, it sounds contradictory to speak of urbanisation when trying to describe a process of counter-urbanisation. It is, of course, helpful to use transitional definitions and terms to help the analysis proceed; however, it appears that, in the final analysis, counter-urbanisation and de-metropolisation are specific existing phenomena of the current capitalist crisis that are better defined under those very terms.

Overall, it can be concluded that the hypothesis of a process of counter-urbanisation amid the crisis is confirmed by our research and analysis, except that this process has different characteristics than usually assumed in the public discourse and even in academia. Contrary to the myth, turning to agriculture or starting a business in the countryside has not been a major incentive to leave Athens or Thessaloniki under the conditions of the crisis. Searching for a job in tourism or enjoying lower living costs and social protection networks, while staying within a distance that permits access to the facilities and, possibly, to the workplaces of a large city or metropolis, do seem to be important reasons to leave or, more frequently, to avoid moving to the Capital city, Thessaloniki, or the largest ones among the remaining cities in the mainland. The de-metropolisation effect, therefore, does not take the form of “polarization reversal” that would favour middle-sized or small cities in general, although some of them do profit; nor is it expressed as a generalised return to remote rural areas, although such examples also exist; it mostly takes the form of growing peri-metropolitan regions, characterised by a low or relatively low degree of urbanisation, and islands.

Above all, the contemporary counter-urbanisation effect in Greece is a phenomenon of crisis instead of the expression of a supposed attraction to the lifestyle of the countryside or of the opportunities that rural settlements or small towns offer. Being the conclusion of a depressive long-wave phase, neither this crisis of urbanisation nor the capitalist crisis, in general, will be something easy to overcome. It will take time and an enormous social cost, especially for the lowest social strata. But it could also be the opportunity for a radical social change and a radically different model of urbanisation – one in the interests and for the needs of the large majority of society.

Future significance

A number of topics for future research have emerged throughout the present study. Our theoretical perception of the relationship between urbanisation and capitalist crises, as well as our specific conclusions about demographic, economic, and residential urbanisation under the conditions of the crisis, could form the ground for exploring other parameters that were not included in our scope here, such as segregation, the evolution of land prices and its distribution in space, the geographical distribution of investments and profit rates, the possible effects of social struggles in urbanisation, the crisis of urbanisation as a crisis of life in the cities etc. Some of those topics have been examined in Athens, but not across the national territory.

Moreover, there are sources of data that have not been taken advantage of in the present study, at least not fully: incomes declared in the tax returns and their geographical distribution (which could be derived from the General Secretariat of Information Systems through a special agreement); data regarding employment from the Labour Force Surveys of ELSTAT and from the Ergani system of the Ministry of Labour, Social Insurance, and Social Solidarity; data about businesses around the country from the General Electronic Commercial Registry; data regarding retirements and their geographical distributions derived from the e-Government Center for Social Security Services (IDICA) etc. Special research programmes could provide more detailed data as well. Research could also focus on specific regions across the country.

Finally, similar studies in other countries could provide the ground for comparative analysis. Relevant empirical studies already exist, but it would be useful to have more of them and to found them on a common methodology and on a solid theoretical background. We could, thus, see whether the observed tendencies in Greece correspond to international trends, whether they constitute an exception due to the sharp crisis in the country or whether a taxonomy of countries could be established according to how urbanisation has responded to the global capitalist crisis, or, if you prefer, how those two processes have interacted in different socio-spatial frameworks.

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