Social Profile Report on Poverty Social Exclusion and Inequality before and after the Crisis in Greece

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FRAGMEX

FRAGMENTATION and EXCLUSION: UNDERSTANDING and OVERCOMING the MULTIPLE IMPACTS of the EUROPEAN CRISIS

Ευρωπαϊκή Ένωση
Ευρωπαϊκό Ταμείο Περιφερειακής Ανάπτυξης

ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ
ΥΠΟΥΡΓΕΙΟ ΑΝΑΠΤΥΞΗΣ, ΑΝΤΑΓΩΝΙΣΤΙΚΟΤΗΤΑΣ, ΥΠΟΔΟΜΩΝ, ΜΕΤΑΦΟΡΩΝ & ΔΙΚΤΥΩΝ

ΓΓΕΤ
ΓΕΝΙΚΗ ΓΡΑΜΜΑΤΕΙΑ ΕΡΕΥΝΑΣ ΚΑΙ ΤΕΧΝΟΛΟΓΙΑΣ

ΑΝΤΑΓΩΝΙΣΤΙΚΟΤΗΤΑ ΕΠΙΧΕΙΡΗΜΑΤΙΚΟΤΗΤΑ ΕΠΑΝ ΙΙ
η περιφέρεια στο επίκεντρο της ανάπτυξης

ΕΣΠΑ 2007-2013
πρόγραμμα για την ανάπτυξη

Με τη συγχρηματοδότηση της Ελλάδας και της Ευρωπαϊκής Ένωσης- Ευρωπαϊκό Ταμείο Περιφερειακής Ανάπτυξης

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1. Introduction

This report is the result of research conducted in the context of the research programme "*Fragmentation and Exclusion: Understanding and Overcoming the Multiple Impacts of the European Crisis*" (FRAGMEX). FRAGMEX takes place under the auspices of a bilateral programme of cooperation in Research and Technology, between Greece and Germany for the period 2013-2015 and is funded by the Greek General Secretariat for Research and Technology and the German Federal Ministry of Education and Research. Along with the Crisis Observatory, participants to the programme include the Hellenic Open University, as well as the University of Duisburg-Essen and the University of Bonn.[1]

The objective of the programme is to study the twin processes of fragmentation and exclusion both within and between European societies that have emerged as a consequence of the crisis, which since 2009 plagues the European economy. These processes take place on two different levels: on a material level, as rising levels of unemployment and poverty are producing new social security "outsiders" and on an ideational level, whereby a discursive-cultural rift is forming between the new (and old) insiders and outsiders. Moreover, the crisis has also created a new level of fragmentation and exclusion. A rift is developing between the societies of the countries of the North, which are called upon to provide financial assistance to the countries of the European periphery hit by the crisis and the societies of the latter countries, which react negatively to the policy conditionality that accompanies this assistance.

This report summarizes some of the findings of the first work package of the programme, which focuses on the first aspect of the fragmentation and exclusion processes mentioned above, that, which touches upon the material conditions of people experiencing the crisis. Here, the objective is to identify and analyse to what degree and in what manner the material well-being of Greek citizens has been affected as a result of the crisis.[2]

The assessment of the crisis' social impact takes place primarily through a comparison of data on poverty, social exclusion and inequality before and after the crisis in Greece. For this reason the report is broadly divided in two segments: one, which provides an overview of poverty, social exclusion and inequality in Greece before the crisis, using data from 1995 (when available) up to 2008, and a second segment, which focuses on the impact of the crisis, using data for the period 2009-2013. The selection of the two time periods is related to the onset of the Greek crisis. Although the international financial crisis broke out in 2007 and reached its

[1] We would like to thank Dimitri A. Sotiropoulo from the Crisis Observatory team and Maria Zafiropoulou, Aspasia Theodosiou and Ioanna Marini from the Hellenic Open University team for their contribution to the completion of this report.

[2] This analysis is complemented by a policy paper on social policy and the public perceptions on poverty and social exclusion in Greece before and after the crisis.

climax in 2008, in Greece the effects of the international crisis really started being felt in 2009, when the country's GDP fell by 3.1%.[3] Since then the country has experienced a deep economic and social crisis of a magnitude unknown for any developed country in the post-war period. Given that the statistical data on poverty for any particular year is based on information (e.g. income or consumption) of the previous year, taking as our basis year 2009, facilitates the analysis by providing us with a clearer picture of the impact of the crisis, as our starting point will be the income/ consumption of 2008, which as we saw above was not substantially affected by the crisis.

While the crisis continues unabated until today, for most of the indices examined in this report the latest available data is for 2013, and in some cases data is only available for 2012. Unfortunately, since 2013 data refers to incomes (or consumption) of 2012, this means that in most cases we are not able to gauge the impact of the crisis beyond 2012. This is very unfortunate and it curtails our ability to reach more definitive conclusions based on our findings, however it is a shortcoming that we are not able to address at the moment of this report's release. Unfortunately, it is common for the statistical data on poverty and social exclusion to be released with roughly a two-year delay.

The structure of the report is as follows: First, we present an overview of the Greek crisis during the past five years and demonstrate some of the most significant changes in terms of overall economic performance and well-being, which are pertinent for the analysis of poverty, social exclusion and inequality which follows. The next section introduces a discussion of definitions of the concepts analysed in this report and the methodology employed. The following sections then outline the profile of poverty, social exclusion and inequality in Greece before and after the crisis. Next, comes a section on the contribution of social policy to the alleviation of poverty, social exclusion and inequality before and after the crisis in Greece. A final section summarizes the findings the report.

[3] In 2008 the country posited negative growth of 0.2%, mainly due to the fall in output in the fourth quarter of that year. The small magnitude and the late occurrence of the recession means that the negative effects of the crisis were not really felt until 2009. Indeed, in 2008 unemployment was 7.8%, which is the lowest level of unemployment since the late 1980s (European Commission, AMECO).

2. The Greek Crisis: An Overview

The saga of the Greek crisis begun with the revelations about Greece's unexpectedly high fiscal deficit in the autumn of 2009. As it turned out, the deficit in that year would reach a staggering 15.8% of GDP. These revelations dealt a severe blow to the country's credibility. At a time when global finance was still reeling from the financial crisis, this news, in combination with the country's long-known problems of high public debt (€300 billion or 129% of GDP at the end of 2009) and low competitiveness (current account deficit of 14.7% in 2008), was enough to drive the already volatile and tense financial markets away.

As the crisis unfolded, the credit rating of Greece gradually deteriorated to the point that by the end of April 2010, Greek bonds had been relegated to "junk" status and their spread had exceeded 1,000 basis points. Unable to access funding from the financial markets, the Greek government made an official request for aid. On 2 May 2010, Greece signed a bailout agreement for a three year, €110 billion loan, provided by the Eurozone member-states and the International Monetary Fund (IMF). The agreement came with strict conditionality in the form of a comprehensive policy programme (Memorandum) that would be supervised by the so-called Troika (the IMF, the European Commission and the European Central Bank (ECB).

The programme called for an extremely harsh front-loaded austerity policy. The aim was to eliminate the deficit and achieve a sustainable primary surplus, in order to ensure the sustainability of public finances and ultimately public debt. Given the extraordinary size of the fiscal deficit, this has meant the implementation of a fiscal austerity programme, which has truly been without precedent. The Memorandum called for a wide array of revenue-raising and expenditure-reducing measures (reduction of public servants' salaries, including the replacement of the 13th and 14th salaries with a much lower holiday supplement, reduction of benefits and pensions, increase of VAT and other indirect taxes on fuels, tobacco and luxury goods), with a view to reducing the fiscal deficit by 11.2% of GDP by 2013; that is, a reduction of more than 3% of GDP per year, with primary surpluses projected thereafter. At the same time, the memorandum required an extraordinary number of major structural reforms, ranging from the reassessment and redesign of public sector's overall operational structure and remuneration system, to the overhaul of the national pension and health systems, to major interventions in the private economy, such as the comprehensive reform of closed professions and the labour market.

However, things did not develop as predicted. The scope and speed of the structural reforms stretched the resources of the state apparatus. The state's traditionally poor record (even

before the crisis) in designing and implementing reforms,[4] was further constrained by aggressive fiscal adjustment policies, which reduced state services' budgets and led many public servants to early retirement, leaving these services seriously understaffed. At the same time, the aggressiveness of fiscal adjustment led the Greek economy into deep recession, which in turn undermined the government's fiscal consolidation efforts, since tax revenues plummeted, while social welfare expenses, particularly those associated with unemployment benefits, increased. To make up for the deviations in the fiscal targets the government was forced to introduce new austerity measures, which however deepened the recession, undermining thus further the effort to reduce the deficit. This vicious cycle plunged the country into a downward economic spiral. It is also worth noting that this policy was implemented at a time when credit had disappeared from the Greek economy. The Greek banking system, cut off from the international interbank market and having lost approximately €80 billion worth of deposits in the period 2010-12, was unable to provide liquidity to the Greek economy. This put more strain on cash-stripped businesses furthering the deterioration of the domestic economy.

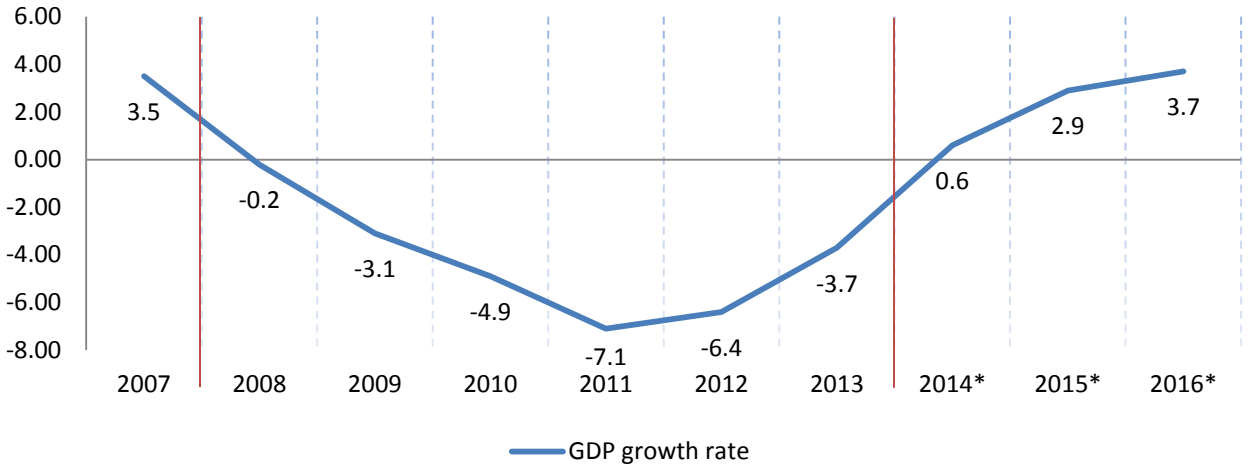
As a result, despite early projections for a quick resolution of the crisis and a return to the markets as soon as 2013, it soon became apparent that the crisis would be long lasting, as the country entered a deep recession. Consequently, the Troika accepted the necessity of a second bailout agreement with additional funds, while also reducing Greek debt to sustainable levels. The result was a second, €130 billion, bailout agreement in February 2012, which included a debt restructuring deal (so-called Private Sector Involvement or PSI), which reduced the privately held Greek debt by €106 billion, while extending the remainder for up to 30 years.

However, the new agreement came with a new Memorandum, which dictated a new round of austerity measures, including the abolition of most tax exemptions, a new round of reductions in salaries, pensions and benefits and more cuts in several areas of public spending, while the minimum wage was reduced by 22% and by an additional 10% for young people up to the age of 25. The package of austerity interventions eventually agreed, was worth €13.5 billion for the period 2013-14, with some €9.4 billion earmarked for 2013.

Although progress on the fiscal front has been remarkable, with the fiscal deficit being reduced by more than ten percentage points in a period of four years, to 2.1% of GDP at the end of 2013, the negative economic consequences of this policy mix have been unprecedented. The output of the economy has collapsed, resulting in a cumulative loss of approximately 25% of GDP since 2008 (Figure 1).

[4] There is an extensive literature documenting the failure of the Greek state in this respect. See for example Lyberaki and Tsakalotos 2002; Tinios 2005; Spanou 2008; Monastiriotis and Antoniades 2009.

Figure 1. GDP Growth Rates in Greece (%, 2007-2016)

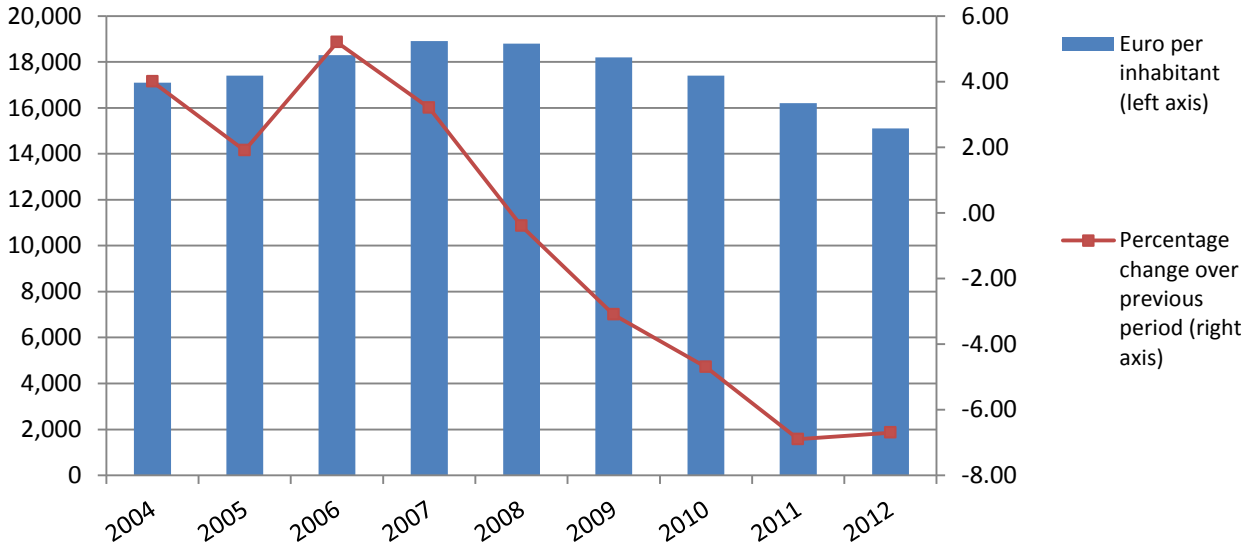


*Official Projections of the Programme

Source: IMF, Staff report 5/2013

As a consequence, real GDP per capita declined by more than 20% between 2008 and 2012 (Figure 2).

Figure 2. Real Gross Domestic Product per capita, Greece (2004-2012)

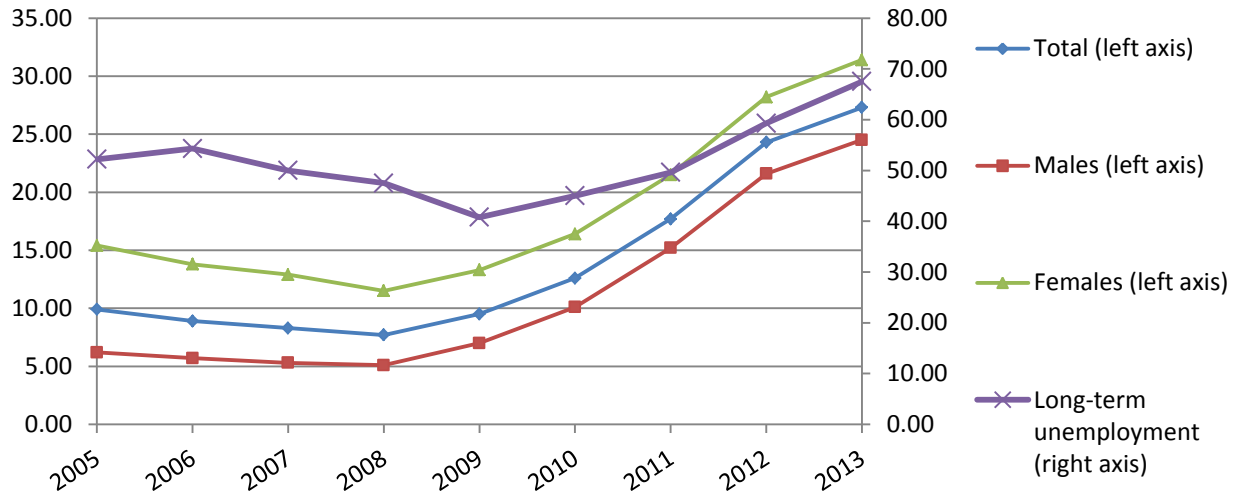


Source: Eurostat

The decline in income has been accompanied by an unprecedented upsurge in unemployment, which at the end of 2013 reached 27.3%, while, due to the prolonged recession, long-term unemployment has soared to 67.5% (Figure 3). This development is particularly worrisome, as it

raises the risk that structural unemployment in Greece could be stabilized in the next few years at unacceptably high levels, leading a substantial part of the population permanently off the labour market.

Figure 3. Unemployment by sex and long-term unemployment, Greece (%, 2005-2013)



Source: Eurostat

These developments in the economic realm form the backdrop of the social situation we are called to present in this report. As we shall see in the forthcoming sections, but also in the policy paper on social policy, this situation has had significant implications for poverty and social exclusion in Greece during the crisis and threatens to alter for the worst and on a permanent basis the socio-economic profile of Greece.

3. Measuring Poverty, Social Exclusion and Inequality: Definitions and Methodology

3.1 Definition and Approaches to Studying Poverty

Poverty is a social, economic and political issue of great importance. Especially during the last years, when austerity policies are being implemented in Greece and in other European countries, the study of such policies' impact on poverty has become a very significant issue of academic and political discourse. The definition and measurement of poverty are crucial issues in the context of the academic debate related to the development of poverty over time, its causes and consequences. According to many researchers, the use of simple definitions and indicators contributes to a better understanding of poverty and its effects by non-expert audiences, including political actors. On the other hand, more complex analysis can deepen our understanding of the poverty phenomenon and thereby improve our ability to tackle it.

Over time, the literature has developed a number of approaches to measuring and analysing poverty. Each approach adopts a different definition, each with its own advantages and disadvantages. There are three major issues, which form the bases of these different approaches. The first has to do with whether we should define poverty in absolute or relative terms. A definition of poverty in absolute terms is essentially a "survival benchmark" -the minimum level of resources needed for a member of a society to satisfy a set of basic needs and is therefore not measured against the level of prosperity or economic growth in a society. According to the United Nations' definition, absolute poverty is "a condition characterised by severe deprivation of basic human needs, including food, safe drinking water, sanitation facilities, health, shelter, education and information. It depends not only on income but also on access to services" (UN 1995). The relativist view of poverty on the other hand, relates the condition of poverty to the general level of welfare in a society and therefore is closely linked to the idea of inequality.

In this study we will use the relative approach to defining and measuring poverty. The reason is first, the inherent difficulty of the absolute poverty approach in establishing a survival threshold applicable to different people and societies across time and second, the fact that the relative approach has gradually been accepted as the most appropriate approach for measuring poverty in developed countries, which have largely overcome the issue of survival of their members (Atkinson 1998; European Commission and European Council 2004). In such countries, it is more appropriate to define poverty in relative terms, compared to some measure of society's "average" welfare (Runciman 1966; Townsend 1979). Absolute poverty measurements on the other hand, continue to be used for underdeveloped countries – the dominant metric being World Bank's 1.25$ per day income benchmark.

The second issue which divides researchers is whether poverty should be approached and therefore measured in an objective, or in a subjective manner. Objective poverty is defined as the lack of adequate income and as a result consumption and wealth. In this case, in order to measure poverty we have to use a variable to determine the level of individual well-being. In the literature, this variable is either income or consumption. Also, it is necessary to define the level of income or consumption below which an individual is considered poor. Following these, steps, different poverty indices can be computed. According to the subjective approach to poverty on the other hand, the perceptions and opinions of the members of each household determine their own standard of living and welfare. Consequently, households have to participate in surveys, whereby their members provide their own assessment of whether they can meet their basic needs with their available income at the particular time of the survey and/ or determine the income level that they deem is sufficient in order to meet these needs. According to the literature, the subjective approach of poverty can be realized by using a variety of methods including: the Leyden Poverty Line (LPL), the Subjective Poverty Line (SPL) and the CSP method (Centre for Social Policy, University of Antwerp).

A more detailed analysis of these techniques is beyond the scope of this report, given that the subjective approach's requirement to conduct extensive surveys with representative population samples places it beyond the time limits and resources available for this research programme. Accordingly, in this report, we have opted for the objective approach. A more detailed presentation of the related methodology and the indices employed follow in the next section.

Finally, the third major issue relating to poverty definition and measurement relates to whether we define poverty as a one-dimensional (typically monetary), or a multi-dimensional phenomenon. Under the approach of multi-dimensional deprivation, the members of each household have to determine the extent to which they can meet some basic needs. Therefore, income is not the proxy in this approach. Hence, the phenomenon of poverty is determined in more complex, qualitative terms, and not only in monetary terms. According to many researchers, the 'multi-dimensional' approach provides a better assessment of the extent to which households can ensure a decent living. In contrast, the one-dimensional approach can give us information about households' income and their position to the income distribution, but not about whether their disposable income is adequate for a decent level of living. Also, the 'multi-dimensional' approach contains analysis of data which are not related to declared incomes, but are directly related with data for standards of living. This data may come from non-declared income or income from illegal activities. In this way, the issue of tax evasion can be treated and a more accurate picture of the level or quality of living conditions can be obtained.

In this report, the objective approach to measuring poverty (which in effect is a one-dimensional analysis), will be complemented with an analysis based on the 'multi-dimensional' method, as it relates to issues of material deprivation and social exclusion which are the focus of this study.

3.2 Poverty Measurement and Indices

Based on the "objective" approach, the first step in measuring poverty is the choice of a deterministic variable for wealth. As mentioned above, in the related literature either consumption or income is used. Some researchers believe that income illustrates better the purchasing power of households (Andriopoulou and Tsakloglou 2010). For others, consumptions outweighs income, because it approximates the concept of permanent income, avoids income reporting gaps (for example due to tax evasion) and portrays a more accurate picture of a household's living conditions (Meyer, Mok, and Sullivan 2009). Nonetheless, studies have shown that the inclusion of imputed income in the income definition can remedy some of the problems associated with income reporting gaps, thereby altering substantially results about inequality and poverty in Greece (Koutsambelas and Tsakloglou 2010). In the present study, we will mainly use disposable income for comparison purposes, since most research on the measurement of poverty and inequality uses this variable. However, we will also check the results of this approach with findings based on the analysis of micro-data on consumption, from the Household Budget Survey (HBS) of EL.STAT. for the years 2008-2012, that is, for consumption expenditure between 2007 and 2011.

After the choice of the deterministic variable, it is necessary to define the income (or consumption) level below which an individual is considered to be poor, compared to other people in society. In most of the literature, a poverty line at 60% of the median (or average) income is used. Nevertheless, there are two other poverty lines that are also frequently used, at 40% and 50% of the median (or average) income respectively. These latter indices are more sensitive to extreme values of the income distribution. It is evident that the "relative" poverty line, regardless of its level, is influenced by the distribution of income and hence the standard of living in society. This means that relative poverty may not change, even in circumstances of high economic growth or conversely of deep economic downturn, if the income distribution remains constant (Andriopoulou and Tsakloglou 2010; Tsakloglou and Panopoulou 1998, Tsakloglou and Mitrakos 1998).

In contrast to the relative poverty line, a fixed poverty line is not correlated with the average or median income and consequently with the income distribution, but rather denotes poverty compared to a fixed level of income which does not change through time. A fixed poverty line can be a very useful analytical tool in cases of big and rapid positive (negative) changes in

economic output in a country. In such circumstances there is a tendency for the entire distribution to move upwards (downwards), leaving thus inequality and therefore also relative poverty largely unchanged. Accordingly, in such circumstances it makes sense to compare peoples' level of living not with other people in the same society, but with the same peoples' living circumstances of only a few years ago, before the boom (crisis) took hold (Matsaganis and Leventi 2013). In the present study, we will use both the three aforementioned 'lines' of relative poverty and a fixed poverty line.

Finally, before computing any poverty indices, it is critical to determine the income level of both individuals and households. Because households differ in size and composition, the comparison of income between households is infeasible. Thus, there is a need to compute an income measure, which allows such a comparison. This measure is *equivalent income* and is computed by using equivalence scales.

3.2.1 Equivalence Scales Analysis

As mentioned before, differences in the size and composition of households make the comparison between households' incomes infeasible, since the needs of different households are likely to be different. Therefore, it is necessary to use a methodology for making comparisons feasible. This methodology makes use of equivalence scales. These scales convert the aggregate disposable income of a family to the equivalent income of each member of the household. The most widely used equivalence scales are the original OECD scale, the Eurostat scale (or modified OECD scale) and the 'new' OECD scale.

The original OECD scale weighs the family income as follows: it gives a value equal to 1 to the person responsible for the household, 0.7 to each additional adult and 0.5 to each child. We have to mention that we consider as "children" all persons aged up to 14 years. The Eurostat equivalence scale gives a value equal to 1 to the person responsible for the household, 0.5 to each additional adult and 0.3 to each child. Then, for both equivalence scales, after computing the total weight of the family, the total disposable income of the family is divided by this number in order to obtain the equivalent income of each individual. In the present study, we use the equivalence scale used by Eurostat.

3.2.2 Poverty Indices

After determining the poverty line and calculating the disposable income, several poverty indices can be used. Below we present all the poverty indices that will be used in the present study, which are those most widely used in the Greek and international literature.

The most commonly used poverty index is the headcount ratio. The index is calculated as the ratio of the number of people with disposable income below the poverty line (q) for the whole population (n). Thus:

$$H = \frac{q}{n}$$

Headcount ratio (or alternatively the poverty rate) is easily interpretable. Thus for example, when using the 60% relative poverty line, the index calculates the percentage of the population, which is below 60% of the median income. However, the index does not calculate the 'distance' of the poor from the poverty line, or otherwise the depth of poverty, while it displays no sensitivity to the size of the inequality among the poor (Sen 1976).

To make more feasible the calculation of poverty depth, researchers use the income gap ratio which is computed by the following formula:

$$I = \frac{1}{q}\frac{\sum_{i=1}^{q} \pi - y_i}{\pi}$$

We see that the income gap ratio depends on (q), the number of people with income below the poverty line, (π) the poverty line and y_i the equalized disposable income. Despite the fact that this index shows how poor are individuals with incomes below the poverty line, it is not sensitive to income transfers among the poor people. So, it does not vary enough in case of income redistribution among the poor.

A poverty index that combines the previous two is the poverty gap which is computed as the product of the poverty rate and the ratio of the income gap.

$$V = H \cdot I$$

According to Sen (1976), this index does not take into account the income distribution among the poor.

In addition, it should also be noted that there are several variants of this index, such as the total poverty gap, the average poverty gap, the percentage average poverty gap, poverty gap as a percentage of the total income of the studied population and the poverty gap as a percentage of total income of non-poor. Eurostat defines the poverty gap as the difference between the

median equivalised disposable income of people below the at-risk-of-poverty threshold and the at-risk-of-poverty threshold, expressed as a percentage of the at-risk-of-poverty threshold.[5]

The disadvantages the aforementioned indicators were identified and studied by Sen (1976), who designated three basic axioms that must satisfy a measure of overall poverty. These axioms are: a) the focus axiom, b) the monotonicity axiom and c) the transfer axiom. The focus axiom posits that the poverty index has to be correlated with the income of the poor. So, changes in the income of non-poor people should leave unaffected the poverty index, if the number of poor people does not change. The second axiom requires that each poverty index has to decrease if there is an increase in the income of an individual, below the poverty line. Finally, the transfer axiom dictates that each poverty index should increase if there is a transfer from a poor person to a less poor person. Then, one regressive transfer should have a positive effect on the poverty index.

Sen's study resulted in the formulation of the Sen Index, which is computed as follows and it is a weighted total of individuals' poverty gaps:

$$S = H \cdot [I + (1 - I)G_p]$$

Where G_p is the Gini index, which counts inequality among poor, with weight *(1-I)*. It is worth noting that the Gini index for the distribution of income among the poor is calculated by the following formula:

$$G_p = \frac{2\sum_{i=1}^{q} iy_i}{q\sum_{i=1}^{q} y_i} - \frac{q+1}{q}$$

It is apparent from the formula for calculating the Sen Index that the index is only sensitive to changes in income among the poor. Consequently, changes in incomes for individuals above the poverty line are ignored. Also, the Sen Index has values from 0 to 1. When S=0, then all individuals have income above the poverty line and when S=1, then all have zero income.
After Sen, many researchers tried to create poverty indices that take into account the income distribution among the poor (e.g. Takayama 1979 and Kakwani 1980; Shorrocks 1995). An extension of Sen's Index is also the family of indices suggested by Foster, Greer and Thorbecke (1984). We refer to family of indices since the Foster, Greer and Thorbecke (FGT) index depends on the value of the parameter related to poverty aversion (a). The FGT index is computed by the following from:

[5] See Eurostat's website, available at: http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Glossary:Relative_median_at-risk-of-poverty_gap

$$FGT = \frac{1}{n}\sum_{i=1}^{q}(\frac{\pi - x_i}{\pi})^{\alpha}$$

When *α=0,* then the index is equal to the poverty rate. If *α=1* FGT index is converted to the average poverty gap ratio and if *α=2* then the FGT index is equal to the average squared poverty gap, which in effect gives an added weight to the incomes that are furthest away from the poverty threshold. This is an index which combines information on both the depth of poverty and the inequality among the poor.

As obvious from the above presentation, the choice of an appropriate poverty index is not an easy task. As mentioned above, in this report all of the above indices will be used.

3.3. Social Exclusion

Social exclusion is closely linked with two of the issues that differentiate approaches to poverty definition and measurement, described above. More specifically, the concept of social exclusion is related to those of relative poverty and most importantly – multi-dimensional poverty. As noted above, in developed societies the measurement of poverty in absolute terms is no longer the norm, as these societies have moved past the problem of ensuring the survival of their members. Therefore, in this context, the concept of poverty is gradually related to a conceptualization of "deprivation" of a number of goods and services, access to which defines the attainment, or not, of a more general conceptualization of well-being (Kahneman et al. 1999; Alesina et al. 2004; Stiglitz et al. 2009; OECD 2011). Often, the criteria which are used to determine the level of well-being are non-monetary and refer to conditions that affect the ability of individuals to attain both a decent a standard of living, but also their prospects and potential for the future. This broader approach to the standing of individuals in a society is closely linked to Sen's (1985) theory of capabilities and functionings, which link poverty and deprivation to the capability of individuals to attain certain fundamental conditions such as for example being healthy or having access to education. In this sense poverty is conceived as the deprivation of such capabilities. This type of approach has been gaining ground during the past three decades and has been very influential in the conception and design of the United Nations' Human Development Index. This multi-dimensional approach to the social condition of the individual, in combination with the emphasis on the relative aspect of poverty or deprivation, where these are not measured in absolute terms but always in relation to the standard of leaving in a society as a whole, constitute the core of what is generally conceived as social exclusion (Silver 1994; Byrne 1999; de Haan 1998; Burchardt et al. 2002; Fischer 2011).

In operational terms and for the purposes of this report we will use data from the EU Survey on Income and Living Conditions (EU-SILK) for people at risk of poverty or social exclusion (AROPE), which has become the leading indicator for assessing the fulfilment of EU 2020 strategy's headline target of reducing poverty by lifting at least 20 million people out of the risk of poverty or social exclusion by 2020.

The AROPE indicator is defined as the share of the population in at least one of the following three conditions[6]:

1) at risk of poverty, meaning below the poverty threshold,
2) in a situation of severe material deprivation,
3) living in a household with very low work intensity.

According to Eurostat: "The material deprivation rate is an indicator in EU-SILC that expresses the inability to afford some items considered by most people to be desirable or even necessary to lead an adequate life. The indicator distinguishes between individuals who cannot afford a certain good or service, and those who do not have this good or service for another reason, e.g. because they do not want or do not need it".

The indicator measures the percentage of the population that cannot afford at least three of the following items, while the severe material deprivation rate measures the percentage of the population that cannot afford at least four of the following items:

1. to pay their rent, mortgage or utility bills;
2. to keep their home adequately warm;
3. to face unexpected expenses;
4. to eat meat or proteins regularly;
5. to go on holiday;
6. a television set;
7. a washing machine;
8. a car;
9. a telephone.

The third indicator making up the AROPE, measures persons living in households with low work intensity. This is defined as those household, whose working-age members (18-59 years old, excluding students between 18-24 years old) have worked during the income reference year less than 20% of their full work potential.

[6] See Eurostat's website, available at: (http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/People_at_risk_of_poverty_or_social_exclusion

In this report, in addition to the poverty ratio, and the overall AROPE indicator, we will present data on the material and severe material deprivation for Greece before and after the crisis.

3.4. Income Inequality

Income or economic inequality is a theme that has come to dominate the public discourse internationally in recent years, not only because of the crisis, but also due to new scientific work (in particular Piketty 2014), which sheds new light on the subject, especially in the developed economies. An overview of the issue and the related literature is obviously beyond the scope of this report; it would suffice to say that it is an issue which touches upon fundamental aspects of the operation of the capitalist system, such as economic growth (Kuznets 1955) and efficiency (Okun 1975), to name but two, but also wider transformations in recent decades related to globalization (see for example Feenstra and Hanson 1996; Aghion and Williamson 1998; IMF 2007; Krugman 2008). The debate on inequality has intensified further because of the crisis, as there is evidence that the latter may have led to an increase in inequality levels (OECD 2013), a result which has been recently reproduced more specifically for the case of Greece (Matsaganis and Leventi 2014).

In terms of its connection to poverty, as was mentioned earlier, the concept of relative poverty, but also that of social exclusion are closely related to the issue of inequality, in the sense that both concepts operate on a relative or comparative basis. In this context, a more focused measurement and analysis of income inequality and its characteristics in Greece, is deemed necessary in the context of this report, as it would complement the analysis on poverty and social exclusion. Moreover, it could also provide interesting insights not fully captured by the latter concepts, given that although inequality, relative poverty and social exclusion can be related, they describe different phenomena, which may develop differently and indeed even move in opposite directions in a given period of time.

The most widely used indicator for inequality is the Gini index. Values of Gini index vary from 0 (perfect equality) to 1 (complete inequality). The Gini index is computed by the following formula:

$$Gini = \frac{1}{2n^2\bar{y}} \sum_{i=1}^{n} \sum_{j=1}^{n} |y_i - y_j|$$

The Gini index shows the expected difference between the incomes of any two individuals in the population. The Gini index is sensitive to transfers in the middle of the income distribution.

Nonetheless, it is widely used as it is easily interpretable and can give comparable results either in the same country over time, or between different countries.

A second index that will be used in this report is the income quintile share ratio or S80/20 index. The S80/S20 ratio is calculated as the ratio of total income received by the 20 % of the population with the highest income (the top quintile) to that received by the 20 % of the population with the lowest income (the bottom quintile). This index is more sensitive to transfers in the tails of the distribution.

3.5 Data

A substantial part of the data presented in this report has already been published by Greek and European statistical agencies, or other researchers in the field. More specifically, data reported for the period before the crisis, is based on existing bibliography and official sources, while for the period following the onset of the crisis, in addition to existing research and edited official indices, the research team has strived to produce a number of new indices, previously not readily available in the literature, based on an analysis of the latest available micro-data from EL.STAT. for the EU Survey on Income and Living Conditions (SILC)[7] and the Household Budget Survey (HBS), as well as provide some new information on food security in Greece, using data previously unreleased, courtesy of the Institute of Preventive Medicine, Environmental and Occupational Health, Prolepsis. Prolepsis conducts, with the financial support of the Stavros Niarchos Foundation, the Food Aid and Promotion of Healthy Nutrition Program for students of schools located in underprivileged areas for the last three years.

[7] The EU Survey on Income and Living Conditions (SILC) is a survey that takes place across the European Union since 2003 and replaced the European Community Household Panel (ECHP). It is carried out by the national statistical authorities. The aim of this annual survey is to collect data through surveys on poverty, living conditions and social exclusion. Also, this a rotating panel survey, as each year ¼ of the sample of the previous year is replaced.

4. Poverty, Social Exclusion and Inequality in Greece before the Crisis

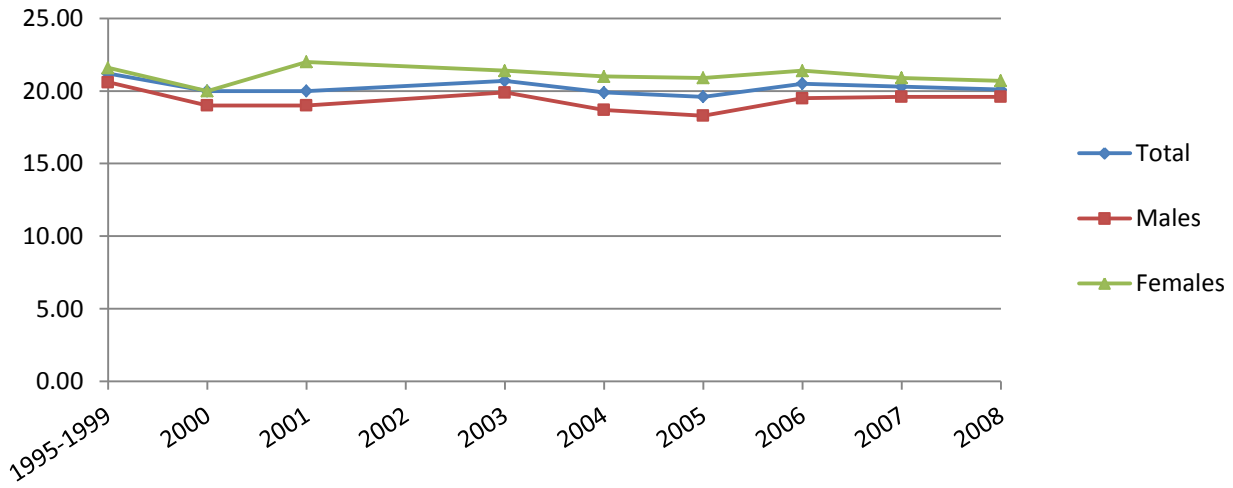
In this section, we present some of the most important results regarding poverty, social exclusion and inequality in Greece, before the crisis. Additionally, we focus on the different dimensions of poverty and compare Greece's social situation with that of other EU countries.

4.1 Poverty in Greece before the Crisis

4.1.1 Basic Trends

Following a decline in the late 1990s, from 2000 until 2008, poverty rates in Greece were stable fluctuating slightly around 20% (Figure 4). The relative stability of poverty in Greece during this period is interesting, given that this was a period characterized by rapid economic growth.

Figure 4. People at risk of poverty, Greece (%, 1995-2008)*

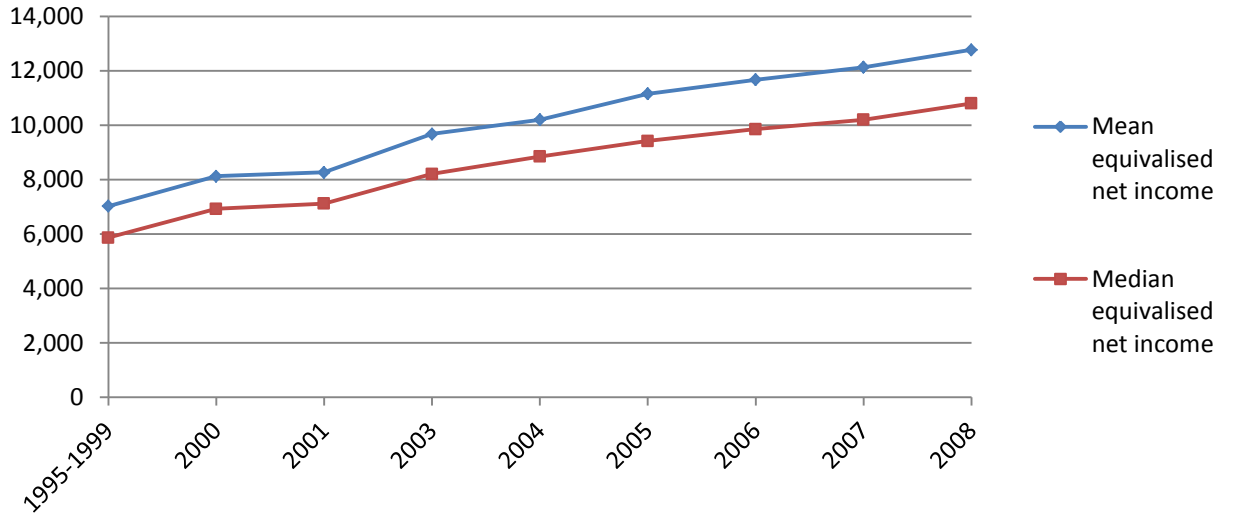


Source: Eurostat

* Calculated at 60% of median equivalised income

This means that during these years, the distribution of income was not substantially altered and therefore a roughly stable proportion of the population remained below the 60% median income threshold, despite the fact that both the mean and median income increased substantially (Figure 5). This finding is telling about both the level and persistence of inequality in Greece, but also about the ability of the Greek welfare state to combat poverty.

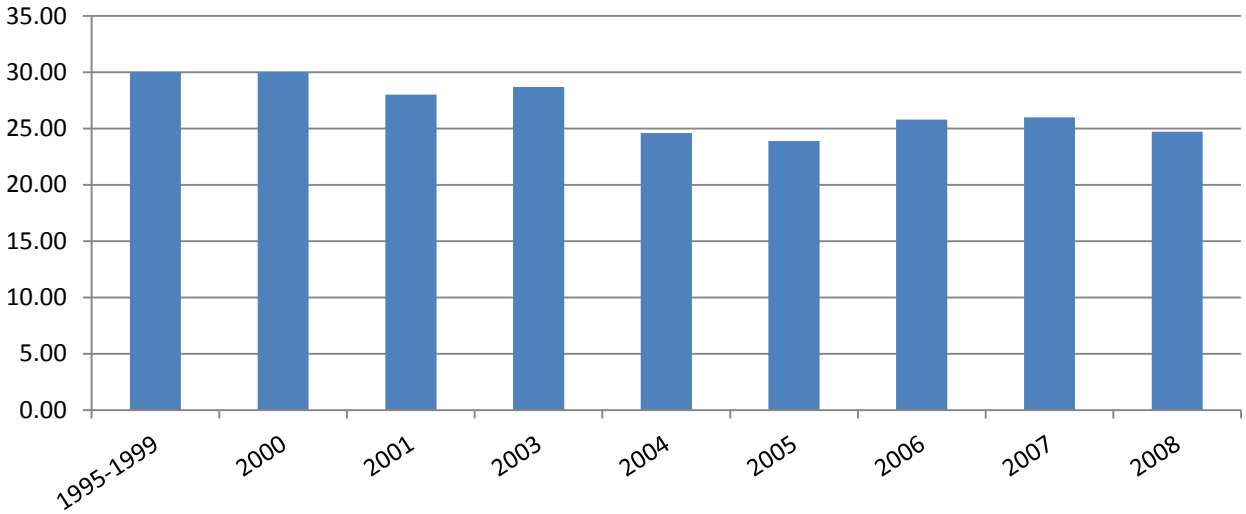
Figure 5: Mean and median net income, Greece (€, 1995-2008)



Source: Eurostat

Another dimension of poverty that is relevant for our purposes is the poverty gap. From Figure 6 we observe there was a significant improvement, with the poverty gap declining from 30% on average in the late 1990s, to 23.9% in 2005, although this progress was somewhat reversed in the following years. This means that at least in the early 2000s, while the percentage of poor people remained relatively stable, a number of poor people became less poor, coming closer to the poverty threshold. In 2008, the poverty gap was 24.7%, which means that 50% of poor people had income below the 75.3% of the poverty threshold.

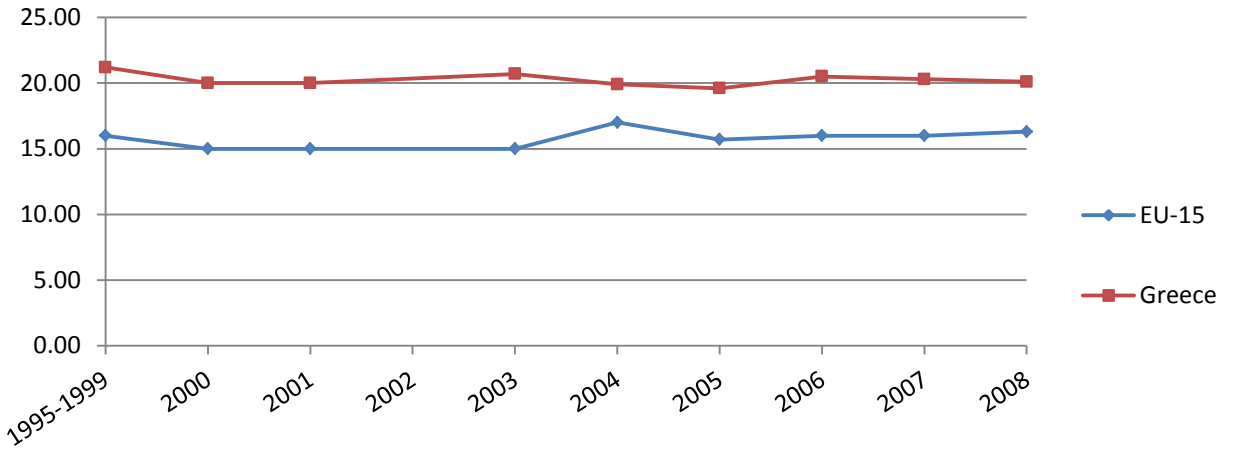
Figure 6. Poverty gap, Greece (%, 1995-2008)



Source: Eurostat

These figures do not compare favourably to other EU countries. From Figure 7 below, we see that poverty in Greece during the period under examination was consistently and substantially above the EU-15 average (Figure 7).

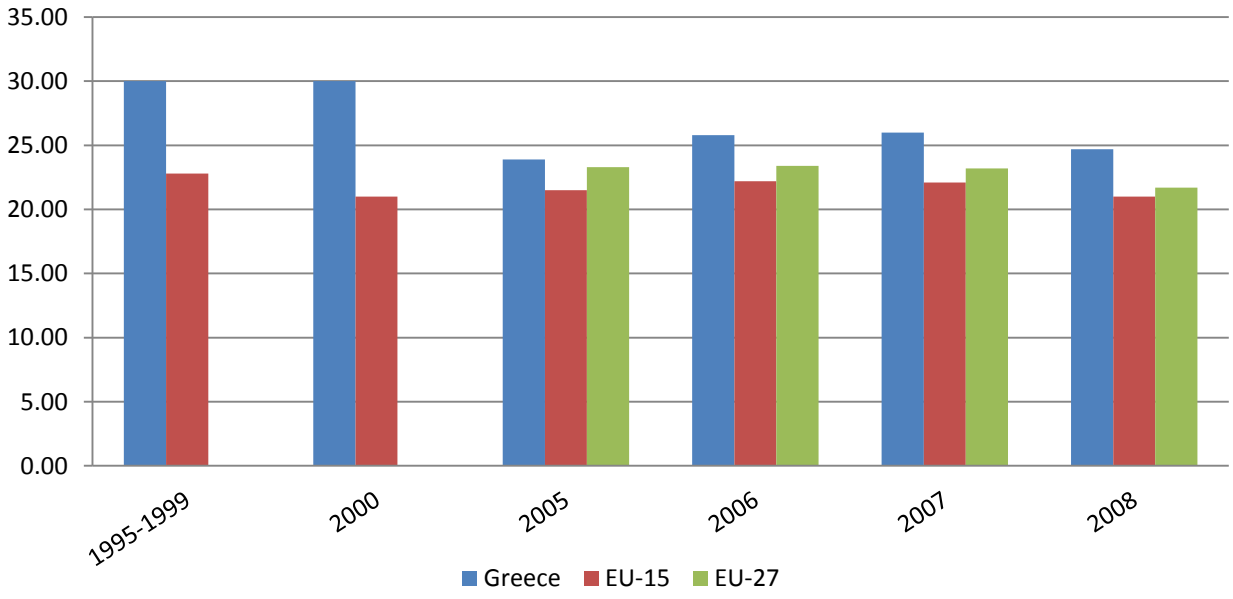
Figure 7. Risk of poverty, Greece, EU-15 (%, 1995-2008)



Source: Eurostat

Similarly, Greece's poverty gap for this period was consistently higher than the EU average, although the situation improved from the mid-2000s onwards (Figure 8).

Figure 8. Poverty gap, Greece, EU (%, 1995-2008)



Source: Eurostat

These findings are also verified by recent studies. For example, Dafermos and Papatheodorou (2010), Andriopoulou and Tsakloglou (2010) and Balourdos and Naoumis (2010), focusing on the 1994-2007 period (or selected sub-periods, or years), have shown that there is a clear stratification of performance in terms of poverty rates, with Mediterranean countries, which share the so-called South-European Social Model, underperforming consistently countries from Northern Europe, which employ the social-democratic or corporatist models.[8] Thus countries such as the Netherlands, Luxembourg, Austria, Finland, Denmark and Germany, typically report poverty rates that range between 10-13%. In contrast, Greece, Spain, Portugal and Italy, along with Ireland, have the highest rates, with poverty typically ranging between 18-20%. Similarly, poverty gap indices for the social–democratic and corporatist groups ranges for most countries between approximately 15% and 18% (although there are significant variations between years) while south-European countries typically report poverty gap indices above 23%.

4.1.2 Vulnerable Groups

While these headline indices already paint a negative picture for Greece regarding poverty, things are even more difficult for a number of social sub-groups, to which we now turn our attention. We already saw above (Figure 4) that traditionally in Greece, women experience higher poverty rates than men, without however varying the temporal trajectories of the whole population. This indicates that there are structural reasons for this deviation, which is supported by the fact that fluctuations of poverty rates for most years seem to be well synchronized for both sexes and are therefore probably related to wider economic developments in the country and not to factors pertaining to one of the two sexes.

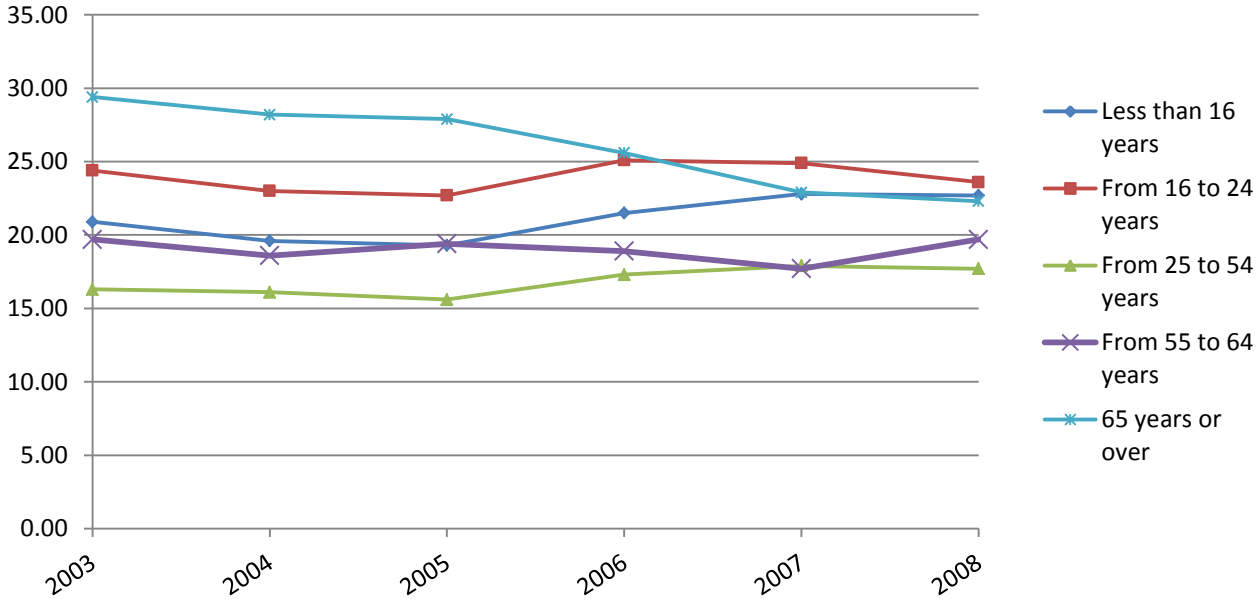
Moreover, recent studies have highlighted a number of social groups that have faced high poverty rates over time in Greece (e.g. Balourdos and Naoumis 2010, Dafermos and Papatheodorou 2010). Drawing on these studies we focus here on the elderly, the young, lone-parent and large families, the unemployed and people with low educational qualifications. It is to those groups that we now turn our attention.

In Figure 9, we present poverty rates' evolution for the major age groups. We observe that the poverty rates of the elderly were initially much higher than all other age groups (29.4% in 2003), however starting in the mid-2000s they decreased substantially, reaching 22.3 % in 2008. This could be interpreted as evidence that social transfers targeted to this age group during this

[8] The categorization of states according to their social model hails from the literature on comparative political economy, which compares different national modes of capitalism and has a long history (see for example Schonfeld 1965, Albert 1993, Hall and Soskice 2001, Schmidt 2002, Amable 2003). The particular categorization mentioned above originated with Gøsta Esping-Andersen's (1990) pioneering work, who distinguished between the social-democratic, the corporatist-statist and the liberal models of welfare state models. Later contributions added a fourth type, the South European Social Model (see Ferrera 1996).

period (pensions, old-age benefits) were quite efficient in reducing poverty. The opposite seems to be the case for children and young up to 16 years old. Beginning in the mid-2000s, the poverty rates of this age group increased steadily, from 19.4% in 2005 to 22.7% in 2008. Moreover, from the mid-2000s the situation of the young between 16-24 years seems to have taken a negative turn as well and in 2008 this group faced the highest poverty rate. It has to be noted that even before this development, this age group was consistently, substantially above the average poverty rate in Greece. Finally, for people aged between 25 and 64, poverty rates were steadily below the average poverty rate, although for the age group 25-54 there is again a marked increase in their poverty rates beginning in 2006.

Figure 9. People at risk of poverty, by age group, Greece (%, 2003-2008)

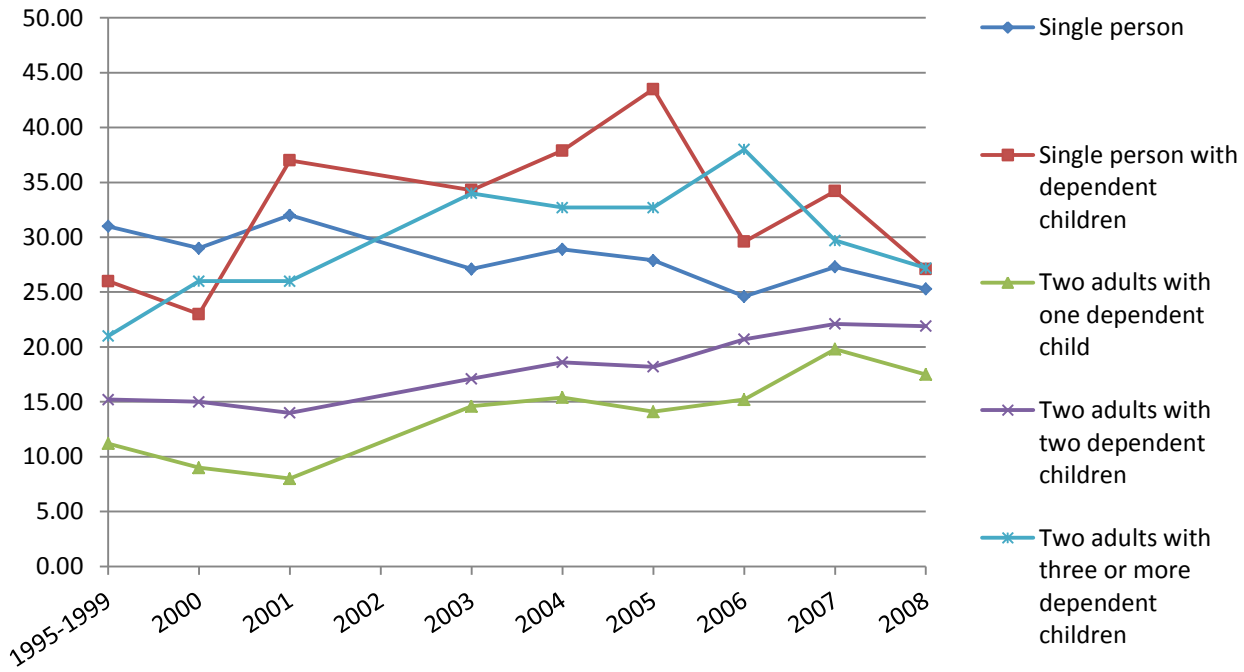


Source: Eurostat

From the above it is obvious that both the elderly and the young traditionally suffered substantially higher poverty rates than other age groups and therefore found themselves steadily above the average poverty rates for the entire population. Beginning in the mid-2000s the elderly's position improved over time, while that of the young and the children deteriorated further.

Turning our attention to families, we observe from Figure 10, that single persons with dependent children and two adults with three or more dependent children are the types of families most affected by poverty. At the other end, the families with the lowest risk of poverty are those comprising two parents and one or two children.

Figure 10. Risk of poverty by household type, Greece, (%, 1995-2008)

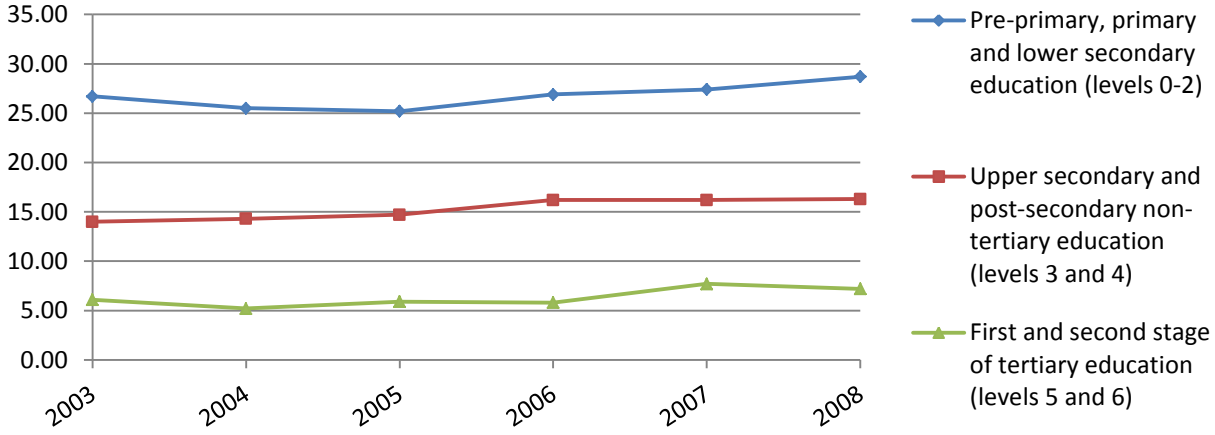


Source: Eurostat

What is interesting however and would require further research, is that the trajectories of these two groups during the 2000s were moving in the opposite direction, with the former (higher risk of poverty) group improving its position and the latter (lower risk of poverty) group experiencing an increase in its risk of poverty.

Another issue that has been documented in the literature and is particularly relevant for policy purposes, is the relation between education and poverty levels. The data in Figure 11 indicates that education plays a significant role in income stratification. There is a clear and significant link between education levels and levels of poverty. More specifically for the six years before the crisis, poverty among people with pre-primary, primary or lower secondary education, i.e. people with very little or no educational qualifications, ranged between 25 and 30%, while for people with upper secondary or post-secondary, non-tertiary education, poverty rates was relatively stable around the 15% level, that is on average more than ten percentage points lower than the first group. Furthermore, for people with tertiary education, poverty levels ranged roughly between 5% and 6% between 2003 and 2006, before increasing slightly to around 7% in 2007 and 2008. The differential between the three groups is very large and is consistent with findings of other studies on poverty in Greece (e.g. Andriopoulou, Papadopoulos and Tsakloglou 2013; Balourdos and Naoumis 2010; Dafermos and Papatheodorou 2010).

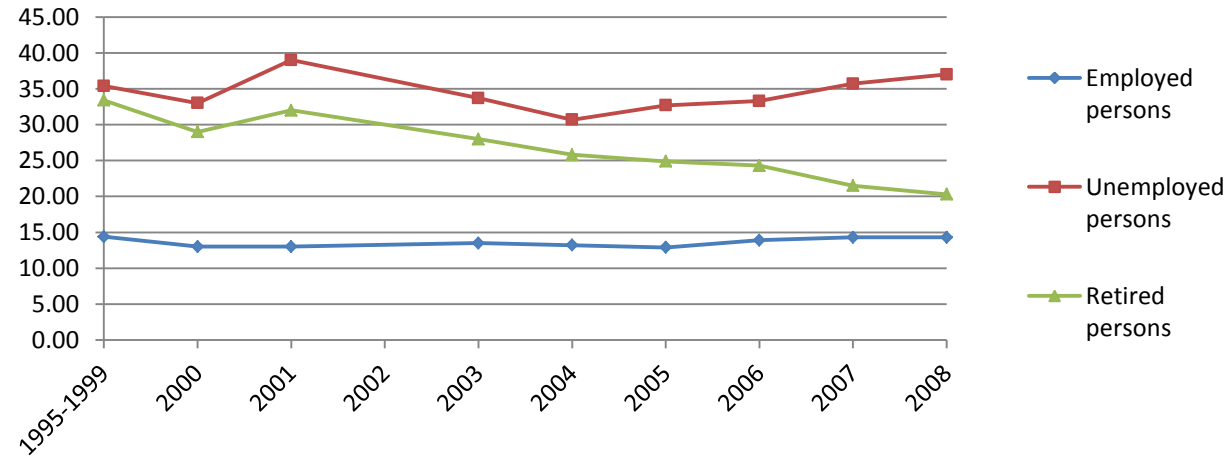
Figure 11. Risk of poverty by education level, Greece (%, total, 2003-2008)



Source: Eurostat

Finally, concerning the unemployed, we see from figure 12, that they were at a disadvantage compared to both employed and retired people. For the former, the poverty levels were kept quite stable for the entire period under examination. On the other hand, poverty among retired people fell substantially from an average of 33.4% during the late 1990s to 20.3% in 2008.

Figure 12. People at risk of poverty by economic activity, Greece (%, 1995-2008)



Source: Eurostat

This picture is consistent with the data about poverty among the elderly examined above and therefore seems to corroborate the interpretation that social transfers to retired people have been an effective means in battling poverty for this age group. This in turn is also consistent with a well-established finding in the Greek literature on poverty, that pensions is the principal policy instrument for reducing poverty in Greece (Andriopoulou, Papadopoulos and Tsakloglou 2013, Ioannidis, Papatheodorou and Souftas 2012, Balourdos and Naoumis 2010).

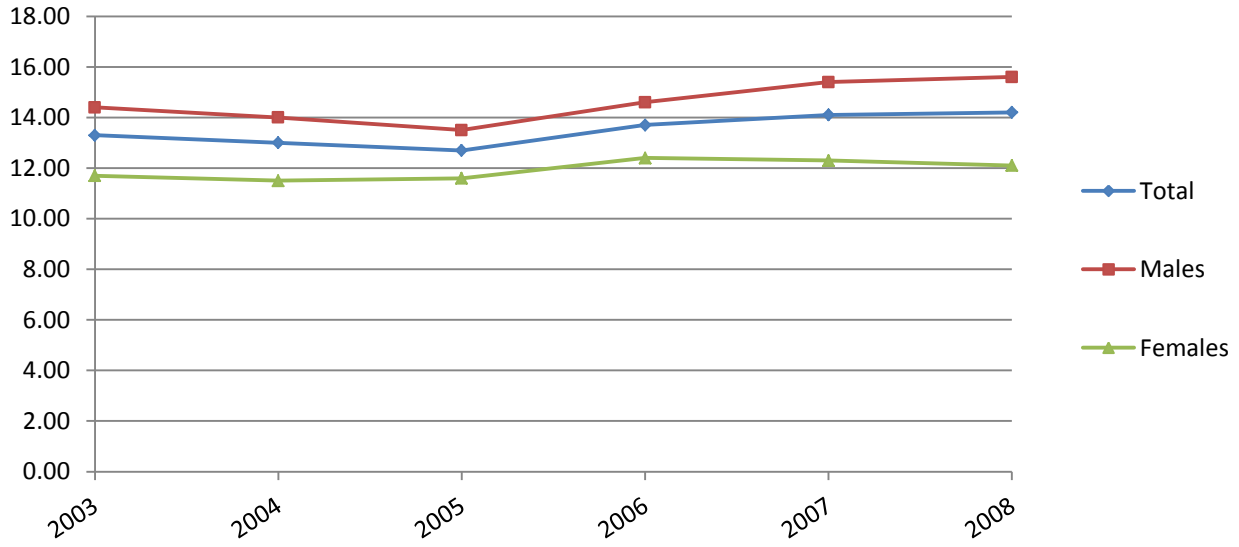
The plight of the unemployed is not unexpected, since they tend to have the lowest income and usually are at the bottom end of the income distribution. Indeed, the literature always considers the unemployed as a high risk poverty group. However, the fact that the percentage of unemployed at risk of poverty increased steadily since 2004 is particularly interesting, since it coincides with a period (2004-2008), when unemployment rates displayed a consistent downward trend, declining from 10% in 2004 to 7.7% in 2008. It seems that economic growth (and thus lower unemployment) during this period left the unemployed further behind in the scale of income distribution. Moreover, the divergent trajectories of the retirees and the unemployed during the same period, are a strong indication of the fragmented nature of the Greek welfare state.

The difficulties facing the unemployed notwithstanding, it has to be said that unemployment by itself cannot account for the majority of the poor, which means that a substantial part of people in poverty are employed. The phenomenon of working poor has attracted increased attention in recent years, as it seems to be on the rise in a number of advanced countries.[9] The phenomenon was documented recently for Greece by Ioannidis, Papatheodorou and Souftas (2012), who argued that for people above the age of 16, 40% of the people in poverty are employed, compared to only 10% of the people who are unemployed. Moreover, they show that people in irregular forms of employment, particularly part-time employees and the part-time self-employed face the highest risk of poverty. The high numbers of working poor is also corroborated by the fact that, as we saw above, poverty rates remained stable during the period under examination, while unemployment rates, declined steadily since 2004.

This picture is confirmed by the data on those in employment, who find themselves at risk of poverty (Figure 13). We observe that approximately 14% of individuals in work, are poor, a percentage which has remained relatively stable since the early 2000s. This means that even during the years before the crisis, when economic growth rates were high and the median and average incomes grew, a significant part of those in employment received wages lower than the poverty threshold, a clear sign of the fragmentation of the labour market.

[9] See for example "Living Wage Research for KPMG, Structural Analysis of Hourly Wages and Current Trends in Household Finances", 2013 Report, available at: http://www.kpmg.com/UK/en/IssuesAndInsights/ArticlesPublications/Documents/PDF/Latest%20News/living-wage-research-october-2013-1.pdf and "Insight: The dark side of Germany's jobs miracle", Reuters, February 8 2012, available at: http://www.reuters.com/article/2012/02/08/us-germany-jobs-idUSTRE8170P120120208

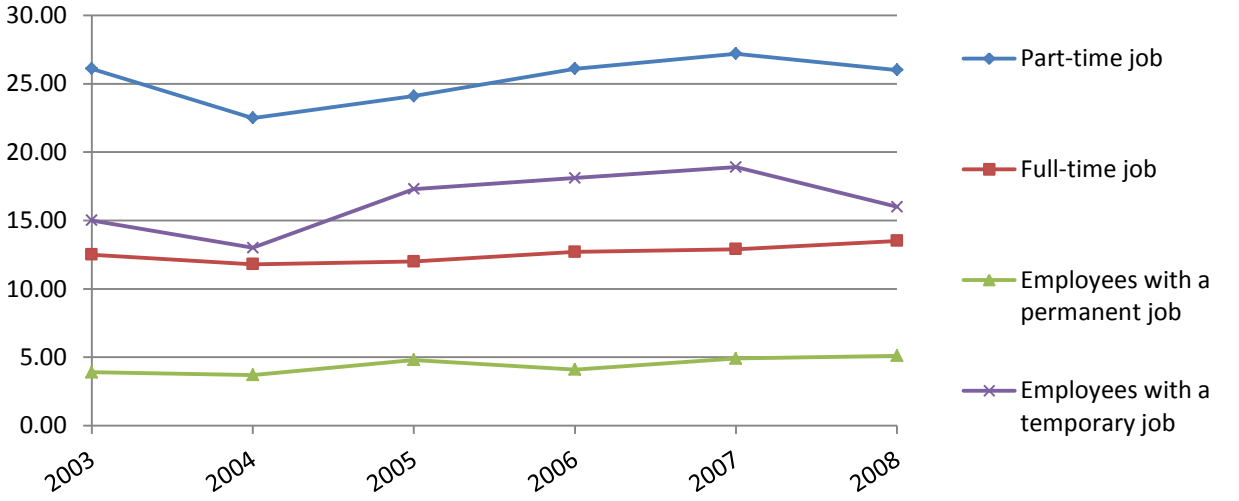
Figure 13. In work at risk of poverty rate by sex, Greece (%, 2003-2008)



Source: Eurostat

The link between the fragmentation of the labour market and poverty can also be observed in Figure 14, where we see that part-timers and employees on a temporary contract faced substantially higher poverty rates than those with full-time contracts and employees with permanent jobs respectively.

Figure 14. Risk of poverty by type of contract, Greece (%, 2003-2008)

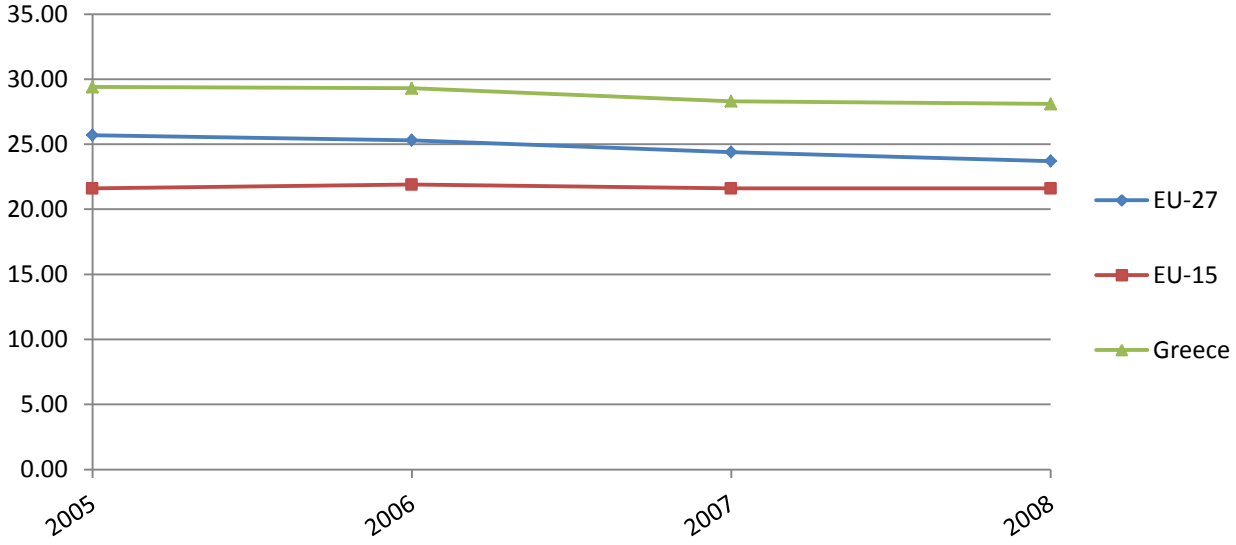


Source: Eurostat

4.2 Social Exclusion in Greece before the Crisis

Turning our attention to social exclusion does not improve the picture of the social profile of Greece. When we add the risk of social exclusion to the risk of poverty, we see that Greece's record is again negative, despite the fact that there was an improvement between 2006 and 2008 (Figure 15). This improvement is slightly higher (by 0.5% in 2007), than that of the poverty rate reviewed previously, which means that social exclusion declined marginally in Greece between 2006 and 2008. The combined index for 2008 was 28.1%, substantially higher than the EU-15 average of 21.6% and the EU-27 average of 23.7%.

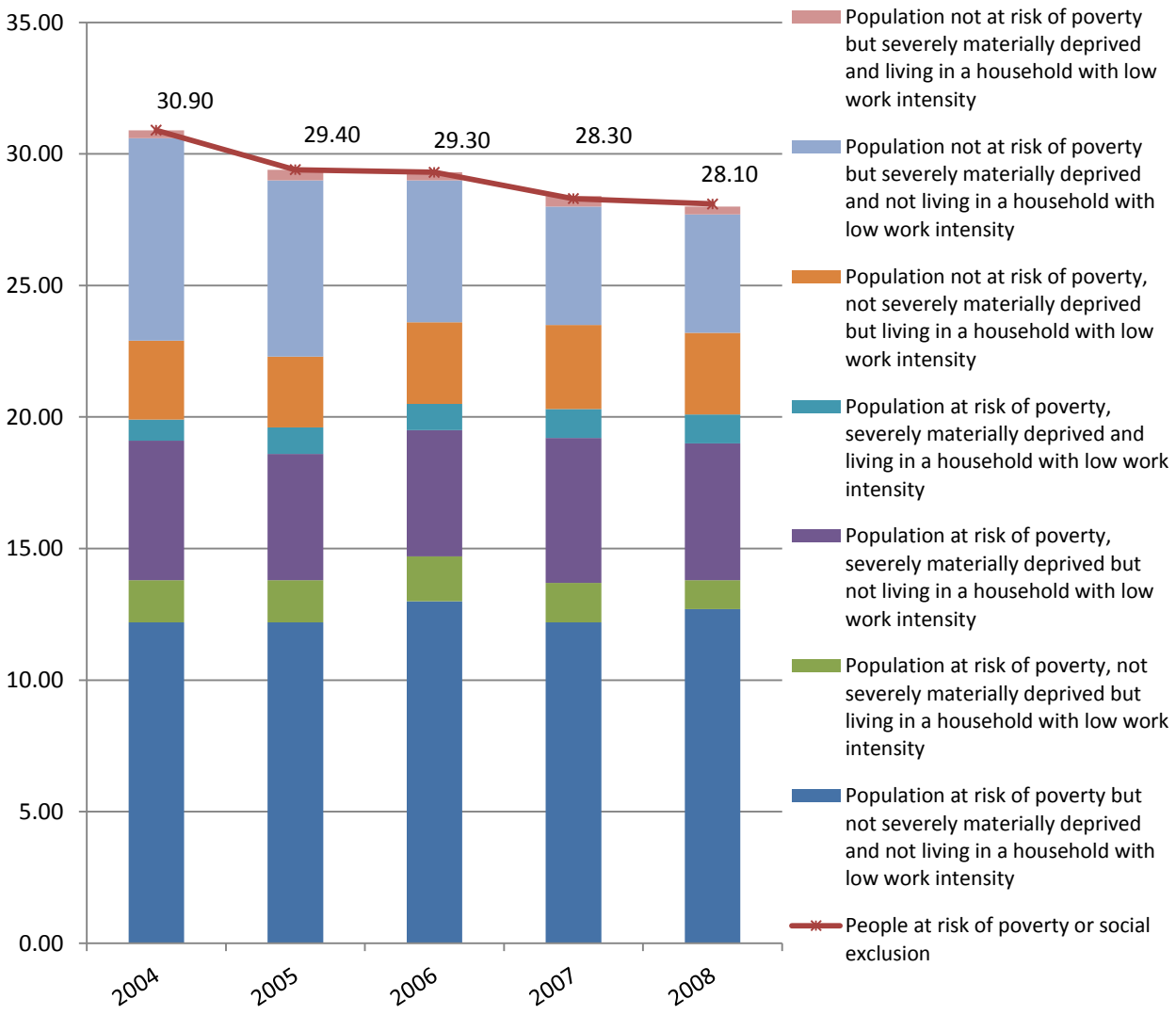
Figure 15. People at risk of poverty or social exclusion (%, 2005-2008)



Source: Eurostat

In Figure 16, we break down the components of poverty and social exclusion. We observe that people at risk of poverty but not severely materially deprived, nor living in a household with low work intensity made up the majority of poor people in Greece (12.7% in 2008). However, it is worth noting that the next two largest segments of the poor population (not at risk of poverty, but severely materially deprived and not living in a household with low work intensity –4.5% in 2008- and at risk of poverty, severely materially deprived, but not living in a household with low work intensity – 5.20 in 2008) suffered from severe material deprivation.

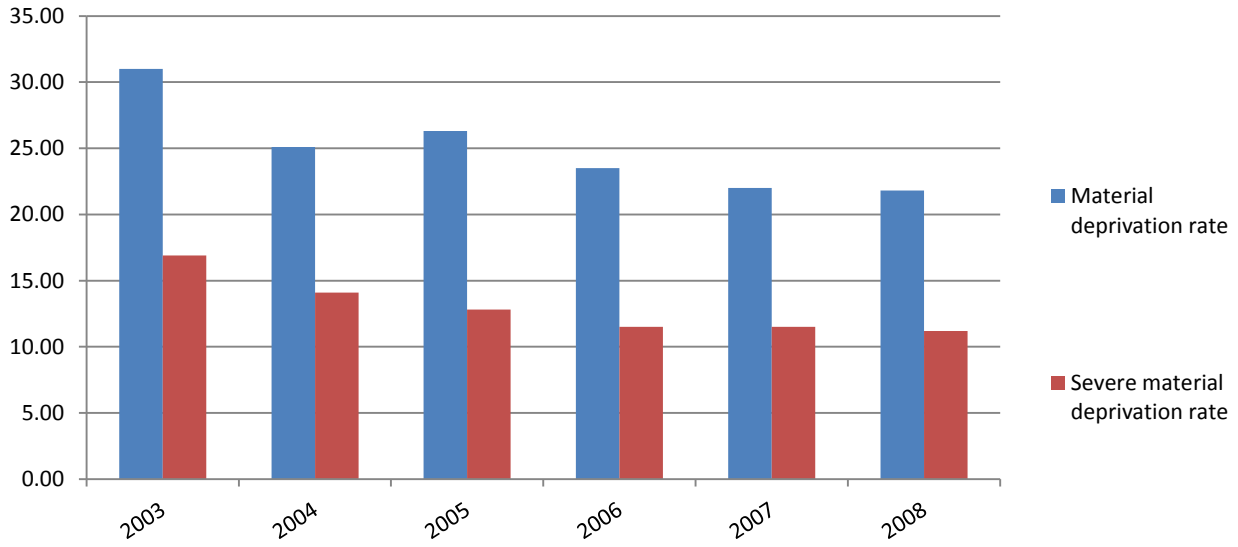
Figure 16. People at risk of poverty or social exclusion, Greece (2004-2008)



Source: Eurostat

Indeed, when we take a closer look at material deprivation, it seems that it was quite high in Greece even before the crisis (Figure 17). However, there was a steady, substantial improvement as the index declined from 31% in 2003 to about 21.8% in 2008. A similar trajectory can be observed for severe material deprivation, which declined from 16.9% in 2003, to 11.2% in 2008, which is however a quite high value for this index.

Figure 17. Material deprivation and severe material deprivation, Greece (%, 2003-2008)

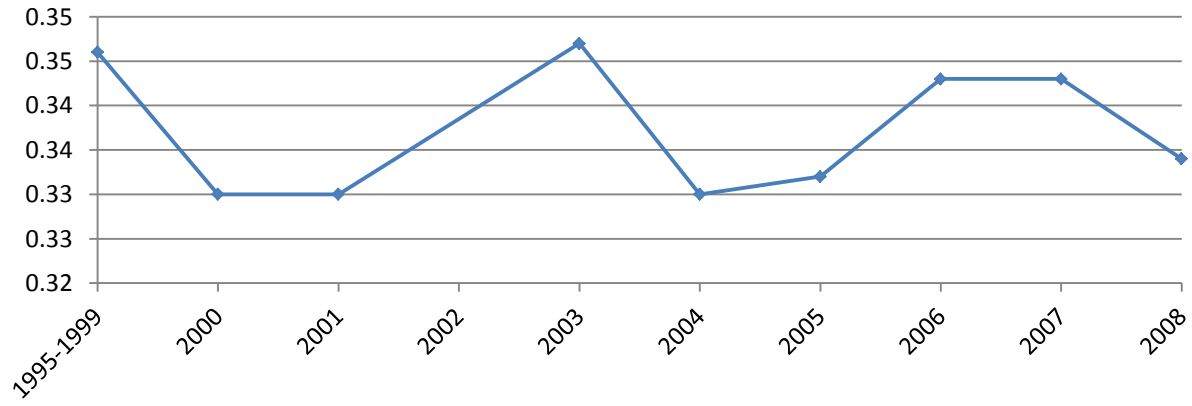


Source: Eurostat

4.3 Inequality in Greece before the Crisis

From the discussion on relative poverty rates, it should be evident that Greek society, even the years before the crisis, experienced high and persistent levels of income inequality, despite the favourable economic conditions that prevailed for most of the period under examination.

Figure 18. Gini coefficient, Greece (1995-2008)



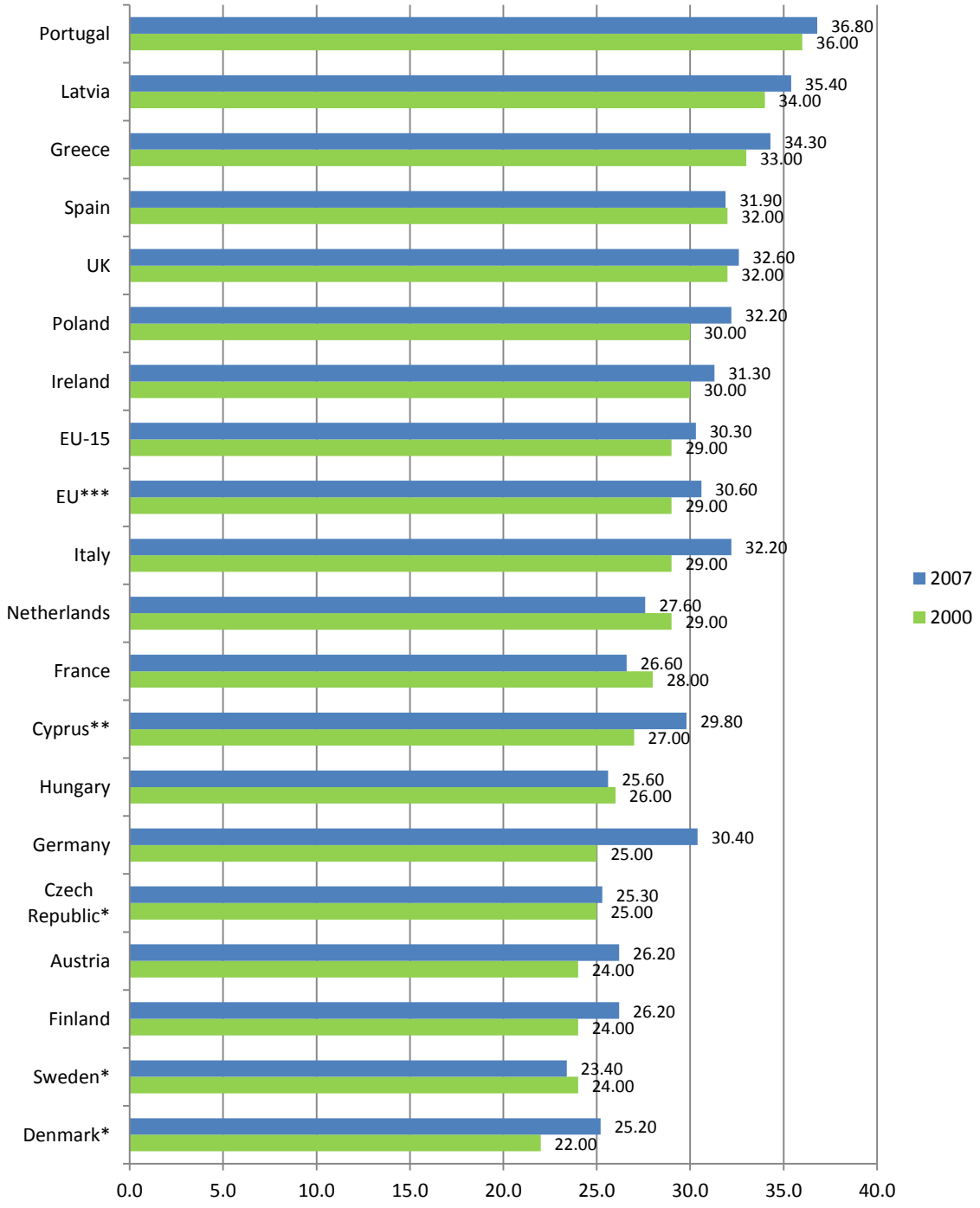
Source: Eurostat

This is confirmed by the data presented in Figure 18; income inequality in Greece, while in decline during the late 1990s, increased again between 2001 and 2003, reaching the previous

decade's levels and followed thereafter a rather unstable pattern of substantial yearly changes, both upwards and downwards, remaining on the whole at quite elevated levels.

Indeed, as we can see from figure 19, Greece's performance the years before the crisis was among the worst in EU (fifth highest level of inequality in 2007, above Romania and Bulgaria, which are not included in Figure 19), despite the favourable economic environment and the high growth rates during that period. As mentioned previously, this indicates the existence of structural factors in the Greek economy, which prevent the reduction of income inequality even in times of high economic prosperity for the country as a whole.

Figure 19. Gini Coefficient (x 100, 2000, 2007, Greece and selected EU Countries and Averages)



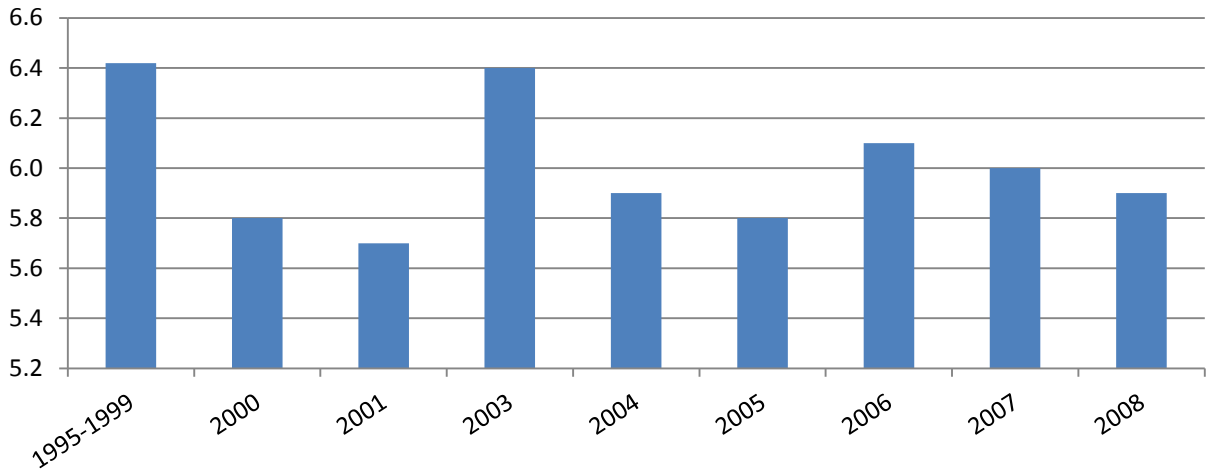
Notes: * 2001, **2003, ***2000: EU-25, 2007: EU-27

Source: Eurostat

A similar pattern emerges when we use the S80/20 index for the same period (Figure 20). We note similar movements, in the same periods and/or years, as was the case with the Gini

coefficient. Moreover, the values of the S80/20 index were quite high as well, with the top quintile of the population earning income 5.9 times higher as that of the bottom quintile in 2008.

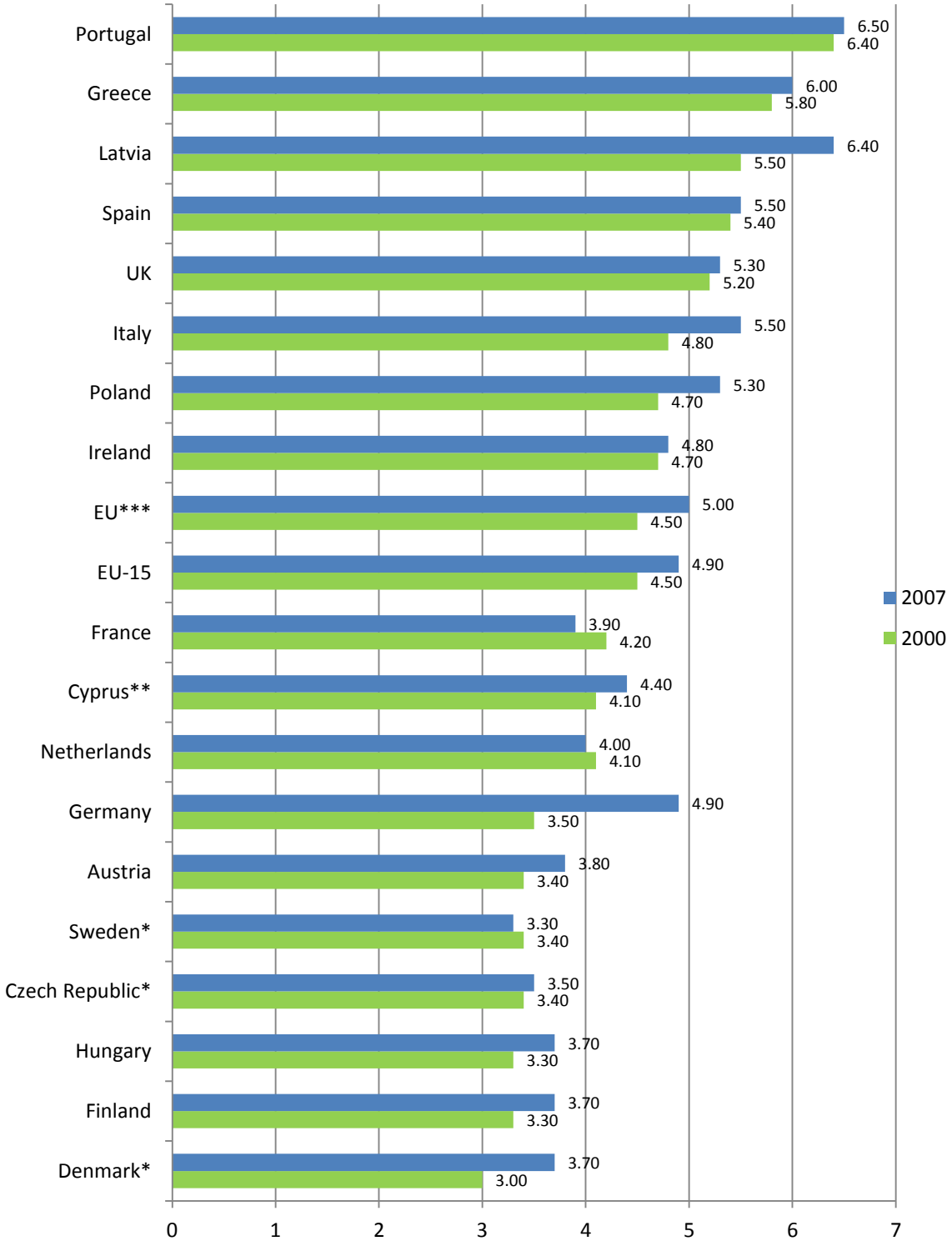
Figure 20. Index of income distribution S80/S20, Greece (1995-2008)



Source: Eurostat

The levels of the S80/20 index for Greece are very high by any rate. A comparison with other European countries (Figure 21), shows that Greece's performance was again fifth worst for 2007, (also above Romania and Bulgaria not included in Figure 21). Once again then, we observe that inequality levels in Greece were consistently high throughout the "good" economic period, before the crisis.

Figure 21. Index of income distribution S80/S20 (2000, 2007)



Notes: * 2001, **2003, ***2000: EU-25, 2007: EU-27

Source: Eurostat

5. Poverty, Social Exclusion and Inequality in Greece after the Crisis

In this section of the report we will try to gauge the impact of the crisis on poverty, social exclusion and inequality in Greece. We do so by following the same structure of the previous section, in order to facilitate the comparison of the situation before and after the crisis; nonetheless it has to be noted that the analysis that follows includes, where possible, additional data in order to capture as fully as possible the different dimensions of the crisis' impact on Greece's social profile. We will proceed by reviewing available statistical data and literature and then we proceed to update and where possible enrich available findings by producing a number of indices based on our own analysis of the most up-to-date micro-data from the Hellenic Statistical Authority.

5.1 Poverty in Greece after the Crisis

5.1.1 Basic Trends

The adoption of an extremely ambitious front-loaded austerity programme in 2010 and the ensuing recession that has plagued the Greek economy, stimulated a number of studies, which have tried to assess the impact of the crisis on poverty in Greece. Leventi et al. (2010) focused on the comparison between policies in 2009 and 2010. They used the multinational tax-benefit micro-simulation model EUROMOD,[10] to study the impact of each austerity policy measure on poverty and inequality. According to their estimations, the implementation of austerity policies in 2010, reduced median income in Greece by 2.4% and led to an increase in poverty rates by 2.7 percentage points to 23.1%. Also, they found that the elderly, the unemployed and households with low work intensity would be affected the most. In a more recent study Matsaganis and Leventi (2013) analysed the anatomy of poverty in Greece using EUROMOD, based on EU-SILC 2010 (incomes of 2009) and they presented poverty rates using a floating and a fixed poverty line. According to their findings relative poverty in Greece (60% threshold) in 2013 increased, albeit less than would be expected from the estimation of the Leventi et al. (2010) study, to 22.3% up from 19.4% in 2009. They also found that for the period 2009-2013 poverty rates for men increased more than those of women. However, we have to mention that, as we saw previously, relative poverty rates for women were initially higher in comparison with those of men. According to the findings of the study, the unemployed face the highest poverty rates. Also, the authors found that relative poverty rates for young people aged between 18 and 29 years increased more than those of any other age group (more than 7 percentage points). It is worth noting that the only age group for which the relative poverty fell was the elderly over 65 years, as low pensions were cut less compared to wages. However,

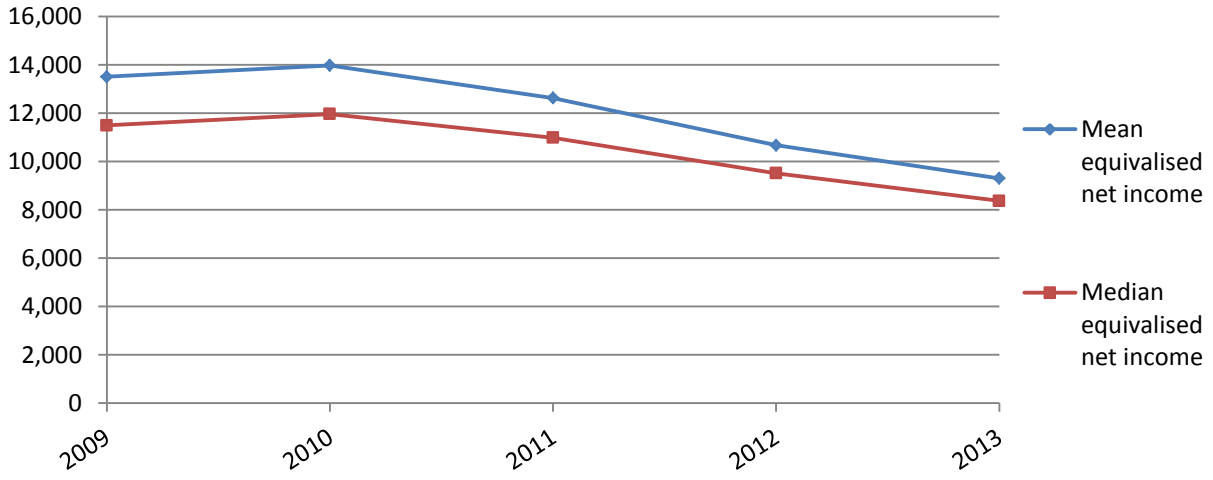
[10] EUROMOD is a tax-benefit micro-simulation model for the European Union countries that enables researchers and policy analysts to calculate the effects of taxes and benefits on household incomes and work incentives for the population of different member-states and for the EU as a whole.

although seemingly less affected by monetary poverty, this age group may have been disproportionally affected by reductions in social services and/or in kind benefits, such as medicines and general healthcare benefits.

Using a fixed poverty threshold, changes the picture completely. By employing a fixed poverty threshold at 60% of median equivalised income of 2009 (adjusted for inflation), Matsaganis and Leventi (2013) obtain a dramatic increase in poverty rates, which for the total population reaches 44% in 2013. The unemployed form the group most hit by the crisis, as their poverty rate reaches a staggering 71.9% in 2013, while the self-employed suffer high rates of poverty, which in 2013 reach 55%. Also the young and in particular the age groups 0-17, but also 18-19, are disproportionally hit (from 23.4% and 19.6% in 2009 to 48.6% and 50.8% in 2013 respectively). Finally, there is sharp deterioration of social conditions of those living in Athens in comparison with rural and suburban areas. Finally, the authors estimated an index of extreme poverty, based on a basket of basic goods and found a dramatic increase of extreme poverty, which for the total population reached in 2013 14%, up from 2.2% in 2009. Once again, the young, the unemployed and those living in Athens were disproportionally hit.

These findings are on the whole verified by more recent data and by our own analysis. Using data on net income, we see that while there was a slight increase in 2009 (incomes of 2008 - when as discussed earlier, the crisis had not been felt in Greece yet), both the mean and median net income in Greece deteriorated between 2010 and 2013, with the former declining from 13,974 euros in 2010 (incomes of 2009) to 9,303 euros in 2013 (income of 2012) and the latter from 11,963 euros in 2010 to 8,371 euros in 2013.

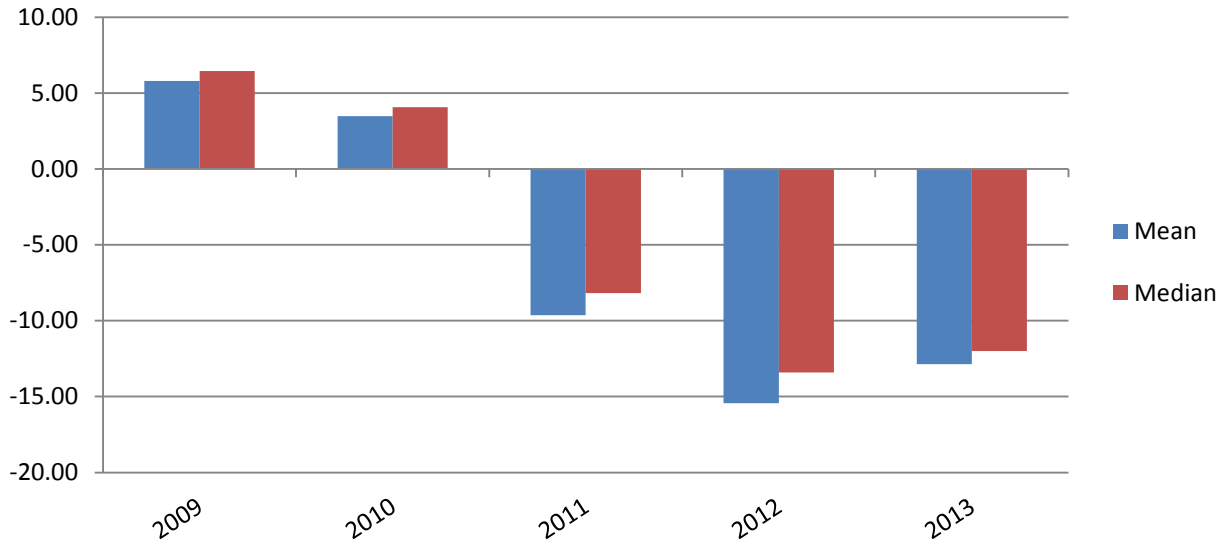
Figure 22. Mean and median net income, Greece (€, 2009-2013)



Source: Eurostat

Therefore, we see that during the first four years of the crisis the mean and median net income fell by 33.4% and 30% respectively. More specifically, the year on year reduction of the average disposable income in 2011 was 9.6%, in 2012, 15.5% and in 2013, 13%. The figures for median disposable income are 8.2%, 13.4% and 12% respectively.

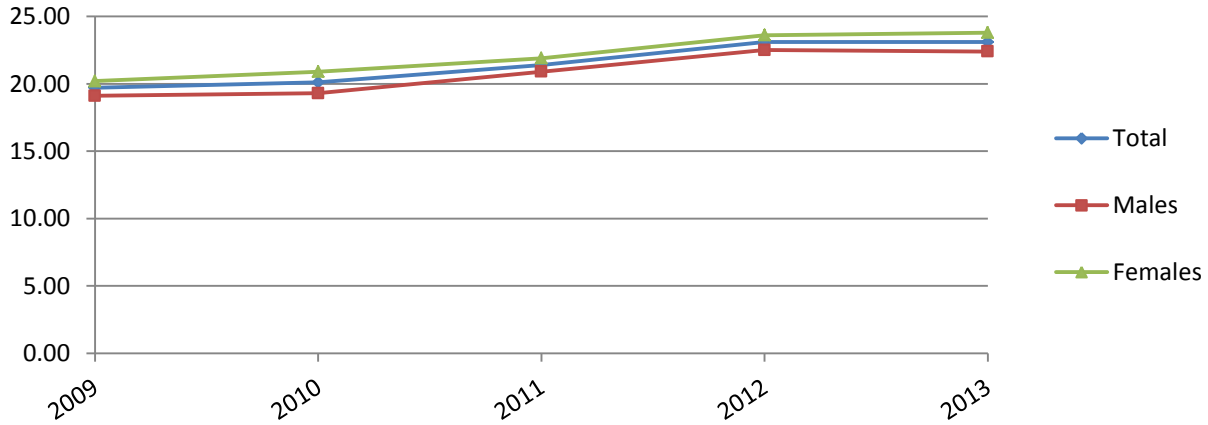
Figure 23. Annual changes in mean and median disposable income (%, 2009-2013)



Source: Own calculations, Survey on Income and Living Conditions, 2009-2012

As one would expect given such a steep decline in income, poverty levels for the entire population increased between 2010 and 2013 from 19.7% to 23.1%, with the poverty rates for men and women increasing in parallel. This represents an increase of approximately 15%.

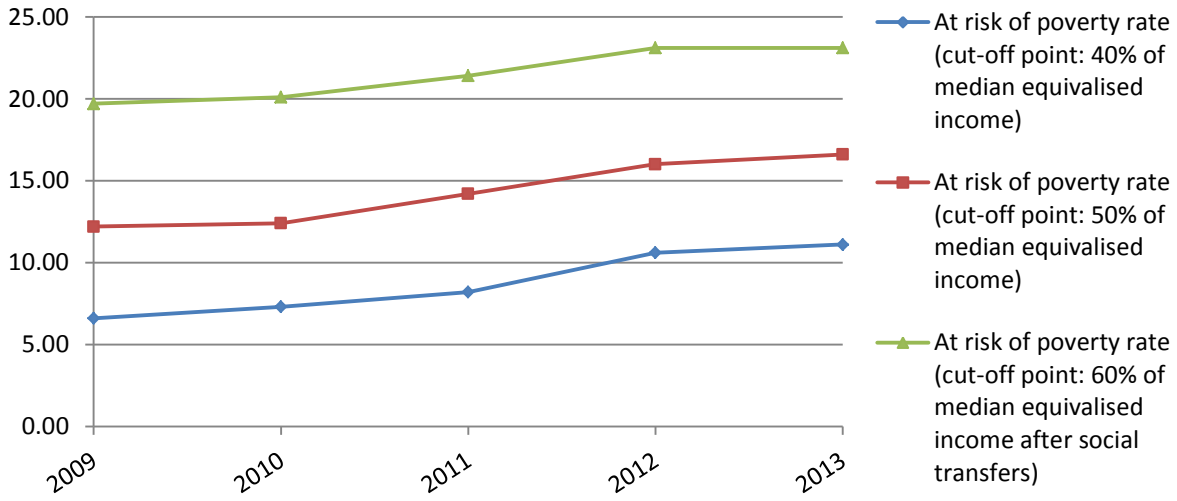
Figure 24. People at risk poverty, Greece (%, 2009-2013)



Source: Eurostat

The increase in poverty becomes larger when we use different poverty thresholds. For the 50% threshold, the poverty rate increased from 12.4% in 2010 to 16.6% in 2013 and for the 40% threshold the poverty rate increased from 7.3% in 2010 to 11.1% in 2013, an increase of 33.9% and 52% respectively. This finding is very interesting, since it indicates that the deterioration in the economic situation of the population was dramatic, since most of the new poor were to be found below the 40% threshold. Indeed, people that found themselves below the 40% threshold accounted in 2013 for almost half of the poor people (based on the 60% threshold), while before the crisis (2009) they accounted for approximately one third of the poor.

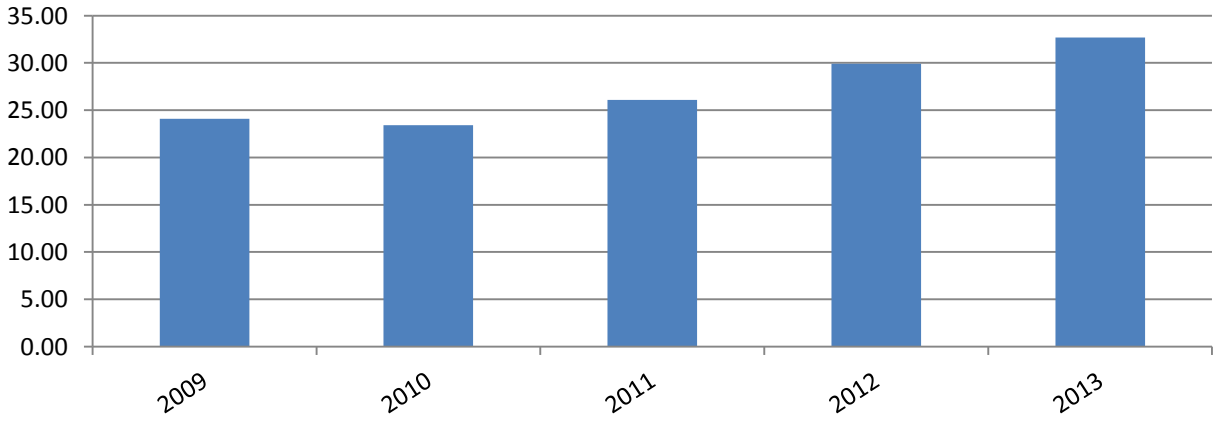
Figure 25. Poverty rates with different poverty thresholds, Greece (%, 2009-2013)



Source: Eurostat

This in turn indicates that poverty depth in Greece has increased during the crisis, a suggestion which is verified by the data on the poverty gap presented in the next graph.

Figure 26. Poverty gap, Greece (%, 2009-2013)

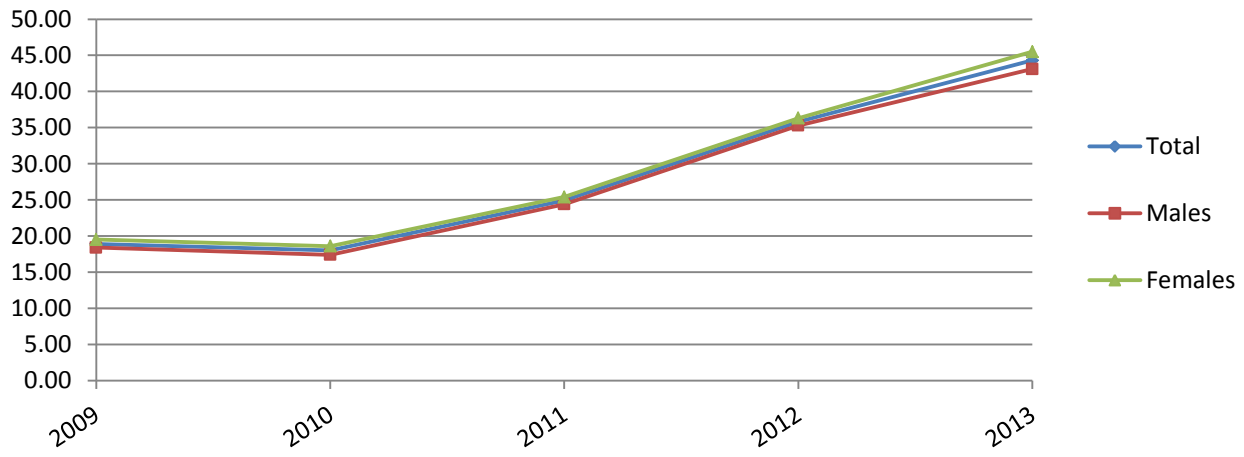


Source: Eurostat

Indeed, from Figure 26 we see a rapid and substantial increase of the poverty gap between 2010 and 2013, from 23.4% to 32.7%. As mentioned in a previous section, the concept of poverty gap does not take into account the income distribution among the poor but it is computed as a proportion of a varying poverty threshold. Accordingly, we can argue that the income of the majority of the population has been decreased dramatically during the crisis and that poor people became poorer as the crisis deepened.

The situation becomes truly dramatic when we employ a fixed poverty line. As argued earlier, in periods of large movements of the economy (upwards or downwards), because the entire distribution of income may move up or down, relative poverty may not capture entirely the effects of economic change. Therefore, a comparison between people's economic situation now with that of a few years back (before the change) can provide us with additional insights into the development of poverty. For this purpose we present below poverty rates using a fixed poverty line (60% of the median disposable income reported in 2008 (income of 2007), adjusted for inflation.[11]

Figure 27. Poverty rates in Greece using a fixed poverty line (2008-2013)



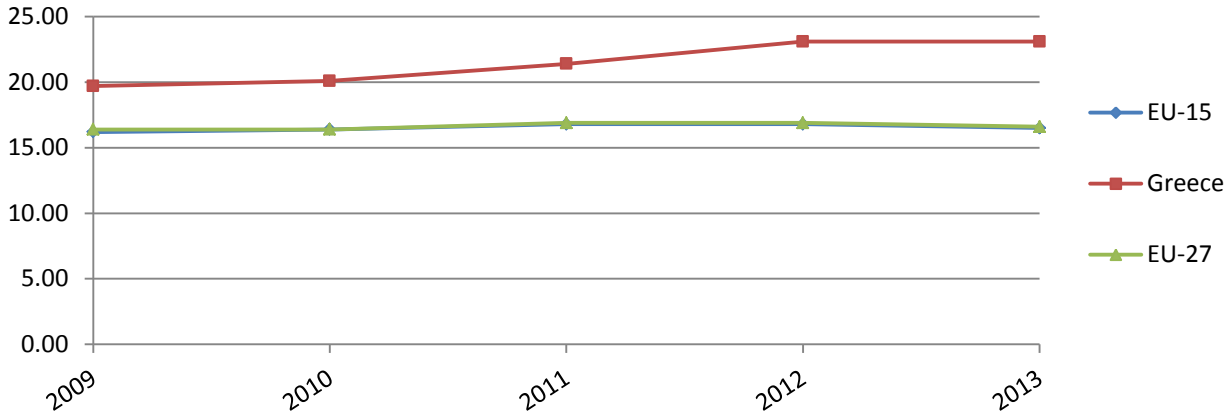
Source: Eurostat

The poverty rate increased by more than 25 percentage points between 2010 and 2013 (from roughly 18% in 2010, to a staggering 44.3% in 2013). This result paints a much bleaker picture than the varying poverty rates described above and indicates that more people have become poorer during the crisis and in particular that close to half the Greek population, had in 2012 less than 60% of the median disposable equivalised income they had in 2007. The previous finding about womens' higher poverty rates holds true in this case as well.

[11] Here the basis year is 2008 and not 2009, because this is how this index is computed by Eurostat. Unfortunately, because micro-data for 2013 was not available at the time of the report's release, we could not compute ourselves the index using as a basis year 2009.

The increase in poverty rates in Greece since 2010 has led to a divergence of the country's poverty levels from both the EU-15 and EU-27 averages, which during the crisis seem to be surprisingly stable (Figure 28).

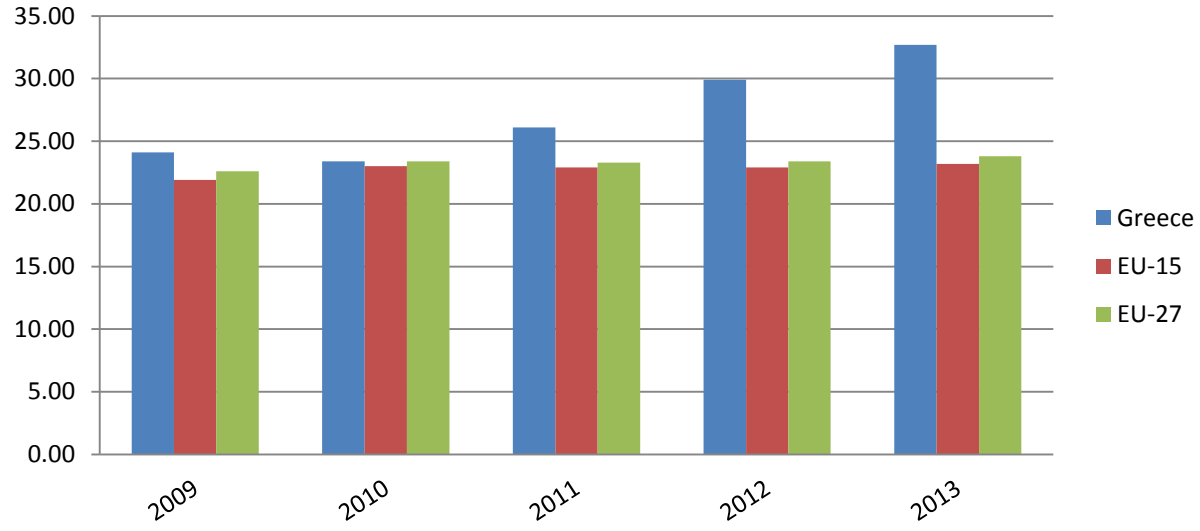
Figure 28. Risk of poverty, Greece, EU-15, EU-27 (%, 2009-2013)



Source: Eurostat

In 2013, the difference between the EU-27 and EU-15 average poverty rate and Greece's poverty rate reached 7.5 and 7.6 percentage points respectively. It is worth noting that for the EU-15 average, for which there is data since 1995, this difference is the largest ever recorded.

Figure 29. Poverty gap, Greece, EU (%, 2009-2013)



Source: Eurostat

A similar picture emerges when we take a look at the poverty gap. While there was an increase in both the EU-15 and EU-27 averages by about one percentage point during the crisis years,

the increase in Greece between 2010 and 2013 is one of 9.3 percentage points. It is worth noting that in 2010 the poverty gap for Greece and the EU-27 on average was the same (23.4%). Moreover, we observe that the increase in EU countries took place in 2009 (income of 2008), as the crisis hit these countries in the direct aftermath of the international financial crisis, one year earlier than Greece.

Having examined various versions of the headline poverty ratio and the poverty gap ratio, we now turn to the Foster, Greer and Thorbecke (FGT) Index. Below, we present the values that each FGT index takes depending on the value of parameter a, which is the poverty aversion parameter. As described in the methodology section, if this parameter is equal to 0 then FGT (0) is equal to the headcount poverty rate. When a=1, FGT (1) is equal to the average poverty gap, i.e. the amount of money needed by a poor person to reach the poverty threshold. Alternatively, for a non-poor person, the index FGT (1) shows the amount of money that this person has to contribute in order to diminish poverty. Finally, when a=2, FGT (2) is equal to the squared poverty gap, which gives an added weight to the lower end of the distribution. Essentially, this index combines information on both poverty and inequality among the poor.[12]

As shown in Table 1, the average poverty gap has been increased by 2.4%. This means that more people lost a large part of their income and fell substantially below the poverty threshold, which confirms the suggestion we put forward based on the analysis of the headline poverty rates. Moreover the increase in the average squared normalized poverty gap, indicates something which we also suggested previously, namely that the poor have become poorer. Of course, this result indicates the size of the negative effect of the crisis and the austerity measures not only on poverty, but also on inequality.

Table 1. FGT indices in Greece (2009 – 2012)

	Value of (a)	2009	2010	2011	2012
Headcount ratio	a=0	0.197	0.200	0.214	0.231
Average normalized poverty gap	a=1	0.063	0.060	0.071	0.087
Average squared normalized poverty gap	a=2	0.045	0.031	0.039	0.054

[12] For the computation of this index, as well as for the following indices in this section, we have used micro-data up to 2012 (incomes of 2011), as the 2013 micro-data were not available at the time of the report's release.

Source: Own calculations, Survey on Income and Living Conditions, 2009-2012

Moreover, according to Table 1 and in line with previous data presented above, the impact of the crisis increased gradually as the crisis deepened.

It is also useful to compute the average poverty gap in monetary terms. In Table 2, we present the average poverty gap from 2009 to 2012 in monetary terms. As expected, the average poverty gap, following a slight drop in 2010, increased in both 2011 and 2012. The cumulative increase of the poverty gap is 25.4%.

Table 2. Average Poverty Gap (in euros, 2009 – 2012)

2009	2010	2011	2012
248.26	235.31	268.01	311.34

Source: Own calculations, Survey on Income and Living Conditions, 2009-2012

The results above are also consistent with findings for the Sen index. As shown in Table 3, during the period 2009-2012, there was initially a small decline in this index but beginning in 2011 the Sen index increased substantially by 3.6 percentage points. This result means that not only poverty and the poverty gap increased, but also that inequality among the poor increased as well.

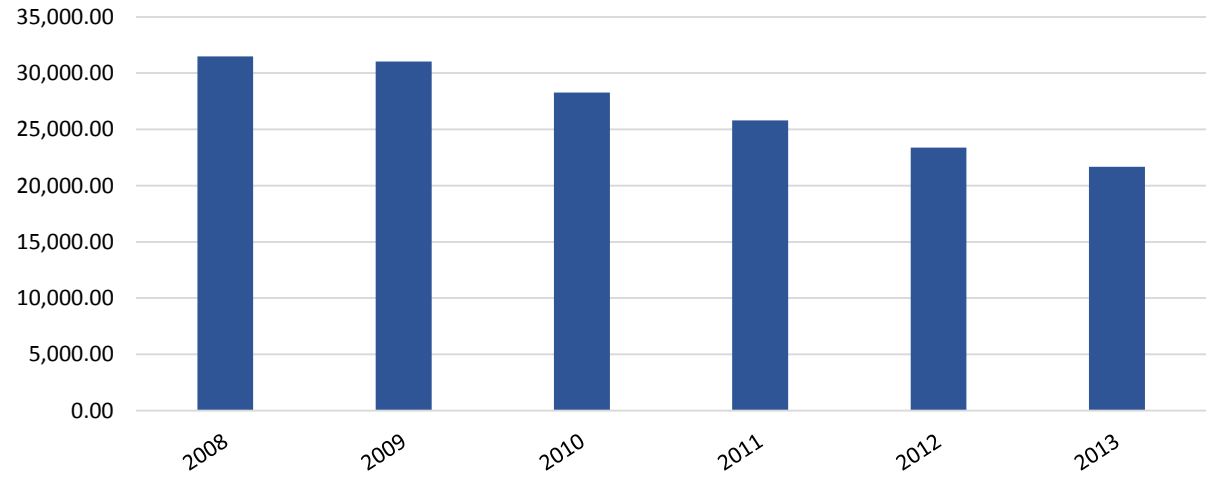
Table 3. Sen Index (2009 – 2012)

2009	2010	2011	2012
0.06555	0.05830	0.07203	0.09470

Source: Own calculations, Survey on Income and Living Conditions, 2009-2012

As noted in the methodology section, except from income, consumption is also used to measure poverty. In this section, we present some data on the crisis' impact on consumption. The analysis concerns the period between 2008 and 2013. We used data from the annual Greek Household Budget Surveys (HBS). First, we calculated the mean total expenditure of each household, as the data is available at household level. As expected, the mean total expenditure declined substantially between 2008 and 2013. As shown in Figure 30, the average expenditure was over 30,000 euros in 2008. Five years later, the average expenditure had decreased cumulatively by roughly 28%, to 21,668 euros.

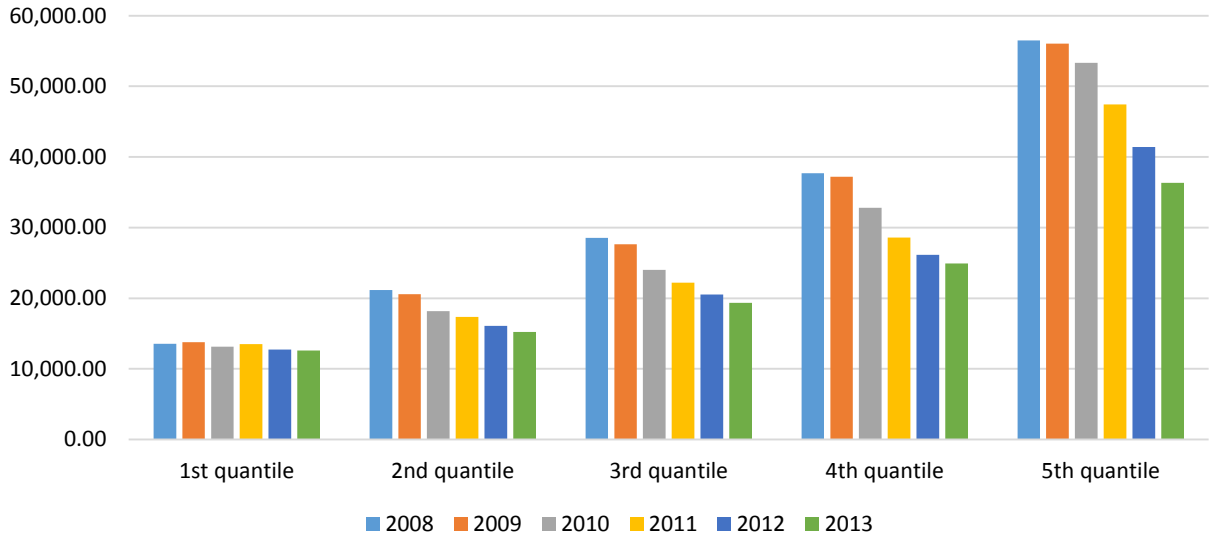
Figure 30. Mean aggregate consumption expenditure in Greece (in euros, 2008-2013)



Source: Own calculations, HBS, 2008-2013

It would be also appropriate to analyse the consumption pattern for different income levels. In particular, it would be interesting to investigate how the poorest households changed their total expenditure during the crisis and how richer households behaved during the same period. We calculated the mean total expenditure for five income groups. The mean total expenditure for all income groups is presented in Figure 31.

Figure 31. Mean aggregate consumption expenditure in Greece per income quintile (in euros, 2008-2013)



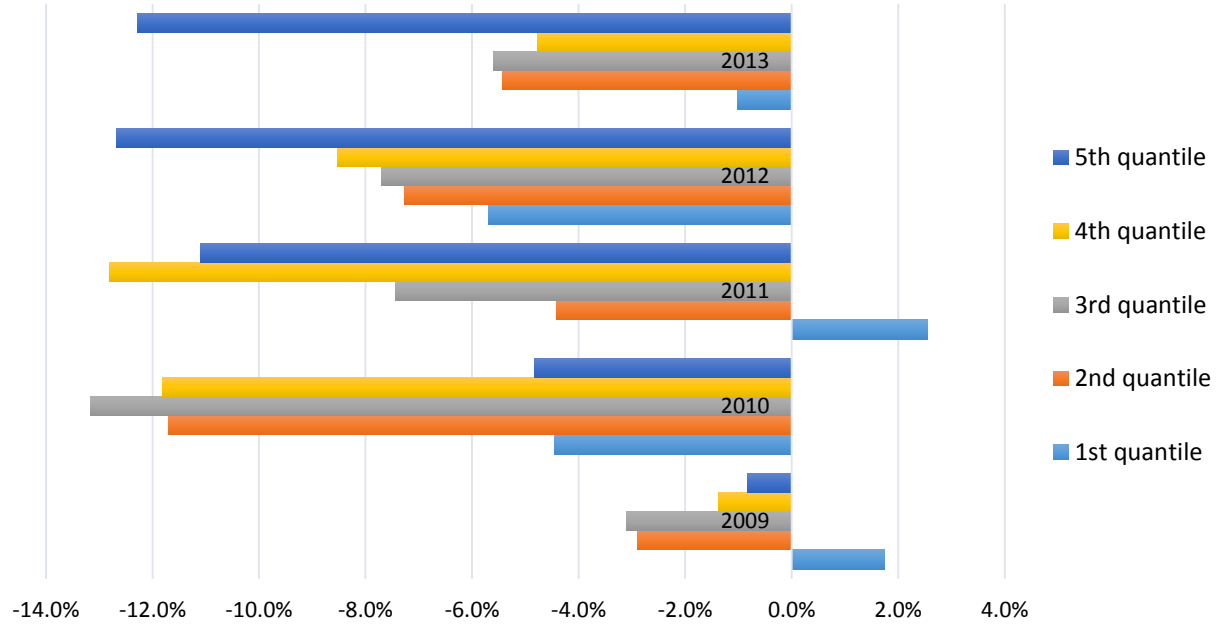
Source: Own calculations, HBS, 2008-2013

The results are in line with the overall economic environment, as it is described by the evolution of the mean total expenditure presented above. Thus, we see that all income groups

experienced a decrease in their mean total expenditure. However, it is interesting to note that the cumulative decrease of the mean total expenditure is above 30% for all income groups except from the first quintile, i.e. the poorest households, for which the cumulative decline is approximately 15%. It is also worth noting that the cumulative decrease is larger as we move from the poorer to the richer income groups (Figure 32).

This may reflect the high inelasticity of consumption in lower incomes as some goods and services are essential and it is not feasible to decrease their consumption substantially. Moreover, this may reflect the fact that households in the lowest quintile had to spend a larger part of their income on these essential goods and services, as prices did not decline in line with income during the crisis. Indeed, for the period under examination, inflation remained for the most part positive. The difference between the lowest quintile and the other quintiles can also be seen in the slight fluctuations in the former as the crisis progressed. In contrast, in other quintiles consumption continued to fall throughout the crisis years, in some cases more sharply as the crisis progressed.

Figure 32. Annual change in aggregate consumption per income quintile in Greece (%, 2009-2013)



Source: Own calculations, HBS, 2008-2013

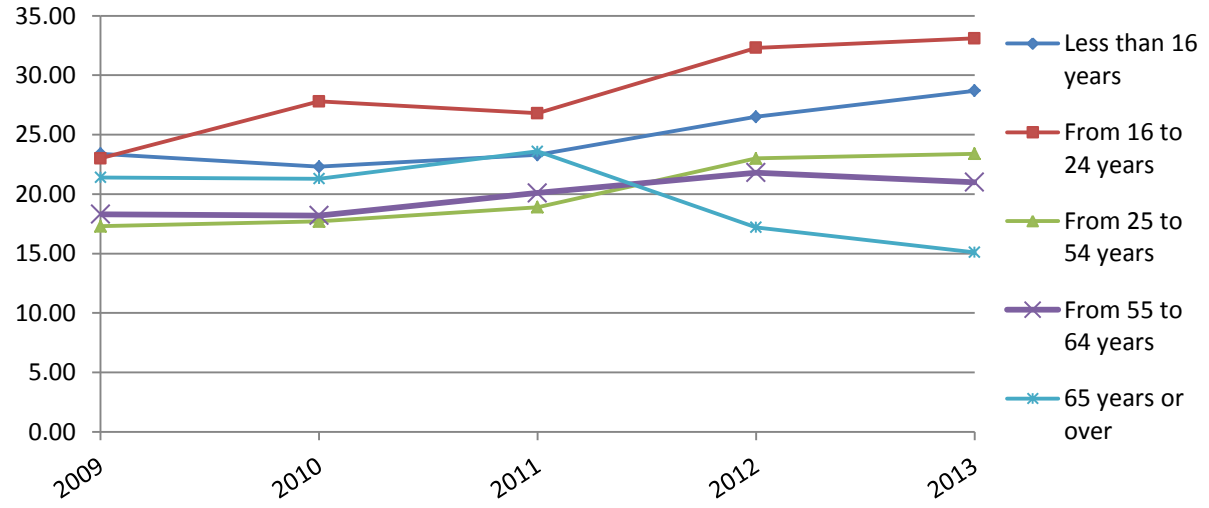
5.1.2 Vulnerable Groups

Next, we move from the measurement of the impact of the crisis on poverty on the entire population, to examining the impact of the crisis to the subgroups that were examined earlier for the period before the crisis.

As before, we begin with an analysis of different age groups (Figure 33). The picture here on the whole is consistent with the trends that we observed before the crisis, with the exception of the elderly. More specifically, we observe that young people, especially those in the age group 16-24, have become more impoverished during the crisis, so much so that in 2013, one in three young people in this age group was below the poverty threshold.

Children less than 16 years old follow suit, their situation having deteriorated since 2010, as is the case also for the age groups 25-64. The interesting twist in this analysis comes from the elderly, whose situation worsens between 2009 and 2011 with their poverty rates increasing from 21.4% to 23.6%, but then declining substantially to 15.1% in 2013, making this age group the less poverty stricken age group. A potential explanation for this development is that as mentioned previously, pensions were hit less than other types of income and therefore when measuring relative poverty rates as above, the position of the elderly (many of whom are pensioners) seems to improve.

Figure 33. Risk of poverty by age group, Greece, (%, 2009-2013)



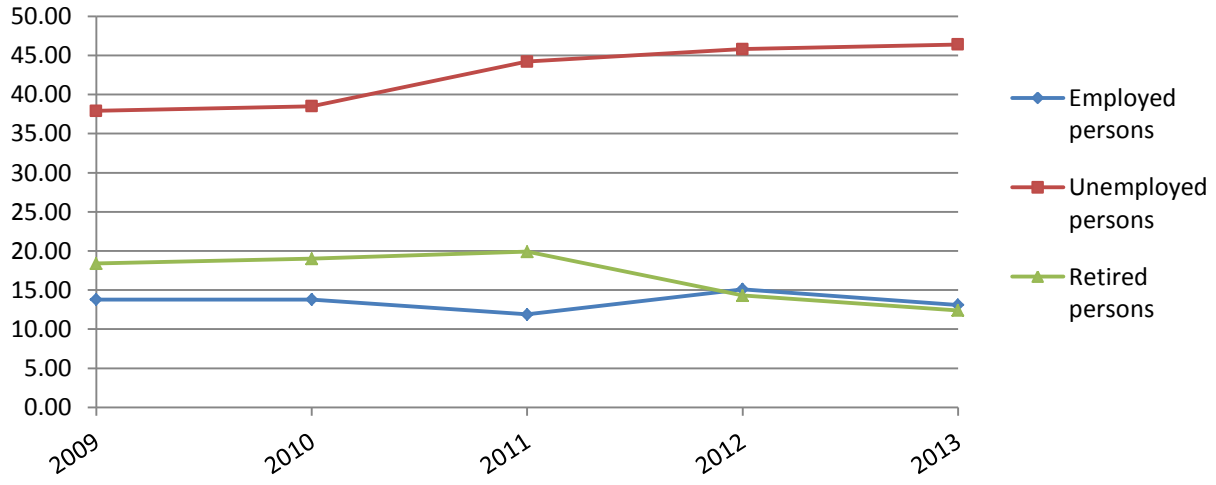
Source: Eurostat

Indeed, this argument seems to be corroborated by data on poverty rates by economic activity (Figure 34). Again we see that retired people are the only group of people whose poverty rates seem to have declined during the crisis, especially after 2011. Their situation stands in stark contrast with that of the unemployed, who are clearly the hardest hit group of people, displaying a significant deterioration of their poverty rates between 2009 and 2013, when a staggering 46.4% of them was below the poverty threshold. The course of poverty among the employed also followed an interesting path, declining between 2009 and 2011, rising sharply in 2012 before declining again in 2013. Thus the employed follow an exactly opposite path from

that of the pensioners until 2013, when their course seems to converge. The decline of the employed poverty rate in 2013 is a development in need of more research and we should be cautious in interpreting as an improvement in the situation of the employed; after all, such an interpretation would run counter the all the other results we have seen so far. One explanation could be that their relative position has improved compared to other groups and in particular the unemployed, whose numbers have swollen since the onset of the crisis.

One word of caution is needed regarding the interpretation of the results in terms of the pensioners. While, their lot since 2012 seems to have improved in relative terms, we should keep in mind that the above measurements are monetary measurements based on income. This does not capture other types of monetary or non-monetary developments, which may increase their social exclusion, like for example access to healthcare services and medicines, which is typically a significant measure of elderly individuals' well-being.

Figure 34. People at risk of poverty by economic activity, Greece (%, 2009-2013)



Source: Eurostat

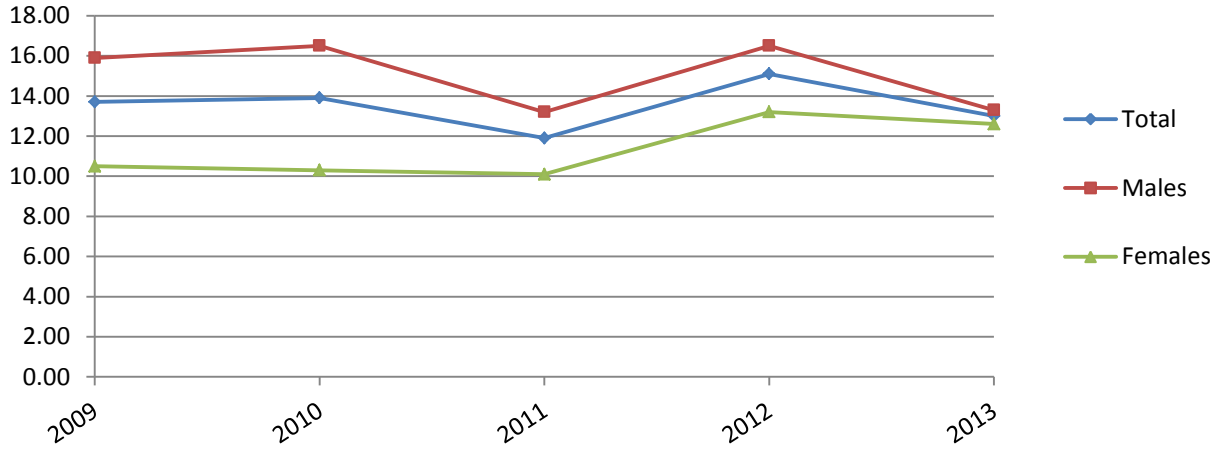
Indeed, according to the findings of a forthcoming report conducted by the ELIAMEP's Crisis Observatory on behalf of the European Foundation for the Improvement of Living and Working Conditions (Eurofound) on the impact of the crisis to access to healthcare services, certain policy measures in the area of healthcare and the insurance system (e.g. increases in co-payment for medicines, introduction of a ticket for accessing public hospitals, restrictions to entitlements for certain treatments or medicines and reductions in benefits) have led to an increase in healthcare costs for patients (Zafiropoulou et al. forthcoming). Moreover, cuts in public funding for public health structures at a time when demand for public healthcare services has increased (as patients cannot afford private services) has meant that waiting times have also gone up, (Zafiropoulou et al. forthcoming). Given that these problems are likely to affect disproportionately the elderly, it is not surprising that according to EU-SILK data, the self-

reported unmet needs for medical examination (because the services were too expensive, too far or there were extended waiting lists) for retired people rose, from 7.6% in 2008 to 9.4% in 2012.

The situation of employed people also deserves a closer look. Already before the crisis we have seen that employment did not guarantee income above the poverty line. This continues to be the case after the onset of the crisis. Indeed, we see that even in 2013, when there seems to be an improvement, employed people faced a poverty rate that exceeded 13%, while in 2010 and 2012 their poverty rate reached 16.5%. What is more, these numbers hide substantial poverty differentials between different types of employed people.

First, as evident from Figure 35, men continued to fare worse than women during the crisis, although in 2013, the difference in their poverty rates declined to less than one percentage point.

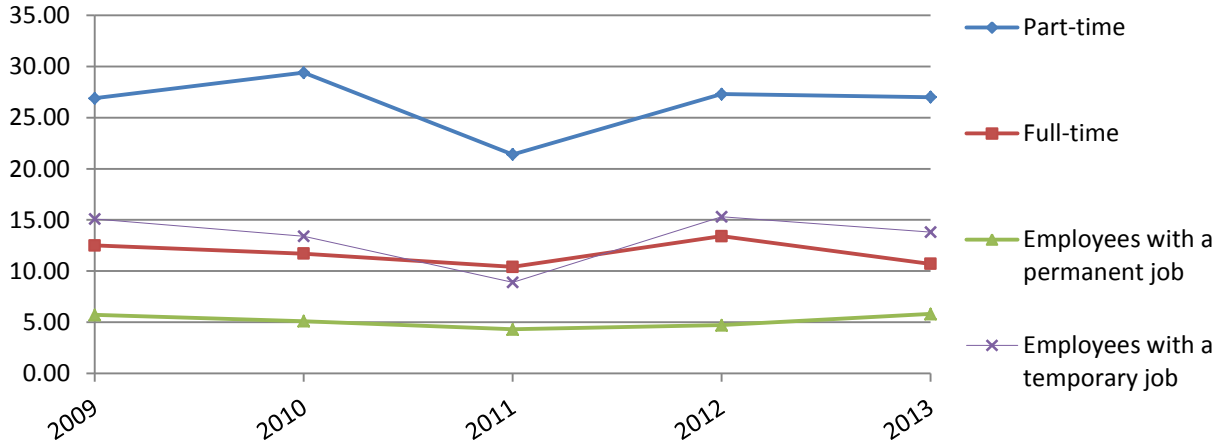
Figure 35. In work at risk of poverty rate by sex, Greece (%, 2009-2013)



Source: Eurostat

Moreover, as noted in the previous section, people in non-typical forms of employment like for example part-time, or temporary work, face significantly higher rates of poverty, a feature that has persisted during the crisis (Figure 36). More specifically, the poverty rates of part-timers' and employees on temporary contracts were 27% and 13.8% respectively in 2013, while the poverty rates of full-timers and employees with permanent contracts ranged at substantially lower levels at 10.7% and 5.8% respectively.

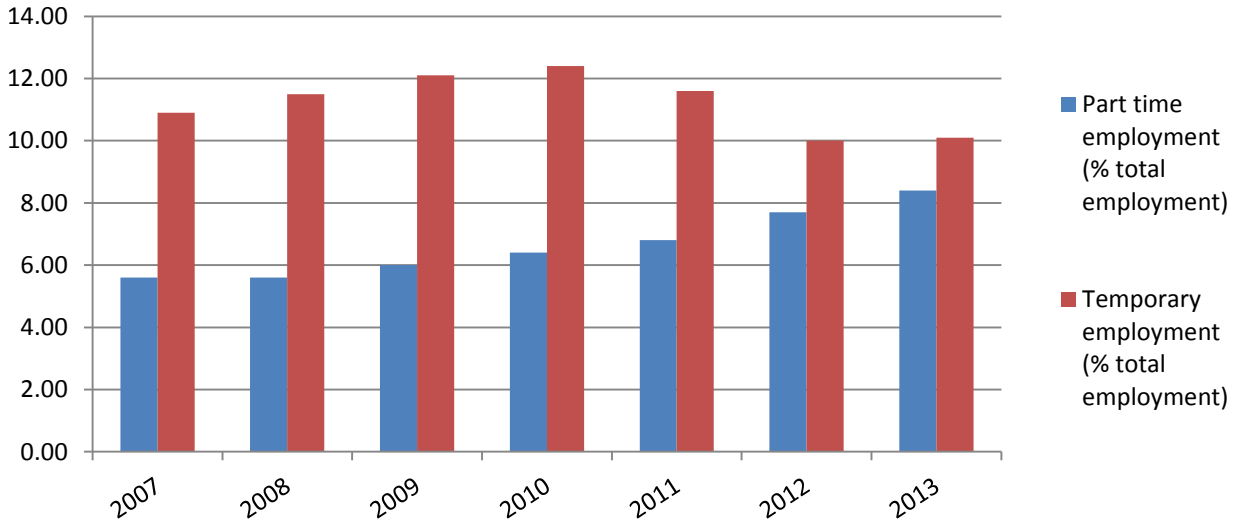
Figure 36. Risk of poverty by type of contract, Greece (%, 2009-2013)



Source: Eurostat

These figures are largely consistent with previous findings and suggest that the situation of employed people in atypical forms of work is far worse compared to that of employees in full time and permanent jobs. At the same time, it should be noted that it is not safe to interpret the movement of these groups' poverty rates during the crisis and that more research is needed in this respect. Nonetheless, one could argue that the prospects of these groups of employees are bleak, when we consider that phenomena of fragmentation of the labour market have increased substantially during the crisis, due to both new labour market legislation and the continued deterioration of the Greek economy. Indeed, according to available data (Figure 37), part-time employment has increased steadily since 2009. On the other hand, temporary employment seems to be decreasing after reaching a peak in 2010. This could be explained by the fact that first, changes in legislation have reduced the cost of firing employees on permanent contracts and therefore there is reduced demand for temporary employees, and second, that the prolonged and deep recession means that increasingly employers simply do not renew temporary contracts.

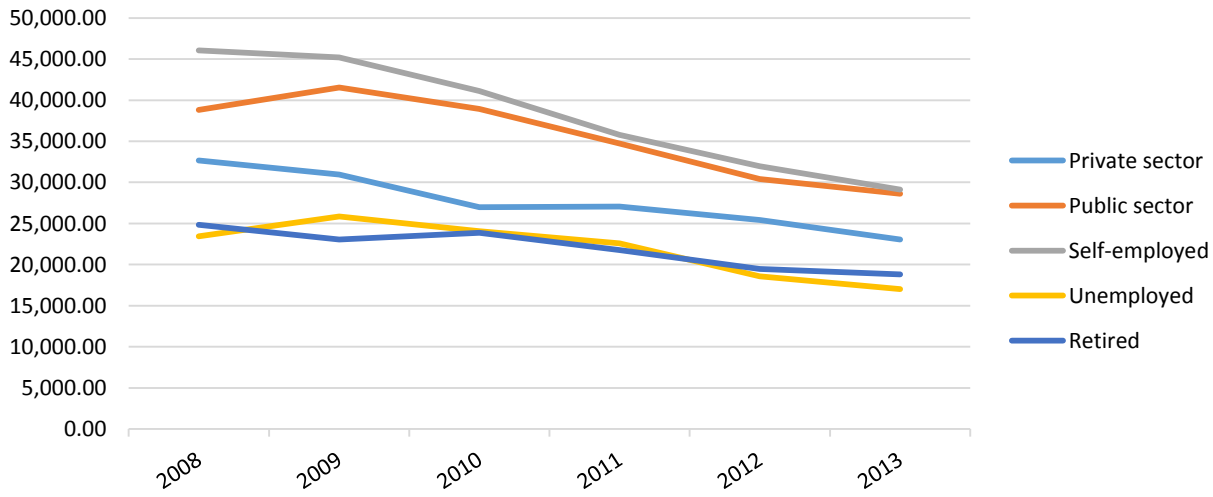
Figure 37. Part time & temporary employment, Greece (%, 2007-2013)



Source: Eurostat

Next, we add an additional layer of analysis in relation to the criterion of economic activity by looking at the consumption of different households, depending on the economic activity/ situation of each household's head (Figure 38). The results show that those hit most by the crisis (as measured by the reduction in their consumption expenditure) are the self-employed, who record a cumulative decline of 36.7%, with private sector employees (29.3%) and the unemployed (27.3%) following suit, while the retired experienced the smallest decline (24.2%).

Figure 38. Mean aggregate consumption expenditure per economic activity of household head in Greece (in euros, 2008-2013)

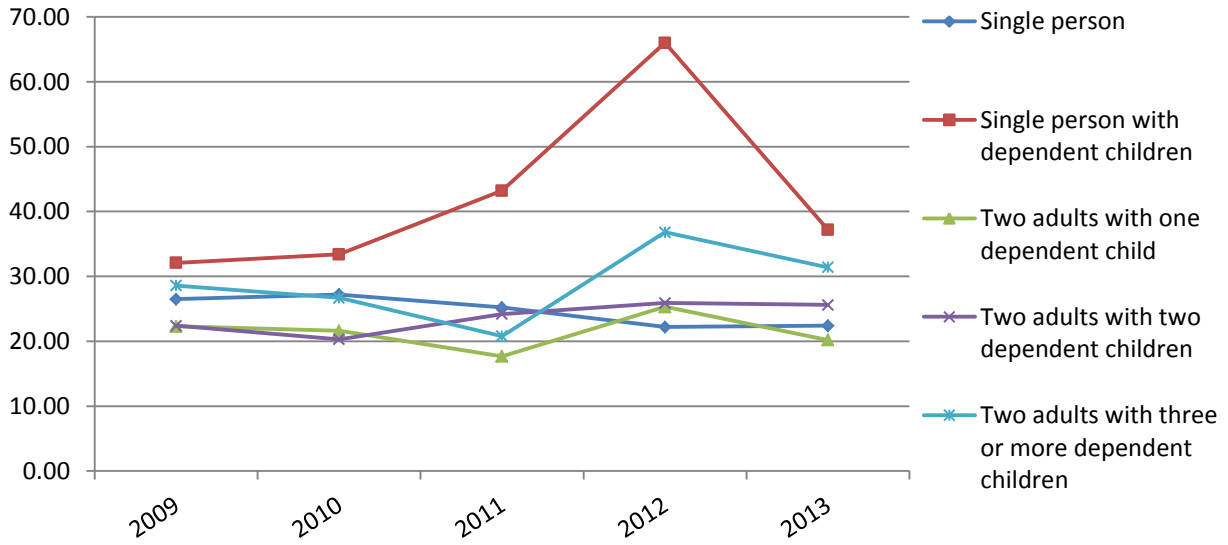


Source: Own calculations, HBS, 2008-2013

This seems to be a different result from our previous measurements based on income, where the unemployed were the group most hit by the crisis. However, as noted earlier, employed people also display substantial poverty rates, particularly when they are employed in atypical forms of work. The self-employed include many people working in part-time and temporary jobs; therefore to some degree the results could be explained by the dynamics of the atypical forms of work described earlier. Moreover, the self-employed typically include many small businessmen who during the crisis have seen their businesses, virtually collapse; however, the self-employed often try to keep their businesses going even when they are not making a profit, while often they do not show up in unemployment records, even if they shut down their business. Moreover, we have to note that the self-employed declined from a particularly high level of consumption and that despite the fact that they experienced the largest decline they continue to enjoy the highest level of consumption, compared to the other groups of economic activity. A similar observation holds for the difference in consumption expenditure levels between the public sector and the private sector employees. The data seem to corroborate studies that argue for a significant income differential between the two categories of employees (Christopoulou and Monastiriotis 2014), a distinction, which it seems continues to hold during the crisis. Finally, it is worth noting that the unemployed and the retired continue to have the lowest levels of consumption after the crisis, as was the case before the crisis.

Moving on to household types, it seems that one of the hardest hit groups of people by the crisis in Greece, are single people with dependent children (Figure 39).

Figure 39. Risk of poverty by household type, Greece, (%, 2009-2013)



Source: Eurostat

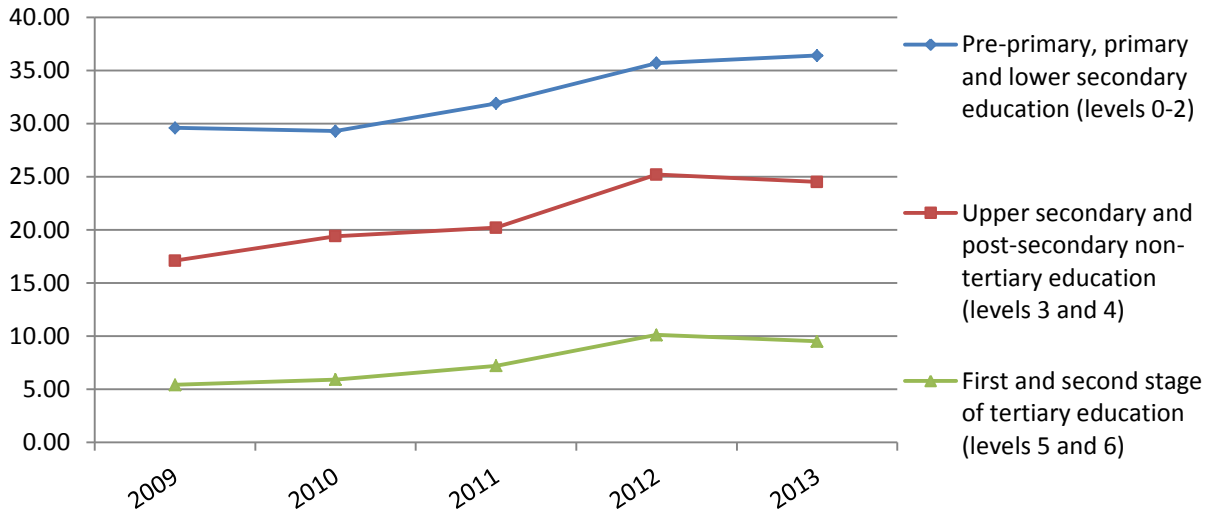
In a complete reversal of the downward trend of the years before the crisis (see Figure 10 above), the poverty rate among this particular group of people has exploded between 2009 and

2012 reaching a staggering 66%. A similar reversal of fortunes is observed for the other group which exhibited high poverty rates before the crisis, the couples with three or more children, which after two years of improving their position, in a space of a single year, between 2011 and 2012, experienced a sharp increase in poverty from 20.8% to 36.8%. The development of poverty among the other types of households is similar, with couples with one dependent child following a similar path as the group of families with three or more children, albeit at much lower levels of poverty, while families with two dependent children improved their position in 2010, before experiencing an increase in poverty the following year. What is very interesting - and difficult to explain- is the reversal that seems to take place in 2013, when particularly the groups that were most adversely hit during the first years of the crisis, like single parent families with dependent children and families with three or more children, seem to experience a substantial reduction in their poverty rates. This finding requires further research, before we can argue that poverty has been truly reduced for these groups.[13]

Finally, the link between educational qualifications and poverty described for the years before the crisis is also confirmed for the years following the onset of the crisis. Again, the highest levels of poverty can be found among those with no or low educational background (levels 0-2), with poverty among those with upper secondary and post-secondary non-tertiary education (levels 3-4) being approximately ten percentage points lower and for those with tertiary education (levels 5-6) a further fifteen percentage points lower. However, it has to be said that although the poverty rate increased for all groups between 2010 and 2012, the largest increase, proportionally, was experienced by the second group, a development in need of further research. Moreover, we observe that in 2013 there was a slight improvement for the most educated groups, while the poverty rate for people with no or low educational background continued to increase (Figure 40).

[13] Indeed, it seems that at least for the group of single parents with dependent children, the observed improvement is at least partly caused by a problem with the data, probably related to the fact that this is numerically a very small group in Greece and therefore the rotation of the sampling population can produce unrepresentative results.

Figure 40. Risk of poverty by education level, Greece (%, total, 2009-2013)



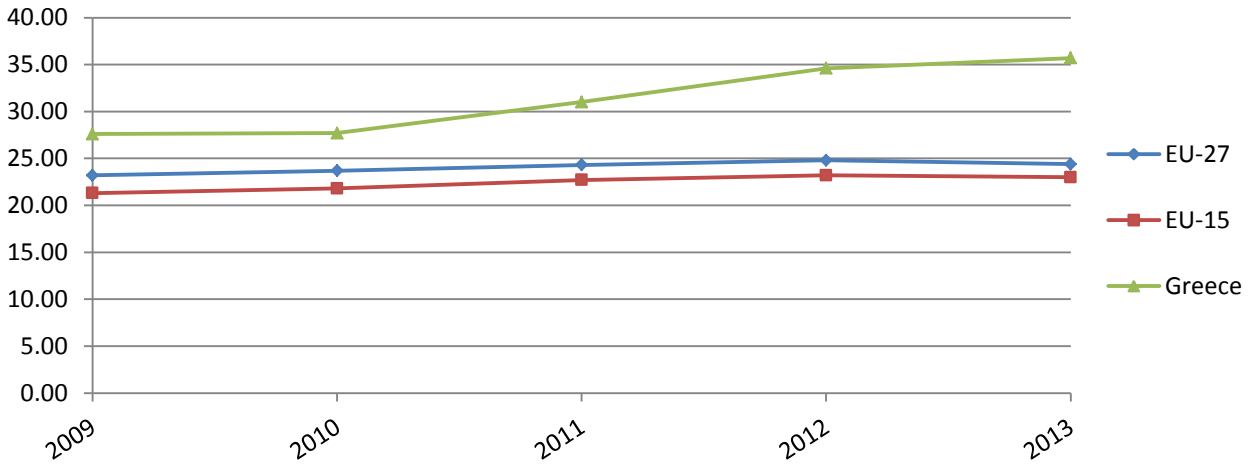
Source: Eurostat

5.2 Social Exclusion in Greece after the crisis

5.2.1 Basic Trends

Turing to social exclusion, we see that the downward trend observed since the mid-2000s (Figure 15) has been reversed after the crisis. Following a slight decrease in 2009 (compared to 2008), between 2010 and 2013 the AROPE rate increased substantially, from 27.6% to 35.7% (Figure 41). Given that during the same period poverty increased from 20.1% to 23.1% (Figure 23), we can argue that although monetary poverty did not increase dramatically (because as we saw above the entire income distribution moved downwards, thereby keeping *relative* poverty rates somewhat stable), social exclusion increased substantially. This is not unexpected, since as we saw previously, people have become impoverished to a considerable degree, when poverty is measured using a fixed poverty line anchored in the income of 2008, while the prices of goods and services did not decline to the same degree during this period, and new, additional costs had to be taken into account (like for example increased taxation). Indeed, the discussion about the consequences in healthcare costs and waiting times and therefore access to healthcare services in a previous section, is a case in point.

Figure 41. People at risk of poverty or social exclusion (%, 2009-2013)



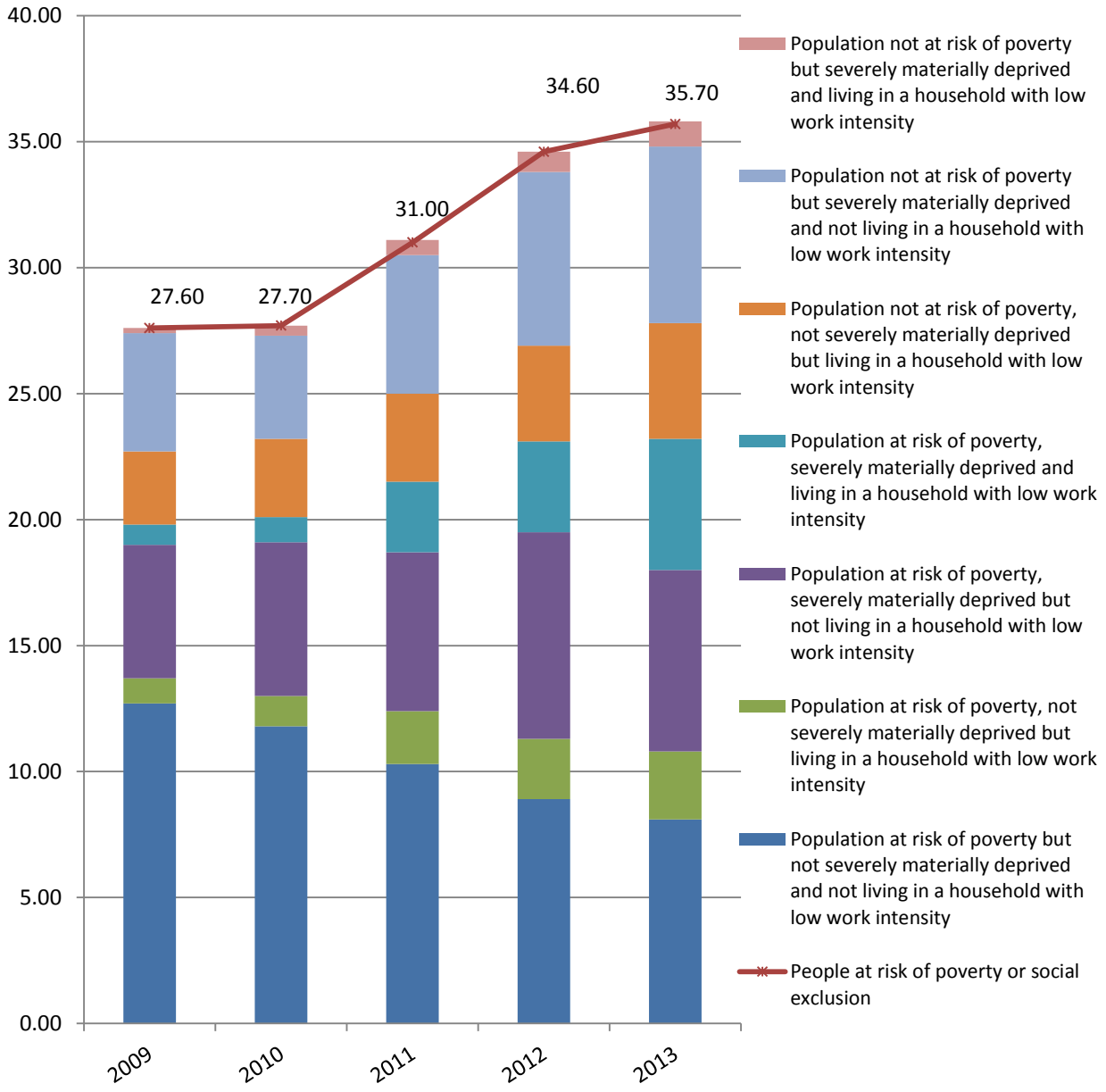
Source: Eurostat

Also, from Figure 41, we observe how much more the situation has deteriorated in Greece compared to Europe. It is evident that the social impact of the crisis has been much more pronounced in Greece, compared with most other EU countries.

Turning now to the composition of social exclusion, we see that the percentage of people in poverty without severe material deprivation and not living in households of low work intensity declined from 12.7% in 2009 to 8.1% in 2013 (Figure 42). At the same time, the percentage of

people experiencing poverty with severe material deprivation, but not living in households of low work intensity increased substantially from 5.3% in 2009 to 7.2% in 2013, as did the percentage of the population who, while not in poverty and not in a household with low work intensity, were severely materially deprived (from 4.7% in 2009 to 7% in 2013). Finally, the number of people who were poor, severely materially deprived and living in a household of low work intensity recorded a significant increase, from 0.8% in 2009 to 5.2% in 2012.

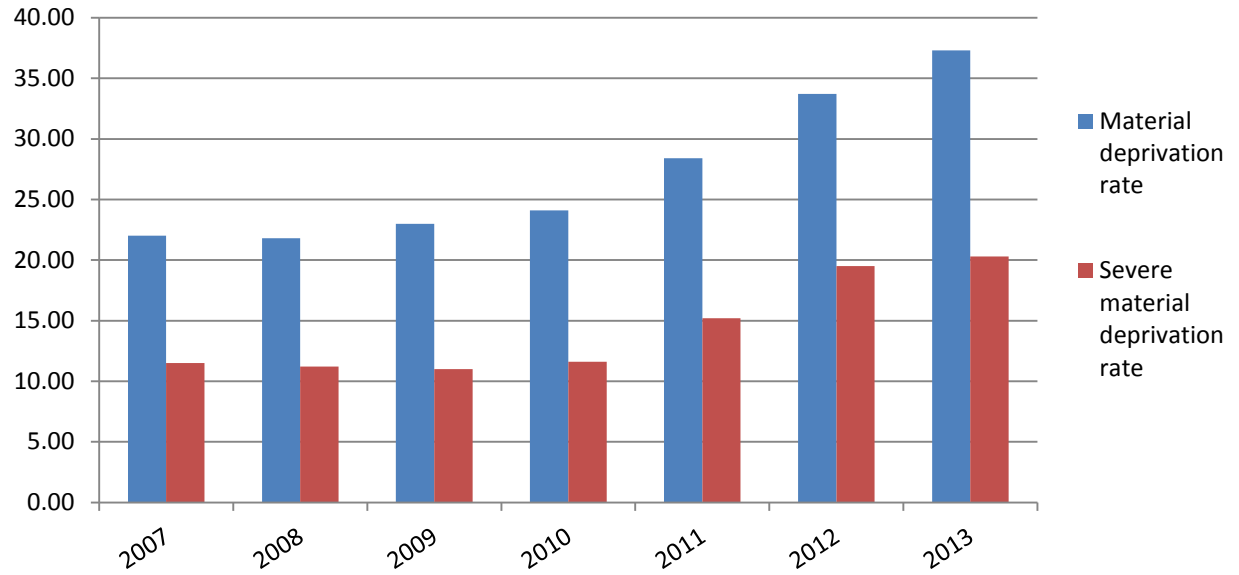
Figure 42. People at risk of poverty or social exclusion, Greece (2009-2013)



Source: Eurostat

In effect, there has been an across-the-board increase in the number of people who are severely materially deprived, irrespective of their other circumstances (i.e. being poor or living in a house with low work intensity). This analysis is confirmed by more explicit data on material deprivation in Greece (Figure 43). Indeed, material deprivation increased substantially from 23% in 2009 to 37.3% in 2012, while severe material deprivation almost doubled from 11.2% in 2009 to 20.3% in 2013.

Figure 43. Material deprivation and severe material deprivation, Greece (%, 2009-2013)



Source: Eurostat

5.2.2 Food Insecurity

A particularly worrisome aspect of the crisis in Greece has been the issue of food security. While there is little known about the true extent of the problem, daily soup kitchens organized by municipalities, NGOs and the Church across the country, which cater to the needs of an increasing number of citizens, have become a commonplace phenomenon in recent years. In this report we devote a separate section to this issue, because it has become one of the most visible symptoms of the crisis and much of the public debate on the crisis has been devoted to it, but also because we are fortunate to have, what is probably the only data available on food security in Greece during the crisis, provided for the purposes of this research programme by the Institute of Preventive Medicine, Environmental and Occupational Health, Prolepsis.

As far as the general population is concerned, in Surveys on Income and Living Conditions (SILC), we can obtain information related to the capacity of each household to afford a meal with meat, chicken or fish (or vegetarian equivalent) every second day. Information is selected at household level and is related to the dimensions of material deprivation. Below (Table 4), we

present the proportion of the total population that cannot afford the aforementioned meal. We see that during the crisis the number of people that cannot afford a meal with meat, chicken or fish every second day doubled, reaching 14.1% in 2012 up from 7.1% in 2008.

Table 4. Inability to afford a meal with meat, chicken, fish (or vegetarian equivalent) every second day, Greece (% of total population, 2008-2012)

2008	2009	2010	2011	2012
7.1%	7.6%	7.9%	9.2%	14.1%

Source: Eurostat

Moreover, a closer look at the people below the poverty line reveals that poor individuals' ability to eat a meal with meat, chicken or fish every second day decreased dramatically during the crisis (Table 5). In 2008, before the onset of the crisis in Greece, 29.74% of the poor could not afford a meal that met the aforementioned specifications. While this proportion decreased in 2009 and 2010, in the next two years it exploded upwards. In 2012 almost half of the poor people could not afford to eat meat, chicken or fish every second day.

Table 5. Inability to afford a meal with meat, chicken, fish (or vegetarian equivalent) every second day, Greece (% of poor people, 2008-2012)

2008	2009	2010	2011	2012
29.74%	24.52%	22.51%	42.22%	49.15%

Source: Own calculations, Survey on Income and Living Conditions, 2009-2012

The plight of the poor comes into even sharper focus when we examine the data provided to us by Prolepsis. Prolepsis has been running, since 2012, the Food Aid and Promotion of Healthy Nutrition Program, DIATROFI, with main funding from the Stavros Niarchos Foundation. The programme was approved and run under the auspices of the Ministry of Education and Religious Affairs, Culture and Sport. Detailed data on the general population of Greece does not exist. The recorded food insecurity levels in the context of this programme, which are the only available, do not represent the situation in the whole country or general regions, since schools were knowingly selected because of low regional economic indicators and accordingly the results reported here-in cannot be generalized for the entire population. Nonetheless, we believe that they are of great interest and they provide useful insights into the situation of the poor; in this sense, this data can be seen as an additional exercise in the analysis of the depth of poverty in Greece, in the aftermath of the crisis.

The program started in pilot implementation in April-June 2012, with 34 schools and 6,272 students and continued in the school years 2012-2013, with 162 schools and 25,349 students and in 2013-2014, covering 406 schools with 61,876 students. The aim was to provide meals to

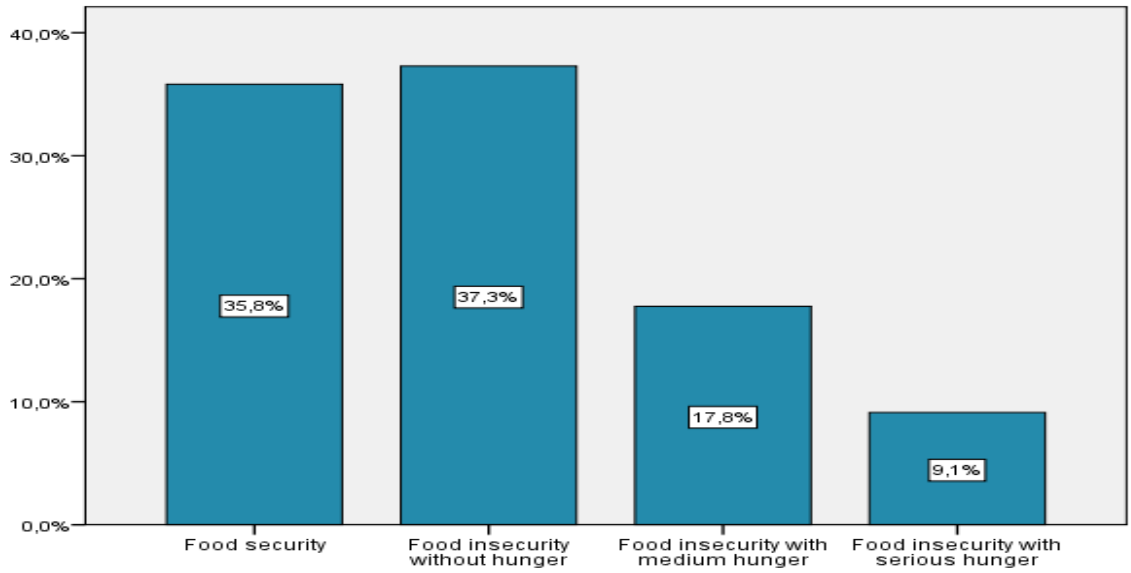
children attending schools in underprivileged areas, while also promoting healthy nutrition. Schools were selected at the neighbourhood level, based on taxable income data provided by the Ministry of Finance, unemployment data provided by the Manpower Employment Organization and written reports by school principals providing estimates of the number of students facing food insecurity and special characteristics of schools (i.e. students from social institutions, parental unemployment, Roma students, fainting episodes).

Food insecurity levels were measured through the FSSM (Food Security Survey Module) questionnaire administered to parents (Deitchler et al. 2011). FSSM contains 18 questions concerning characteristic incidents of food insecurity (stress caused by lack of food, inadequate quality and quantity of food consumed, related biological consequences, such as weight loss, etc.). The sum of insecurity-affirming responses produces a score ranging from 0 to 18, with higher numbers indicating higher food insecurity. The score is used to determine the level of food insecurity, as categorized on a four-point scale: "food security" (score 0-2), "food insecurity without the experience of hunger" (score 3-7), "food insecurity with medium experience of hunger" (score 8-12), and "food insecurity with serious experience of hunger" (score 13-18).

Families residing in low socioeconomic areas of Greece, which were selected to participate in the food aid program, were found to experience high levels of food insecurity. More specifically from the 162 schools with 25,349 students participating in the 2012-2013 programme, 15,897 well-completed questionnaires were returned by the parents. The 64.2% of households was found to be food insecure (Figure 44). It is worth noting that data from developed countries show that in 2011-2012, 8.3% of Canadian households were food insecure,[14] and in 2012, in the United States 14.5% of households were food insecure (Coleman-Jensen et al. 2013). Moreover, 26.9% of the students' households participating in the program were found to experience hunger. For 48.4% of the students participating in the program, one of their parents was not receiving income (either from employment or retirement), while for the 17.1% of students none of their parents was employed or retired (Table 6). Households in which the parents were unemployed experienced higher levels of food insecurity. It is indicative that in households in which both parents were unemployed and not retired, food insecurity with hunger was up to 50%.

14 Household Food Insecurity, 2011-2012. Statistics Canada, available at: http://www.statcan.gc.ca/pub/82-625-x/2013001/article/11889-eng.htm#n2)

Figure 44. Food insecurity levels as measured in the schools participating in the 2012-2013 DIATROFI program



Source: Institute of Preventive Medicine, Environmental and Occupational health, Prolepsis

Table 6. Food insecurity levels as measured in the schools participating in the 2012 - 2013 DIATROFI program according to employment status

Employment status	% of Total	% food security	% food insecurity without hunger	% of food insecurity with hunger (medium or serious)
Both parents employed or retired	34.0	50.5	35.0	14.5
One parent employed or retired	48.4	35.8	40.2	24.0
None parent employed or retired	17.1	13.6	36.5	49.9
Total	100.0	35.8	37.3	26.9

Source: Institute of Preventive Medicine, Environmental and Occupational health, Prolepsis

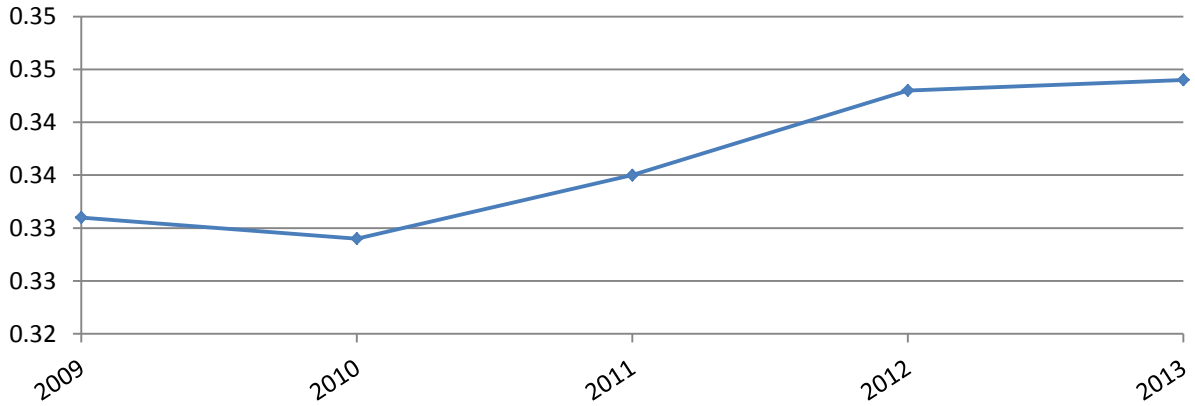
The data paints a truly bleak picture. These numbers are without precedent for a developed country in peace time. Of course, it has to be stressed, once again that they do not represent the actual situation for the whole country, nonetheless they give us a very strong indication that the situation in the lower socio-economic strata of the Greek society has truly

deteriorated, thereby corroborating, similar conclusions reached in previous sections of this report.

5.3 Inequality in Greece after the crisis

In view of the previous results it is not surprising to see that inequality also increased in Greece during the crisis. More specifically, following a decline in 2009 and 2010, which continued the downward trend of 2008 (Figure 18), inequality rose in 2011, 2012 and 2013 reaching 0.344, which is equal to Gini coefficient's value of 2006 and close to the levels of inequality observed in the late 1990s (on average 0.346). The fact that initially the coefficient declines, not only in 2009 (incomes of 2008), but also in 2010 (incomes of 2009), when the crisis had truly struck the country, but as of yet no austerity measures were adopted, indicates, that the losses from the decline in GDP experienced in 2009, were somewhat more equally distributed in Greek society. However, beginning in 2011, when the effects of the first austerity policies were felt, inequality begun to rise, which gives us an indication that the policies implemented as part of the Memorandum in 2010 and 2011, may have increased inequality.

Figure 45. Gini coefficient, Greece (2009-2013)

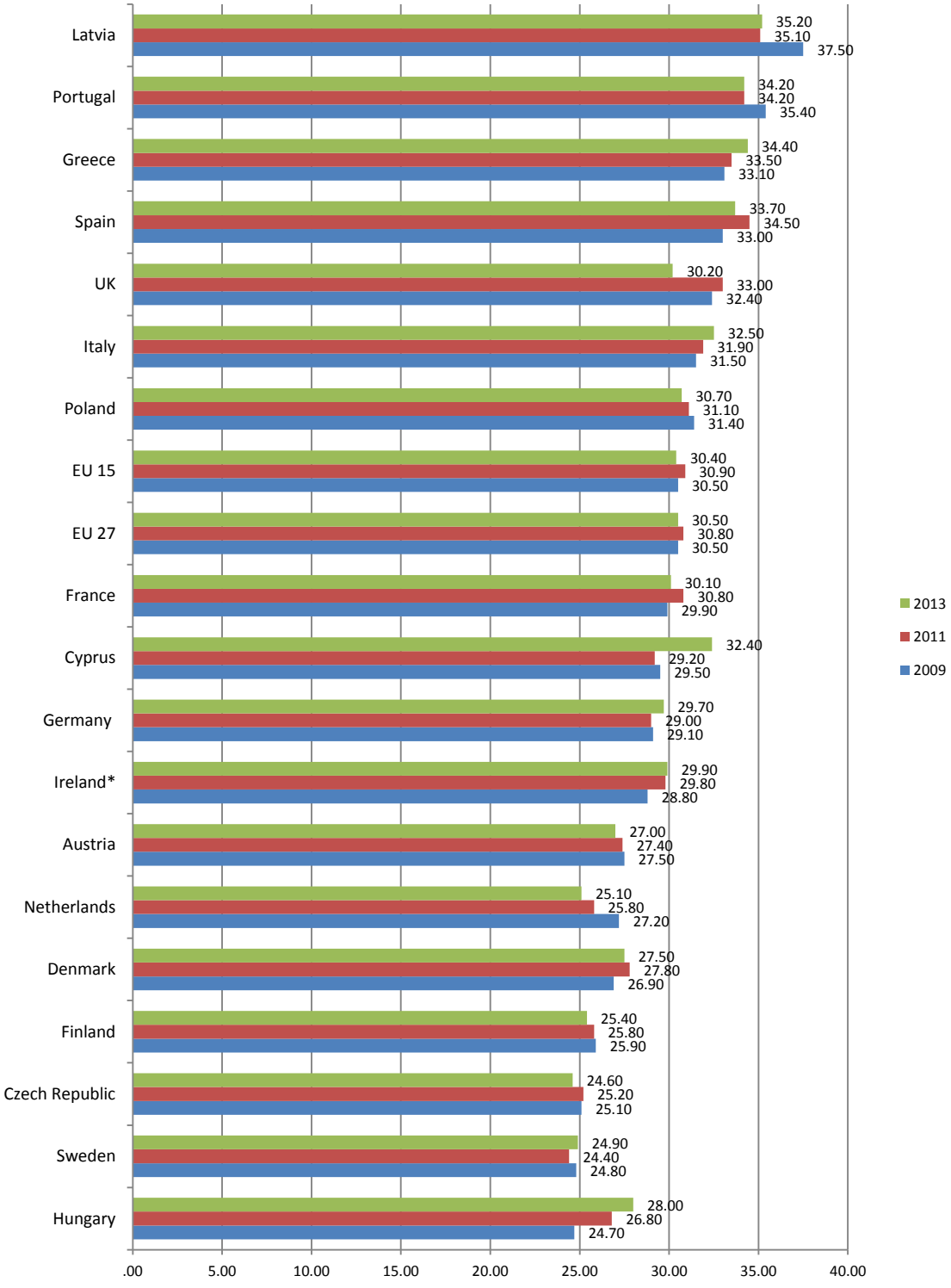


Source: Own calculations, Eurostat

These levels of inequality are among the highest in the EU (Figure 46). Crisis hit countries like Latvia and Portugal, while exhibiting high levels of inequality present an improved picture in 2011 and 2013 compared to 2009. In Spain, while inequality increased more than Greece in 2011, in 2013 the Gini coefficient is reduced, while the Greek situation continues to deteriorate. Only in Cyprus and to a much lesser degree Hungary, did inequality increase more than in Greece between 2011 and 2013. It is also noteworthy, albeit perhaps not surprising, the fact that of the eleven countries which exhibit values above or around 30% in Figure 46, seven

(Latvia, Greece, Ireland, Portugal, Spain, Italy, and Cyprus) have experienced a severe economic crisis in recent years.

Figure 46. Gini Coefficient (x 100, 2009, 2011, 2013)

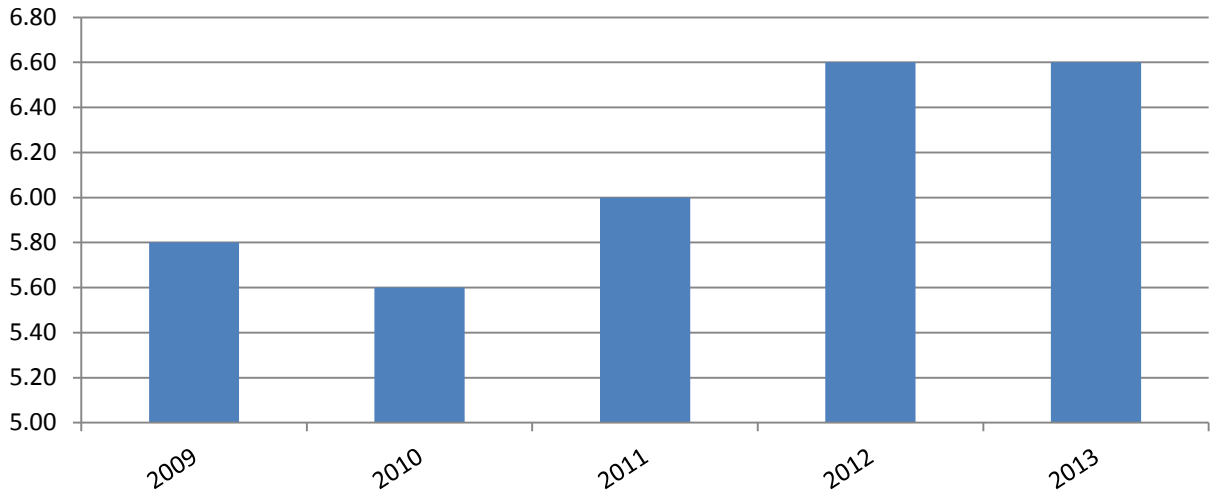


***2012**

Source: Eurostat

The picture of inequality that emerges from the data on the Gini coefficient is corroborated by the data on the S80/20 index (Figure 47). Again, following a decline in 2009 and 2010, the S80/20 index rises in 2011 and 2012 and stays stable in 2013 to levels not seen since the 1990s.

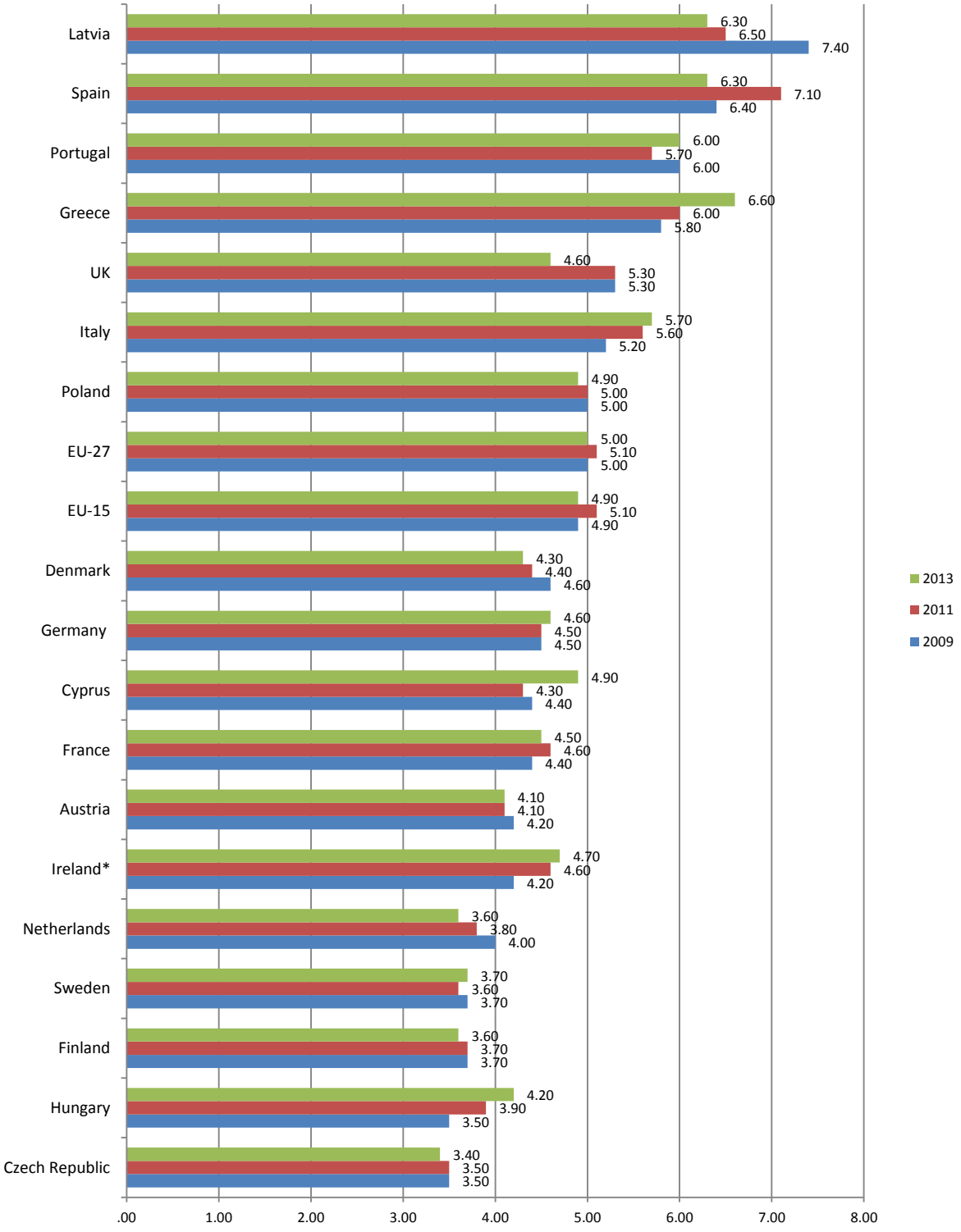
Figure 47. Index of income distribution S80/S20, Greece (2009-2013)



Source: Eurostat

In terms of comparison with Greece's partners in the EU, again the picture that emerged from the Gini coefficient is corroborated. Greece is among the worst performers overall and one of the countries experiencing a significant increase in inequality during the crisis. Latvia and Spain despite the high levels of inequality display an improvement from 2009 to 2013, while Portugal after a decline in the value of the index in 2011, in 2013 moved again upwards to 2009 levels. Greece and Cyprus display the largest increase in the index between 2011 and 2013.

Figure 48. Index of income distribution S80/S20 (2009, 2011, 2013)



***2012**

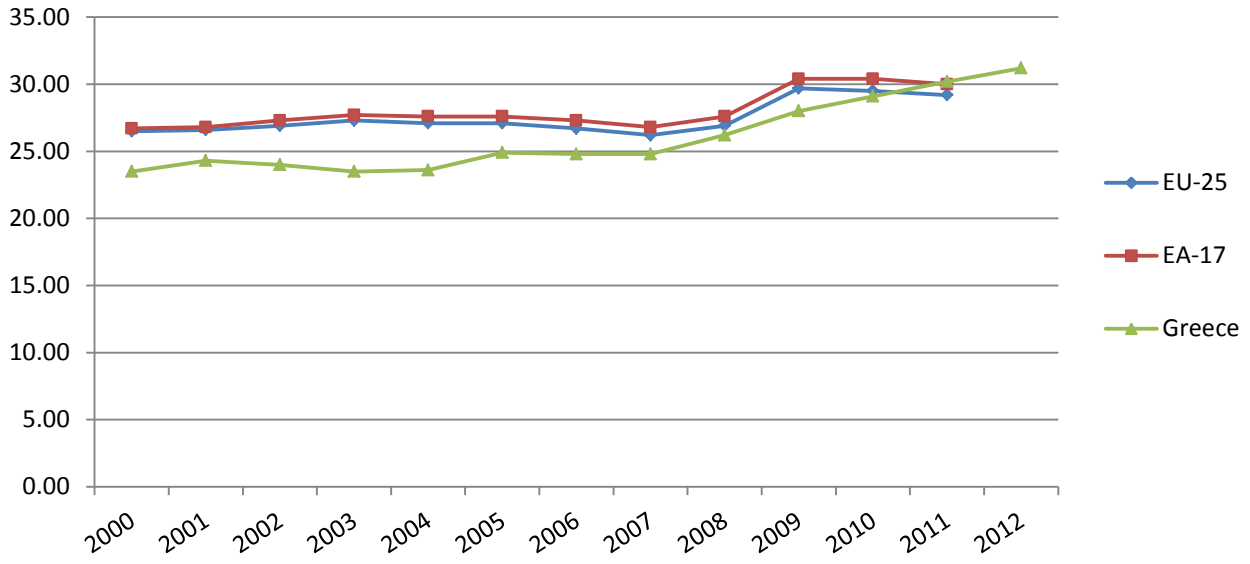
Source: Eurostat

6. The Impact of Social Policy on Poverty and Social Exclusion before and after the Crisis

Following our overview of the impact of the crisis on poverty, social exclusion and inequality in Greece, in this section, we will briefly discuss the role of social policy in tackling these phenomena both before and after the crisis.

Traditionally, the welfare state in Greece has been criticized for being inadequate, fragmented and operating on a clientelist basis.[15] Unsurprisingly then, researchers have traditionally found that the Greek welfare state's contribution to the reduction of poverty, social exclusion and inequality has been lacking, particularly when compared to other European countries whose welfare state belong to the social-democratic and corporatist-statist varieties (e.g. Dafermos and Papatheodorou 2010; Balourdos and Naoumis 2010). In other words, the Greek welfare system is ineffective. First, this is due to resources. From Figure 49, we see that the total expenditure for social protection in Greece has been traditionally below the European average. Thus for example, for the period 2000-2007 Greece spent on average 24.2% of its GDP on social protection, while EA-17 countries for the same period spent on average 27.2% of their GDP, that is, a differential of 3 percentage points.

Figure 49. Social protection expenditure, Greece, European Union, Euro area (% GDP, 2000-2012)

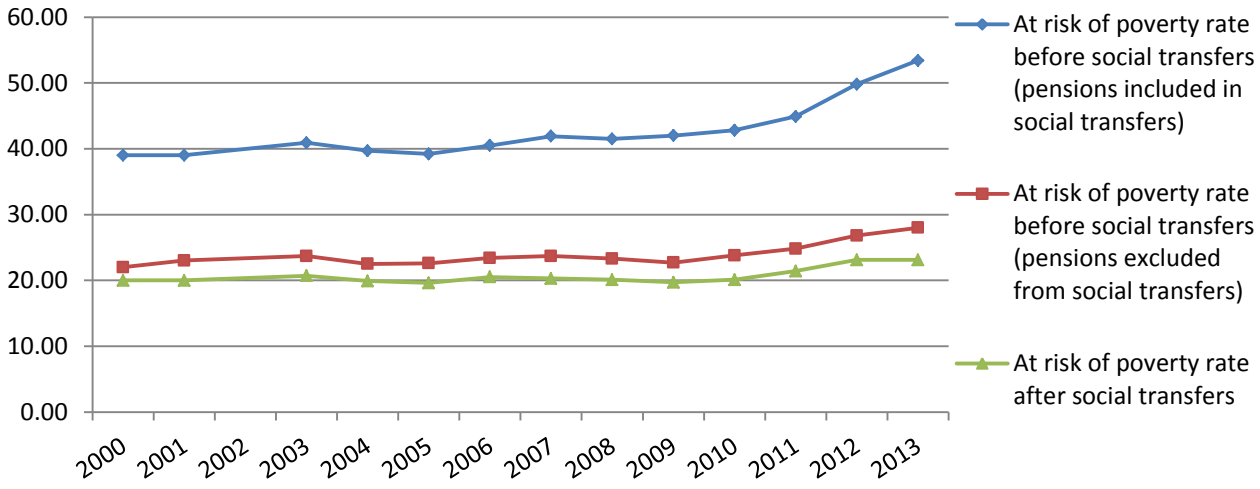


Source: Eurostat

[15] For a more detailed analysis of this critique and an overview of the related literature see the policy paper on social policy by D. A. Sotiropoulos, which accompanies this social profile report.

In addition to lower resources however, what seems to be even more important is the low effectiveness of the system in tackling poverty. We see that throughout the 2000s, social transfers reduced the risk of poverty by approximately 20 percentage points on average (Figure 50).

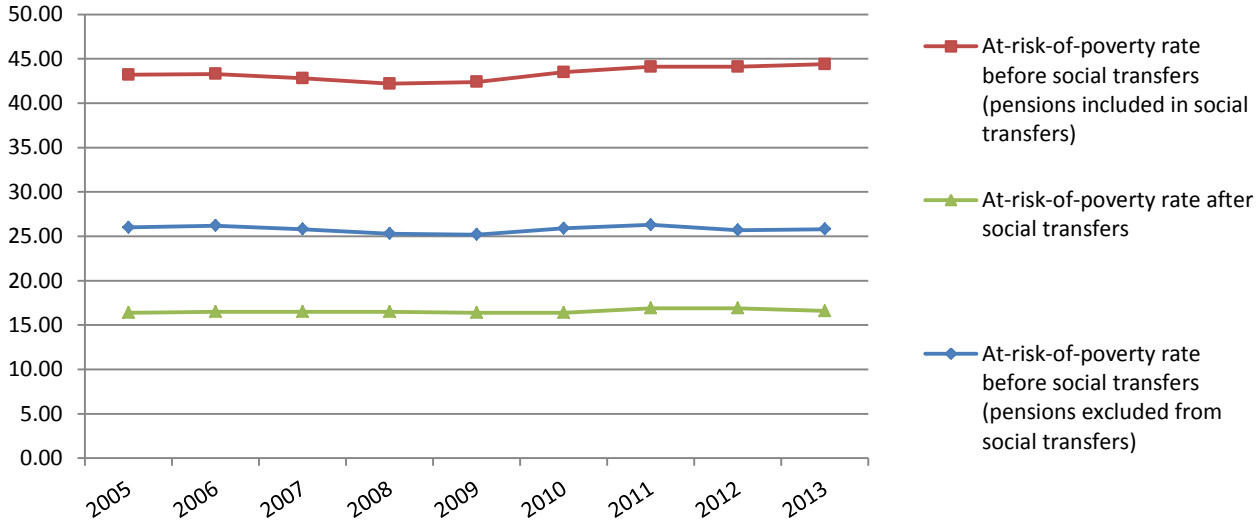
Figure 50. At risk of poverty rate before and after social transfers, Greece (%, 2000-2013)



Source: Eurostat

In contrast, the other European welfare systems seem to be on average, much more effective in combatting poverty.

Figure 51: At risk of poverty rate after social transfers, European Union (27 countries) (2005-2013)

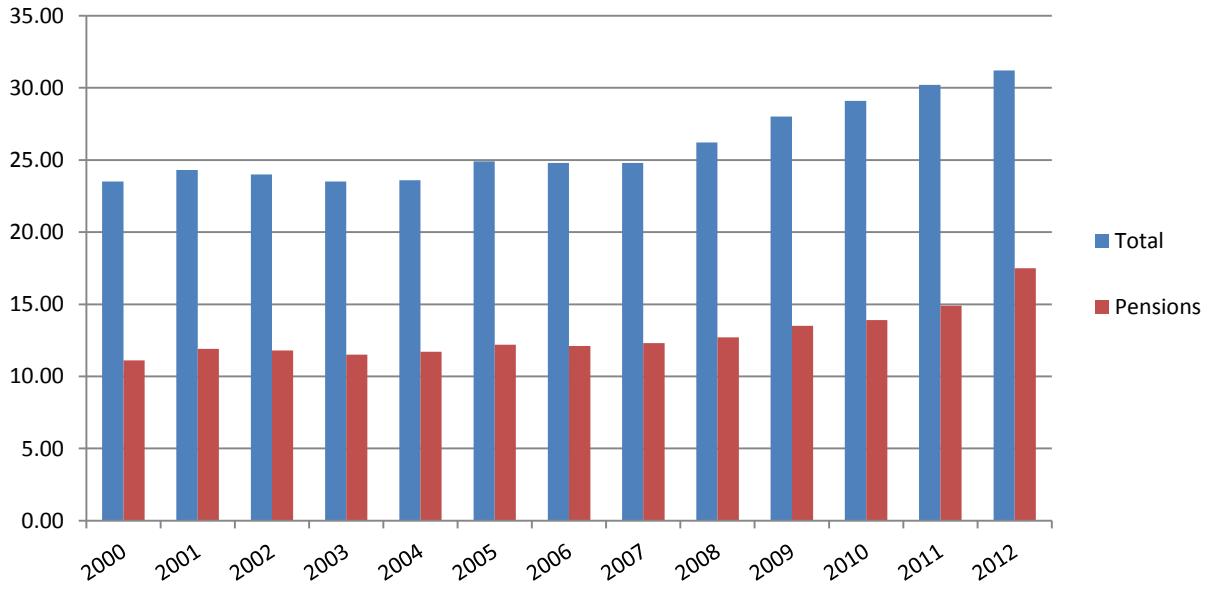


Source: Eurostat

Between 2005 and 2008 the average poverty rate before social transfers for the EU-27, was 42.9%. After social transfers this figure was reduced on average, for the same period, to 16.5%, that is, a reduction of 26.4 percentage points, a substantially greater improvement in poverty rates, compared to Greece (Figure 51).

What is more, we observe that most of the reduction in poverty in Greece comes primarily through pensions, while the contribution of other types of transfers (e.g. disability, family or housing benefits) contribute only marginally to the reduction of poverty (roughly 3 percentage points on average between 2000 and 2008). In contrast, for the EU-27 during 2005-2008, other types of social transfers, excluding pensions, contributed on average 9.3 percentage points to the reduction of poverty, that is, more than three times the contribution of other social transfers in Greece. This finding is probably related to the fragmented nature of the Greek welfare system, which does not provide universal social services to the entire population, a policy which seems to be contributing substantially in the reduction of poverty in other countries, but targets instead specific groups of people (Dafermos and Papatheodorou 2010). The main policy instrument for reducing poverty in Greece continues to be the pension system, which makes up almost half of the total social expenditure in Greece (Figure 52) and which of course is only partly redistributory, given that pensions are largely based on own contributions.

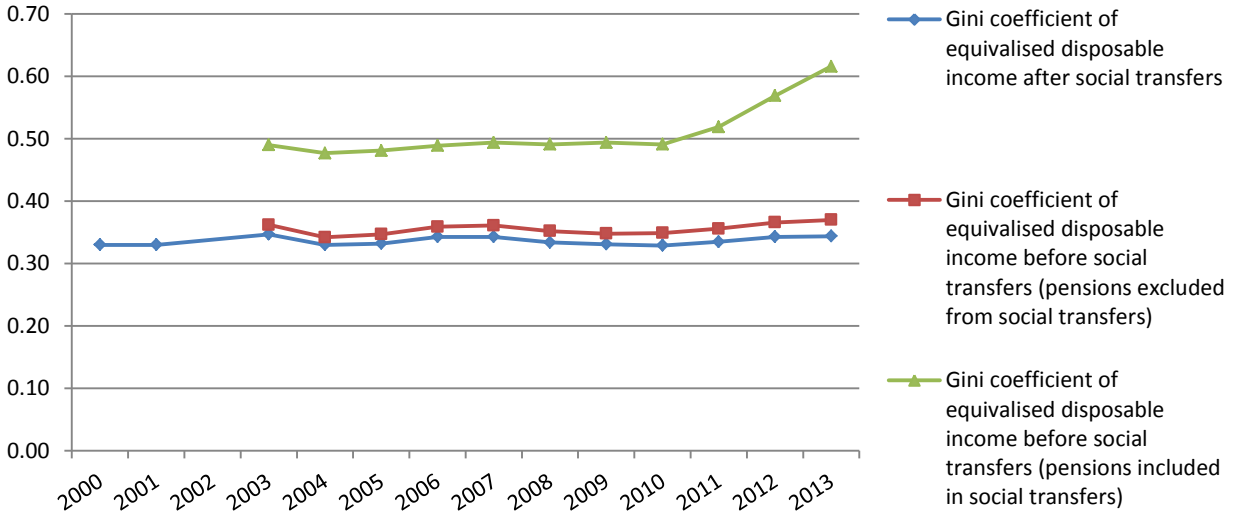
Figure 52. Social protection expenditure, Greece (% GDP, 2000-2012)



Source: Eurostat

A similar pattern emerges when we look at income inequality. Again we see that inequality in Greece before the crisis was reduced by roughly 30% through social policy; this was mostly achieved through pensions, with other social transfers making a minimal contribution.

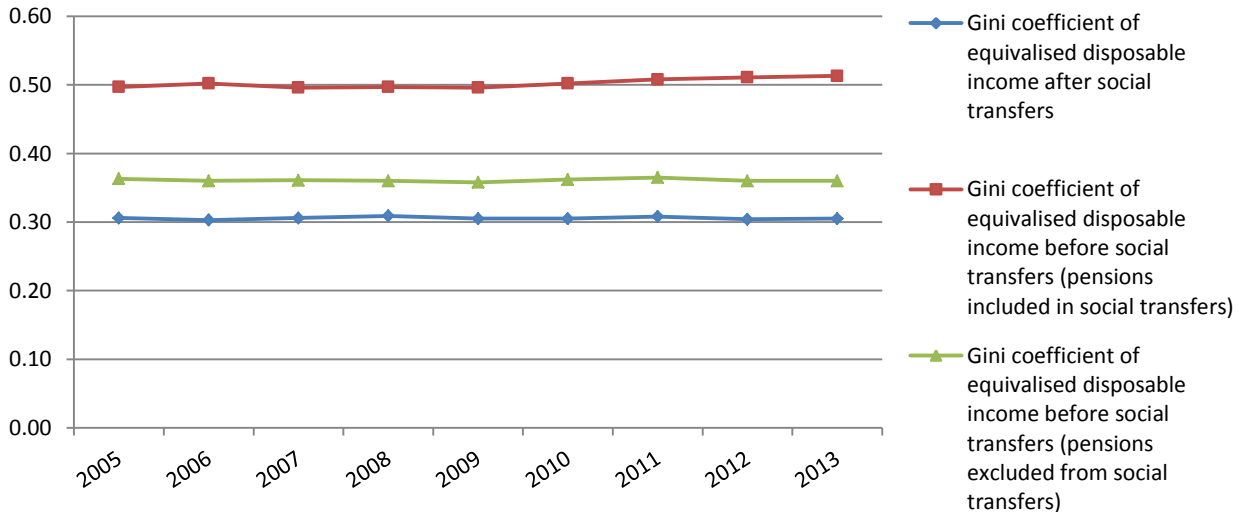
Figure 53. Gini coefficient before and after social transfers, Greece (2000-2013)



Source: Eurostat

In contrast, in the EU-27, on average, the years before the crisis, income inequality was reduced by approximately 40%, with other types of social transfers contributing approximately one fourth of that improvement (Figure 54).

Figure 54: Gini coefficient before and after social transfers, European Union (27 countries) (2005-2013)



Source: Eurostat

Moving to the crisis period, a first finding is that unfortunately the issue of resources has not been addressed. More specifically, we observe that the gap between Greek and European social expenditure in terms of GDP gradually started closing the years immediately before the crisis (Figure 49). However, in 2006 and 2007 this was more a result of lower expenditure by European countries, than of an increase in Greek social protection expenditure. Still, beginning in 2008 we observe a gradual increase in the level of social expenditure in Greece. Indeed, by 2011 the differential was completely eclipsed and in 2012, Greece's expenditure on social protection rose still further to 31.2% of its GDP.

However, a word of caution is needed before interpreting these results as a change of Greece's approach to social policy. The trend presented above refers to expenditure as a percentage of GDP. However, during the crisis period, when Greek GDP collapsed, an increase in the figures presented above, may mean that the social expenditure appeared to increase, simply because GDP fell. Indeed, when we take a closer look at the data, we see that while in 2008 and 2009 social protection expenditure in Greece did increase in absolute aggregate terms, from 2010 the reverse is true and while social expenditure as a percentage of GDP increased, in absolute terms it decreased. More specifically, in terms of aggregate expenditure (billions in 2005 constant prices), in 2009 there was an increase to 57.94 bn, up from 55.08 bn in 2008 and 51.84 in 2007. However, in 2010 this trend was reversed and total expenditure was reduced to 55.55 bn, before declining further to 52.36 and 49.75 in 2011 and 2012 respectively, a level which is the lowest since 2005.

This means that during the first years of the crisis, when as we have seen, the social consequences of the crisis were particularly harsh and phenomena of poverty and social exclusion were on the rise, the Greek state spent less money for addressing these problems.

Thus it is not surprising that poverty rates after social transfers increased in Greece, albeit at a lower rate than poverty before social transfers (Figure 50), while on average, in EU-27, poverty rates after social transfers have declined since 2011, despite the fact that, on average, there was also an increase in poverty before social transfers (Figure 51).

In terms of income inequality, the situation is better, with the increase after social transfers being modest, in comparison with the increase in income inequality before social transfers (Figure 53), while for the EU level, we observe that both before and after social transfers, income inequality is for the most part stable (Figure 54).

7. Conclusions: The Impact of the Crisis on Poverty, Social Exclusion and Inequality in Greece

This report has sought to present the basic trends and characteristics of poverty, social exclusion and income inequality in Greece, before and after the crisis. Below we present the principal conclusions derived from the preceding analysis.[16]

Poverty, social exclusion and inequality before the crisis:

- Poverty in Greece before the crisis was at stable but substantially higher levels compared to the EU average. While there seemed to be some improvement in terms of the situation of the people that were already poor during the early 2000s (moving closer to the poverty threshold), overall in a period of rapid economic growth, poverty was not reduced. This indicates the existence of rigidities in the Greek economy, which prevented a change in the distribution of income in favour of the lower socio-economic strata.

- Women, the elderly, young people and children, single parent households and households with three or more children, people with low educational qualifications, unemployed and employed people in atypical forms of work, were the groups of people that the years before the crisis suffered disproportionately high levels of poverty.

- In terms of social exclusion, before the crisis, Greece again exhibited relatively stable but substantially higher levels, compared to the EU average. Material and severe material deprivation decreased during the 2000s, however they remained at high levels for the entire period.

- Inequality in Greece before the crisis was also high (consistently among the worst performers in EU).

The crisis had a significant impact on poverty, social exclusion and inequality in Greece:

- Following years of continuous increase, both the mean and median income fell substantially in 2010, 2011 and 2012.

[16] As explained in the introduction and in the methodology section, the statistical data reported for each year refers to the income (or consumption) of the previous year. In this summary section, in order to portray the situation more accurately with respect with the actual circumstances on the ground, we summarize the findings with reference to the years when income or consumption were actually earned or realized.

- The poverty rate increased in relative terms to 23.1% in 2012. This represents an increase of approximately 15% since 2008. Most of the new poor were below the lowest poverty threshold (40%), while the poverty gap increased substantially between 2010 and 2012. These findings indicate that the depth of poverty increased during the crisis, that is, the poor became poorer.

- When examining poverty using a fixed line of poverty anchored to the income earned in 2007, the poverty rate increase dramatically to 44.3%, which means that in 2012 close to half of the Greek population, had less than 60% of the median disposable income of 2007.

- When comparing the situation in Greece with the EU poverty averages, we see that Greece was hit by the crisis, on average, much more harshly than other European countries.

- Using the FGT and Sen Indices we see that not only the poor became poorer, but also that inequality among the poor increased during the crisis.

- Consumption fell substantially across the board during the first years of the crisis. The decline was much lower for the lowest income quintile, compared to the other quintiles. This demonstrates clearly the pressure experienced by the middle classes, but also it indicates the inelasticity of the poor people expenses, as well as the fact that they tend to spend a higher proportion of their income on essential goods and services.

- The same groups that were vulnerable to poverty before the crisis were also disproportionately affected by the crisis. Particularly worrying is the situation for the young people aged 16-24, those with low educational qualifications, the unemployed, those with part-time jobs and single parent households, whose poverty rates are alarmingly high.

- Elderly people seem to be relatively less affected by the crisis in terms of poverty, however poverty indices may hide the fact that the elderly are disproportionally affected by negative developments in a number of social services.

- In 2012, 35.7% of the Greek population was in risk of poverty and social exclusion. This is more than 10 percentage points higher than the EU-15 average.

- A particularly disturbing feature of this development is the alarming increase of the severe material deprivation index to 20.3% in 2012.

- An equally disturbing development is the rise of food insecurity and malnourishment, particularly among the poor people. In 2011, almost 50% of poor people cannot afford a meal with meat, chicken or fish every second day, while data from the food aid programme, run by Prolepsis paints a truly bleak picture, as almost two thirds of the households participating in the programme report food insecurity, with more than a quarter also reporting hunger. Households where parents did not work were particularly vulnerable to food insecurity. Although these findings are not generalizable because participating households came only from poor areas, they nonetheless demonstrate the deterioration of the standard of living experienced by the poor.

- Income inequality also rose in Greece during the crisis. As a result, Greece's position in terms of inequality, compared to other European countries, deteriorated further.

With regard to the contribution of social policy in combatting poverty, social exclusion and income inequality before and after the crisis we find that:

- Even before the crisis, the Greek welfare system was underfunded and ineffective in reducing poverty compared to the European average.

- The principal policy instrument for reducing poverty was the pension system, with other types of social transfers making a minimal contribution.

- A similar picture emerges when examining income inequality, with the Greek welfare system performing significantly below the EU average in reducing inequality. Again the principal means of reducing inequality were pensions.

- The worsening of the poverty, social exclusion and income inequality indices, means that the Greek welfare state has failed to protect the Greek population by the adverse effects of the crisis.

- This is not surprisingly given that despite the deterioration of the economic and social circumstances during the crisis, the total expenditure for social protection in absolute terms declined during the first years of the crisis.

Bibliography

Aghion, P. and J. G. Williamson (1998), *Growth, Inequality and Globalization: Theory, History, and Policy*, New York: Cambridge University Press

Albert, M. (1993), *Capitalism against Capitalism*, Trans. Paul Haviland London: Whurr Publishers

Alesina, A., R. Di Tella and R. MacCulloch (2004), "Inequality and happiness: Are Europeans and Americans different?" *Journal of Public Economics*, 88: 2009–2042.

Amable, B. (2003) *The Diversity of Modern Capitalism,* Oxford: Oxford University Press

Andriopoulou, E. and P. Tsakloglou (2010), "A Dynamic Analysis of the Poverty Phenomenon in Greece", Studies no 4, Observatory of Economic and Social Developments, INE/GSEE, Athens, December (in Greek)

Andriopoulou, E., F. Papadopoulos and P. Tsakloglou (2013), "Poverty and Social Exclusion in Greece", Studies no 25, Observatory of Economic and Social Developments, INE/GSEE, Athens, September (in Greek)

Atkinson, T. (1998), *Poverty in Europe*, Oxford, Basil Blackwell

Balourdos D. and M. Naoumi (2010), "Poverty in Greece: Comparative data with other EU countries", in *The Social Profile of Greece 2010*, Naoumi, M., G. Papapetrou, N. Spirolpoulou, E. Fronimou and M. Chrysakis (eds), National Centre of Social Research, Athens

Burchardt, T., J. Le Grand and D. Piachaud (2002), "Introduction", in *Understanding Social Exclusion*, J. Hills, J. Le Grand and D. Piachaud (eds), Oxford University Press.

Byrne, D. (1999), *Social Exclusion*, Oxford University Press

Christopoulou, R. and V. Monastiriotis (2014), "The public-private duality in wage reforms & adjustment during the Greek crisis", Research Paper no 9, April, Crisis Observatory, ELIAMEP

Coleman-Jensen A., M. Nord, M. Andrews and S. Carlson (2013), "Household Food Security in the United States in 2012", Economic Research Service of U.S. Department of Agriculture, Economic Research Service No. 155.

Dafermos G. and C. Papatheodorou (2010), "Macroeconomic Environment, Inequality and Poverty", Studies no 3, Observatory of Economic and Social Developments, INE/GSEE, Athens, December (in Greek)

Deitchler M., T. Ballard, A. Swindale and J. Coates (2011) "Introducing a Simple Measure of Household Hunger for Cross-Cultural Use", United States Agency International Development, Technical Note No.12

Haan, A. d. (1998), "'Social Exclusion': An Alternative Concept for the Study of Deprivation?", *IDS Bulletin*, 29: 10–19.

Hall, P. and D. Soskice (eds) (2001), *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*, Oxford: Oxford University Press

Esping-Andersen, G. (1990), *Three Worlds of Welfare Capitalism,* Oxford: Polity Press

European Commission and European Council (2004), *Joint report by the Commission and the Council on social inclusion*, 7101/04, Brussels, 5 March

Feenstra, R. C. and G. H. Hanson (1996), "Globalization, Outsourcing, and Wage Inequality", NBER Working Paper No. 5424

Fischer, A. M. (2011) "Reconceiving Social Exclusion", Brooks World Poverty Institute Working Paper No. 146

Foster, J., J. Greer and E. Thorbecke (1984), "A class of decomposable poverty measures", *Econometrica*, 3 52: 761–766

IMF (2007), *World Economic Outlook, Globalization and Inequality*

Ioannidis, A., C. Papatheodorou and D. Souftas (2012), "Working but poor: Dimensions of in-work poverty in Greece", Reports no 6, Observatory of Economic and Social Developments, INE/GSEE, Athens, December (in Greek)

Kahneman, D., E. Diener, and N. Schwarz (eds) (1999), *Well-Being: The Foundations of Hedonic Psychology,* Russel Sage Foundation New York

Kakwani, N. (1980), "On a Class of Poverty Measures", *Econometrica*, 48: 437-446

Krugman, P. R. (2008), "Trade and Wages, Reconsidered", Brookings Papers on Economic Activity, spring

Kuznets, S. (1955). "Economic Growth and Income Inequality," *American Economic Review* 45: 1-28

Leventi, C., H. Levy, M. Matsaganis, A. Paulus and H. Sutherland (2010), "Modelling the distributional effects of austerity measures: The challenges of a comparative perspective", Research Note 8, Social Situation Observatory, European Commission.

Lyberaki, A. and E. Tsakalotos (2002) "Reforming the Economy without Society: Social and Institutional Constraints to Economic Reform in post-1974 Greece New Political Economy", 7 (1): 93-114.

Matsaganis, M. and C. Leventi (2013), "Poverty in Greece: trends in 2013", Newsletter 5, Policy Analysis Research Unit, Department of International and European Economic Studies, Athens University of Economics and Business

Matsaganis, M. and Leventi, C. (2014), "Poverty and Inequality during the Great Recession in Greece", *Political Studies Review*, 12: 209–223

Meyer, B. D., W. K. C. Mok and J. X. Sullivan (2009), "The Under-Reporting of Transfers in Household Surveys: its Nature and Consequences", Working Paper 15181, National Bureau of Economic Research

Monastiriotis, V. and A. Antoniades (2009), "Reform that! Greece's failing reform technology: beyond 'vested interests' and 'political exchange", GreeSE Paper 28, Hellenic Observatory Papers on Greece and Southeast Europe

OECD (2011), *How's Life?: Measuring Well-being*, OECD Publishing

Okun, A. (1975), *Equality and Efficiency: The Big Tradeoff*, Washington D.C.: Brookings Institution Press.

Papatheodorou C. and Dafermos G. (2010), "Structure and trends of economic inequality and poverty in Greece and the EU 1995-2008", Reports no 2, , Observatory of Economic and Social Developments, INE/GSEE, Athens, December (in Greek)

Piketty, T. (2014), *Capital in the 21st century*, Harvard University Press

Runciman, W. G (1966), *Relative deprivation and social justice: a study of attitudes to social inequality in twentieth-century England*, Berkeley: University of California Press

Schmidt, V. A. (ed.) (2002) *The Futures of European Capitalism*, Oxford: Oxford University Press.

Sen, A. K. (1976), "Poverty: An Ordinal Approach to Measurement", *Econometrica*, 44 (2): 219-31.

Sen, A. K. (1985), *Commodities and Capabilities*, Oxford: Elsevier Science Publishers.

Shonfield, A. (1965), *Modern Capitalism: The Changing Balance of Public and Private Power*, Oxford: Oxford University Press

Silver H., 1994, 'Social Exclusion and Social Solidarity: Three Paradigms'*, International Labour Review*, vol. 133, nos. 5-6: 531-578

Shorrocks, A.F. (1995), "Revisiting the Sen poverty index", *Econometrica*, 63: 1225-1230

Spanou, C. (2008) "State reform in Greece: responding to old and new Challenges", *International Journal of Public Sector Management*, 21 (2): 150-73.

Stiglitz, J., A. K. Sen, and Fitoussi, J.-P. (2009), *Report by the Commission on the Measurement of Economic Performance and Social Progress*

Takayama, N. (1979), "Poverty, Income Inequality and their Measures: Professor Sen's Approach Reconsidered", *Econometrica,* 47: 747-758

Tinios, P. (2005) "Pension Reform in Greece. Reform by Installments: a Blocked Process", in K. Featherstone (ed.), *The Challenge of Modernization*, London, Routledge.

Townsend, P. (1979) *Poverty in the United Kingdom*, London, Allen Lane and Penguin Books

Tsakloglou, P. and C. Koutsabelas (2010), "Redistributive effects of non-monetary incomes in Greece", Studies no 6, Observatory of Economic and Social Developments, INE/GSEE, Athens, December (in Greek)

Tsakloglou, P. and T. Mitrakos (1998), "Economic inequalities in Greece: Survey of evidence, methodological problems, trends and prospects", in G. Tsiakalos (ed.) *Social Inequalities and Social Exclusion*, PP. 241-265, Sakis Karayiorgas Foundation, Athens (in Greek).

Tsakloglou, P. and G. Panopoulou (1998), "Who are the poor in Greece? Analysing poverty under alternative concepts of resources and equivalence scales", *Journal of European Social Policy*, 8 (3), pp. 229-252.

United Nations, (1995) Report of the World Summit For Social Development

Zafiropoulou M., D. Kaitelidou, O. Siskou, D. Katsikas and C. Oikonomou, (forthcoming) *Impacts of the crisis on access to healthcare services: Country report on Greece,* Crisis Observatory Research Reports