Department of Balkan, Slavic & Oriental Studies

M.A in Politics and Economy of Contemporary Eastern and South-eastern Europe

Topic: The Impact of the International Financial Crisis on the National Health System of Greece

PANTELEIMON TSAKIRIS

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1. Introduction, object and scope of the study, methodology and structure of the thesis

1.1 Introduction

A major consequence of the global financial crisis was the adoption of austerity measures, in every country of the European Union and the Eurozone. These measures led to budget cuts in most of government expenditures regarding public sector, as well as public goods.

In the case of Greece, the financial crisis has resulted in cutting health costs, thus limiting the access of the population to health, while at the same time a part of the population was and is full of unmet needs. This paper aims to examine the effect of the reduction in public spending on access to health services, and express the basic elements of a program of equal access to public health facilities.

1.2 Object and scope of the study

The main object of the thesis is to identify the impact of the global financial crisis and the austerity measures to the Greek health system. Having a reliable study about the relationship between health and economic conditions, and especially about the consequences of the government's budget cuts to the equality of public access to the health system, has become a necessity, since Greece adopted the economic and structural reform programme in 2010. The study contributes to the academic literature, by conducting a critical review of an extensive bibliography on major topics about health systems and equal access.

At the same time, by reviewing global financial crisis, as well as the characteristics of Greek economy, the analysis describes the reorganization measures and underlines the positive and negative effects of this programme.

1.3 Methodology

In order to analyze the impacts of financial crisis and austerity measures to health system, at first we are reviewing the bibliography regarding the way economy interacts with governmental decision on public expenditure, and especially health system budget. We are, as

well, reviewing the impact of the global financial crisis to public economics and the following budget cuts.

We then analyse the characteristics of health as a public good and the involvement of the private sector to the production and distribution of this good. After that, we are reviewing the measures of Greek government for the health sector and, by examining various statistical facts and figures, we are considering the effects of these measures to health conditions.

Finally, we are mentioning the positive and negative effects of the health reorganization process and we underline the factors that could have a positive, as well as negative, impact to improving health conditions in Greece.

1.4 Structure of the thesis

In the First chapter we are introducing the case, with the structure of the thesis.

In chapter two we are reviewing the global financial crisis, as well as the Greek economic crisis, which led to the Troika memorandum.

In chapter Three we are critically reviewing the literature about the impact of the economic crises to the health system. We are considering the case of health as a public good and we examine the private sector involvement. Also, we are analysing the theoretical framework of the budget cuts' impact to health systems.

In chapter Four we are examining the case of Greece, where we analysing the impact of the reorganization of health system, with the positive and negative effects of the programme.

In the final chapter we are discussing the results of the analysis and we are presenting the outcomes of the health reorganization programme. Also, we are considering the factors that could improve health equality among the population.

2. International financial crisis and Greece

2.1 Debt crisis, Greece and the IMF

On April 23, 2010 the Prime Minister called for financial help both by the European Union and the International Monetary Fund. The result of this agreement was the voting and implementation of the measures proposed by the Memorandum of Economic and Financial Policies (MEFP). The Greek state adopted the MEFP as the Law 3845 / 06.05.2010.

The package of 2010 consisted of 30 billion Euros in bilateral loans for the countries of Eurozone, as well as 15 billion Euros from the International Monetary Fund. The interest rate for the loan of the European countries is 5 per cent. Both Germany and France are those European countries that provided the largest financial help in Greece the previous year: Germany gave a bilateral loan of about 8.4 billion Euros and France 6.3 billion Euros (Nelson et al., 2010).

At first, many officials of the European countries stated that Eurozone should be the only responsible for addressing the problem of Greece, as it was a major opportunity for Europe to show its strength as a union. However, in the end Eurozone accepted the help from the International Monetary Fund. What differentiates these two mechanisms of help is that while the Eurozone requires the adoption of specific policies as a condition for the loan provided, the International Monetary Fund is much more independent, is more experienced regarding the resolving of crises related to debts, as in the case of Greece and thus it will provide technical assistance to Greece about how to handle the problems that occurred due to the crisis.

The question than one can pose at this point is why European Union shows so much concern about the Greek debt. There are three reasons (De Grauwe, 2010): a) due to the fear that the crisis will affect the bond market of other countries, b) due to the possible fear stemming from the previously mentioned reason that this contagion in bond markets will affect the banking industry of the Eurozone and finally c) the above outcomes will force the other countries to implement fiscal policies "leading to deflationary effects and risk pulling down the Eurozone economies into a double dip recession. Such an outcome would not only be bad news for the unemployed, but would also make it even more difficult for the Eurozone countries to reduce their budget deficits and debt".

2.2 The Troika Memorandum

The Memorandum of Economic and Financial Policies has two objectives. The first is to "eliminate the immediate risk of bankruptcy and to allow the continued financing of the Greek economy" and the second is "to implement a medium-term reform programme that will remedy the causes of the Greek economy's two more serious contemporary problems, viz. fiscal imbalances and low level of competitiveness, facilitating its revival" (IOBE, 2010, p. 9).

The ultimate objective of the Memorandum of Economic and Financial Policies is "to enhance the economy's growth potential and establish conditions that can support a higher pace of economic activity and job creation in a sustained manner" (Papademos, 2010, p. 7). The

scope of all the reforms in Greece should be the achieving of both high sustained growth and improved living standards (Papademos, 2010), by attracting foreign investments, boosting the growth, implementing a socially acceptable and effective tax system, combating the corruption, exploiting the assets of the public sector, reducing the size of the public sector and finally by making the necessary reforms in the health care and pension system. However, the major challenge is the commitment of the Greek government regarding the full implementation of the measures proposed.

In order to implement the program, there should be adopted and followed both fiscal adjustments and structural reforms. More precisely, there is a need of the following (IMF, 2010):

- "Fiscal adjustment will have to be the cornerstone of the program
- Incomes and social security policies need to buttress the fiscal adjustment effort and restoration of competitiveness
- Financial sector policies need to maintain stability
- Structural reforms that boost the economy's capacity to produce, save, and export will be critical for the medium-term recovery".

The fiscal policies according to the Memorandum of Economic and Financial Policies are the following (Hellenic Mininstry of Finance, 2010a, 2010b, 2010c, IMF, 2010): 1) Increase in rates of VAT, with a yield of at least 1.800 million for a full year (800 million Euros in 2010), 2) Increase in taxes on fuel, tobacco and alcohol, with a yield of at least 1.050 million for a full year (450 million Euros in 2010), 3) Reduction in the salary of the public sector by reducing Gifts of Easter, Christmas and holiday pay and allowances paid to civil servants, having the net savings to amount to 1.500 million Euros for a full year (1.100 million in 2010), 4) Reduction in the Gifts of Easter, Christmas and holiday paid to pensioners, while protecting those who receive lower pensions, with the net savings amounting to 1.900 million for a full year (1,500 million in 2010), 5) Cancellation of budget appropriations for contingency reserve in order to save 700 million, 6) Reduction of higher pensions, aimed at saving 500 million for a full year (350 million Euros in 2010), 7) Removal of most of the credit of the budget for the solidarity allowance (apart from an amount for the relief of poverty) in order to save 400 million, 8) Reduction in the public investments by 500 million Euros compared with the existing figure.

The table below (table 1) summarizes the fiscal adjustment that is required from the MEFP for the time – period 2010 – 2013.

Table 1. **Fiscal adjustment that is required from the MEFP for the time – period 2010 – 2013 as percentage to the Gross Domestic product**

(% of GDP)	**2010**	**2011**	**2012**	**2013**	**Total**
Revenue	0.5 %	2.9 %	0.7 %	- 0.3 %	3.9 %
Expenditure	1.9 %	1.2 %	1.7 %	2.3 %	7.1 %
Balance	***2.5 %***	***4.1 %***	***2.4 %***	***2.0 %***	***11.0 %***

(Table 1. Source: IOBE, 2010, p. 15)

The main fiscal adjustment is taking place in 2010, since Greece should reduce its deficit as percentage of the Gross Domestic Product to 5.6 per cent. The following table (table 2) presents some more fiscal adjustments that should take place during the time – period of 2010 – 2014, as well the relevant fiscal figures for the year 2009.

Table 2. **Fiscal adjustment that is required from the MEFP for the time – period 2009 – 2014**

Fiscal figures	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Revenue	36.8 %	39.6 %	42.6 %	42.8 %	43.0 %	42.4 %

Primary expenditure	45.4 %	42.1 %	43.6 %	41.8 %	39.8 %	36.8 %
Interest payments	5.0 %	5.6 %	6.6 %	7.5 %	8.1 %	8.2 %
Primary deficit	8.6 %	2.4 %	1.0 %	- 1.0 %	- 3.2 %	- 5.7 %
Net deficit	13.6 %	8.0 %	7.6 %	6.5 %	4.9 %	2.6 %
Debt	115.1 %	133.2 %	145.2 %	148.9 %	149.7 %	148.4 %

(Table 2. Source: IOBE, 2010, p. 16)

Regarding the estimations about the government's debt, the International Monetary Fund projection is that it will reach 150 per cent in the year 2013, but it will fall in 2010, reaching 120 per cent, as it can be seen from the table below (table 3).

Table 3. **Estimations about the long – term public debt**

	Nominal Gross Domestic Product	Primary deficit	Autonomous adjustment
2010	- 2.8 %	2.4 %	6.7 %
2011	- 3.1 %	0.9 %	0.1 %
2012	2.1 %	-1.0 %	0.1 %
2013	2.8 %	- 3.1 %	- 0.3 %
2014	3.1 %	- 5.9 %	- 2.7 %

2015	3.8 %	- 6.0 %	- 2.3 %
2016	4.2 %	- 6.0 %	0.0 %
2017	4.2 %	- 6.0 %	0.0 %
2018	4.2 %	- 6.0 %	0.0 %
2019	4.2 %	- 6.0 %	0.0 %
2020	4.2 %	- 6.0 %	0.0 %

(Table 3. Source: IOBE, 2010, p. 18)

One of the most significant structural policies that should be made is the restructure of the pension system. The reform of the pension system includes the following (Hellenic Mininstry of Finance, 2010a, 2010b, 2010c, IMF, 2010): 1) Simplification of the fragmented pension system by merging the existing pension funds in only three funds and establishing a new single system for all current and prospective employees. New universally binding rules for pension rights, contributions, rules and accumulation of indexation of pension rights should be applied mutatis mutandis to all from January 1, 2013, 2) Insert of a single retirement age to 65 years, even for women in the public sector (gradually from 1 January 2011), which will be completed in December 2013, 3) Gradual increase in the minimum contributory period for retirement with full pension from 37 to 40 years until 2015, 4) Modification of the way that pension is awarded in the contributory pension scheme for the strengthening of the relation between the contributions paid and the benefits received, having the rate of accumulation limited to an average annual rate of 1.2 per cent, while at the same time pensions should be indexed, 5) Introduction of an automatic adjustment mechanism, which will increase the (minimum and legislated) retirement age as life expectancy at retirement, every three years starting in 2020, 6) Expansion of the calculation of pensionable earnings of the last five years in entire working life (maintaining the already acquired rights), 7) Reduction in the upper limit on pensions, 8) Insert of a guaranteed income based on income criteria for the elderly (above the statutory retirement age), in order to protect the most vulnerable groups, consistent with the sustainability of the public finances, 9) adoption of measures to limit the access to early retirement. In particular, the minimum early retirement age should be set to 60 years from January 1, 2011, including workers in heavy and unhealthy occupations and those with 40 years

of contributions. Elimination of special rules for those who were insured before 1993 (while maintaining the acquired rights). Substantial revision of the catalogue regarding heavy and unhealthy occupations, 10) Reduction of pension benefits (6 per cent per year) for the persons who are retired between 60 and 65 years old, with a period of contributions less than 40 years, 11) Introduction of stricter conditions and regular review of the filling conditions for the invalidity pensions.

Apart from these, a) the Parliament adopts, as provided in the stability program of January 2010, a law that will establish a progressive tax scale for all sources of income and a horizontal uniform treatment of income derived from employment and assets and b) the Parliament adopts, as provided in the stability program of January 2010, a law that will eliminate exemptions and autonomous tax provisions in the tax system, including the income from the special allowances paid to the civil servants (Hellenic Mininstry of Finance, 2010a, 2010b, 2010c, IMF, 2010):

Based on the measures proposed by MEFP, the Government adopted a law that requires a monthly publication by the General Accounting Office of accurate, monthly statistics (on a cash basis) for revenue, expenditure and financing of the State and the pending expenditures. Regarding the regulation and monitoring of the financial sector, the Bank of Greece has recommend an independent Finance and Credit Stability Fund, with a strong governance structure to address potential solvency issues, and to preserve the soundness of the financial sector and its ability to support the Greek economy, providing capital support to banks if it is needed (Hellenic Mininstry of Finance, 2010a, 2010b, 2010c, IMF, 2010)

In addition to that, the Greek government adopts a plan for the railway sector, which specify (Hellenic Mininstry of Finance, 2010a, 2010b, 2010c, IMF, 2010): 1) how operational activities will be made profitable, including by closing loss-making lines, 2) ensure the effective implementation of EU Directives allowing for competition amongst providers of railway services, 3) provide for the restructuring of holding company, including the sale of land and other assets".

For the reorganization of the public administration (Hellenic Mininstry of Finance, 2010a, 2010b, 2010c, IMF, 2010): 1) The Parliament should approve legislation to reform public administration at the local level, mainly through the merger of municipalities and prefectures to reduce operating costs and salaries, 2) The Parliament should approve legislation requiring publication on the Internet of all the decisions regarding commitments of funds to

general government, 3) Creation of a simplified pay system that will cover basic salaries and allowances. It should be applied to all civil servants and should be part of a wider reform of human resources management. This should lead to a reward system that will reflect the productivity and capacity, 4) the government will complete the establishment of a Single Payment Authority of wages in the public sector. The Ministry of Finance should publish a detailed report, based on the information and in cooperation with the Single Payment AUthority, regarding the structure and the amount of compensation, the size and the dynamics of employment in the general government.

For the reorganization of the health system: 1) The Government should adopt legislation regarding the health supplies (Law 3580/2007), create a system for administering of drugs, which promotes the use of drug copies (including an electronic monitoring system of prescriptions given by the doctors), 2) The Government will complete the program of computerization of hospitals, by upgrading the systems of their budget and the reform of administration systems, account management (including double – entry accounting system) and financial management, 3) The Government should ensure greater financial and operational monitoring of the health expenditure by the Minister of Finance, the publication of audited accounts and the improvement of pricing and costing mechanisms.

3. The impact of economic crises to the health system

3.1 Health: Public or private good?

The issue of public and private goods is, over time, one of the dominant topics, with a wide variety of reports. The content of this reflection seeks to explore the relationship between the state and market forces as dynamically formed in the respective political, economic and social conditions of a State to determine the discrete action limits should be undertaken by each body. The analysis of this issue is multi-layered and multi-disciplinary, as the legal science involved, economic, sociology and politics. In order to determine when and under what conditions should the state intervene in the market mechanism, or respectively, when market participants must assume the provision of goods and services, the clarification of what is the market mechanism what is the concept of public goods.

The market mechanism is a way of communication between persons who wish to acquire goods and those who wish to produce these goods. In the evolution of economic thought, it is accepted the principle that a person wants to purchase a product when it receives

a benefit (utility) of the object in question, with the intensity of his desire to be expressed in monetary units - ie, the more intense the desire of the buyer, and so much money available to pay for the acquisition of the object; while at the same time another person will the cost of production and availability of specific goods, as long as the fee it receives (per) covers these costs (Samuelson 2000). In this light, the consumer benefit is assigned to the cost of the producer, so setting the value of the property. In this way, the quantity of the goods shall be sufficient to cover the desired quantity of consumers, without displaying a surplus or shortage of goods. Thus, without requiring no intervention, determine the price and quantity of the goods. In order to operate the mechanism described the market should have ensured some necessary conditions, the main one of which is (Samuelson & Nordhaus 2000, Begg et al 2006, Mankiw & Taylor 2010):

The existence of a multitude of buyers and sellers, without legal or other restrictions on their activation

- All goods and services have value and exchange markets
- No business or consumer has the size nor power to influence the market price
- The existence of perfect information, without cost to consumer preferences and their disposable income, and the conditions of production and production costs.
- Absence of external economies of the charges
- Full mobility of production factors

Under these conditions, the operation of the market mechanism ensures that consumers will have the opportunity to buy goods and services to meet the needs and desires and producers are willing to produce goods in order to derive profit from this the activity. The interaction between consumers and producers gives all the information necessary to determine the quantity offered and the price of the goods, without displaying a deficit or surplus in the market. But even if people are those who make major economic decisions, as producers and consumers, the involvement of the state economic process is essential for both substantive and for operational reasons. In functional dimension, state intervention is because the above criteria of perfect competition are not fully satisfied. In practice, there is imperfect information between producers and consumers, thereby resulting distortions in the price of goods. Also, there are monopolies and oligopolies, making it necessary for state to get involved in order to reduce market failures.

Furthermore, the production and consumption of a number of goods involves externalities, either in the form of negative externalities, and either in the form of positive externalities. A positive externality is the condition where there is a wider benefit for the whole society, by the activity of an individual, but no one has to pay for this benefit he gets. Instead, a negative externality is the condition where there is a loss, whether throughout society or in part, by the activity of an individual, for which no one pays for the damage (Mankiw & Taylor 2010). For example, a positive externality arises from the existence of an underground station in a region: the existence of the station not only benefit commuters, but many others as well, who haven't paid anything to have these benefits, e.g. property owners near the station, as the increases the commercial value of their property and can get higher rent, as well as shop owners, who have more potential customers, etc. As an example of a negative externality we can mention the pollution caused by the operation of a factory: the local residents are suffering from the infection, but the factory does not have to pay them for the damage.

One of the most striking examples of externality is that of health: to have a good level of health, there are multiple benefits throughout the entire society, which is multivariate and multidimensional: for example, preventive health level prevents the spread of communicable diseases (the most simple form, e.g., a flu, to more dangerous forms of diseases), or reduces the impact and duration of other diseases, hence are not lost working hours (thus resulting benefit to employers), not reduced the income of citizens, and hence the consumption of goods (benefit for shop owners), not their ability to pay is reduced (hence benefit to the state), etc. We see, then, that health is a state of the field of intervention in order to ensure the existence of this object.

In addition to the externalities and other operating events mentioned, there are substantial reasons for government intervention in a market economy. One of them is the implementation of social policy, by means of income redistribution. The mechanism of the market has a constraint: goods are for those who have the income to buy them. So if someone does not have the required income, may not have access to those goods. This is where the state intervenes with two ways: on the one hand, through tax policy, receives revenue from citizens with higher income, in order to provide benefits to the most vulnerable income groups. In this way, state is providing access to goods and services to a larger population range. On the other hand, the State provides the same goods and services to citizens, without requiring the provision of goods by private entities. This way ensures the provision of specific goods to everyone, regardless of their financial situation.

Very often, these types of goods (tangible or intangible) given by the state, referred to as "public goods". Here it is necessary to clarify the term, in order to clarify the structure and its operational characteristics. As a pure public good to mention one that has the following two properties (Begg et al 2006):

- The non-competitiveness in consumption (consumption of the good by one person does not reduce its consumption by another person) and
- The inability of exclusion (from the time the goods are common to all, if it is available for one, is simultaneously available to all, at no cost).

As an example of pure public good is the lighthouse: the strobe light is for all, without being able to exclude any ships. The problem that arises is that the owner of the lighthouse cannot receive payment for the service offered, because, once the light is free to all, nobody wants to pay.

The misunderstanding that often arises is to be regarded as a public good any good provided by the state, even though it does not have the properties of good. One such case is that of health: the beds of a hospital are limited and specific. This means that the particular health service does not have the characteristics of a public good, since an extra patient means one less available bed.

So, since health is not a pure public good, why is the state to provide health services? States are providing health services for the following reasons:
1. There will be an effective access of the country's residents (and visitors) to health services, regardless of their income to a level that is consistent with the relevant standards and capabilities of the state and society
2. It is effective prevention, treatment, care and rehabilitation in order to fulfil the conditions of the definition given to the concept of health.
3. There will be efficient development of service delivery, human resources, logistics, in connection with international standards (Spencer et al, 2000)
4. The service users and their satisfaction, based on their own sense of satisfaction, with each available resources (Martinez, 2001).

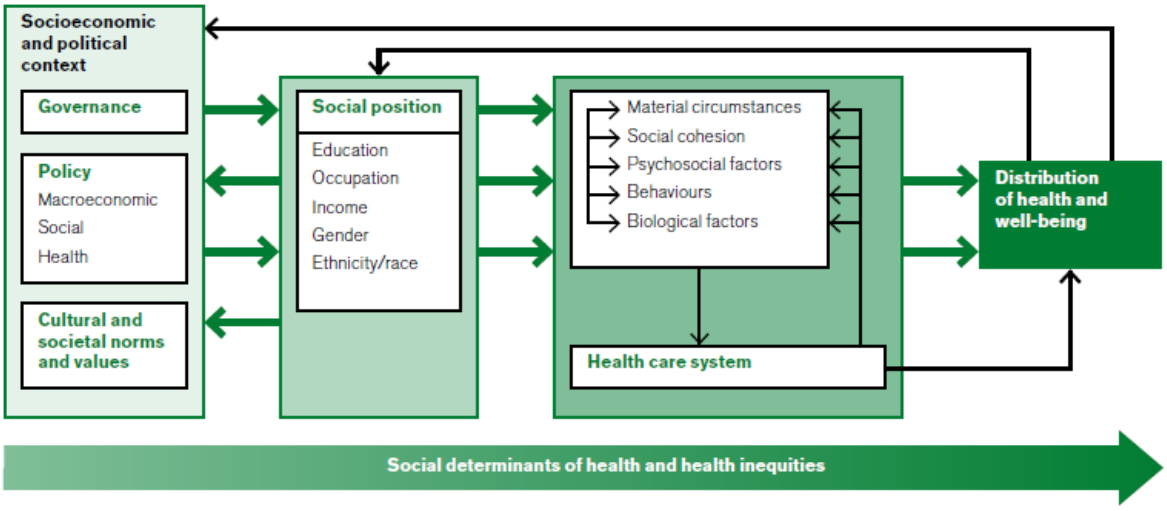
From all of the above we can see that health, although not a pure public good, since it has competitiveness in consumption, is a good so precious that everyone should have access to, despite his/her income. That is why state provides health services.

3.2 Health system under budget cuts

As we mentioned, health is a good which by its nature is valuable and creates positive externalities. By having a good level of health, there are multiple benefits throughout the entire society; benefits which are multivariate and multidimensional. Therefore, the provision of health services by government is necessary to ensure the existence of this object. As to the definition of what is health, the World Health Organization states that " health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity"[1].

The configuration of the level of health includes a number of parameters, political, social and economic. The improvement in the level of these determinants, improves the overall health level. In contrast, a decrease in these parameters, the differences in health access are increasing, leading to a further widening of economic and social inequalities.

The main social determinants of health and health inequalities are as follows (figure 1)



(Figure 1. Social determinants of health and health inequalities. Source: World Health Organization, 2013, p. 5).

Because of the crisis, the macroeconomic policy of Greece, as well as of almost every Eurozone member country, was to reduce the expenditure for health. Greece had, and still has, a public debt over 180% of GDP and during the crisis had a deficit, so governments, with the Troika memorandum, took measures to reduce the debt and the deficit.

[1] Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19-22 June, 1946; signed on 22 July 1946 by the representatives of 61 States (Official Records of the World Health Organization, no. 2, p. 100) and entered into force on 7 April 1948.

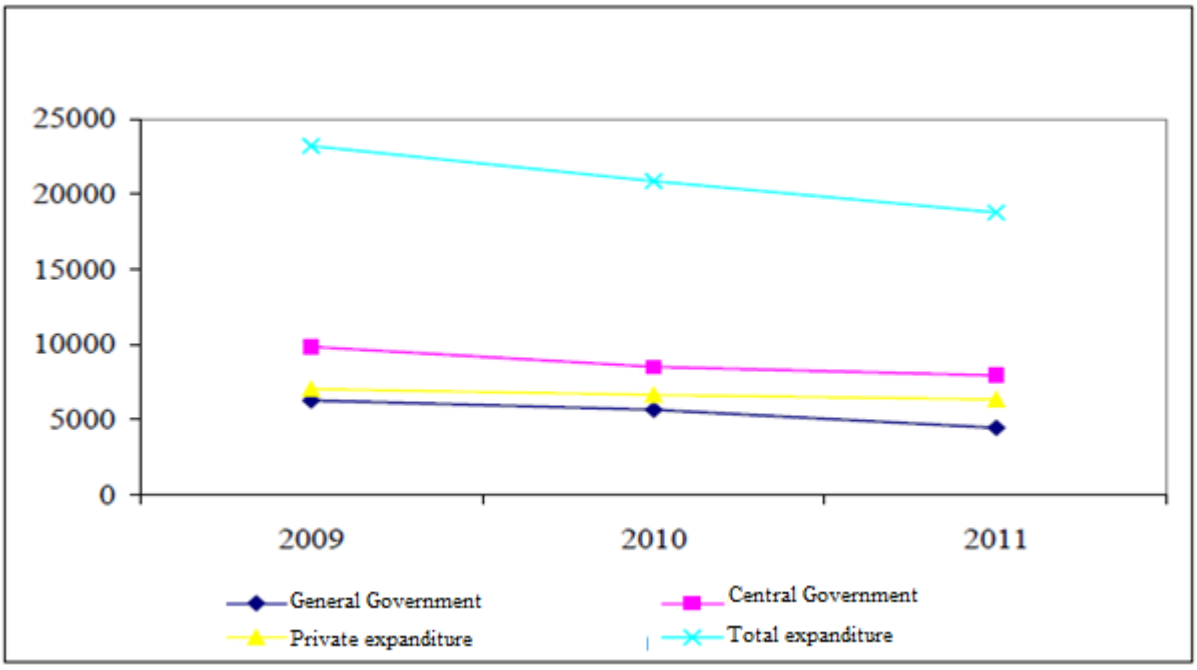
The field of public health provision shows reduction of allocated funds, while the long recession has resulted in a surge in unemployment and the dramatic drop in income. According to data from the Hellenic Statistical Authority (ELSTAT) (2013), in Greece the total current health expenditure to GDP ratio stood at 9% in 2011, while in 2010 and 2009 amounted to 9.4% and 10% respectively. Here, it should be noted that should be taken into account that during the years under review, the GDP of Greece decreased continuously, so the amount of the reduction of public health expenditure is even higher than that listed in the above percentages.

In mil Euros

	2009	2010	2011	% change 2009-2010	% change 2010-2011
Total Central Government Expenditure (1)	6278,4	5644,6	4456,1	-10,1%	-21,1%
Total General Governent Expenditure (2)	9835,5	8498,9	7928,7	-13,6%	-6,7%
Total public expenditure (1+2)	**16113,9**	**14143,5**	**12384,8**	**-12,2%**	**-12,4%**
Total Private Expenditure (3 +4)	**7027,1**	**6632,6**	**6342,9**	**-5,6%**	**-4,4%**
Private Insurance Expenditure (3)	433,8	536,6	534,2	23,7%	-0,4%
Provate Health Expenditure (4)	6593,3	6096	5808,7	-7,5%	-4,7%
Other expences (5)	**52,6**	**73,3**	**52,4**	**39,4%**	**-28,5%**
Συνολική Τρέχουσα Δαπάνη Υγείας (HF) (1) έως (5)	**23193,6**	**20849,4**	**18780,1**	**-10,1%**	**-9,9%**

(Table 4. Total expenditure for health in Greece, 2009-2011. Source: ELSTAT, 2013b)

This is illustrated in the next graph (figure 2).

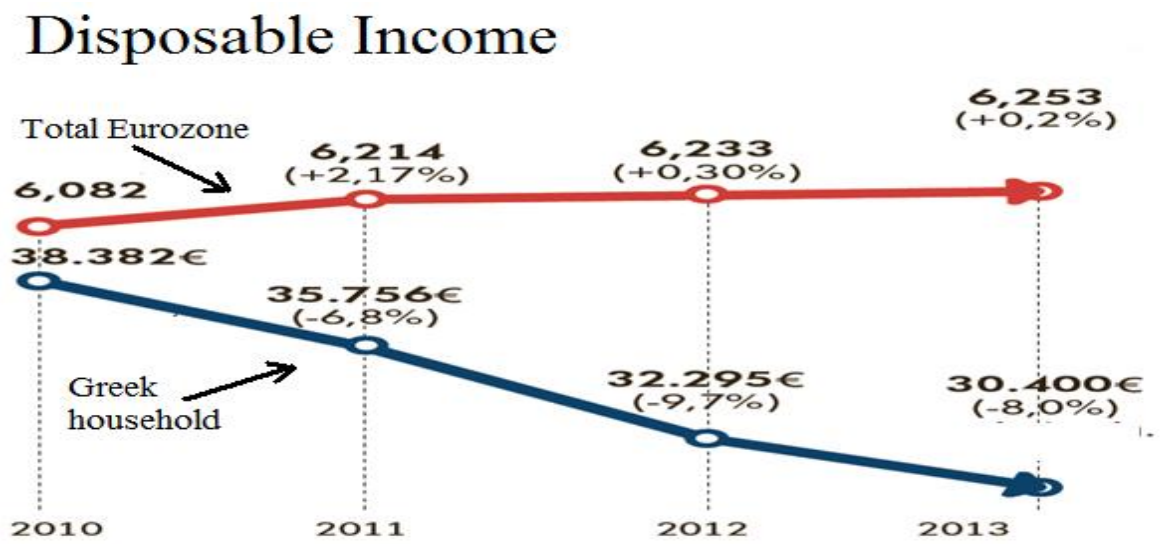


(Figure 2. Expenditure for health, 2009-2011. Source: ELSTAT 2013b)

So the socio-economic determinants of health, during the crisis, are worst than in were, resulting in health inequality, not only because of the economic crisis (Fallon & Lucas, 2002, Habib et al., 2010), but also because of the austerity measures of governments (IMF, 2014),

4. Economic crisis and Greek national health system reform

The budgetary cuts and increased tax revenues resulted in the deepening of the recession of the Greek economy and reducing disposable income. According to figures from the Greek Statistical Authority (ELSTAT 2014a), the average household disposable income declined in the last five years at 14,181 euros, equivalent to 31.8%. The decline of the disposable income is as follows (figure 3):



(Figure 3. Disposable income in Greece and Eurozone. Source: http://www.ethnos.gr/article.asp?catid=22770&subid=2&pubid=63957089, figures by ELSTAT).

One of the main reasons of the fallen income is unemployment. The unemployment rate in the fourth quarter of 2013 was 27.5%. In this period, employment decreased by 1.3% compared to the third quarter of 2013, while the number of unemployed increased by 5.2% compared to the fourth quarter of 2012 (ELSTAT, 2014d).

Also, the average disposable income is defined by wages. In Greece, wages declined by 6.2% in the fourth quarter of 2013 compared to the same quarter of 2012, and in 2012 declined by 2.6% compared with 2011 (ELSTAT 2014c).

All of the above resulted in economic recession. For all of 2013, the decline was 3.7%. The GDP for 2013 amounted to 181.1 billion euros, compared with 193.3 billion in 2012 (ELSTAT., 2014b).

From all the above, we see two simultaneous phenomena: the first is that the reduction of public health expenditure has resulted in an increase of the population shift to private entities. The second is that a large part of the population does not have the necessary disposable income to go to these private entities. Together, our data suggests the widening inequality in population health status.

According to the World Health Organization (2009), the economic crisis increases the demand on health services, the main pressure is directed to public health services. So when there is crisis and simultaneously a reduction of public funds, a growing part of the population

remains uncovered. Also, according to Habib et al. (2010), the economic crisis has resulted in the inaccessibility of much of the population in health facilities, thus further widening the gaps. Quevedo et al. (2005) in their analysis showed that inequalities in health care access in the European Union not only did not decrease, but rather expanded over the long term, because τηε income gap is increasing, which is also a major cause of health inequalities. An important parameter is the total health inequalities, and not just the inequalities to health facilities' access.. In this light, economic and social inequality creates widening inequalities in health. Studies of Shorrocks (1978) and Jones & Van Doorslaer (2004) show that widening the income gap has important implications to the weaker sections of the population, as states provide public health services to more and more increased the need for civic participation. A key parameter is the sense of the level of health that has the citizen himself. In the study of Van Doorslaer & Jones found that there are gaps and inequalities in self-determined level of health among different income groups, with the weaker sections to feel that they pose health level, while households with higher incomes to describe their health status as good. Identical findings presented in Greece, which recorded significant correlation of access to health services and the self-assessment of health status by income (Danilidou et al, 2004).

The economic crisis widens the above gaps. The adverse effects of the economic crisis on health are distributed differently in social escalation (Gakidou et al., 2000). Individuals and families who are in a low position have twice the risk of premature death and increased morbidity due to the problems on income , education, medical care, housing and nutrition, which act collectively. Although the economic crisis has significantly affected the entire Greek population, there are significant differences not only on income but also on other consequences. According to Wilkinson (1996), Power (1994) and van Doorslaer (1997) the economic crisis and long-term unemployment leads many people to social exclusion and poverty, resulting in increased risk for premature mortality and morbidity especially to persons belonging to minorities, immigrants and people with chronic mental or physical illness. Also, a study of Economou et al. (2007) in 13 European countries has shown statistically significant correlation between unemployment and mortality, as well as increased unemployment by 1% lead to an increase in mortality rate by 2.18 (ie 2.18 deaths / 100,000). According to the same study, there is a positive correlation between unemployment mortality from heart disease.

Furthermore, as demand for public health services is increasing, but funds are limited, the burden of public health structures are particularly high. As reported by Stuckler et al. (1996), the level of health worsens when, due to workload, there is inadequate management of

diseases. Therefore, the proportion of the population that has the income potential of access to private health facilities, does not face similar problems, so the gap is widening. A further important consideration is that households are faced with a sudden event or a costly chronic disease will need to give more than 40% of their income thus, reduced income, will not be able to cope with the respective costs.

The health gap in Greece is more extended than other countries affected by the crisis, not only because the cuts were important, but because there were significant differences even before the crisis because of inefficient allocation of resources and the deviation of the welfare state in Greece than the EU average (Gakidou et al., 2000). By reducing expenditure in Greece, the deviation from the average EU enlarges, resulting and widening health gaps (Matsagkanis & Leventis 2012). Also, a general conclusion of the literature is that austerity measures have a significant impact on increasing inequalities (IMF, 2014).

From all this we see that the effects of the economic crisis in Greece, with the simultaneous decision of reducing public spending, created widening gaps in access to health structures, but overall the image and self-assessment of health status that has the population, or at least, the most vulnerable part.

The proposals for the reduction of inequality in access to health facilities and medication cannot be one-dimensional, because, as mentioned, health itself is a result of many economic, social and other parameters. In their study about reducing inequalities in health access in the Netherlands, Storm et al. (2011) mention 38 actions, of which 15 focus on improving socio-economic conditions of the population, with employment support measures, creating special units psychological support, social work programs for the unemployed, creation of special employment consultants, etc., 4 actions that focus on participation of people with health problems in society and removing the exclusions, 19 actions related to the improvement of working conditions and environmental protection and a healthier standard of life (eg diet) and four actions that focus on the same access to health facilities.

Precisely because of the many parameters involved in health, the proposed measures should be divided into two parts: the first part, which is in its own health care and the second part relating to social and financial aid measures for the most vulnerable population groups. A key element of the proposed measures referred to in the social protection network. In the richest countries, the negative health effects can be reduced if there is an organized network of social protection, and this cannot happen in developing countries with inadequate social protection system. Social protection is often referred to as a "network", which indicates that

not only in a Ministry or by sector, but it should be as a concept permeates the entire community. In this axis, special attention should be given to voluntary and non-governmental organizations, as has been observed that the activation significantly reduces disparities and gaps in health, even when there are large income gaps (Kunitz, 2000). Voluntary organizations, in addition to the other positive effects they have, they create a sense of security to the most vulnerable citizens; that someone will be able to look after them when they are helpless. This sense of community creates the feeling of social protection, thus is a component of health. In the same context, the social safety net is an important parameter and the WHO mentions that countries who have the worst health picture are those who lack social protection, which comes as mostly by low literacy levels (WHO 2009).

In this context, proposed structures and active support of the unemployed, with specialization programs, employment consultants, providing career guidance, etc. This will make a valuable contribution to increasing employment opportunities, which in Sierra will greatly decrease the inaccessibility health structures. We should emphasize that the proposed programs do not cost anything at all in the state, as can be financed by Community funding (especially European Union programs)

In addition to these programs, we should address the issue of persons deprived completely of access to the health system. The number of uninsured and those lacking health booklet increases, resulting in a dramatic impact on their health status, both at primary and tertiary levels, and at the level of medication. In this context, the Ministry of Health was hand designed universal access to health care, but this has not yet been fully achieved. Provision has been made to the new primary healthcare provider access and the uninsured, but should be implemented and extended to tertiary health. The cost of access for the uninsured can be covered by the positive externalities of improving the level of health, and by rationalizing other health expenditure.

With the improvement of the general level of health, the health gap decreases and the citizens have the possibility of access. In addition, however, these measures, the government should take measures to reduce income inequalities. It is worth noting that, according to the study of Larch (2010), as is the fairer distribution of income in a country, the best performance is in macroeconomic fundamentals, as well as countries with lower income inequality show smaller deficits and more growth, hence the reducing inequality will contribute positively to the achievement of the objectives of Greece.

5. Conclusions and discussion

During the crisis, Greece faced a wider gap in health inequalities, because of the lower income level, as well as the budget cuts, that reduced the expenditure for public health. Although these budget cuts, government should take measures to improve the general level of health, because, by these measures, the health gap decreases and the citizens have the possibility of access. Additionally, however, to these measures, the government should take measures to reduce income inequalities. It is worth noting that, according to the study of Larch (2010), the most fair the distribution of income in a country, the best performance has in macroeconomic indicators, and also, countries with lower income inequality show smaller deficits and more growth, hence the reducing inequality will contribute positively to the achievement of the objectives of Greece.

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