The European Journal of Health Economics (2021) 22:499–504
https://doi.org/10.1007/s10198-020-01193-w

EDITORIAL

Awaiting the "catharsis"

John Yfantopoulos[1]

Published online: 9 May 2020

JEL Classification G01 · G28 · G38 · I14 · I18

Introduction

Catharsis is a metaphor used in Aristotle's *Poetics*. He compares the effects of a sudden tragedy to the effects of an anticipated catharsis in the mind and body of the sufferer. The notion of catharsis is closely related to "purification" or "purgation". In 2008 it was the "global economic pandemic" that infected world economy and society in general. Bail-out rescue funds were widely distributed by the European Commission, the Central European Bank, and the IMF to EU-Member states, and the main question arising refers to the extent to which these funds induced a "purification" of the chronic problems of the Greek health system. The main purpose of this editorial is to review the plethora of measures implemented in Greece during the economic crisis, to assess their degree of success in leading to the much awaited 'catharsis'.

European health model in dispute

All the European member states have been facing increasing demands for more and better-quality health services over the last two decades. Given the commitment of the European health model [1] to the principles of efficiency, effectiveness, equity, and universality in the access to health services, several reforms have been introduced aiming at improving health outcomes in a cost-effective way in the European setting. The recent economic crisis introduced a new impetus in the balancing of economic and social objectives within the health systems. The decline in GDP and the corresponding reduction in health expenditures have jeopardized the ability of the European governments to meet the obligations stemming from the European values of equity, efficiency, and effectiveness [1]. The Commission called the member countries to revisit their strategies and adapt to the changing macro-economic environment by introducing more resilient policies.

In 2005, Professor Alan Maynard [2] highlighted the need to set clear policy objectives and for continuous monitoring: "Now, more than ever, we must have clarity around the goals of efficiency, equity and expenditure control. Reform should be evidence based, cautious in implementation and subject to rigorous evaluation."

During the economic crisis, numerous health and economic policy reforms were introduced. The Southern European countries (Greece, Spain, Italy, Portugal) as well as some other countries such as Ireland, the UK, and Slovenia focused on substantial horizontal cuts in health spending, while, at the same time, others, like the Netherlands, France, and Switzerland, increased the level of their health expenditure in real terms. Despite the often-stated argument that austerity measures are associated strictly to funding curtailment, there is a greater scope of policies, as it has been reported by the ECFIN [3]: "Since the 2008–2009 crisis the focus of reforms has been on generating savings and improving the financing side, with few reforms aiming at improving the value for money of public health care".

The economic crisis has taken a severe impact on Greek society in terms of unprecedented high unemployment rates, increased poverty, and exacerbated economic inequality. Pascual et al. [4] investigated the magnitude of health inequalities and health polarization across the 27 European Union countries using the European Health Interview Survey (EHIS) over two periods: 2006–2009 and 2013–2015. Their findings revealed that Greece is the country with the highest levels of health polarization in both periods. Based on this, assessing health inequalities in Greece and how they have changed as a result of the economic crisis is among the primary objectives of this editorial. Polarization and health

✉ John Yfantopoulos
yfantopoulos@gmail.com

[1] Health Economics, University of Athens, Athens, Greece

inequalities will be investigated using the EQ-5D-5L instrument for the pre-crisis and during-crisis periods.

The chronicle of the crisis

Greece has gone bankrupt six times in its economic history since the establishment of the Greek modern state. The milestones of these crises are as follows. The first bankruptcy took place in the year 1827, four years after the Greek revolution against the Ottoman State. Similar economic events leading to bankruptcy were recorded in 1832, 1843, 1893, and during the great crisis of 1932. Upon examination, the economic crisis of 1929 compared to the crisis of 2009 shows crucial differences with respect to both its depth and duration as well as on the range of its impact on health systems, the society and citizens' overall health. The features of the global crisis from its emergence in the United Kingdom (Northern Rock, Royal Bank of Scotland) in 2007 and its extension to USA in 2008 (bankruptcy of Lehman Brothers) were quickly transmitted to other countries and this "infection" brought about deleterious economic effects on several European countries such as Iceland (2008), Latvia (2008), Hungary (2008), Serbia (2009) Romania (2009), Ireland (2010), Greece (2010), Portugal (2011) and Cyprus (2013) [5].

Greece, after a decade (2000–2009) of flourishing economic growth, fluctuating annually around the level of 4%; (whereas the corresponding EU-27 average was at around 2% at that time), went into recession in 2009. The economic downturn had a series of adverse effects on the wider economy and the health sector as a corollary. More specifically [5], over the 2008–2015 period, GDP was reduced by 29.5%, wages were reduced by 35–45%, private consumption dropped by 30% and health expenditure declined by 41%. At the same time, income inequality (S80/S20) increased by 11% and the unemployment rate reached 27.1% (an increase of 276.4%). The share of population at risk of poverty increased from 27.6% in 2009 to 36% in 2014. Finally, life expectancy stabilized at about 80 years.

Chronic inefficiencies in the Greek health system

The Greek health system presents the historical, political and organizational characteristics of the Southern European welfare state model based on the co-existence of both Beveridge and Bismarck principles. Even before the crisis, the Greek healthcare system was suffering from a series of inefficiencies relating to structural problems in the public administration, financial pressures and the failure to contain health expenditure growth. In the pre-crisis period (1980–2009), the system faced serious economic problems due to tax evasion, corruption, waste of public money, considerable inefficiencies in the operation of public hospitals, lack of transparency, absence of cost containment measures and an ineffective and inefficient primary health care system. Until 2009, the National Health System of Greece was notorious for not using any monitoring tools to collect and analyze information on its performance. The distribution of health resources in the regions was mainly based on historical and political criteria, such as fragmented reforms, which were the result of political pressure and client-based relations. Consequently, the NHS was characterized by uneven, unequal and inadequate distribution of health and financial resources. In addition, there was a mismatch between the existing public funding allocation for health and citizens' expectations, which stem from the limited participation of citizens in health policy-making and prioritization.

In the hospital sector area, Greece presented serious inefficiencies with low bed occupancy rates, high hospital stays, high re-admissions, and fragmented procurement processes. A DEA analysis has indicated that only 23.2% of the hospitals were fully efficient, 37.5% were only efficient, while 39.3% were inefficient [6]. These results could be attributed to several chronic issues regarding medical procedures in Greece, such as the inadequate medical guidelines, the absence of medical protocols and medical records, the fragmentation of services combined with poor coordination between them, and the insufficient supervision by regional or national authorities. Many healthcare units were subject to understaffing, low number of nurses compared to doctors, unbalanced distribution of specialized doctors, lack of GPs and an absent referral system. Moreover, there has been no successful initiative promoting prevention for several years. Inefficiencies are also observed in primary healthcare. Several studies have measured the efficiency of rural health centers across Greece. Results indicate that the mean technical efficiency level was under 60% [7].

In addition, pharmaceutical care also suffered from several inefficiencies, including irrational and unmonitored prescribing, induced demand and fear of litigation [8]. Pharmaceutical expenditures increased in Greece in the pre-crisis period at a much faster pace in comparison with the rest of the OECD countries, generating significant problems in the financing and delivery of health services. According to OECD data, pharmaceutical expenditure accounts for 1.5% of GDP on average across the OECD countries [7]. Greece was classified among the highest spenders with 2.5% of GDP devoted to pharmaceutical care [7]. Examination of the evolution of pharmaceutical expenditure in the pre-crisis period of 2000–2009 among the OECD countries, shows that Greece has the highest annual rate of growth (1.1% per annum). The corresponding average growth rate among the OECD countries was less than one third (3.5% per annum).

These inefficiencies created a feeling of mistrust and social injustice among the Greek population.

Incremental cost effectiveness ratio

By taking into account the increase in health expenditure in comparison to the corresponding increase in life expectancy in the pre-crisis period over the years 1988–2009, Greece increased its health expenditure as a share of GDP by four percentage points (the highest among the Southern European countries), while the associated life expectancy gain was only 3.4 years (the lowest among these countries). Calculating the incremental cost effectiveness ratios (i.e., marginal increase in health expenditure divided by marginal increase in life expectancy) we find Greece to be the most cost-ineffective country, as it is associated with the highest Incremental Cost Effectiveness Ratio ($ICER_{Greece} = 1.18$). At the same time, the rest of its Southern European neighbors record much lower ratios ($ICER_{Portugal} = 0.74, ICER_{Spain} = 0.68, ICER_{Italy} = 0.62$). The empirical findings reveal that all the Southern European countries with similar economic, political and health service infrastructures achieved better results in life expectancy gains with lower resources compared with Greece.

EU health policy intervention

On the basis of the aforementioned health policy gaps, in 2009 the European Commission and the OECD [9] strongly suggested to Greece that "A reform of the health sector is urgently needed". Furthermore, "the government should start preparing and implementing a comprehensive reform". These organizations proposed that the overall health policy objective should aim at the improvement of cost efficiency, while maintaining public health expenditure below 6% of the GDP.

Rescue package and conditions

The Eurozone countries and the IMF provided three rescue packages to Greece [10–12]. The first economic adjustment program was signed in May 2010 between Greece and Troika (European Commission, European Central Bank, International Monetary Fund), and the total amount of financial assistance was €110 billion. The second adjustment program, which added up to €130 billion, was signed in February 2012, while and the third program was agreed in June 2015, and it amounted to €86 billion. The terms of these bailouts included a series of conditionalities in the form of prerequired reforms, such as the liberalization of several protected economic and employment sectors, the reduction of public expenditures, the fight against corruption and the underground economy, the control of health expenditures and the implementation of an austerity package.

Political economy

The Troika undertook the assessment of the reforms and in all of the reports submitted to the Greek authorities and the European Union underlined "the considerable delays" observed in the preparation and launch of the anticipated structural reforms. The slow progress of the reforms was attributed to a combination of factors, such as electoral cycles and resistance from certain groups with vested interests. Key reforms were expected to be implemented in the health care system and the labour market. Some of the reforms had been on the agenda of leading political parties in Greece for decades, but due to "high political cost" and trade union resistance, they had never been implemented. The economic downturn generated political instability with rioting and public resistance against austerity measures. Trust in politicians declined significantly over the crisis period with a substantial proportion of the Greek population declaring "no trust at all in politicians" [13].

Mitigation strategies

The literature shows that while reforms are introducing greater opportunities for efficiency gains in the public health sector, austerity measures may worsen the health status of the population. In this part we will consider the positive signs of these implementations, as well as the negative effects on the population health and quality of life.

Positive signs

In 2011, substantial reforms were introduced in the Greek health sector. Troika's members lauded the legislation with the aim to distinguish between supply and demand for health services. The unification of all social insurance funds was proposed, under the umbrella of the National Organization for the Provision of Health Services (EOPYY) covering 98% of the Greek population. EOPYY purchases primary and secondary healthcare services for its insured members from both public and private healthcare suppliers. A mandatory all-day functioning of public hospitals was enacted, with the afternoon outpatient surgeries of public hospitals providing medical services to patients, on a consultation fee ranging between 30 and 90 euros. In addition, a centralized procurement of health supplies and a mandatory e-prescription by active substance were introduced. To control health spending, an operational monitoring and internal

auditing was applied followed with the establishment of a Diagnosis-Related Group (DRG) for the hospital payment system (2013).

In primary health care, a network of local health centres was launched ensuring universal access and free services to all vulnerable groups.

In the pharmaceutical sector, a new pricing and regulation system was introduced, based on the average price of the three lowest-priced markets in the EU (2012). This measured was followed by compulsory prescription guidelines/protocols, incentives and obligations to promote generics (2012), detailed monitoring on prescription patterns and pharmaceutical expenditure (2012), automatic quarterly rebates on private pharmacies and pharmaceutical companies (2012), reduction in the profit margin for pharmacies (2014), and prescription ceilings (2014) The curtailment of pharmaceutical expenditure was a key priority. A qualitative examination of the legislature revealed that 82.6% of the measures in the pharmaceutical sector were cost-containment efforts, and 59.8% of them reallocated cost to consumers [14]. The shift of the cost to patients is also highlighted by the European Commission assessment of the reforms [1]: "Since the crisis, the narrative has been dominated by calls for reduced spending on health care, with several countries implementing significant reductions as well as related measures such as cost shifting to patients".

HTA

Up to 2019, Greece was the only EU country without an HTA system. Despite the 2017 European's Parliament Proposal to Member States, for establishing an HTA system and the subsequent European Commission's legislation in 2018 for an HTA regulation, it was not until February 2019 that the Greek Legislation for an HTA system was enacted.

Negative signs

When the EU and the rest of Troika introduced the three rescue packages, they did not take into account the possible negative effects of the austerity measures on the health status of the Greek population and its health-related quality of life (HRQoL). Below, we provide evidence on the catastrophic effects of the crisis on infant mortality, Healthy Life Years, and HRQoL.

Infant mortality declined substantially in Greece in the pre-crisis period following the trends of other European Countries. However, the economic crisis brought a halt to this declining trend. For the first time in Greek history, infant mortality increased during the crisis by 65% [15]. In 2008 as much as 2.6 infant deaths per thousand live births were recorded. In 2017 this rate increased to 4.3 infant deaths. It is often argued that infant mortality depends on education, income, and other socio-economic variables. It is considered as a representative indicator of the general socio-economic level of a country. The increase in infant mortality in Greece reveals the detrimental effects of the recession and the overall deterioration of the social safety net.

Healthy life years (HLY) is another sensitive to economic fluctuations indicator describing the health status of the population. During the economic crisis, the Greek populations lost 3.4 HLY [13] over the period 2006–2016. In 2006 Greece enjoyed a high level of health with 68.1 HLY. However, after the onset of the economic crisis this index was reduced substantially to 64.7 HLY. It should be noted that in the case of other Memorandum Countries with similar socio-economic background, like Cyprus, the corresponding index of HLY increased over the same period by 5.4 HLY (from 64.4 HLY in 2006 to 68.8 HLY in 2016).

The EQ-5D-5L instrument was used to assess the effects of the crisis on the HRQoL of the Greek population. Face-to-face interviews with a randomly selected sample of 5,500 individuals (53.3% women, 46.7% men) living in the wider Athens area were conducted over the period of 2013–2014. Respondents were asked to report their current level of health during the crisis (2013–2014), in comparison to their level of health before the crisis (2008–2009), using the EQ-5D-5L questionnaire.

The economic crisis induced a significant deterioration in the quality of life of the Greek population [16]. The mean scores of HRQoL indicated a significant reduction by 10% in the case of EQ-VAS and by 22% in the EQ-5D Index. Specifically, the value of EQ-VAS before the crisis was $\text{EQ-VAS}_{\text{Before}} = 86.06$ and the reported value during the crisis was $\text{EQ-VAS}_{\text{During}} = 76.72$. The reduction in EQ-5D index was larger, revealing more accentuated effects of the crisis on HRQoL compared with the EQ-VAS. The EQ-5D Index before the crisis was $\text{EQ-5D Index}_{\text{Before}} = 0.83$ and during the crisis $\text{EQ-5D Index}_{\text{During}} = 0.65$. Hence, the EQ-5D index appears to be more sensitive in describing the health impact of the crisis.

A significant reduction in HRQoL was also associated with a gradient among the rich and the poor revealing a polarization and greater inequalities among the income classes. The repercussions of the crisis were much more apparent in the poor population and less so in the rich. The change in mean EQ-VAS before and after the crisis was much larger in the poor class in comparison with the richer one. Indicatively, the change in the mean value among the poor was 14.9 ($\text{EQ-VAS}_{\text{Before}} = 82.2$—$\text{EQ-VAS}_{\text{During}} = 67.9$), while the corresponding change for the rich was 4.9 ($\text{EQ-VAS}_{\text{Before}} = 88.7$—$\text{EQ-VAS}_{\text{During}} = 83.8$). Figure 1 portrays the polarization and the health inequalities between the rich and the poor stratums due to the economic crisis in Greece.

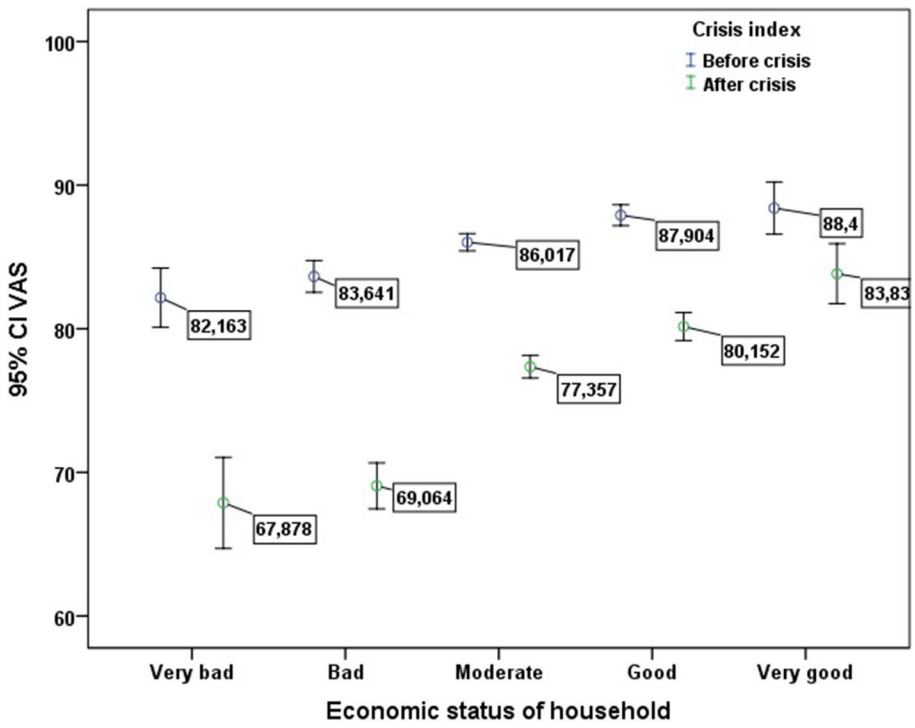

Fig. 1 Distribution of Health (Visual Analogue Values) across economic groups before and after the crisis. Source: Yfantopoulos J (2015) University of Athens

In the case of the EQ-5D Index, the discrepancy among poor and rich was much more apparent. Furthermore, the mean change in the estimated utility indexes was again much greater in the lower income classes in comparison with the higher income classes. The change in the mean EQ-5D Index among the poor was 0.297 (EQ-5D $\text{Index}_{\text{Before}} = 0.776 - \text{EQ-Index}_{\text{During}} = 0.479$). On the other hand, the corresponding mean change among the rich was much smaller, i.e., 0.115 (EQ-5D $\text{Index}_{\text{Before}} = 0.860 - \text{EQ-5D Index}_{\text{During}} = 0.745$), revealing a trend of increasing health polarization after the

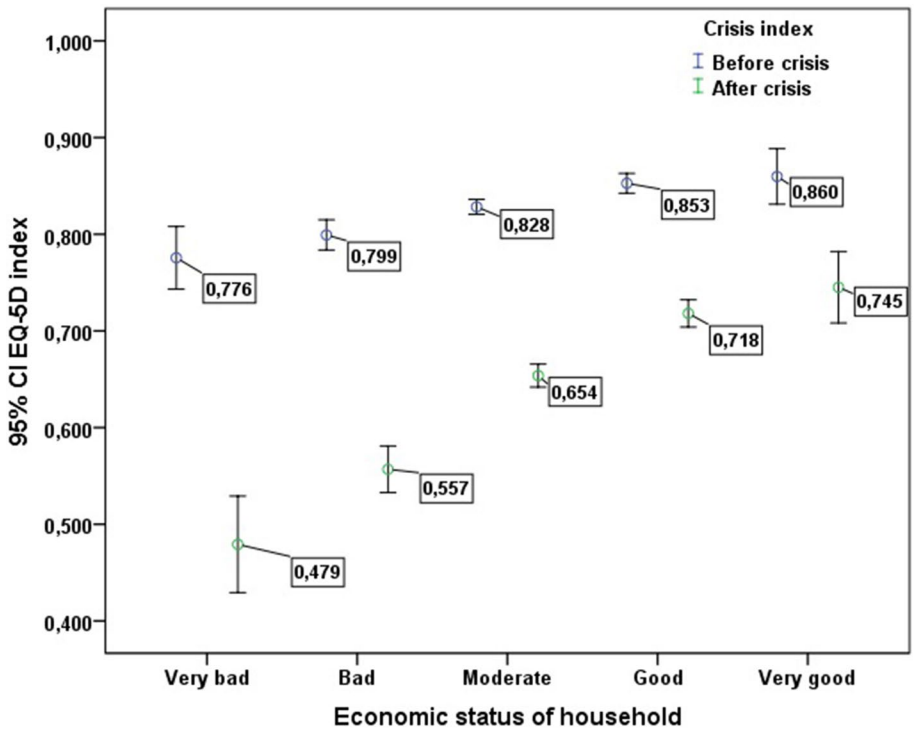

Fig. 2 Distribution of health (EQ-5D index) across economic groups before and after the crisis. Source: Yfantopoulos J (2015) University of Athens

economic crisis. Figure 2 presents the widening of health inequalities between the poor and the rich populations with respect to the estimates of the EQ-5D Index.

In addition, low-income individuals reported loss of job, fear of long-term unemployment and a significant deterioration of their psychological and emotional status as depicted in the dimensions of Anxiety–Depression and Pain–Discomfort of the EQ-5D descriptive system to a much greater extent compared with the high-income ones. Also, income individuals confronted greater difficulties in getting access to health services. The findings of this research would help to develop more targeted and effective health policies aiming at the improvement in health of the Greek population.

Conclusions

Health economics is not just about money, but more importantly it concerns the general health and the Eudemonia of a population. EU policy objectives focus on certain values rooted in the long history of European nations. However, while it is easier to agree on some shared values, it is much harder to implement these. The Greek case study, with its positive and negative aspects of health reforms can be a useful example of the wide range of austerity policies implemented and the augmented social benefits and risks. The Coronavirus Covid-19 pandemic has increased economic uncertainty and has become one of the biggest threats to the global economy. We do not know how long it will last and what is its impact on inequality, unemployment, and the economic growth. The OECD [17], in its March 2020 report downgrades economic forecast for all economies across the world. The governor of the Bank of Greece forecasts zero economic growth, while the Morgan Stanley projects a 5.3 recession in Greece [18]. Despite of its negative effects on society and economy, the crisis should be viewed as a "window opportunity" to rethink the European values and implement the relevant effective policies, if 'catharsis' is to ever be achieved.

References

1. Expert Panel on effective ways of investing in Health (EXPH): Report on Typology of health policy reforms and framework for evaluating reform effects. European Union, Brussels (2016)
2. Maynard, A.: The Public-Private Mix for Health. CRC Press, London, The Nuffield Trust (2005)
3. Economic and Finances Committee: Public expenditure on health: its growing importance, drives and policy reforms to curb growth. European Union, Brussels (2013)
4. Pascual, M., Cantarero, D., Lanza, P.: Health polarization and inequalities across Europe: an empirical approach. Eur. J. Health Econ. (2018). https://doi.org/10.1007/s10198-018-0997-8
5. Yfantopoulos, P., Yfantopoulos, J.: The Greek tragedy in the health sector: social and health implications. Virteljiahrshefer zur Wirtschaftsforforschung DIW Berlin **84**, 165–182 (2015)
6. Xenos, P., Nektarios, M., Constantopoulos, A., Yfantopoulos, J.: Two-stage hospital efficiency analysis including qualitative evidence: a Greek case. J. Hospital Administr. **5**(3), 1–9 (2016). https://doi.org/10.5430/jha.v5n3p1
7. Vdoukakis, A.: Measuring the Efficiency of Greek Health Centers using the Malmquist Productivity Index (2015–2018) (Master's Thesis). National and Kapodistrian University of Athens, Greece (2019)
8. Yfantopoulos, J.N., Chantzaras, A.: Drug policy in Greece. Value Health Regional Issues **16**, 66–73 (2018). https://doi.org/10.1016/j.vhri.2018.06.006
9. OECD. OECD Economic Surveys: Greece. OECD, Paris (2011).
10. European Commission. The Economic Adjustment Programme for Greece. Occasional Papers. European Union, Brussels (2010). https://doi.org/10.2765/46750
11. European Commission. The Second Economic Adjustment Programme for Greece. Occasional Papers. European Union, Brussels (2012). https://doi.org/10.2765/20231
12. European Commission. The ESM Stability Support Programme for Greece. Institutional Papers. European Union, Brussels (2012). https://doi.org/10.2765/466433
13. European Commission. Public opinion in the European union (Spring 2018). European Union, Brussels (2018)
14. Chantzaras, A.E., Yfantopoulos, J.N.: Financial protection of households against health shocks in Greece during the economic crisis. Soc. Sci. Med. **211**, 338–351 (2018). https://doi.org/10.1016/j.socscimed.2018.06.024
15. Hellenic Statistical Authority (ELSTAT). Living Conditions in Greece (March 2020). Hellenic Statistical Authority, Athens (2020)
16. Yfantopoulos, J., Yfantopoulos, P.: The validity of the EQ-5D-5L instrument in assessing the impact of Economic Crisis on Population's Health. Paper presented in the 32nd Plenary Meeting of the EQ-5D Conference in Krakow Poland (2015)
17. OECD: Economic Outlook Report March 2020. Coronavirus: The World Economy at Risk. OECD, Paris (2020)
18. International Monetary Fund. World Economic Outlook, April 2020: The Great Lockdown. International Monetary Fund, Washington, D.C. (2020)