Greece in Economic Crisis: The Case of Health and Education

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Summary: In 2010 the Greek economy entered a deep economic crisis. This was the result of an accumulation of structural problems in the economy, including overspending and loss of competitiveness during the previous decades, translating into persistently large budget and trade deficits. Currently in its third bailout by the EU and the IMF, the country has entered a spiral of depression that has led to its economy shrinking by one third and unemployment skyrocketing to more than 25% as a result of the austerity measures introduced as a prerequisite for the bail out funding Greece received. As a consequence, the health and education sectors have each experienced a reduction in public spending of more than one third. We look at these two sectors before the crisis in the early noughties, and find that a combination of delays, lack of enforcement and reversals of urgently needed reforms resulted to a lack of correction of obvious weaknesses. This has prevented these two systems from delivering the social principles of equity in provision, equal opportunities for all, universal coverage, accessibility and affordability. Healthcare and education lack oversight and evaluation mechanisms on the demand side to ensure quality of service for its users. Also, there are no cost containment/efficiency mechanisms on the procurement side to avoid a waste of the taxpayers' money and valuable resources. This means that Greece has high cost/low outcome education and health systems. When the economic crisis struck, the ability of these two systems to deliver the above mentioned social objectives further deteriorated, as lower per capita spending on education, health and social protection lowered entitlements, benefits, outcomes and increased the burden of out of pocket expenses, user charges etc. We conclude by arguing that there is a need for a radical change in the institutional framework and governance of these two systems, by establishing truly independent from the government regulators or agencies (answerable to the parliament alone) that can effectively exercise oversight on both the demand as well as on the purchasing/procurement side of health and education.

1. Introduction

For the last 6 years starting from 2010, Greece is in the midst of a severe economic crisis that has led to a drastic reduction in the funding of essential public services to an extent that this has started to unravel social coherence in the country. Debt has reached a staggering 178.6% of the GDP (the latest available figure from the Hellenic Statistical Authority for 2104), the result of a downward spiral in competitiveness, exports and output, combined with years of excessive public spending and continued budget deficits until achieving a budget primary surplus in 2013 and 2014. Three bail out

austerity programmes in the period 2010-2015 have led to a 26.6% unemployment rate in 2014 and a decrease in mean income by more than 25%. Household disposable income decreased by 11%, 9.9%, 7.9% and 8% in 2010, 2011, 2012 and 2013 respectively. Real GDP contracted at the rate of 5.4%, 8.9%, 6.6% and 3.9% over the same 4 years, returning to a paltry growth of 0.8 in 2014 while further reductions are predicted for 2015 and 2016 following a recent third bail out.

Since 2008, the vast majority of Greek people can no longer afford private health care, relying on public hospitals instead[1], while in the school year 2010-11 15% of pupils transferred from private to public schools[2]. As a result, there has been a dramatic increase in the demand for public hospitals (28% between 2009 and 2013) and an increase in the demand for places in public schools.

An increase in co-payments for medicines and other user charges, together with the loss of social insurance health coverage by the unemployed and self-employed (Kentikelenis et al., 2014) has compounded problems, while on the funding side there has been a sharp contraction in public spending. Total public funding on health expenditures decreased by 31.39% over the period 2009-2013[3], while educational spending was reduced by 33% over the same period; according to Stratis (2014) there is a further 8.1% planned reduction in education spending for 2015.

In the article below we first discuss in Section 2 the principles that should characterise a health and an education system in their provision of services to the citizens of a country. We then explain in Sections 3 and 4, that even before the crisis the education and health sector were both unreformed and lacked independent oversight and evaluation mechanisms that would provide incentives to promote value for money and ensure an efficient use of resources. Once the economic crisis struck the spending cuts hit especially hard these two sectors that were cost inefficient, bloated and characterised by unequal access, leading to a sharp increase in unmet medical needs in health and under provision (e.g. in the form of teacher and teaching materials shortages) in education. As the emphasis by Greece's bailout monitors was in the spending cuts rather than ensuring the implementation of reforms, there was a treatment of the symptoms rather than the underlying causes. Reforms that were introduced were few and apart, presented to the people as a result of

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[1] Data for 2009-11 show increases in admissions to public hospitals as patients can no longer afford private payments or access to private health insurance. Several authors report on a marked deterioration in accessibility, especially for vulnerable people (uninsured, unemployed, migrants, older people, children etc.), increases in suicide rates combined with a decrease in the spending for mental health, 40% cuts in hospital budgets, shortages in staff and medical supplies, and corruption in procurement and bribes (for example, see Economou, et al., 2014a, Kentikelenis et al. 2011, 2014, Karanikolos et al, 2013, Karamitri et al, 2013, Kentikelenis and Papanicolas, 2012, Karamanoli, 2011, etc.).

[2] What happens now? The fallout of Greece's education cuts at:
http://learnnow.org/departments/global-learning/the-state-of-public-education-in-greece-2

[3] Calculated using data in Table 3, Hellenic Statistical Authority 2015.

austerity measures rather than as sensible changes. Many of the reforms that were voted by parliament were either never implemented, or reversed or seriously watered down after pressure from the trade unions. As exceptions, in Section 3 we see that higher education has seen the introduction of an evaluation system in order secure EU research funding long before the crisis, and in Section 4 the very recent (in 2014) introduction of a standard health package for all citizens after decades of unequal access (promoting some equity in the system), the introduction of e-prescriptions, and the implementation of the OECD based accounting system in hospitals for more transparency in the payment and procurement systems. As we argue in Conclusions, Greece still needs to promote radical reform by introducing an institutional framework for independent regulation, oversight and evaluation which is answerable to, but not controlled by, the state. It is of primary importance that such a system is understood, supported and owned by the people of Greece as a way to improve the services that they are entitled to as taxpayers and citizens of the country.

2. Models of Education and Health Provision

2.1 Supply and Demand Criteria in Health and Education

Every country has an obligation to provide healthcare and education as these two services are essential to enable the people of the country to effectively participate into society as its citizens. The provision of these services must satisfy on the supply side the main social criteria of equity, equal opportunities for all, universal coverage, accessibility and, where appropriate, affordability. On the demand side, as both services are experience, or even credence, goods, their quality cannot be easily ascertained by direct users, before its use and sometimes even after.[4] As there is an informational asymmetry on the users' side, the state has to ensure not only the continuity and sustainability in the provision of such services, but also their quality irrespectively of whether these are provided by public or private providers. Hence there is a need for the existence of an institutional framework that ensures the independent regulation of such systems using a transparent system of evaluation, assessment, oversight and accountability in their provision.

In the last two decades, there has been an attempt in some developed countries, such as the UK, to transform the provision of such services into 'user choice' public service markets where the focus is the promotion of competition and, through it, increased user choice, without sacrificing any of the above social principles. (We discuss this theme in more detail below).

[4] See Dassiou et al, 2015, 2016 on credence goods in terms of time lags (time required to establish quality through criteria such as survival rates, employment outcomes etc.), difficulty of establishing a counterfactual, or problems of attrition (e.g. health and education being two factors among many that define educational or health outcomes).

There are different models in health and education provision in different OECD countries with different institutions, and indeed with different levels of acceptance by the population regarding the provision of such services by private-for-profit companies, together with social companies (mutuals, charities etc.) and state providers. For example in the US, families are used to the idea of paying for their children's university education as private universities were established earlier than public universities (Musselin, 2010). Similar arrangements apply to countries like Cyprus. In Greece, education is viewed as being exclusively the concern of the state (Education Act, 1985), and its constitution prohibits the establishment of private universities. Total private spending on health has always been around 1/3 of total spending on health in the years immediately before the recession and has been even higher in the early noughties.[5]

2.2 Health and education as merit goods

Health and education are categorised as merit goods in economic theory i.e. they are characterised by large positive externalities in their consumption.[6] While such services are not public goods as they are both rival (e.g. prone to congestion and hence there is rivalry in their consumption) and excludable (e.g. in principle it is possible to exclude people from being served), the social benefit to the society of "consuming" health and education services significantly exceeds the private benefit to the direct beneficiary. If the provision of these goods was left solely to the private sector, these services would be massively under consumed while the society would miss the large positive externalities. In other words, the market mechanism cannot meet the wider policy objectives as the users do not internalise the full social benefits of their actions. Hence state funding is required to correct a market failure (under consumption) for these two merit goods, whose significant spill overs are not captured wholly by their immediate users.

While state funding is therefore justified, in principle there is no reason why the state could not just hand out vouchers or direct payments to users and let them choose a supplier. This approach creates a user choice based quasi- market approach where the providers chase the funding by the state, now in the hands of the consumers of such services. Providers have an incentive to compete with each other for consumers' custom. This should lead to improvements in quality and innovation. For example, Sweden gives parents vouchers that they are able to redeem not only in state schools, but

[5] See OECD data on Government expenditure by function (COFOG) at: https://stats.oecd.org/Index.aspx?DataSetCode=SNA_TABLE11#

[6] For a closer analysis on merit goods, externalities and market failures, the reader can refer to any microeconomics or industrial organisation textbook (e.g. Griffiths and Wall, 2000).

also in private schools, where they have the choice to top up if required.[7] The UK has started offering personal budgets to older and disabled people wishing to buy their own care, while UK universities compete with each other for students as the state (through the Student Loans Company) provides the latter with loans to "purchase" tertiary education. The reason why this does not happen more widely, is that even if we assume hypothetically that all the users had the ability to effectively choose in this manner (plurality of providers, free entry and exit in the market, ability of users to access, assess and act on information regarding all aspects of the service, etc.), the state may wish to pursue different objectives like fairness, equity, social justice, and, most importantly, implement budget constraints in their provision.

Ultimately, even where the user may exercise choice by purchasing the service directly, the user's choice is restricted by the funding for the service from the state or the relevant regional/local authority. For example, in the case of school choice in the UK, it would be more accurate to say that the user (the parent) can state a preference rather than being able to exercise the right to choose which school their child attends. Hence the choice of available school places is restricted by how many schools there are in the area, as well as the capacity of these schools.

3. The Greek Education System

3.1 Primary and Secondary Education

The education system in Greece has the following structure: primary education (PE), lower secondary education (gymnasium - LSE) followed by upper secondary education (USE) in lyceums or technical vocational schools (EPALs). Education is mandatory until the completion of gymnasium at 15. Students aged 15-18 go on to complete the lyceum or to technical schools both of 3 years duration.

Higher education consists of Universities and vocationally oriented Technological Education Institutes (TEIs), both offering 4 year study programmes. Graduates of the lyceum are eligible to national exams for entry into universities and TEIs, while graduates of EPALs were eligible for admission to TEIs and, as of 2009[8], to Universities too. Further education also exists in the form of institutes of vocational education (IEKs) that belong to further education (Xochellis and Kesidou, 2007). There is plethora of such institutes across the country both state and private (the duration of study in these is two year, with a further 6 months of work experience).

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[7] This far more radical that it may seem at a first glance. It means that taxpayers' money in the provision of education ends up with private firms and also that the taxpayers that use private education no longer cross-subsidize (by paying for a service they do not use) the ones that use state provision.

[8] With the aim of promoting equality of access in tertiary education, as working class students were over represented in EPALs and hence effectively excluded from access to the more academic type of HE offered by Universities.

According to Eurostat data, Greece's spending on education as a percentage of the GDP is one of the lowest in Europe, at 4.1% in 2005, compared to 6.8% in Germany, 5.4% for the UK, 6.% in Sweden and 8% in Denmark (2006 figures). About 6-7% of all pupils attend private schools. However there exists a different form of private education spending, in the form of a parallel system that has been created in the last 15-20 years. Private cramming groups (phrontistiria) or home tutors are used by the majority of pupils in the last year (or last two years) of upper secondary education who wish to get admitted into universities[9]. In 2008 spending on phrontistiria constituted 20% of a household's expenditure. Prices for daily 3- hour lessons are around 500 euros per month. Obviously pupils coming from more affluent families can afford to spend a larger number of time in such lessons (4 times as much as pupils from less affluent families can afford to, according to the BBC[10]). Given the reduction in median income by 1/3 and unemployment hovering around 25%, this gap in affordability has increased further, violating the principles of equal opportunity and accessibility to higher education.[11] Many of the public school teachers also work in such tuition centres to supplement their low salaries. Obviously if the students are taught by the same teacher both at school and at the tuition centre, there is a conflict of interest leading to perverse incentives.

Despite the fact that the maximum class size is defined by law to be 25 pupils in primary education and 30 in secondary education, in practice many schools in Greece have significantly fewer pupils.

<Tables 1-3>[12]

The 2011 OECD report stressed that pupils to teacher rates (as highlighted in the tables) were very low in Greece compared to the OECD averages: the figures for 2007 were 10.1, 7.7 and 7.3 in PE, LSE and USE respectively vs. OECD averages of 16.0, 13.2 and 12.5. To correct for the existence of schools with very few pupils, in 2011 the government consolidated 1,933 schools into 877 schools. This decrease in schools is reflected in Tables 1 and 2 (primary and lower secondary education) and to a lesser extent in upper secondary education in Table 3.

The need to improve efficiency and rationalisation in the coverage of the school networks, is limited by the geographic diversity of Greece. 54% of primary school students are clustered in two regions:

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[9] See Papapolydorou, 2010.p. 123.

[10] http://www.bbc.co.uk/news/business-34384671

[11] According to Hanushek and Wößmann, 2006, Greece is the second most inequitable country after Germany as measured by the increase in inequality between primary and secondary education. Also the parents' occupational status is largely related to the student performance and this correlation is stronger in Greece that in other non-selective countries such as Scandinavian ones.

[12] Hellenic Statistical Authority at:
http://www.statistics.gr/portal/page/portal/ESYE/PAGE-themes?p_param=A1401&r_param=SED12&y_param=2012_00&mytabs=0.

Attica and Central Macedonia with pupils concentrated in the city of Athens and Thessaloniki respectively. The remainder of pupils are dispersed across thousands of communities in mountainous isolated regions across Greece and in its 227 populated islands, only 78 of which have more than 100 people.

Net teaching time in Greece is strikingly lower than both OECD and EU averages. This combined with persistently low pupils to teacher rates, leads to a high salary cost in education, despite low teacher salaries. Also teaching time is inversely related to qualifications and experience meaning that the less prepared and less experienced teachers have to teach more. Some modest increases in teaching hours were introduced in 2013 with the aim of bringing these to OECD averages by 2015, albeit once more by increasing the teaching hours of junior staff more than those of senior staff. Unfortunately many of the policy recommendations were never implemented or reversed, and it is only at the time of writing this paper that there is talk of evaluating and approving the OECD 2011 recommendations for implementing in the teaching year 2016-17 or later. This is unfortunate as it misleadingly links sensible reforms, which should have been enforced years ago at a time when the Greek economy was experiencing fast growth, to austerity measures in the minds of parents and pupils.

Schools in Greece have no autonomy and virtually no say in the hiring of teachers, their dismissal, establishing starting salaries or increases, or formulating the school budget. All of these decisions rest with the regional or national education authority. This is in stark contrast with OECD practice. As the selection and remuneration of teachers is isolated from the school itself, the teachers have no incentives to build a commitment to the school they are appointed to. Teachers are hired using a waiting list where ranking is determined using various socio-economic criteria. Progression rules are based on seniority rather than criteria relating to their effectiveness or training related experience as teachers.

The OECD 2011 policy recommendations suggested a simple conceptual framework of evaluation and analysis with assessment at different levels: at the pupil level (in the classroom), teacher appraisal (by the school leadership), school assessment (by the local authority) and system evaluation (by the regulator or education department).

However, what is required in the long run, is that the budget allocations to schools should follow a carefully set up algorithm using a per-pupil funding formula with weights for age, level in education, family income and other background characteristics, including special needs and learning difficulties. The formula would allow funds according to school location, teacher positions, operational costs and investments. For this to happen a reliable database is needed, with live data that report on pupils, schools and teachers as well as buildings and infrastructure. The system should encourage the

formation of clusters where small schools team up with larger ones by sharing resources, teachers, management, and best practice teaching methods, while allowing for an alternative approach to small primary schools in isolated regions.

Incentives should be build-into the system, not only in the form of sticks but also carrots recognizing and rewarding on the basis of output/outcomes (e.g. pupils' performance and learning achievement, quality in teaching and assessment and leadership). Successes should be recognised in the remuneration of the school's management and teaching staff and advertised to parents and pupils to secure their support in introducing reforms.

3.2 Tertiary Education

Greece has 22 universities, while there are 16 TEIs operating a total of 212 departments in 46 municipalities. The establishment of a plethora of TEIs during the last two decades means that Greece has the highest number of tertiary education enrolments per 100,000 people (5,478/ 100,000) in the world[13]. Also in contrast with the low graduation rates in Greek Universities (around 17% in 2007, as opposed to an OECD average in excess of 35%, see below), data form the same year suggests that graduation rates in TEIs are above both OECD and EU averages.

<Figure 1>

As Figure 1 illustrates, enrolment in Universities significantly increased until 2005, then slightly decreased and stabilised. The diagram reflects the caps in student numbers set by the state rather than actual demand as reflected by the number of pupils taking the higher education entrance examinations. As an indication in 2014 there were around 105,000 students taking part in the national entrance exams, but only 70,305 open positions at higher education institutions around the country. While it is relatively easy to gain entry in a HE institution, it is very difficult to gain entry at a University, especially the pupil's first preference, and many end up in a TEI instead. Figure 2 reports on the numbers of teaching staff and graduates in Greek universities. The relative static number of graduates at around 10,000-14,000 every year, despite the rise in students' numbers as of 2000, indicates the low graduation rates in Greek Universities that we referred to before.

<Figure 2>

In the 1990s the EU emerged as a major funding source for academic research in higher education. The Bologna Process (1999) on the implementation of an evaluation and quality assurance framework paved the way for the creation of a national system of quality assurance (Mattheou, 2004). This was

[13] OECD., 2011, p. 65

a pre-requisite for Greece to follow the process of European unification and also necessary to secure access to European funds for academic research. Universities wishing to participate in European projects had to familiarise themselves with evaluation mechanisms and discourse. As a result, they adopted criteria from the EU toolkit including internal and external evaluation, accountability, quality and efficiency. As part of the Europeanization process, universities had to offer new degrees with a more pragmatic orientation (vocation-wise) in finance, business and technology. Moreover, the EU's Operational Programme of Education and Initial Vocational Training (OPEIVT) led to the establishment of new University departments and TEIs across the country and an increase in teaching staff numbers as shown in Figure 2. However the creation of these served more mayoral and local community ambitions and resulted in the creation of "flying professors"[14], rather than the intended objective of fostering innovation and entrepreneurship in underdeveloped regions of Greece and responding to genuine demand by potential students in the region. Also, a complex system of transfers of students between Universities and TEIs in different regions using ad hoc and ever changing socioeconomic criteria, means that many departments in the regions end up with far fewer students that they planned for and vice versa for metropolitan areas such as Athens and Thessaloniki.

Despite the backlash (Prokou, 2010), evaluation mechanisms in Greek Universities were formally established in 2005; these included both internal and external evaluation, the use of evaluation indicators, the implementation of the European Credits Transfer Scheme (ECTS), and a 4 year Development Academic Planning as a requirement on universities in order to secure public funding (Zmas, 2015).

Regardless of the significant reductions in research, investment, infrastructure and operational costs funding in 2011 onwards, the improvements that have taken place over the last twenty years starting from the mid 90's are becoming visible: Greek Universities have now in place a quality assurance mechanism and the majority have established mechanisms for internal and external evaluation, while an increasing number of institutions are finally adopting Development Academic Planning.

However from the side of the students there is still a "beyond reasonable involvement in the political process in university campuses" (OECD, 2011, p. 77) that has entered the system since the 80's and persists to this day, endangering both academic freedom and the quality of teaching and learning in higher education institutions. In terms of attainment Greek universities are still featuring low in research league tables, while the employment prospects of Greek graduates are the bleakest in the EU with an almost 20% unemployment rate. The introduction of a law in 2011 based on the bail out

[14] Academic staff that taught for 1-2 days per week at the regional University or TEI and then flew back home on subsidised tickets.

requirements led to the merging of university departments and a change in its management with the aspiration of sharpening the strategic focus of universities to conducting innovative research that will lead to an improvement of their position in the research league rankings, attaining international recognition and ensuring financial and administrative autonomy from the state.

4. The Greek Health System

The Greek public health system is a hybrid including a compulsory social insurance model, together with a National Health System (ESY), as well out co-payments by patients[15] . In addition the private sector includes profit making hospitals, diagnostic centres and independent practices. Table 4[16] gives a brief description of the three types of health systems typically found in most countries; we see that Greece is a combination of all three types.

<Table 4>

Until very recently there was a very large number of Social Security Funds (SSFs) in Greece; these have currently merged into 4 funds covering 95% of the population (Economou, 2010), and the plan is to integrate all schemes into one by January 2018.[17] There is no regulator or other institutional body or a jurisdictional map to govern the relationship between ESY and the SSFs. ESY is taxpayer funded while SSFs depend on employer and employee contributions and are also subsidized by the state (taxpayers). This hybrid system has led to two sources of entitlement, the first based on citizenship for access to outpatient services provided by ESY, and the second based on employment provided by insurance fund membership for access to doctors, diagnostic tests, etc.[17], as well as access to inpatient services (e.g. hospitals) by the ESY. This has meant that health coverage was largely dependent on being employed or self-employed (with wives and children also enjoying coverage as the dependants of the insured). As a consequence, the fall in employment as a result of the economic crisis, combined with the fact that a large number of people are self-employed (40.6% of male and 31.2% of females according to 2012 figures provided by the OECD) meant that many people found themselves without coverage after one year in unemployment (recently this has been increased to

[15] For drugs there is typically a 25% co-payment fee. There are also fees for private afternoon outpatient clinic consultations. In the last 2-3 years fees for morning outpatient clinics and hospital admissions were introduced, but both have been withdrawn following public outcry. (See Zaracostas, 2011, and Doctors of the World, 2013a, 2013b, on increases in user fees and access to health care.)

[16] This is a much reduced and modified version of a table constructed by Professor Mireia Jofre-Bonet as part of her lecture notes at City University London for the MSc in Economic Evaluation in Health Care.

[17] These plethora of funds linked to different occupational groups gave different levels of health benefits coverage and access to health to their members (not directly linked to the level of contributions), violating equity, universality and social fairness objectives. The level of subsidies by the government to these funds were different too. Fortunately, as we report below, reforms in the system since 2010 have led to a standardization of health benefits package for all citizens (Economou et al., 2014).

two years) or with no coverage at all after ceasing their self-employment activity and/or stopping self-insurance payments.

Table 5 (constructed using Eurostat online data) shows the split between different financing agents in 2012 for different OECD countries. Private expenditure on health (including private payments and private insurance) in Greece is 31.8%, one of the highest by European standards, only surpassed by Cyprus, Bulgaria and Latvia and similar to Portugal, Hungary, Lithuania and Switzerland.

<Table 5 >

Figure 3 [18] shows the split among the three sources of health spending in Greece for the years 2009-2013 where we see private funding share increasing from 30.3% to 35.6 % of total spending while the role of social security funds shrinks from 43.1% to 34.3% over the same period (because, as we discussed above, there was an increase in unemployment, a reduction in the number of self-employed as many small businesses failed, while many self-employed can no longer afford to pay their own social security contributions or contributions for their employees). Figure 4[19], shows the split of total funding (yellow bar) to public funding (government spending plus social security funds - blue bar) and private funding (red bar), with the former decreasing by almost 38% over 2009-2103 and the latter by 20%, amounting to a fall in total health spending of 32%. The fact that public funding fell faster than private funding explains the increase in the share of private funding seen in Figure 3. Both are the result of the economic crisis and the imposition of austerity in Greece which has led to a reduction in both availability and affordability of healthcare in Greece.

<Figure 3>

<Figure 4>

Given that health is free at the point of use, overconsumption may lead to waste. To prevent overspending, choice may be exercised on behalf of the user by the family doctor. In many health systems, general practitioners and family physicians form what is commonly called the primary care level, while the secondary health care sector includes specialised care and hospitals. In several northern European countries including the UK, as well as in Italy, Portugal, and Spain, the primary care level plays the role of the "gatekeeper" to the health system. The patient is not authorised to consult a specialist if she has not first consulted a general practitioner with whom she has a record.

[18] Chart 3, p.7, Press Release, System of Health Accounts of year 2013 & revision of SHA data of years 2009-2011, Hellenic Statistical Authority, 2015.
http://www.statistics.gr/portal/page/portal/ESYE/BUCKET/A2103/PressReleases/A2103_SHE35_DT_AN_00_2013_01_F_EN.pdf.

[19] Chart 2, ibid.

Given that the family doctor should also promote the interests of the patient too, a gatekeeping arrangement may lead to an obvious conflict. For example, in the UK a family doctor acts an agent for the patient (advising him on treatment options, choice of specialists, hospitals etc.), as well as an agent for the state in his roles of gatekeeper and budget-holder. This means that she may face conflicting incentives in her dual role.[20] Interestingly, referral by a general practitioner to a specialist or a hospital is necessary even in the case where the patient elects to go private. This is because private healthcare is not only provided by the 200 or so private hospitals, but also by private patient units in National Health Service hospitals.[21]

This 'gate' system is not present in Greece (nor in Belgium, France, Germany, and Luxemburg.) In terms of user choice, Greek patients enjoy a more market like approach than the UK. They can choose any public hospital to receive treatment and have access, as part of primary care, to any specialised doctor provided that the latter is contracted with the particular insurance fund to which the patient belongs to. The pay of doctors in primary care is on a "fee per service" basis which leads to a "supplier-induced demand" (Van Stolk et al., 2010, p. 18), where doctors use the information asymmetry to alter patient preferences and provide more services than necessary leading to a waste of taxpayers' money.

Economou (2010) reports on sensible reforms introduced between 2001 and 2004, which following the election in 2004 were either abolished or never implemented. Fortunately reforms in the system since 2010 have led to a standardization of health benefits package for all citizens (Economou et al., 2014b) thus restoring equity, together with the introduction of a prospective payments system for hospital care, the implementation of the system of health accounting used by the OECD, the introduction of more transparency in the system of procurement, the introduction of e-prescriptions and the use of more generic drugs in prescriptions. However the improvements that such reforms would have brought would have been more pronounced and better received by people if they had been implemented when the economy was growing fast in the early noughties, rather than during the economic crisis presented to its citizens, as always, as necessary by-products of the economic austerity.

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[20] See Van Stolk et al. (2010) on the double agency issue: providers are expected to act as agents of both patients and payers. The shifting of the responsibility for commissioning care to GPs, has given rise to questions concerning the commissioning skills, capacity and incentives of GPs to ensure value for money for both their patients and the taxpayers (see Crowe et. al., 2014).

[21] The German system differs substantially, as the funding is patient –based, so data on patients are not centralised, but are sent to the sickness benefit fund of each patient with the aim of financing the care for each patient, and subsequently covering the costs of the hospitals.

Regarding universality and accessibility, the economic crisis had led to medical needs increasing among both unemployed and employed people (Dubois and Anderson, 2013). In The European Quality of Life survey respondents indicated distance (45% of respondents), delay of appointment (67%) waiting time to see a doctor (66%) and cost (64%) as a barriers to access in to healthcare in 2011, while there was a 50% increase in the reporting of unmet medical need in 2011 relative to 2007. A study by Karamitri et al. 2013, looks at the perceptions of health professionals on the accessibility to health services by vulnerable people. Physicians report bureaucratic procedures, the lack of translation of access procedures and medical interpreters, as well as the lack of a link between primary and secondary healthcare, leading to a clustering of vulnerable people in emergency departments, as the main impediments to access. The Thales European project in Greece is one example of attempting to remove barriers to informed access by establishing a website and information kiosks in large cities in Greece with information on access to publicly funded services translated in different languages, on the rights of migrants with regard to access to healthcare services, on co-payments, and on the identification of symptoms of infectious diseases.

The lack of a health regulator in Greece leaves unaddressed the problem of asymmetric information on the demand side, as there is no one to oversee the quality of health care provided to the users of the health system. It is also problematic on the procurement side given the lack of a mechanism of oversight over the purchasing activities by the insurance funds leaving room for corruption and nepotism. Reimbursement levels, and the prices paid to providers are regulated by the central government. A large part of the private sector enters into contracts with the social insurance funds and provides mainly primary care. In 2011 the government briefly toyed with the idea of transforming PODY (former EOPYY), the provider of primary care, to a purchaser only body commissioning health care services from providers. However this step is not a realistic one, unless the system is first subjected to independent oversight and regulation to ensure transparency in procurement through the establishment of an independent agency.

The other missing part of the jigsaw is the incentives for doctors. As we have already mentioned, the fee for service pay that contracted doctors receive creates perverse incentives to overspend rather than economize. Doctors in hospitals receive a modest salary and there is no clear system for progression given the lack of an evaluation system. As a consequence, some of these doctors also retain a private practice, while others solicit or accept bribes given by patients and their relatives who hope to jump the queue and/or receive prompt quality care.

5. Conclusions

The severe problems in funding for health and education induced by austerity measures (imposed as a result of three successive bail outs) are magnified by a lack of coherence and continuity: even before the economic crisis (in fact, ever since the restoration of democracy in 1974) Greece experienced a very large number of education and health ministers with terms of service that, on average, amounted to a few months rather than years. This means that there was no time to design a coherent policy, own it and implement it. The constant change of ministers has accelerated since 2008 as the negotiation of three bail out programmes has led to a political crisis in the country, with each party in government being toppled after 2 years or less (rather than serving a full term of 4 years) hence leading to the introduction of a completely new ministerial team by each new government as it takes office, in addition to the frequent reshuffling of ministerial positions in education and health by any given government. This has led to a further deterioration in policy design and implementation, just when it was most sorely needed: many laws are passed without proper design and consultation of the stakeholders and either reversed by successive governments, or never implemented, unless there are pre-requisites for accessing bailout funding. In other words, there is a persistent and significant divergence between the enactment and the enforcement of legislation in the health and education sector. The state controls all economic activity including the provision of health and education. Any attempts for reform, for rationalizing, evaluating or improving are either resisted or stalled.

Under these circumstances, it is clear that only a paradigm shift can provide a legitimate response capable of winning back the trust of the citizens, as taxpayers, and the people, as the users of these services. The country needs urgently the establishment of an institutional framework for independent regulation (with a regulator/agency answerable only to the parliament rather than the government) in health and education so that a competent small group of health technologists, economists, healthcare managers and education specialists become responsible for monitoring these sectors, oversee the implementation of policy, ensure continuity, perform oversight and evaluation of the system and ultimately protect the interests of the consumers (e.g. users) both present and future (i.e. ensure the system is sustainable). This is similar to the current regulatory arrangements in the European Union surrounding utility services (e.g. national watchdogs in energy markets, telecoms, etc.).

Reforms need to be coherent and fully owned with a strategy plan that clearly sets out the benefits and the risks. The system should include an evaluation system with clear rules and with incentives in

the form of sticks (rewards) and carrots (punishments). The citizens' anxieties and concerns should be addressed and reforms explained in a way that simplifies the stakes and translates into an understandable context the necessity for specific reforms. Finally the regulator should be granted independence and a clear de-coupling from the state that will allow it to overcome the resistance in the implementation of reforms by interest groups exerting often disproportionate to their size influence.

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Table 1. Primary education (primary schools): School units, teaching staff and pupils, end of the school years 2000/01 – 2012/13

Type of school	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Public													
School units	5,708	5,600	5,541	5,471	5,398	5,297	5,220	5,174	5,127	5,075	4,991	4,392	4,350
Teaching staff	48,872	50,986	52,775	57,305	59,387	60,814	63,513	64,058	64,977	66,409	66,018	63,396	61,726
Pupils	593,094	597,847	600,254	605,961	599,843	596,652	593,583	590,491	590,640	589,578	590,203	590,070	588,832
Pupils per teacher	12.1	11.7	11.4	10.6	10.1	9.8	9.3	9.2	9.0	8.9	8.9	9.3	9.5
Private													
School units	386	389	384	383	380	378	374	372	369	365	365	354	348
Teaching staff	3,218	3,334	3,360	3,465	3,495	3,602	3,829	3,985	4,041	4,066	3,967	3,918	3,831
Pupils	46,838	48,484	48,233	48,819	47,700	46,548	46,378	46,818	46,836	46,357	43,845	43,221	41,211
Pupils per teacher	14.6	14.5	14.4	14.1	13.6	12.9	12.1	11.7	11.6	11.4	11.1	11.0	10.8

(1) Including teachers, other teaching staff e.g.foreign language teachers, music teachers, etc. "Absent" teachers are included only for public shcools. Absent teachers are the teachers with a fixed post in the school unit who are absent for more than 20 working days(due to illness, training, maternity leave, etc.) and their replacement is pending, as well as the teachers who are seconded to other administrative posts of the Ministry of Education and Religious Affairs, Culture and Sports or elsewhere.

Table 2. Secondary education (lower secondary schools): School units, teaching staff and pupils, end of the school years 2000/01 – 2012/13

Type of school	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Public													
School units	1,760	1,762	1,723	1,811	1,797	1,834	1,847	1,851	1,859	1,860	1,826	1,729	1,729
Teaching staff[(1)]	37,340	38,757	38,892	41,627	43,137	44,477	46,606	47,727	49,335	50,208	46,762	43,071	40,585
Pupils	329,842	318,897	305,448	307,218	308,861	317,091	325,514	322,391	322,242	318,875	315,606	308,185	304,863
Pupils per teacher	8.8	8.2	7.9	7.4	7.2	7.1	7.0	6.8	6.5	6.4	6.7	7.2	7.5
Private													
School units	110	105	96	107	107	112	111	106	109	105	102	100	98
Teaching staff	2,327	2,135	2,095	2,297	2,309	2,446	2,495	2,473	2,523	2,397	2,277	2,202	2,080
Pupils	18,916	17,253	16,233	16,115	16,290	17,144	18,251	18,716	19,073	18,063	16,399	16,217	15,087
Pupils per teacher	8.1	8.1	7.7	7.0	7.1	7.0	7.3	7.6	7.6	7.5	7.2	7.4	7.3

(1) Also Including "absent" teachers, but only for public lower secondary schools. Absent teachers are the teachers with a fixed post in the school unit who are absent for more than 20 working days(due to illness, training, maternity leave, etc.) and their replacement is pending, as well as the teachers who are seconded to other administrative posts of the Ministry of Education and Religious Affairs, Culture and Sports or elsewhere.

Table 3. Secondary general education (upper secondary schools): School units, teaching staff and pupils, end of the school years 2000/01 – 2012/13

Type of school	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Public													
School units	1,199	1,146	1,171	1,191	1,212	1,246	1,252	1,264	1,264	1,265	1,244	1,228	1,225
Teaching staff[(1)]	23,484	23,420	23,605	24,428	26,014	28,099	27,028	28,122	28,756	29,197	28,015	25,817	25,567
Pupils	225,057	214,361	212,628	217,530	219,134	222,519	217,061	223,527	225,507	231,766	231,593	232,145	230,998
Pupils per teacher	9.6	9.2	9.0	8.9	8.4	7.9	8.0	7.9	7.8	7.9	8.3	9.0	9.0
Private													
School units	90	92	97	99	100	106	109	105	103	96	94	92	93
Teaching staff	1,897	1,989	1,993	2,075	2,020	2,172	2,103	2,036	1,927	1,821	1,768	1,855	1,760
Pupils	16,157	15,804	16,119	16,193	15,963	16,456	15,825	16,125	16,219	15,675	15,627	15,572	14,894
Pupils per teacher	8.5	7.9	8.1	7.8	7.9	7.6	7.5	7.9	8.4	8.6	8.8	8.4	8.5

(1) Also Including "absent" teachers, but only for public upper secondary schools. Absent teachers are the teachers with a fixed post in the school unit who are absent for more than 20 working days(due to illness, training, maternity leave, etc.) and their replacement is pending, as well as the teachers who are seconded to other administrative posts of the Ministry of Education and Religious Affairs, Culture and Sports or elsewhere.

Table 4: Comparison of different health systems

	Private health insurance	Social health insurance	Taxation
Key features	1. Insurance is voluntary 2. Premiums are paid by the individuals and /or their employer 3. Premiums are based on individual risk status 4. Insurance providers may be profit maximisers or have goals other than profit maximization 5. Insurance provision may be via indemnity plans or managed care organisations (MCOs)	1. Insurance is compulsory for all or part of the population 2. Premiums are usually paid in the form of a hypothecated payroll tax 3. Payments are related to ability to pay usually as a proportion of income; they are not related to individual risk 4. Payments are made into a social insurance fund	1. Insurance is compulsory for the whole population 2. Premiums are paid in the form of tax payments made to the government 3. Payments are related to ability to pay; they are not related to individual risk 4. Taxes can be: indirect or direct; general or hypothecated; set locally, regionally or nationally
Countries with predominantly this type of system	USA, Switzerland	France, Germany, Luxemburg, Netherlands	Denmark, Finland, Ireland, Italy, Norway, Portugal, Spain, Sweden, UK
Dealing with affordability	1. Retrospective reimbursement 2. Selective contracting and vertical integration between the third party payers and health care providers	Compulsory insurance in which payments are related to ability to pay	Compulsory insurance in which payments are related to ability to pay

Table 5: Healthcare expenditure by financing agent, 2012

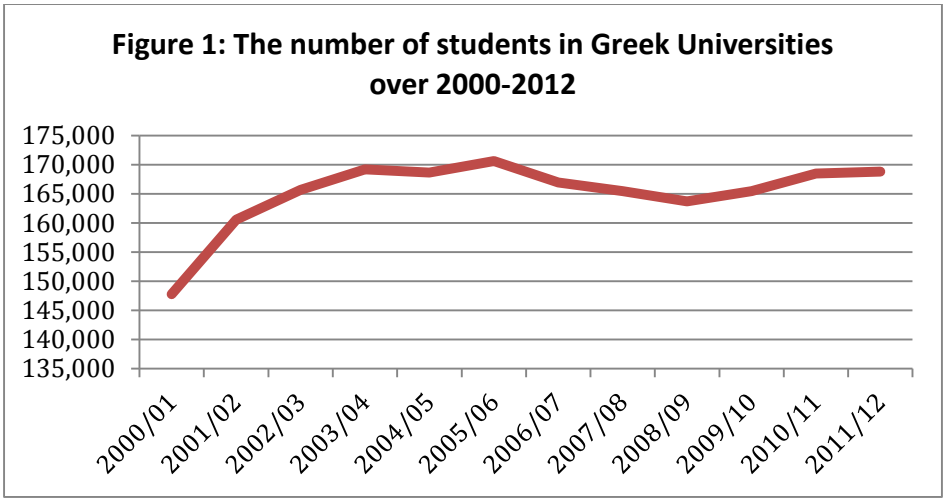
(% of current healthcare expenditure)

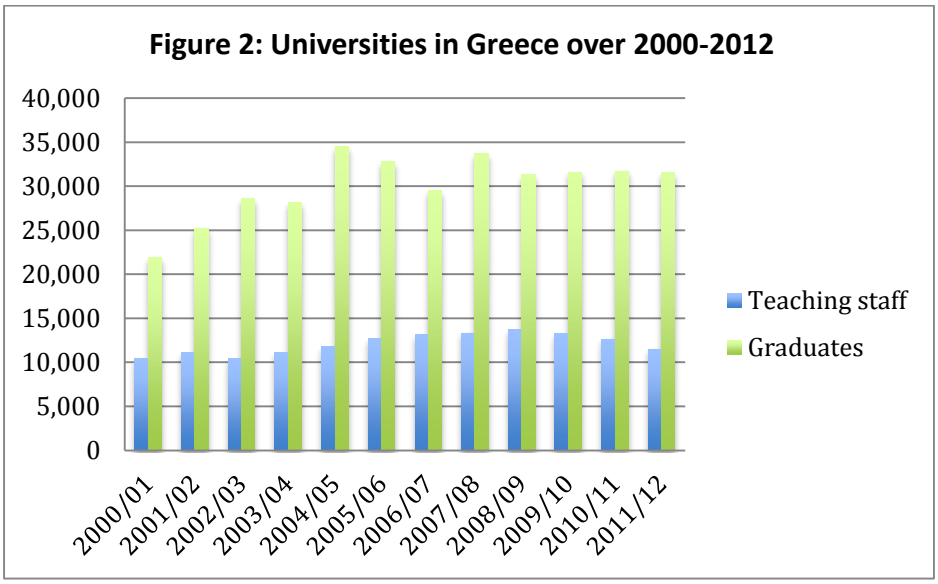
	General government excluding social security funds	Social security funds	Private insurance enterprises (including private social insurance)	Private household out-of-pocket expenditure	Non-profit institutions serving households	Corporations (other than health insurance)
Belgium	10.9	64.3	4.2	20.4	0.2	0.0
Bulgaria (1)	15.5	38.8	0.4	44.5	0.5	0.4
Czech Republic	4.5	79.2	0.2	15.3	0.4	0.3
Denmark	*85.2*	*0.0*	*1.8*	*12.9*	*0.1*	*0.0*
Germany	6.8	70.4	9.6	12.2	0.5	0.5
Estonia	10.5	69.1	0.3	18.4	0.0	1.4
Greece	28.7	39.3	3.0	28.8	0.1	0.0
Spain	67.0	4.7	5.8	22.1	0.4	:
France	3.9	73.8	13.8	7.8	0.0	0.6
Croatia	2.6	76.9	7.7	12.8	:	:
Cyprus	*45.7*	*0.7*	*4.5*	*47.2*	*0.2*	*1.7*
Latvia (2)	59.6	0.0	2.5	37.8	0.2	0.0
Lithuania	9.0	58.1	0.8	31.8	0.0	0.1
Luxembourg	8.6	74.0	4.6	11.6	1.2	0.0
Hungary	8.1	53.8	2.7	29.1	2.0	4.2
Netherlands	7.5	78.3	5.5	6.0	1.3	1.5
Austria	32.6	44.6	4.8	16.7	1.2	0.1
Poland	6.4	63.6	0.8	24.3	1.4	3.6
Portugal (1)	*64.2*	*1.3*	*4.9*	*28.9*	*0.1*	*0.5*
Romania	12.1	67.8	0.2	19.5	0.1	0.3
Slovenia (1)	1.8	71.3	13.7	12.2	0.1	1.0
Slovakia (1)	7.2	66.5	0.0	23.6	1.0	1.7
Finland	59.7	15.1	2.2	19.6	1.0	2.5
Sweden	81.2	:	0.3	17.5	0.2	0.8
Norway	*73.6*	*11.4*	:	:	:	:
Switzerland	*20.3*	*45.5*	*7.2*	*26.0*	*1.0*	:
Australia (1)	68.3	:	8.8	19.4	0.6	2.9
Canada (1)	68.5	1.4	12.9	15.5	:	1.6
Japan (1)	9.6	72.8	2.5	14.1	:	1.0
New Zealand (1)	74.9	7.8	4.8	10.9	1.6	0.0
South Korea	11.4	44.4	5.8	37.6	0.6	0.1
United States	5.3	43.3	34.8	12.5	3.9	0.2

(1) 2011.

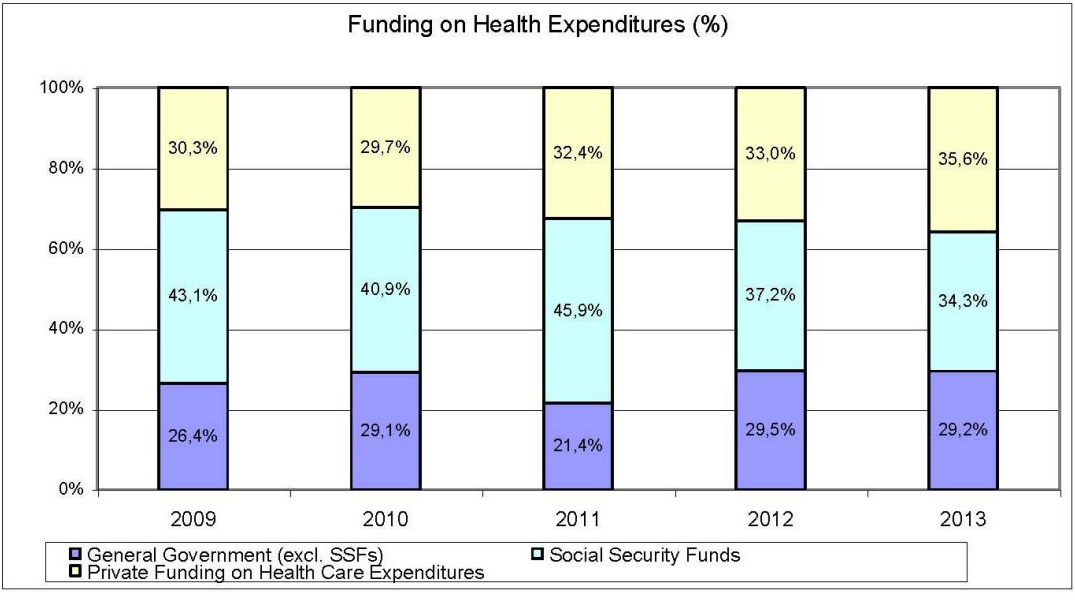
(2) 2010.

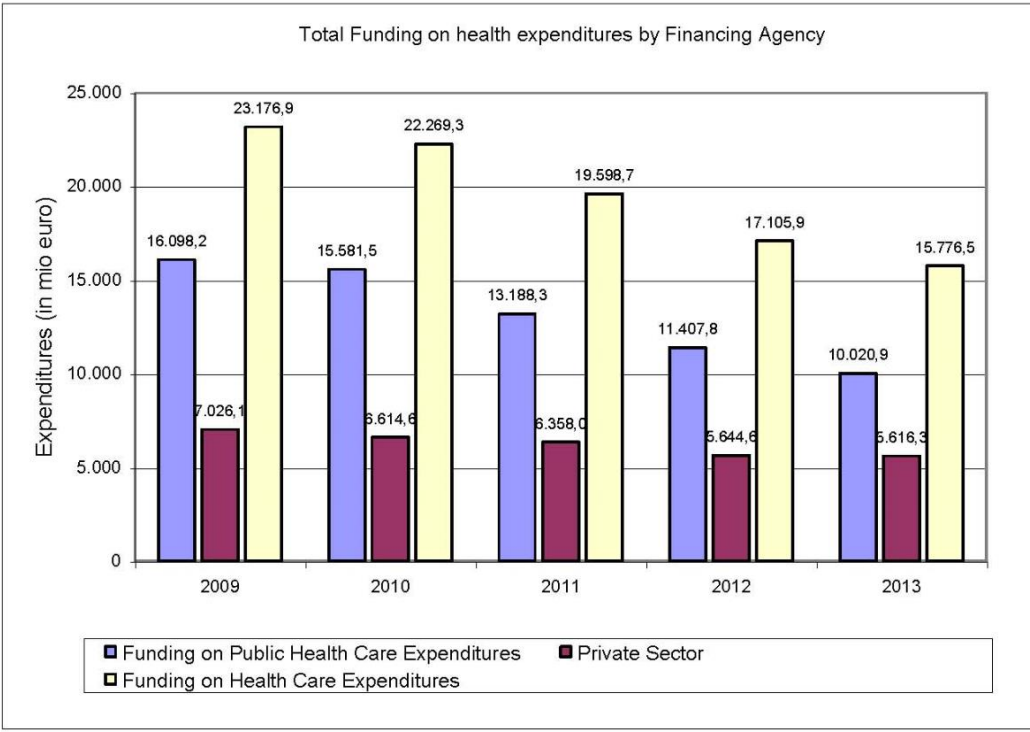
Source: Eurostat (online data code: hlth_sha_hf)





Source: ElStat-Education


Funding on Health Expenditures (%)
100%
80%
60%
40%
20%
0%
30,3%
43,1%
26,4%
29,7%
40,9%
29,1%
32,4%
45,9%
21,4%
33,0%
37,2%
29,5%
35,6%
34,3%
29,2%
2009
2010
2011
2012
2013
General Government (excl. SSFs)
Social Security Funds
Private Funding on Health Care Expenditures


Total Funding on health expenditures by Financing Agency
Expenditures (in mio euro)
25.000
20.000
15.000
10.000
5.000
0
16.098,2
7.026,1
23.176,9
15.581,5
6.614,6
22.269,3
13.188,3
6.358,0
19.598,7
11.407,8
5.644,6
17.105,9
10.020,9
5.616,3
15.776,5
2009
2010
2011
2012
2013
Funding on Public Health Care Expenditures
Private Sector
Funding on Health Care Expenditures