The Great Recession and its Effect on Greek Education Spending

Gregory T. Papanikos

Working Paper
02/2017

Athens, 20 November 2017

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eISBN: 978-960-598-302-4
Published by the Athens Institute for Education and Research (ATINER)

Suggested citation of this paper:
Papanikos GT (2017) *The Great Recession and its Effect on Greek Education Spending*, No 02/2017.

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The Great Recession and its Effect on Greek Education Spending[1]

By Gregory T. Papanikos[*]

This paper looks at Greek educational spending before and after the Great Recession of 2008-2016. The Great Recession hit Greece the hardest because it was ill-prepared to face such an economic shock. Nevertheless, the Greek economy during its worst years of the 21st century outperformed the best years of the entire twentieth century. Educational spending decreased, but as a percentage of GDP increased showing that government budget cuts (85% of which are salaries) were leaner in education in relation to other government functions. Finally, the recent evaluation of the education system of Greece is misleading. Educational policy cannot be guided by short-run considerations and must be forward looking, taking into consideration and support, where necessary. the idiosyncrasies of the Greek system of education. One such aspect is so called "shadow education", which has been the most efficient, effective, competitive, and democratic aspect of the Greek education system.

Keywords*: Greece, Recession, Education, Government Spending OECD*

Introduction

The Great Recession began in 2007 in the USA. It spread to Europe in 2008 by hitting hard the least developed countries of the eurozone, resulting in a sharp drop in total output (GDP), per capita output, consumption, and investment. It is true that recessions do not affect equally all members of society. Educational differences are an important determinant of who is hit hardest. Hoynes et al (2012, p. 45) concluded, "[T]he labor market decline during the Great Recession and its aftermath has been both deeper and longer than the early 1980s recession—indeed, the longest and deepest since the Great Depression. The labor market effects of the Great Recession have not been uniform across demographic groups. Men, blacks, Hispanics, youth, and those with lower education levels experience more employment declines and unemployment increases compared to women, whites, prime-aged workers, and those with high education levels".

The effect of the Great Recession in Greece manifested itself as a public finance crisis. The effect on Greek public finances was harder because of its structural idiosyncratic pathogeneses and an unprecedented overvalued euro. The former includes the notorious Greek informal economy, which has its own unique characteristics, as I have explained elsewhere, in Papanikos (2015a). The latter

[1]This paper was presented at the Study Tour Program of the University of Georgia, USA, 20 November 2017, on "Education in Greece, the Impact of Historical and Cultural Contexts".

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(overvalued euro) has been more important than the structural deficiencies of the Greek economy. I have examined this issue in Papanikos (2015b).

Why was Greece so ill-prepared to deal with the Great Recession relative to the other PIIGS (Portugal, Italy, Ireland, Greece and Spain) of the eurozone? Let me start with a well known fable. All Greeks learn the tale of the three pigs in their preschool years (3-5), but they forget the moral of the story once they enter adulthood. The moral of the story of the three pigs is that there are external threats such as the Great Recession (the wolf), which can be dealt with when your house (national economy) is built with strong bricks, that no natural or "animal" made wind (threat) can demolish.

Following this story, some "houses" (economies) in the eurozone were built with bricks (Germany and the Netherlands), some with wood (Ireland) and some with straw (Greece). The Greek economy has many structural problems, but the most important one is that all its historical land is full of scarecrows scaring away all the "birds" who want to invest and contribute to Greece's development. Unfortunately, there are no scarecrows for "wolves". Despite this, Greece's economic performance won't look so bad, if the right time comparisons are made. Greek economic growth prior to the recession was mainly due to unprecedented borrowing from abroad intended to finance huge increases in public wages, including those of public teachers' wages. This was the weakness of the Greek "house" (economy) which was taken advantaged by the "wolves", i.e. the international markets, which will exist in an open "forest" (global economy) without "fences", i.e. protection measures such as tariffs and devaluations.

The emphasis of this paper is on the Great Recession's effect on Greek total general government expenditure on education. It is organized in five sections including this introduction. In the next section, I present some stylized facts on the Greek population and some relevant economic statistics. Section three looks at the Greek government's expenditures on education and at some school enrollment data before and after the Great Recession. Section four discusses some issues on the Greek education system and education policy and section five concludes.

Demographic and Economic Facts

In the last ten years, the Greek economy has been at the center of the world's attention. As Professor of History at Columbia University Mark Mazower (2011) has demonstrated, this is the first time. On 29 June 2011, he wrote that "…the whole world was watching Greece as its Parliament voted to pass a divisive package of austerity measures that could have critical ramifications for the global financial system. It may come as a surprise that this tiny tip of the Balkan Peninsula could command such attention. … But this is hardly the first time that to understand Europe's future,

you need to turn away from the big powers at the center of the continent and look closely at what is happening in Athens. For the past 200 years, Greece has been at the forefront of Europe's evolution".

It seems to me that the world is obsessed with whatever happens in Athens (Greece). This has resulted in overstatements, if not foolishness. Since 2008, the international media were preoccupied with Greek economic and social developments. They were predicting, along with Greek national media, that a catastrophic humanitarian crisis was imminent in Greece and quite a few were expecting a civil war. By itself, this bad publicity could have been a self-fulfilling prophecy, because the bad news had a deleterious effect on the Greek economy, reducing international tourist arrivals and, most importantly, their valuable tourist spending. Of course, there was no such thing as an international conspiracy as many thought at the time. The reason was simple. Athens "sells" well in the international media because of its historical role in shaping the modern world and, of course, bad news sell much better than good news. If there is not such bad news, a little exaggeration does the trick. The mass media are experts in exaggerating. At the extreme of exaggeration is fake news, which sell even better.

These negative predictions were not at all justified by Greece's historical economic performance. As shown in this paper, the Greek economy during its worst year of the Great Recession was producing more goods and services than in its best year of the entire 20th century. If there was to be a humanitarian crisis during the Great Recession, according to the data (per capita and level), this would have been the case throughout the 20th century. Of course, there was no humanitarian crisis. Greece is a well-developed economy and can deal with recessions more easily than other countries. If the Great Recession hit the Greek economy as hard as it did, it was because it was one of the five pigs in the eurozone that built the weakest house (economy). It is now up to Greece to build a better "house" (economy).

The above claim does not imply there are no problems with the Greek economy. On the contrary, there are many problems. However, these are structural and will remain well after the Great Recession is over. The best example of the structural problem in Greece is its notoriously large shadow or informal economy. The estimates of the informal economy range, from a minimum of 25% to a maximum of over 50% of Gross Domestic Product (GDP), as explained in Papanikos (2015a). This structural problem cannot be solved with changes in budgetary policies, such as horizontal cut offs in government spending and increases in tax rates. Most probably, the problem will be aggravated. As I have argued, Papanikos (2015a), this tax evasion can be dealt with only if all easily evadable taxes are abolished (sales tax and income tax) and replaced with taxes that cannot be evaded, such as a wealth (property) tax.

Similarly, the problems of the Greek Educational System do not relate to Great Recession. They are structural, and some recent recommendations by such

prestigious organizations as OECD and European Commission will make things worse, if they are implemented. Actually, most of these recommendations echoed Greek government officials' opinions. One good example is the criticism of the so-called shadow education and the universality of the national entrance exams to post secondary educational institutions. In fact, these are the most efficient, effective, competitive and democratic elements of the Greek education system. They should be retained and, if possible, reinforced.

In addition to the structural imbalances of the Greek economy, two new problems have emerged. First, is the "brain drain", which was exacerbated by the recession. Young educated Greek people are migrating to other countries, primarily to Germany and the U.K. Reliable figures do not exist, but some estimates show that more than 400 thousand Greeks left Greece to work abroad since the start of the Great Recession (2008). A note is important here to make clear what is cyclical and what is secular. The Greek education system produces more doctors than needed, i.e. orthopedics. Even after the recession, this oversupply of orthopedic doctors will remain, unless one makes an argument that bone fractures are positively related to economic growth. These doctors must migrate to countries where there is a demand for such specialties. This is exactly what has been happening as was expected by the founders of the European Union, i.e. the free movement of labor.

Second, there is a huge inflow of refugees and economic migrants, who put a strain on the Greek economy and society, including the public provision of education. What makes this worse is that almost all of these migrants and refugees do not want to stay in Greece, but consider it as a transitory stage in their search for permanent settlement in another European country, mainly Germany and the U.K. The result is a decline in the Greek population, which cannot be replaced by migrants.

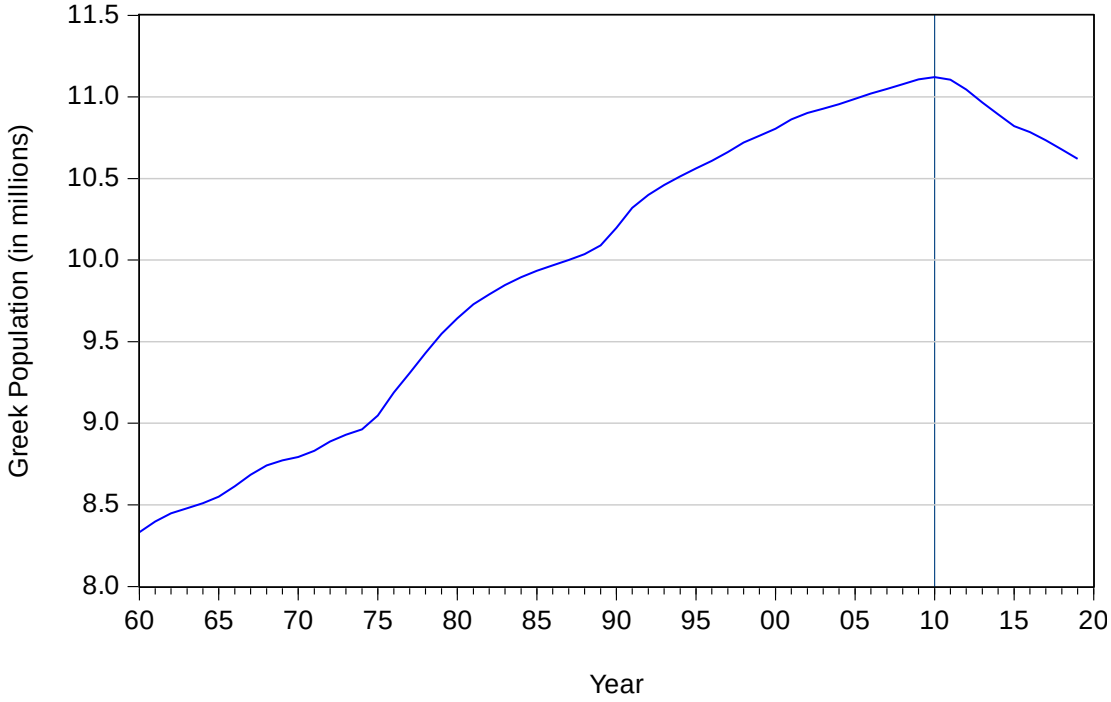
In the rest of this section of the paper, I present data on Greek population, the euro-dollar exchange rate, Gross Domestic Product (GDP), per capita income, and on public wages.

The Greek Population Statistics

Figure 1 shows the Greek population from 1960. The projections up to 2019, which are also shown in the figure, are dismal. In 2010, the Greek population reached its peak with 11.12 million people. Since then, it has been constantly declining and is expected to be 10.62 million people in 2019. Low birth rates and outmigration are the main reason for such a decline. Thus, we may conclude that the Great Recession did not result to a humanitarian crisis. Greek people, particularly the young and skilled, moved to other countries, which is facilitated by the advantage free movement in the European Union. Others migrated to the USA, Canada and Australia either because

they were passport holders of these countries or they met the entrance requirements for work visa.

Figure 1. Greek Population, 1960-2019 (in millions)



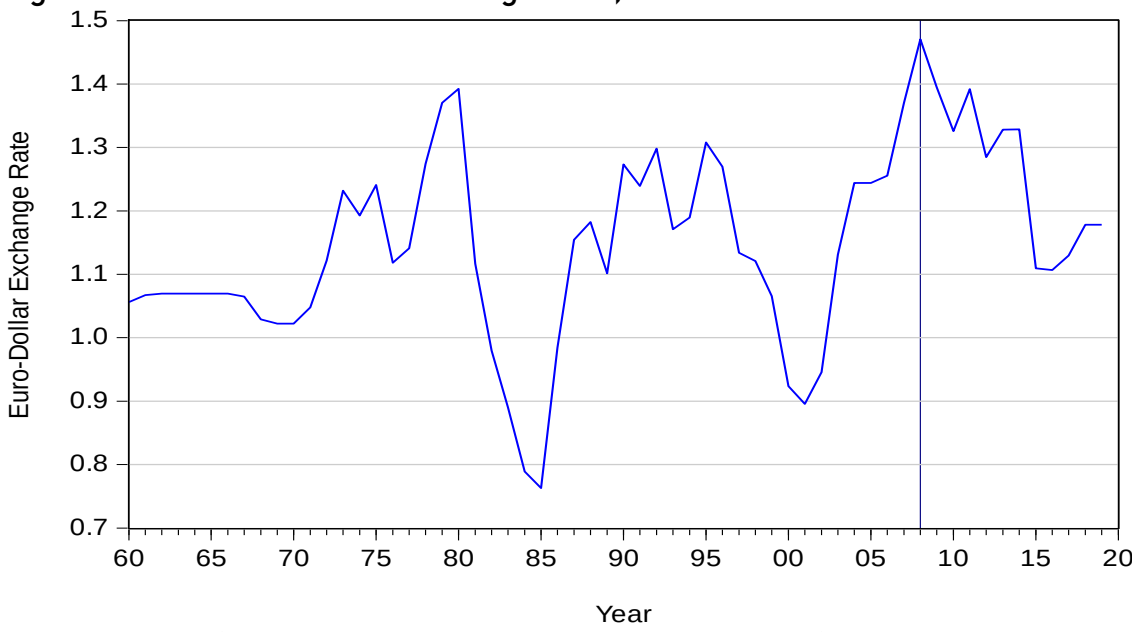
Source: AMECO (European Commission of the European Union)

The Euro-Dollar Exchange Rate

The "wolf" of the story of the three (actually five) little pigs of the eurozone is the strong euro, which has had a strong impact on the Greek economy. I have argued, Papanikos (2015b, p. 101), that "… the current protracted Greek recession is to a large extent the result of a prolonged overvalued euro. Rodrik (2008) has stated that overvalued currencies harm economic growth because the latter is "…associated with foreign currency shortages, rent seeking and corruption, unsustainably large current account deficits, balance of payments crises, and stop-and-go macroeconomic cycles". As a description, it fits very well with what has been happening to Greece in the euro years, primarily after the current crisis in 2009. In this sense, Rodrik's paper can be considered a prophetic one".

Figure 2 shows how many dollars are needed to buy one euro. A decline (in this number makes the dollar stronger. In 2008, in the beginning of the Great Recession in Greece, the euro was at its highest value ever at 1.47; e.g. a trip to Greece from the USA, which costs today 900 dollars, in 2008, would have cost 1130 dollars, a difference of 26%. This made all Greek products and services much more expensive and so the Greek tourism was hit hard.

Figure 2. The Euro-Dollar Exchange Rate, 1960-2019



Source: AMECO (European Commission of the European Union)

I have concluded (Papanikos, 2015b, p. 109) "… that a large part of the current Greek economic crisis can be explained by an overvalued euro. The euro–dollar misalignment has had a negative impact on Greek economic growth. … Greece's future in the eurozone cannot rely solely on correcting the euro misalignments. Alesina and Barro (2002) presented a model where the optimal currency area depends on a number of variables such as "…a history of high inflation and is close in a variety of ways to a large and monetarily stable country" (p.435). Greece has had a long history of high inflation. The euro years are characterized by an unprecedented low and stable Greek inflation rate. On the other hand, Greece is the only country of the region that is a member of the eurozone. Most of the surrounding countries are not even members of the European Union". Of course, what I meant then was that the Greek economy would benefit if Turkey, a large country, became a full member of the eurozone. This, of course, still applies today, but the prospects of Turkey ever becoming a member of the European Union are gloomy.

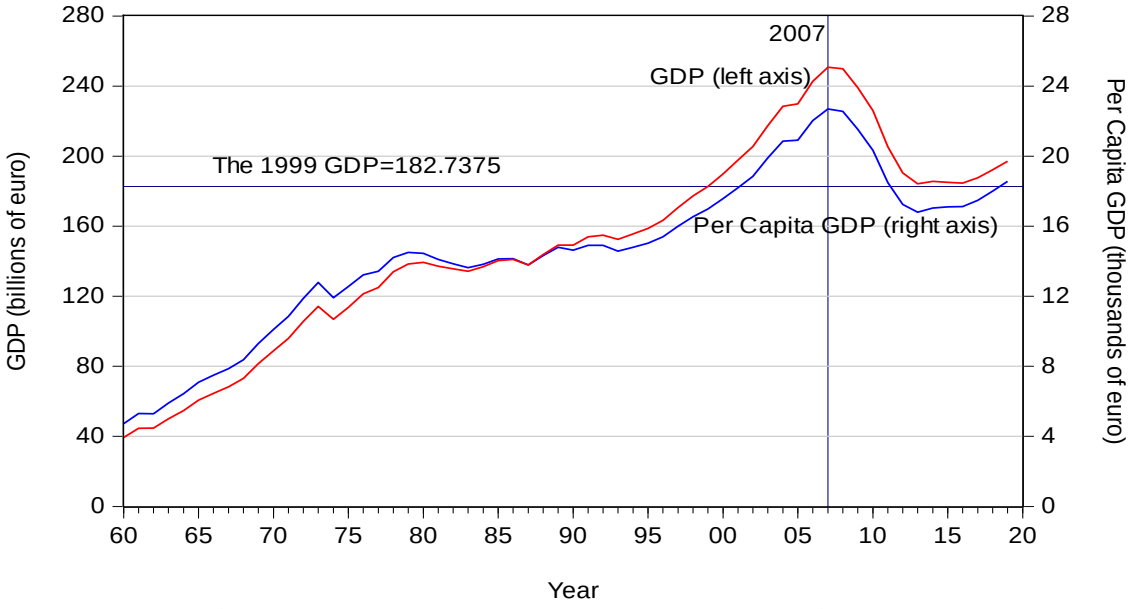
Total and Per Capita Gross Domestic Product (GDP)

The economic impact of a recession is usually measured as the decline in total and per capita Gross Domestic Product (GDP), i.e. the decline in the monetary value of the total and per capita final goods and services produced in a national economy per year. Figure 3 depicts the total GDP (left axis measure) and the per capita GDP (right axis measure).

A number of important observations emerge from this graph. First, the highest value of GDP in the 20th century was the 1999 value of 182.73 billion of constant 2010 euro (shown in the figure as the horizontal line). Similarly, per capita GDP was at its highest level of the entire 20th century in 1999 of 16980 euro (not shown in the figure). The worst economic performance of the 21st century was not below these highest values of the 20th century. Thus, if the Great Recession brought a humanitarian crisis, which it did not, this could not have been the result of the lack of means (GDP).

Why is there, then, so much noise on the Greek tragedy? The reason is that they are comparing the GDP of 2007 (shown as the vertical line in Figure 3) with the GDP of the following years. They rightly conclude that the Great Recession resulted in a decrease in GDP of more than 25%, e.g. from 251 billion euro in 2007 to 185 billion euro in 2016. What they do not say is that GDP increased by a similar percentage from 1999 to 2007. From 183 billion euro that was in 1999 to 251 billion in 2007, an increase of 27%.

Figure 3. Greek Gross Domestic Product (GDP) and Per Capita GDP (constant 2010 euro)



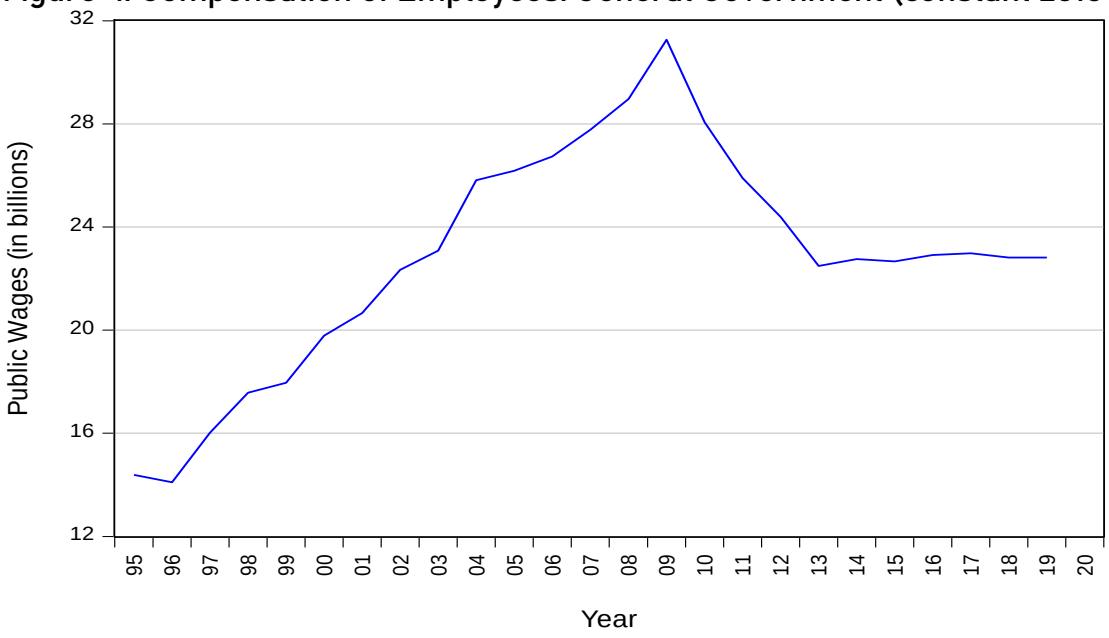
Source: AMECO (European Commission of the European Union)

However, what most commentators fail to notice is that this 27% increase in the pre Great Recession years was mainly due to skyrocketing sovereign debt (Papanikos, 2014). This had nothing to do with the Great Recession but rather with an unprecedented increase in government spending, primarily for public employees, including school teachers. It was not productivity that drove wages up but the huge borrowing from abroad. Total public wages (see Figure 4) more than doubled from 14 billion euro in 1995 to 31 billion in 2009, or from 9% of GDP in 1995 to 13% of GDP in

2009. The total sovereign debt almost doubled from 178 billion euro in 1999 (97% of GDP) to 353 billion euro in 2011 (172% of GDP).

As any economist would have predicted, such huge inflows of foreign money (borrowing) would increase GDP, as it did in Greece during the euro years prior to Great Recession. Greece's GDP increased at a much higher rate than the eurozone average. However, this could not last and the Great Recession was the symptom, not the cause, of what economists call a return to equilibrium or Greek politicians now a return to normality.

Figure 4. Compensation of Employees: General Government (constant 2010 euro)



Source: AMECO (European Commission of the European Union)

Many eurozone countries did not increase public wages. In Greece, if the share of public wages had remained constant at 9% of GDP (its 1999 share), the sovereign debt would have been lower by more than 100 billion euro in 2016, and this does not include the interest paid on this extra debt. I have examined in detail the Greek sovereign debt (Papanikos, 2014). Public wages would have increased by a rate similar to the increase of GDP. This would have taken into account the inflation, because we are measuring all these figures in real terms. Greece, then, would not have any problem with sovereign debt.

Who is then to blame? Definitely not the Great Recession. The little Greek "pigs" who not only built a straw house, but left it incomplete are to be blamed. The argument was that Greece was different and no "wolf" would ever dare to blow down the Greek house. After all, who needs a house in Greece with such nice weather? They can sleep outside. The wolf is not to blame for finding the pigs outside and made a nice "Greek souvlaki", i.e. the memorandum agreement between the IMF,

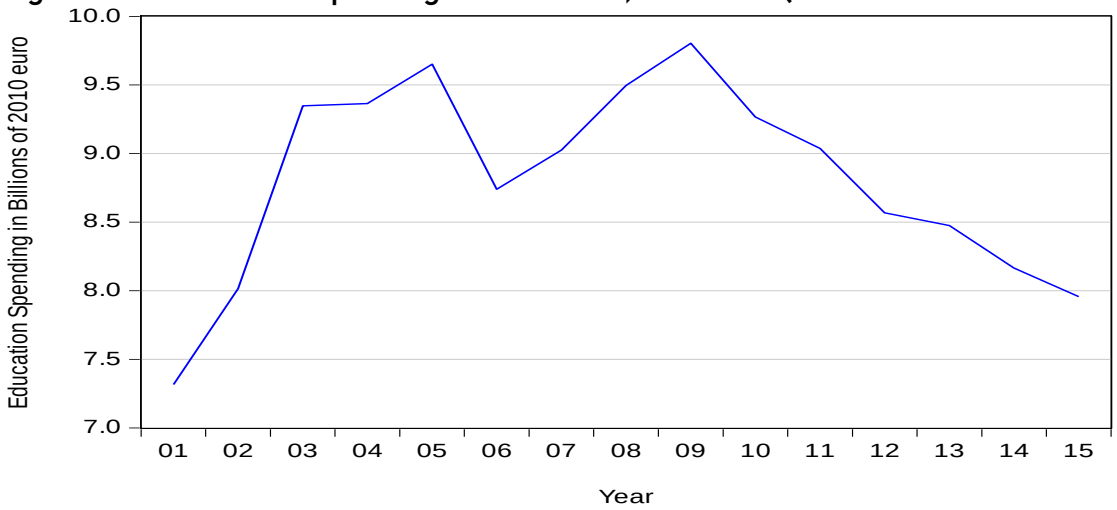
the ECB and the European Commission. There is only one solution. Public wages must return to 10% of GDP, and any increase must not exceed the increase in GDP. This requires a change in policy. It can be done without the notorious, long and useless negotiations between the troika and the Greek government. Of course, this will affect government spending on education, as it actually did, because the horizontal measure of reducing public wages affected Greek government spending on education, since 85% of this goes towards teachers' salaries. This spending is examined in the next section of this paper.

Greek Public Spending on Education

Greek total public spending on education is depicted in Figure 5. In Appendix I, I give what types of spending are included in these statistics. The time period of the data refers to the eurozone years from 2001 to 2015. In 2009, public spending on education hit its maximum ever at 9.8 billion 2010 constant euro, or 4.1% of GDP. Public spending has been decreasing thereafter but at a lower rate than the decrease in GDP. The result was an increase in the share of public spending on education to GDP from 4.1% to 4.6% in 2013 (Figure 6).

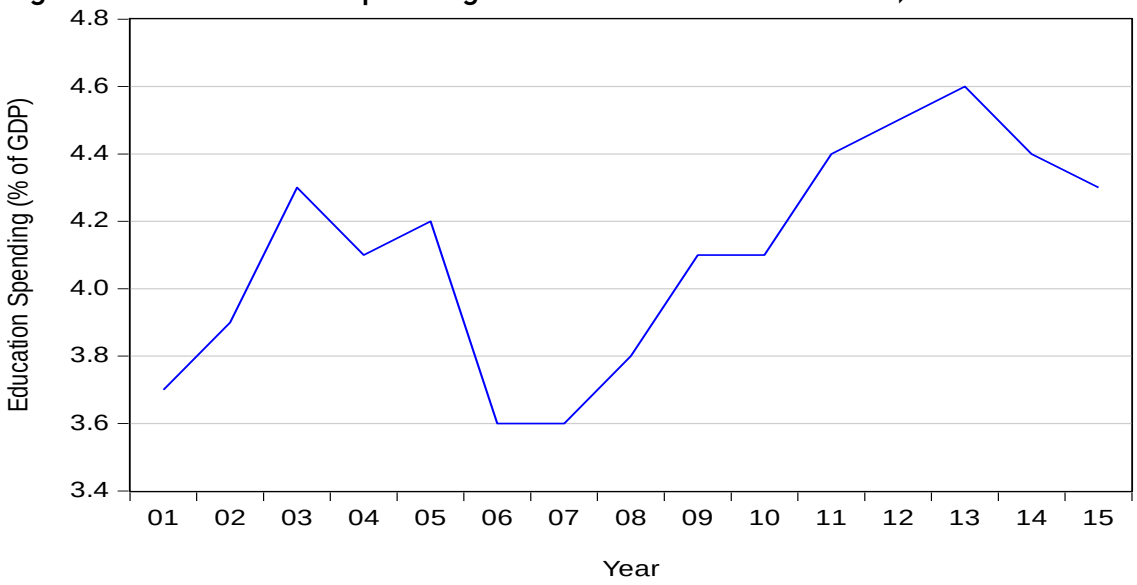
Even in 2015, total spending on education and as a share of GDP is much higher than in the early years of the eurozone. In 2001, total spending on education was less than 7.5 billion euro, the lowest value of the entire period. These expenditures skyrocketed during the euphoria years of the eurozone, reaching close to 10 billion euro. Since 2010, public spending on education has been decreasing, but it never came back to its 2001 level.

Figure 5. Greek Public Spending on Education, 2001-2015 (in billions of 2010 constant euro)



Source: Government Statistics by Function - European Union

Figure 6. Greek Public Spending on Education as a % of GDP, 2001-2015



Source: Government Statistics by Function - European Union

However, public spending on education as a percentage of GDP was not reduced as much. Figure 6 shows that the share of public spending on education of GDP was 3.7% in 2001, and since 2005 is increasing. Only the lasts two years of the period under consideration show decline, but it still is at a historically high share.

Thus, one might conclude that the Greek Great Recession not only did not reduce the spending on education, but increased it. However, more spending does not necessarily result in better school performance. Economists have argued this for a long time. Abundant research shows that spending and school performance is not related (Hanushek, 1996).

The result was that enrollment in public and private elementary schools were not affected by the Great Recession. Table 1 provides data on student enrollment in public and private schools from 2008 to 2014. The first column of Table 1 gives the total numbers of students enrolled in Greek primary schools and the next two show the numbers for public and private. The last column gives enrollment as a percentage of the 4-14 year old demographic.

Table 1. Number of Students in Public and Private Greek Primary Schools

	Total (1)	Public (2)	Private (3)	% Pop (4-14) (4)
2008	635804	589198	46606	58.73%
2009	633406	587383	46023	58.66%
2010	635780	590941	44839	59.21%
2011	633590	590378	43212	59.15%
2012	631834	591461	40373	58.88%
2013	628502	589967	38535	58.63%
2014	629373	590737	38636	58.50%

Source: Greek Statistical Authority (ELSTAT): Education Statistics

A number of conclusions emerge from Table 1. First, the number of students in public schools remained relatively the same before and after the Great Recession. From 589198 students in 2008 (the year before the Great Recession), the number increased to 590737 students (0.26%) in 2014.

On the other hand, the number of students attending private school was reduced from 46606 in 2008 to 38636 in 2014, a substantial decrease of 17%. Some of these students switched from private to public, because the latter charge no fees. However, a number of students are missing in the data, because the total number of enrollments decreased from 635804 in 2008 to 629373 or 1% of the total (6431 students). Most probably, this can be explained by the "brain drain" mentioned above as many young couples moved outside Greece with their children. However, statistics are not available. This conclusion is reinforced by the fact that the percentage of the 4-14 population attending primary school before and after the Great Recession remained constant at 59%.

General Thoughts on Education Policy

Policy Aims and Instruments

Any policy, including education policy, must be evaluated in terms of four criteria: efficiency, effectiveness, competitiveness and democracy. Efficiency requires the least possible monetary cost. Effectiveness is the maximum possible result. Competitiveness demands the best comparable results and thus requires evaluations, assessments etc. The unit of comparison can be geographical (district, municipality, region, country, continent or group of countries, the world) or social (social classes, ethnicity, etc). Democracy implies transparency and accountability in decision making and allocating scarce resources.

Any policy must have aims (targets) that can be both measurable and non-measurable. Tinbergen (1967) identified five aims of any policy, which includes education policy as well.

1. Maintain International Peace.
2. Increase Economic Welfare, i.e. increase per capita income for the poor households and countries of the world.
3. Improve the distribution of income among social groups and countries.
4. Emancipation of certain under-privileged groups.
5. Promote personal freedom.

The aims (targets) are achieved by the use of policy instruments, which in one way or another alter the current situation. No policy intervention is required if the system performs well. Depending on the extent of the intervention, a policy can be categorized as a simple change, a reform, a restructure or a destructive policy. There are many ways of classifying policies. Table 2 provides a taxonomy of policies which can be applied to education.

Table 2. A Typology of Policies

Policy	Examples
Change	Increase (reduce) public spending on education. Establish Fees for all students. Abolish Free textbooks and meals for university students.
Reform	Maximize Economies of Scale and Scope in the Provision of Education by integrated educational units and processes. Set better standards for hiring new personnel.
Restructure	Reevaluate teachers and fire those we do not meet the minimum standards. Shut down existing universities and fire teachers who underperform.
Destruction	Abolish the public formal provision of education and the taxes they imply.

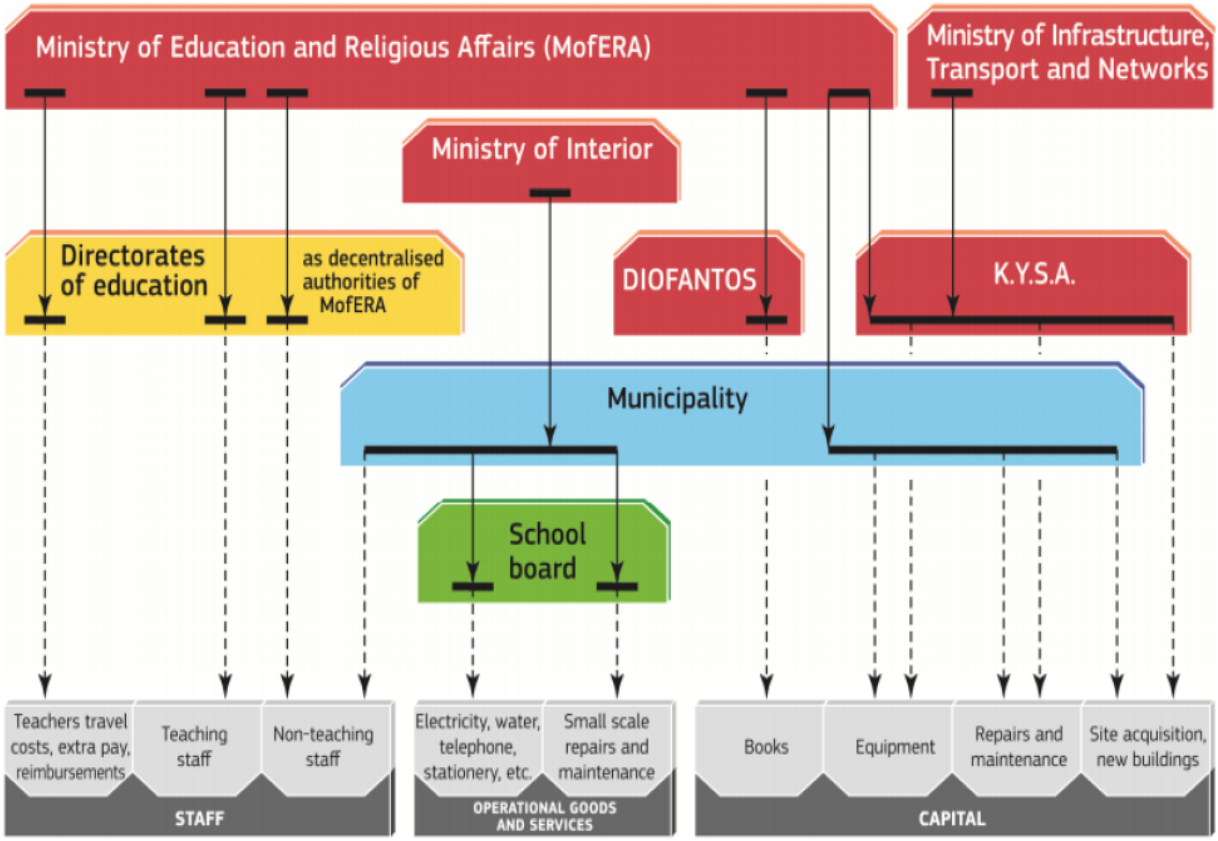
Any organization (school, airport, hotel, carmaker, etc.) and system (education, transportation, accommodation, industry, etc.) must be efficient, effective, competitive and democratic. At the primary school level, this implies that school funding must be used to minimize costs (efficiency), teach students the minimum required relevant knowledge (effective), achieve comparative excellence in comparison with other schools at the district, municipal, regional, national, continental, and global level (competitive) and do all this with transparency and accountability towards all school stakeholders (democratic).

The Greek Education System and Policy

Since antiquity, the Greek education system has been based on a mixture of public and private education. Still today, the Greek family considers the education of their children as the most important investment along with health. The Greek family invests in health, education and housing. This is not a weakness, but a structural strength of the Greek family and should be supported. For example, families who have children must pay half direct and indirect taxes than those without children. Of course, knowing since antiquity, how Greeks will behave, only biological children would be considered.

Today, the Greek system of education is organized (see Appendix 2) along the lines of a pre-primary school (starting at the age of four), six years of primary school, three years of lower and three years of higher secondary school and then various post-secondary educational institutions that students can access them either through national entrance exams (Universities and Technological Educational Institutes) or without exams (Institute of Vocational Training and Other Schools mainly of Liberal Arts).

Figure 7. The Structure of Greek Education Financing



Source: OECD (2017)

The Greek education system is centralized and should remain so, because any decentralization in Greece is met with corruption and misuse of public money. Local authorities are more corrupted than national government authorities. The current system of financing public education in Greece is given in Figure 7. Given the current economic, social, political and technological environment of Greece, centralization is the most efficient, effective, competitive and democratic system of financing public education in Greece. It is not the best, but the second best. Actually, it should be totally centralized and only one ministry must be responsible and not three as depicted in Figure 7 and local authorities (municipalities) should be excluded. One central authority must be responsible for the three level of education: pre-secondary, secondary and post-secondary. They must allocate all funds. In a more advanced system, each school must be run as an independent organizational unit with parents being responsible for hiring and firing teachers and appoint the schools headmaster but a universal of all parents. Teachers' salaries can differ but the overall wage teachers' fund must remain the same.

The Great Recession did not reduce governmental spending on education, at least as compared with what the levels and shares in the early years of this century. This was shown in the previous section of this paper. In 2010, the Greek Government signed a Memorandum of Understanding between the IMF, the ECB and the European Commission, the so-called troika. The aim was to reduce the Greek sovereign debt and prevent a Greek default. This was easily achieved because, as I stated above, the Greek economy is well developed and can deal with external shocks.

However, this has nothing to do with the Greek education system. Here starts the nonsense with the current Greek educational policy. As part of the third memorandum, which was signed in August of 2015, the Greek government asked the OECD to prepare a study on the Greek Education system. In 2017, OECD released a report entitled "Education Policy in Greece: A Preliminary Assessment". The aim of the report was to look at "… a series of underlying issues that can contribute to raising the quality of education" (OECD, 2017, p. 5). Among other things, these issues include:

1. Procedures for budgeting expenditures for education.
2. Ways to increase the autonomy of (a) schools, and (b) universities and other post-secondary institutions; study the functioning and governance of tertiary education institutions (TEI), as well as measures to ensure transparency.
3. Training and development for effective school leadership.
4. The development of all-day schools.
5. Links between research institutions, universities and the technological educational institutions.
6. Procedures for the reliable monitoring of the implementation of reforms at all levels of education.

Unfortunately, for Greek Education, many Greek and foreign policy makers, who were responsible for the memorandum agreement, are intervening in the Greek Education System and suggesting education policies that have nothing to do with the structural problems of Greek education. The Great Recession has nothing to do with all these long-term family planning and preferences. Greek families send their children to public schools, but they also hire private tutors, either to help their children with the school curriculum or to learn new subjects. This is called shadow education, because these teachers do not report this income for tax purposes and no other reason. I consider the shadow education as an efficient and effective reaction of the Greek parents to the structural deficiencies of the Greek education. This system existed since antiquity and has nothing to do with the recent Great Recession. Even though this is known to many Greek policy makers, they use the Great Recession as an excuse to dismantle a system that has been effective and exerts no cost at all on public finances.

The OECD report "…addresses these issues and presents a preliminary assessment that aims to contribute to policy discussions in Greece, building on a short review visit to Greece by an OECD education policy review team. It will be followed by a more in-depth analysis and review of Greece's education system which will include recommendations for action" (OECD, 2017, p. 6).

The report is irrelevant to the reality of the Greek education system, or it serves narrow and shortsighted political interests of the present-day government. Any policy, and this includes education policy, must have fewer aims (targets) than instruments (tools), as these have been analyzed by Tinbergen in 1952 and 1967. In most education policy discussions, the objectives exceed the instruments available at the hands of policy makers. To quote Tinbergen (1967, p. 55) "[I]f the number of instruments is smaller than the number of targets, the number of unknowns in the political problem will be smaller than the number of equations that have to satisfy, and this will, as a rule, be impossible. A solution will only be possible by pure coincidence, i.e. for certain "happy" combinations of targets". This is the "happy" story of education policy narrated by the OECD.

I want to demonstrate the above with some examples taken from the OECD study. The OECD study claims that "[T]he way the university entrance examination is organized and the linked "shadow education" sector have many adverse effects on the whole of the education sector". Contrary to what this report states, the Greek entrance exam system is the best system in the world in terms of efficiency, effectiveness, competitiveness and democracy. And OECD wants to change it. It is this system of entrance exams that has produced the best in the world. According to Yaret (2017), Greece ranks only second to Israel in providing the best professors in elite Universities with their first university degree obtained at a Greek University. These excellent academics were sorted according to these entrance exams which OECD finds to having adverse effects. Yaret (2017, p. 364) concludes that "Greece

which has a small population and is geographically distant to the United States provides more education to academics in the United States than all of South America combined".

The system is effective, but, also, efficient, because households minimize costs by directly deciding how to spend their money in investing in their children's education instead of having the notorious Greek government wasting taxpayers' money. The only problem is the democratic aspect of the policy because poor households cannot afford private lessons. Nevertheless, as mentioned in OECD (2017), studies have found that 99% of children attend private grouped schools called frontistirion, private tutoring or both. Thus, only 1% cannot afford it. You cannot have more equity than that. Shadow education must be promoted! One way to do this is having a compulsory education system offering high school diplomas through national exams at the minimum age of 16 years and then students can be free to prepare for the entrance exams. This is what de facto is happening now. A structural change in policy will facilitate this system by making it de jure as well. The OECD's concern echoes the present government's stupidity of abolishing the entrance exams, which, according to Table 2, will be a destructive policy.

Education is a very serious matter and policy makers must understand that there is no royal way to education, or, as Carl Marx put it "[T]here is no royal road to science, and only those who do not dread the fatiguing climb of its steep paths have a chance of gaining its luminous summits." Tinbergen (1967, p. 14) put it this way "[I]f some groups of the population, because of shortsightedness prefer not to be educated or trained, the policy-maker will perhaps force them to go to school, etc". Unfortunately, this is not what the Greek education policy makers and the OECD study does not help either. Both they want to destroy what has been one of the best features of the Greek education system: private tutoring and universal entrance exams to higher educational institutes. They should be strengthen and not abolished.

Conclusions

I argued that the Great Recession was not so great after all. Its economic impact did not create a humanitarian crisis. Education was not affected by the recession. The Greek education system is efficient, effective, competitive and democratic. It can perform better in all four indicators if its strong elements are identified and supported. Such strong elements are the Greek families' preferences to invest in their children's education. One efficient and effective way to allocate scarce resources to education is through shadow education (private tutoring). It is competitive and democratic. 99% of the Greek families spend money on private tutoring and this should be reinforced. Similarly, an efficient, effective, competitive

and democratic element of the Greek education system is the national entrance exams to the Universities. It should be reinforced.

On the other hand, there are many thorny issues of education system that for political reason nobody wants to discuss such as public teachers' shirking, lost teaching hours in public schools, re-evaluation of professors and teachers, etc. These issues were not discussed here but are directly related to the quality of education (effectiveness) and the misuse of public funding (efficiency). The future studies promised by OECD's should deal with what I call real problems of the Greek education system.

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Appendix 1. General Government Total Expenditure and Expenditure on Education

(see http://ec.europa.eu/eurostat/statistics-explained/index.php/Government_expenditure_on_education and http://ec.europa.eu/eurostat/statistics-explained/index.php/Government_expenditure_on_education)

Government total expenditure comprises the following categories:

- P.2, 'intermediate consumption': the purchase of goods and services by government;
- P.5, 'gross capital formation' consists of: (a) gross fixed capital formation (P.51g); (b) changes in inventories (P.52); (c) acquisitions less disposals of valuables (P.53); where
- P.51g, 'gross fixed capital formation': consists of acquisitions, less disposals, of fixed assets during a given period plus certain additions to the value of non-produced assets realised by the productive activity of producer or institutional units. Fixed assets are tangible or intangible assets produced as outputs from processes of production that are themselves used repeatedly, or continuously, in processes of production for more than one year;
- D.1, 'compensation of employees': the wages of government employees plus non-wage costs such as social contributions;
- D.29, 'other taxes on production, payable',
- D.3, 'subsidies, payable',
- D.4, 'property income, payable', consists of: (a) 'interest, payable' (D.41) and (b) 'other property income, payable' (D.42+D.43+D.44+D.45), where
- D.41, 'interest': excludes settlements under swaps and forward rate arrangements, as these are treated as financial transactions in the ESA 95;
- D.5, 'current taxes on income, wealth, etc, payable';
- D.62, social payments: cover social benefits and pensions paid in cash;
- D.632, 'social transfers in kind - purchased market production';
- D.7, 'other current transfers, payable';
- D.8, 'adjustments for the change in pension entitlements'
- D.9, 'capital transfers payable'
- NP, 'acquisitions less disposals of non-financial non-produced assets': public investment spending. Non-financial non-produced assets consist of land and other tangible non-produced assets that may be used in the production of goods and services, and intangible non-produced assets.
- Capital investments includes P.5 and NP.
- Other current expenditure includes D.7, D.29, D.5 and D.8.

Expenditure on 'Education'

In the COFOG 99 classification in use in national accounts and thus in this publication, expenditure on 'education' is divided into groups based on the ISCED 1997 classification. The following COFOG groups form the education division: 'pre-primary and primary education',

'secondary education', 'post-secondary non-tertiary education', 'tertiary education', 'education not definable by level', 'subsidiary services to education', e.g. expenditure on providing school buses, 'R&D education', i.e. R&D related to education not all R&D undertaken for example in universities and 'education not elsewhere classified'.'

In 2015, general government expenditure on 'education' in the EU-28 amounted to 4.9% of GDP. Of this, 'pre-primary and primary education' accounted for 1.5% of GDP and secondary education accounted for 1.9% of GDP. For tertiary education, an average of 0.7% of GDP was reported.

As a percentage of GDP, the highest amounts were reported by Iceland (7.5% of GDP), Denmark (7.0%), followed by Sweden (6.5% of GDP) and Belgium (6.4% of GDP).

For Latvia, Lithuania, Estonia as well as Iceland and Switzerland, education expenditure accounted for over 15% of total expenditure. The lowest ratios of total expenditure were observed for Greece (7.8% of total expenditure) and Italy (7.9%).

Expenditure on 'Education' by Type of Transaction

In 2015, at the level of the EU-28, expenditure on education was divided into transactions as follows: Around 60% was in the form of 'compensation of employees', meaning wages, salaries and employers' social contributions for e.g. teachers, 16% was in the form of 'intermediate consumption', 5% in the form of social benefits other than social transfers in kind and social transfers in kind - purchased market production and 7% was in the form of other current transfers. This latter category contains for example payments to private schools. Capital investments (for example on buildings) accounted for around 8% of education expenditure.

Appendix 2. The Greek System of Education

School Types	Number of schools	Number of students	Number of permanent teachers
Kindergarten (all kinds) [*Nipiagogeio*]	5 224	143 217	11 511
Primary School (all kinds) [*Dimotiko Scholeio*]	4 566	607 589	55 038
Secondary School (all kinds and levels)	3 437	617 280	69 181
Lower Secondary School (all kinds)[*Gymnasio*]	1 747	308 493	34 160
Upper Secondary Vocational School [*Epaggelmatiko Lykeio*]	399	88 622	13 089
Upper Secondary General School [*Geniko Lykeio*]	1 059	217 161	21 130
Other	232	3 004	803

Source: OECD (2017)