

Greece: Structural reforms, multipliers, competitiveness

1. Structural reforms: theory and practice
2. Fiscal multipliers
3. Competitiveness and adjustment

1. Structural reforms: theory and practice

Theory

For several years, IMF, OECD and the European Commission have produced numerous studies to assess the impact of structural reforms on growth. They distinguish three main categories of reforms:

- Labour market reforms
- Product market reforms
- Reform of social protection (health, pensions) that are part of fiscal consolidation

The methodology of these studies is to construct indicators meant to measure the rigidities in the labour market and the product market and to show that the less "rigid" countries perform better. So structural reforms aimed at reducing these rigidities would allow a country to improve its performances.

These studies are very fragile and the IMF itself has recognized this fact. In a recent report¹, it finds that "labor market regulation is not found to have statistically significant effects on total factor productivity". It refers to "difficulty in measuring the degree of labor market flexibility across countries" and this admission undermines the abundant literature that posits instead that their indicators correctly measure the flexibility (or rigidity) of labour markets.

Notwithstanding, the IMF says in the same document that: "Severe financial crises, which tend to be followed by long and deep recession, may lead to a permanent decline in the level of potential output by increasing structural unemployment (...). This is particularly the case for economies with rigid labour market institutions". To back up this latter assertion, the IMF refers to papers that say² that labour market reforms can lower unemployment.

¹ ["Where are we headed? Perspectives on potential output"](#), IMF, *World Economic Outlook* April 2015, chapter 3, p.37.

² Bernal-Verdugo L., Furceri D., Guillaume D., "[Crises, Labour Market Policy, and Unemployment](#)", *IMF Working Paper* 12/65, 2012, also published as: "Banking Crises, Labour Reforms, and Unemployment", *Journal of Comparative Economics*, Vol.41, 2013; "[Labour Market Flexibility and Unemployment: New Empirical Evidence of Static and Dynamic Effects](#)", *IMF Working Paper* 12/64, 2012, also published in: *Comparative Economic Studies*, 2012, Vol. 54 (2).

This thesis that large-scale reforms of labour market institutions towards flexibility may help reduce unemployment has been questioned by different studies. A first study, from ILO³, examines the reliability of the data and of the methodology used in these papers. It reports serious flaws both in the data and in their methodology which “does not capture actual reform processes and ignores the scope and the size of the reforms”. The conclusion is that “taken together, our findings call into question most of the empirical results of these papers and policy advice based on them”.

Another study⁴ dissects the results of the IMF and demonstrates that there is only one labour market institution that is still showing a statistically significant link with unemployment: coordination of wage bargaining. In other words, the more trade unions and employer organisations are able to coordinate the process of wage bargaining over different sectors and companies, the lower unemployment tends to be. As Ronald Janssen, an economist at ETUC, notes⁵: “The latter finding is ironic. By systematically pushing for single employer/company-based negotiations, thereby undermining multi-employer wage bargaining systems that are capable of organising such a coordination process, the IMF and the European institutions have been attacking the single labour market institution that, according to this and similar research, is able to reduce unemployment »

This interpretation is of course favoured in the case of Greece, where the indicators of “rigidity” are particularly high. The studies seek to quantify the impact of these rigidities on the magnitude of the crisis and the high potential of structural reforms. The European Commission attributes to these rigidities a major part of the gap with the weighted average of the three highest GDP per capita ratios in the euro area in 2012 (Luxemburg, Austria, and the Netherlands): “The aggregate effect of these reform scenarios can account for about 78% of gap in Greece, 87% in Italy, 99% in Spain, and 67% in Portugal⁶”.

Here is an example of this literature taken from an IMF document⁷. The starting point is the observation that: “Greece entered the crisis with an overburden of regulation” and that “Greece’s labor market regulations were rigid and tended to protect insiders”. This is why “rigidities in Greece’s product and labor markets have increased the cost of adjustment to large pre-crisis economic imbalances”. But “simulations from a calibrated model of the Greek economy confirm that reforms to these markets can play a significant role in stemming output losses and supporting the recovery”.

Still, there is an important qualification based on a distinction between short run and long run. In the long run, “product and labor market reforms can have positive effects on growth, employment, and productivity” but, in the short run, “the impact is smaller because of adjustment costs”. These remarks are in line with the “theoretical results [that] point to benefits from structural reforms, but indicate that they may not materialize immediately”.

³ Mariya Aleksynska, “[Deregulating labour markets: How robust is the analysis of recent IMF working papers?](#)”, ILO, 2014.

⁴ Sabina Avdagic and Paola Salardi, “[Tenuous link: labour market institutions and unemployment](#)”, *Socio-Economic Review* (2013) 11.

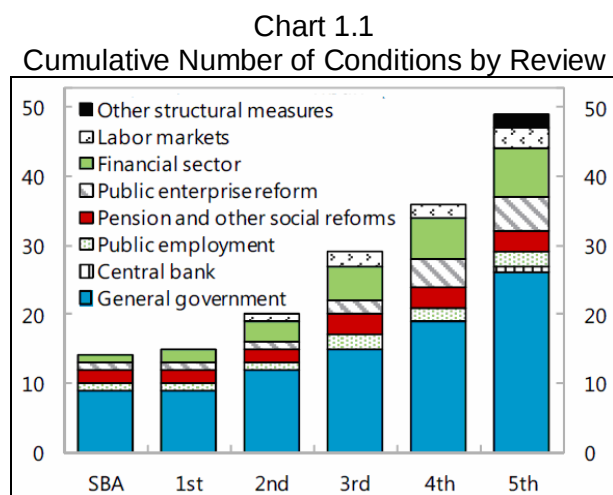
⁵ Ronald Janssen, “[Labour Market Deregulation and Productivity: IMF Finds No Link](#)”, *Social Europe Journal*, 15 April 2015.

⁶ “[Growth Effects of Structural Reforms in Southern Europe](#)”, European Commission, *Economic Papers* 511, December 2013.

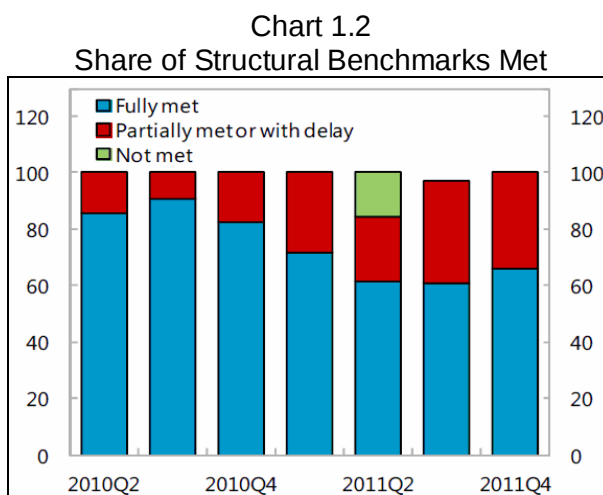
⁷ IMF, “[Greece. Selected issues](#)”, *IMF Country Report* n°13/155, May 2013.

Practice

These studies and reports do not seem to take into account the fact that significant structural reforms (as defined by international institutions) were implemented in Greece. This is well shown by the table of structural conditionality annexed to a IMF document⁸. In the same document, a chart illustrates the cumulative number and the distribution of the conditions (Chart 1.1) and another shows that most of these conditions have been met (Chart 1.2).



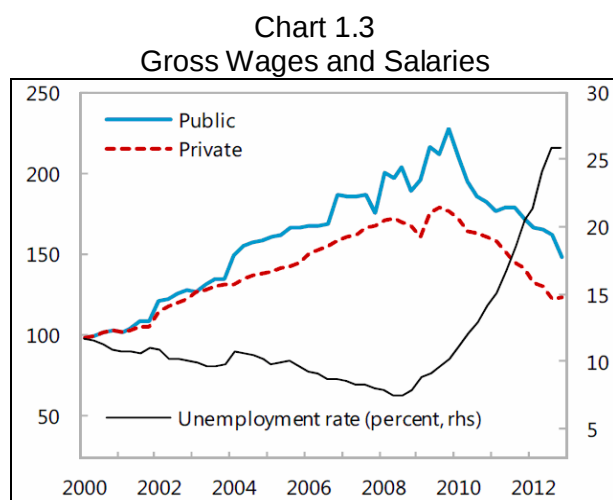
Source: IMF staff estimates.



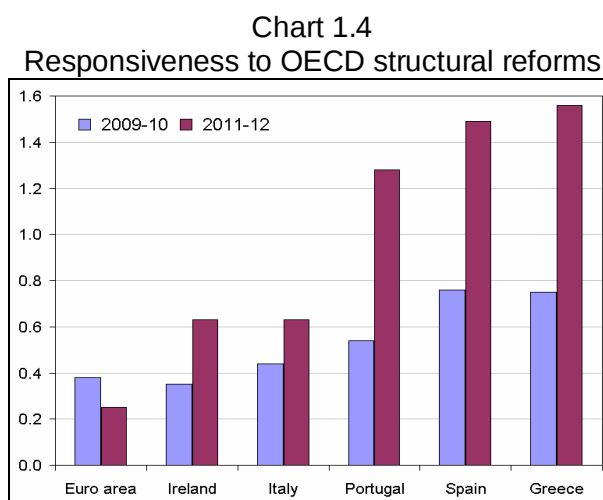
Cumulative number of structural benchmarks met out of structural benchmarks due in the quarter (percent). Source: IMF staff estimates.

The report underlines that “to improve competitiveness, the program initiated a comprehensive agenda of structural reforms that included reducing public sector wages; liberalizing wage-setting and loosening employment restrictions in the private sector; improving the business environment by cutting red tape; and reducing barriers to entry and market distortions in protected industries”.

Another chart shows the fall in wages, both in the private sector and in the public sector, and the sharp rise in unemployment (chart 1.3). But this is still not enough: “labor market reforms were not initially deep enough to tackle entrenched labor market inflexibility”.



2000=100. Sources: Elstat; Eurostat; IMF staff calculations



Source: OECD, [Economic Survey, Greece, 2013](#)

⁸ IMF, “[Greece. Ex post Evaluation of Exceptional Access Under the 2010 Stand-by Arrangement](#)”, June 2013, p.44., The table 3 can be consulted [here](#).

The OECD regularly makes recommendations in its publication *Going for Growth* and it finds that: “Impressive progress has been achieved in reforming labour and product markets since the beginning of the crisis, albeit from a low starting point. Since 2009-10, Greece has the highest OECD rate of responsiveness to structural reforms recommended in the *Going for Growth* publication⁹” (Chart 1.4).

Regarding the labour market, the OECD recalls the welcomed reforms undertaken by the Greek government: “The authorities therefore stepped up the pace of labour market reform at end-2011 in four directions: *i*) decentralising the wage bargaining system; *ii*) softening employment protection (EPL); *iii*) reducing the minimum wage; and *iv*) increasing working time flexibility”.

And the OECD emphasizes the good results obtained: “These reforms are now changing labour market behaviour. Labour costs have fallen sharply since end-2011 and flexible working arrangements have become more common, with an increased share of part-time and intermittent employment (...) The softening of employment protection legislation has been more pronounced than in other OECD countries since 2008, except in Portugal, and is now close to the OECD average for permanent jobs (...) Although the labour market has continued to deteriorate as the economy has shrunk, the decline in employment has slowed since mid-2012”.

These findings probably help to better understand the real objectives of labour market reforms: lower wages, easier redundancies, labour flexibility and casualisation.

The pension reform is another example. In its evaluation in June 2013¹⁰, the IMF congratulates Greece for its pension reform, “one of the main achievements of the program”. The reform was “essential to restoring the sustainability of the pension system – a significant achievement” that “tackled multiple deficiencies to bring about a sustainable long-term pension profile”. The table 1.1 below illustrates the scope of the reform.

Table 1.1 Pension System Parameters

Reform elements	Before Reform	After Reform
Accrual rate	2-3%	0.8-1.5%
Replacement rate	70%	60%
Retirement age	60	65
Early retirement age	<60	60
Pensions base calculation	Last 5 years earnings	Lifetime earnings
Indexation of pensions	Policy decision	CPI and GDP
Annual deficit in 2060	12.5%	2.5%

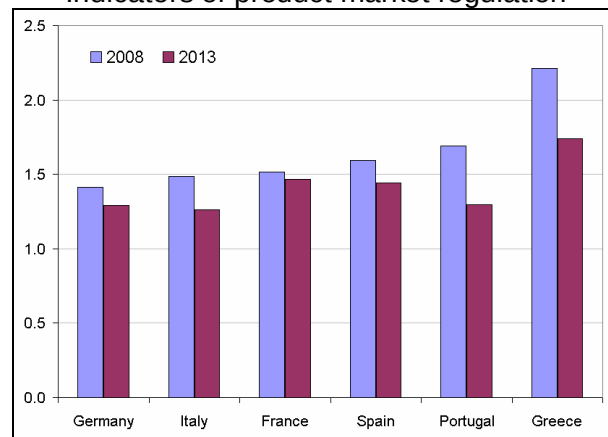
Sources: OECD; and IMF staff estimates.

The same trends are reported in relation to the product market regulation using a set of indicators meant to measure legal barriers to entry, barriers to entrepreneurship, complexity of regulatory procedures, administrative burdens, barriers to trade and investment, public ownership, state control, etc. (Chart 1.5).

⁹ OECD, *Economic Survey. Greece*, OECD, November 2013.

¹⁰ “[Ex post Evaluation of Exceptional Access Under the 2010 Stand-by Arrangement](#)”, June 2013, op.cit.

Chart 1.5
Indicators of product market regulation



Source: OECD

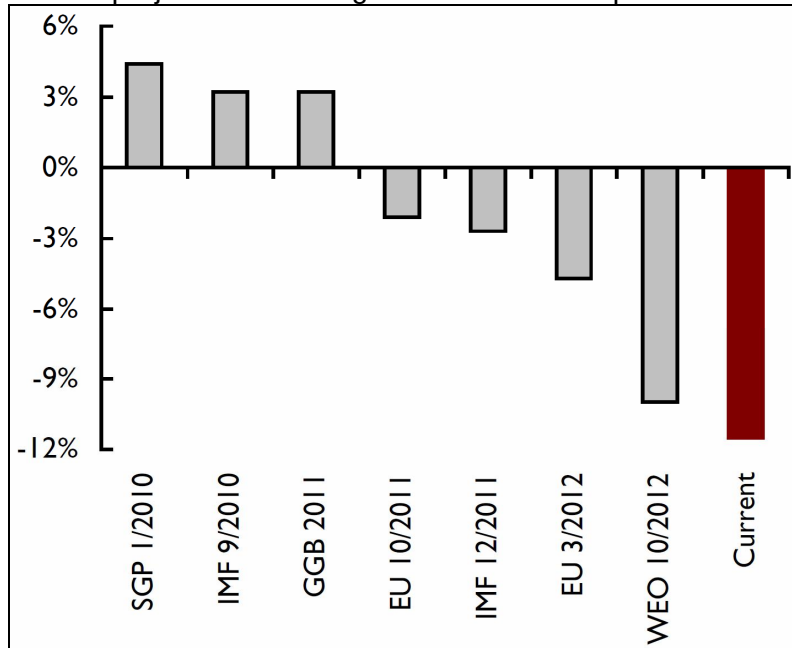
The IMF document already cited above¹¹ does not hesitate to affirm that: “The simulated effects of reforms are in line with developments in the Greek economy” and that: “The results are also consistent with long-term projected growth under the program ». But in reality, Greece has been plunged into a deep recession, even as it has strictly applied the structural reforms recommended and imposed by the Troika.

¹¹ [“Greece. Selected issues”](#), May 2013, op.cit.

2. Fiscal multipliers

The Greek economy has not followed the evolution forecasted by the international institutions. Chart 2.1 below shows various estimates of the growth rate of Greece for the years 2012 and 2013. In January 2010, the Stability and Growth Plan, as agreed with the European Commission, expects it to be 4.4%. In September of the same year, the IMF lowers it to 3.5% and the Greek Budget 2011 follows this forecast. By October 2011, expectations become negative and degrade regularly to the actual outcome, a decline of GDP by 11.5% in 2012-2013.

Chart 2.1
Official projections of real growth rates for the period 2012–3



Note: SGP is the Stability and Growth Plan published by the government and the EU before the implementation of the Programme. GGB stands for the Greek government Budget Report. Source: Nicos Christodoulakis¹²

This substantial error comes from an underestimation of fiscal multipliers. The meaning of this parameter can be explained in simple terms. Public spending is a component of GDP (and in the case of Greece, it represents more than half of GDP): if a government lowers public spending, this will lower the GDP. The fiscal multiplier captures the impact of this change on output. If, for example, the fiscal multiplier is equal to 1/2, a decrease in public expenditure of one euro yields a decrease in GDP of 50 cents. If it is larger than 1, the reduction of one euro yields a drop of GDP of more than one euro.

Some economists underrate the risk of recession induced by fiscal consolidation. Their theoretical reference is the so-called "Ricardian equivalence": under this assumption, the fiscal measures of the government would be offset by the household saving behavior. In this debate, Alberto Alesina, an economist at Harvard University, has played a significant role, especially with his contribution to the Ecofin meeting in Madrid in April 2010¹³, influential enough to be cited in the official communiqué of this meeting.

¹² Nicos Christodoulakis, "[From grexit to growth: on fiscal multipliers and how to end recession in Greece](#)", *National Institute Economic Review* n°224, May 2013.

¹³ Alberto Alesina, "[Fiscal adjustments: lessons from recent history](#)", prepared for the Ecofin meeting in Madrid April 15 2010.

In his paper, Alesina wonders if fiscal consolidations always lead to recessions and his answer is "a loud no", because: "starting from the early nineties, several authors have noted how large and decisive deficit reduction policies in several European countries were accompanied by increases in growth, the opposite of the standard Keynesian story". He argues that deficit-cutting can stimulate economic growth by lowering interest rates and promoting investment and that taxpayers will spend more because they are reassured that more fiscal adjustments won't be needed later. Alesina also says that spending cuts are better for growth than raising taxes". A little later, Jean-Claude Trichet, then ECB President will say that: "It is an error to think that fiscal austerity is a threat to growth and job creation"¹⁴.

This "expansionary fiscal consolidation" thesis was subjected to devastating criticisms by other economists, such as Arjun Jayadev and Mike Konczal¹⁵ or Iyanatul Islam and Anis Chowdhury¹⁶. Among them, there is Christina Romer, Chair of the President's Council of Economic Advisors, who declared in 2011: "As I have described this evening, the evidence is stronger than it has ever been that fiscal policy matters—that fiscal stimulus helps the economy add jobs, and that reducing the budget deficit lowers growth at least in the near term. And yet, this evidence does not seem to be getting through to the legislative process"¹⁷.

As soon as 2010, the IMF is more cautious and finds that "fiscal consolidation typically has a contractionary effect on output. A fiscal consolidation equal to 1 percent of GDP typically reduces GDP by about 0.5 percent within two years and raises the unemployment rate by about 0.3 percentage point. Domestic demand—consumption and investment—falls by about 1 percent"¹⁸. And the fiscal multipliers could be even higher if deficit cuts "occur simultaneously across many countries".

The IMF continued its analysis with the October 2012 *World Economic Outlook*¹⁹, appropriately titled "Coping with High Debt and Sluggish Growth". In Box 1.1. (p.41) Olivier Blanchard, chief economist at the IMF, and Daniel Leigh wonder if "the negative short-term effects of fiscal cutbacks have been larger than expected because fiscal multipliers were underestimated". Their econometric method is to "regress the forecast error for real GDP growth during 2010–11 on forecasts of fiscal consolidation for 2010–11 that were made in early 2010". The equation estimated is:

$$\text{forecast error of growth} = \alpha + \beta \cdot \text{forecast of fiscal consolidation} + \varepsilon.$$

With accurate fiscal multipliers, the coefficient β should be zero. But the authors find this coefficient β to be "large, negative, and significant: the baseline estimate suggests that a planned fiscal consolidation of 1 percent of GDP is associated with a growth forecast error of about 1 percentage point". In other words "actual fiscal multipliers were larger than forecasters assumed". Because "not all forecasters make these assumptions explicit", Blanchard and Leigh do not know exactly what were these assumed fiscal multipliers. But, on the basis of "a number of policy documents, including IMF staff reports" their guess is that fiscal multipliers used in the forecasting process were "about 0.5". They conclude that "if the multipliers underlying the growth forecasts were about 0.5, as this informal evidence suggests, our results indicate that multipliers have actually been in the 0.9 to 1.7 range since the Great Recession ».

¹⁴ [Interview with Jean-Claude Trichet](#), President of the ECB, and *Libération*, conducted by Jean Quatremer, 8 July 2010 Jean Quatremer.

¹⁵ Arjun Jayadev and Mike Konczal, "[When Is Austerity Right? In Boom, Not Bust](#)", *Challenge*, November–December 2010.

¹⁶ Iyanatul Islam and Anis Chowdhury "[Revisiting the evidence on expansionary fiscal austerity: Alesina's hour?](#)", *voxeu.org*, circa 2012.

¹⁷ Christina Romer, "[What Do We Know About the Effects of Fiscal Policy: Separating Evidence from Ideology](#)", Lecture Delivered at Hamilton College, November 7, 2011.

¹⁸ FMI, "[Will It Hurt? Macroeconomic Effects of Fiscal Consolidation](#)", *World Economic Outlook*, October 2010, chapter 3.

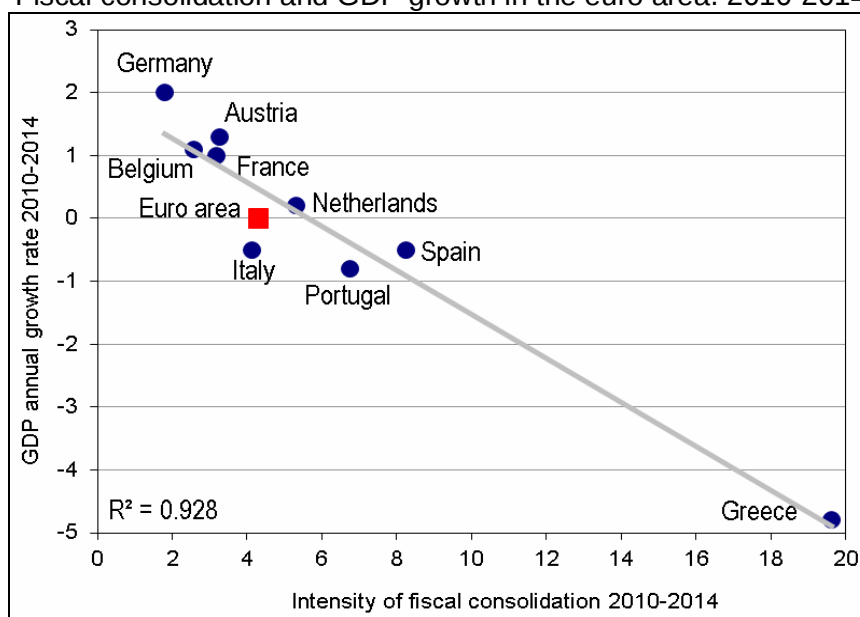
¹⁹ IMF, "[Coping with High Debt and Sluggish Growth](#)", *World Economic Outlook*, October 2012.

A few months later, Olivier Blanchard and Daniel Leigh published a famous working document, “Growth Forecast Errors and Fiscal Multipliers”²⁰, with the same conclusion: “fiscal multipliers were substantially higher than implicitly assumed by forecasters”.

The general failure of fiscal policies in the euro area is now a well-established fact. It can be illustrated by the chart 2.2 below that compares the GDP growth between 2010 and 2014 with the intensity of fiscal consolidation over the same period. The latter is calculated, using OECD data, as the change in “general government cyclically-adjusted balances” during the same period²¹.

The chart shows that countries with stronger fiscal consolidation recorded a lower GDP growth or a recession, with a good correlation. Greece is a borderline case: harsh fiscal consolidation is associated with a decline in GDP of 4.8% per year, or 17% over the four years.

Chart 2.2
Fiscal consolidation and GDP growth in the euro area. 2010-2014



Sources: OECD, Ameco

The 2012 *World Economic Outlook* finally pointed out that: “Expectations about what can be achieved need to be set realistically”. Was it the case for Greece?

The IMF’s mistakes on Greece

The answer can be found in the evaluation made in 2013 by the IMF²² and it is the same: “The fiscal multipliers were too low”. As in every country, it seems, “the program initially assumed a multiplier of only 0.5 despite staff’s recognition that Greece’s relatively closed economy and lack of an exchange rate tool would concentrate the fiscal shock”. This amounts to recognize that the IMF did not take into account the specific characteristics of the Greek economy even if “recent iterations of the Greek program have [since] assumed a multiplier of twice the size”

Under these conditions, all projections were biased and two linked errors were made in the design of the program. The borrowing need was more or less correctly projected (Chart 2.3)

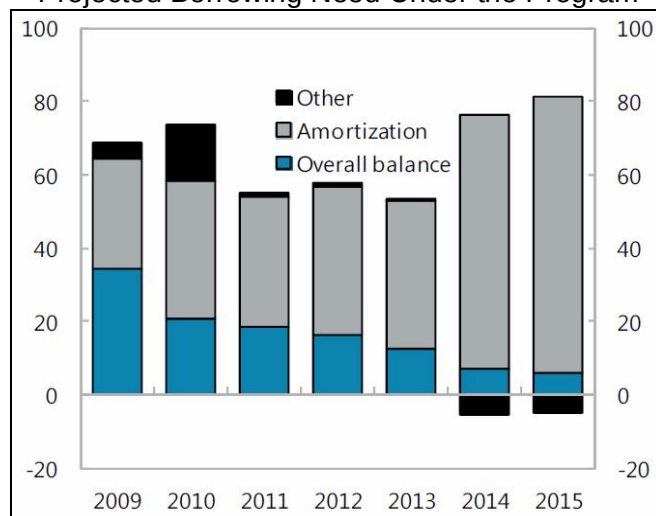
²⁰ Olivier Blanchard and Daniel Leigh, “[Growth Forecast Errors and Fiscal Multipliers](#)”, *IMF Working Paper* n°13/1, January 2013.

²¹ OECD, [Economic Outlook Annex Tables](#), Table 28: General government cyclically-adjusted balances.

²² IMF, “[Greece. Ex post Evaluation of Exceptional Access Under the 2010 Stand-by Arrangement](#)”, June 05, 2013.

before the launch of the program²³, but the underestimation of the recessive effects of the program led the IMF to forecast highly overrated growth rates in 2010 (Table 2.1).

Chart 2.3
Projected Borrowing Need Under the Program



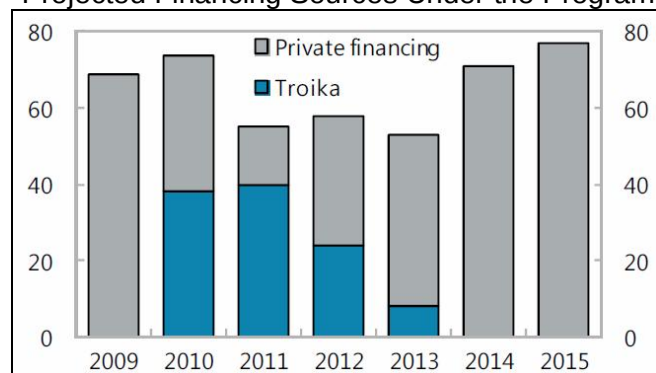
Billions of euros. Source: IMF Country Report No. 10/110.

Table 2.1
Projected and actual growth rate

	2009	2010	2011	2012	2013	2014
projected	-2.0	-4.0	-2.6	1.1	2.1	2.1
actual	-4.4	-5.4	-8.9	-6.6	-3.3	0.6

The first mistake was to assume renewed market access from 2012 and the end of financing by the 'Troika' as soon as 2013 (Chart 2.4).

Chart 2.4
Projected Financing Sources Under the Program



Billions of euros. Source: IMF Country Report No. 10/110.

The second mistake was that “Ex ante debt restructuring was not attempted²⁴”. The IMF recalls that: “One way to make the debt outlook more sustainable would have been to attempt to restructure the debt from the beginning”. George Papaconstantinou, the Greek Finance Minister had dismissed debt restructuring saying that: “any notion of restructuring is off the table by the Greek government, has never been put on the table in the negotiations, and has never been part of any suggestions or proposals made by the IMF to Greece²⁵”. But, “in fact”,

²³ IMF, “[Greece: Staff Report on Request for Stand-By Arrangement](#)”, IMF Country Report No. 10/110, May 2010.

²⁴ IMF, “[Greece. Ex post Evaluation of Exceptional Access Under the 2010 Stand-by Arrangement, 2013](#)”.

²⁵ George Papaconstantinou, [Transcript of a Press Conference](#), Washington, DC, April 25, 2010.

according to the IMF, “debt restructuring had been considered by the parties to the negotiations but had been ruled out by the euro area”.

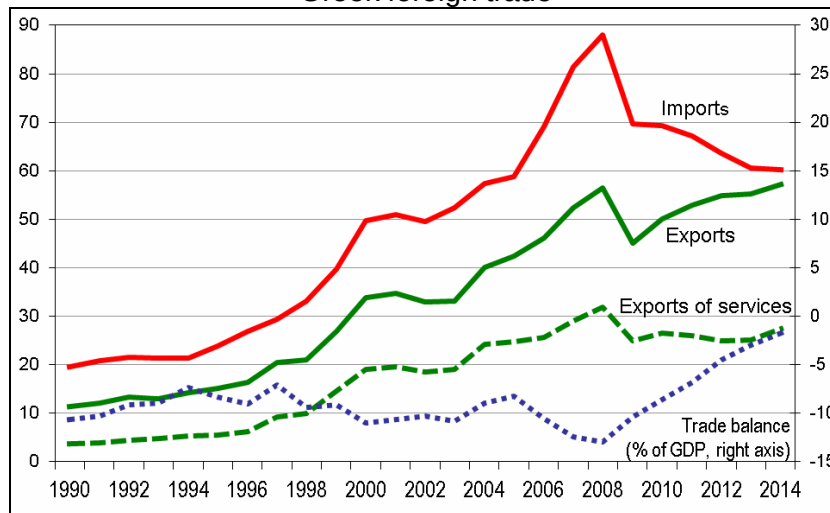
The following comment by the IMF must be underlined: “An upfront debt restructuring would have been better for Greece although this was not acceptable to the euro partners. A delayed debt restructuring also provided a window for private creditors to reduce exposures and shift debt into official hands. As seen earlier, this shift occurred on a significant scale and limited the bail-in of creditors when PSI [private sector involvement] eventually took place, leaving taxpayers and the official sector on the hook”.

3. Competitiveness and adjustment

Foreign trade was balanced through the recession

The Greek foreign trade is structurally unbalanced. Between 1990 and 2010, exports accounted for between 60 and 70% of imports, and the trade deficit has hovered around 10% of GDP, and reached 13% in 2008 (Chart 3.1). Services, mainly tourism and shipping, account for about half of total exports.

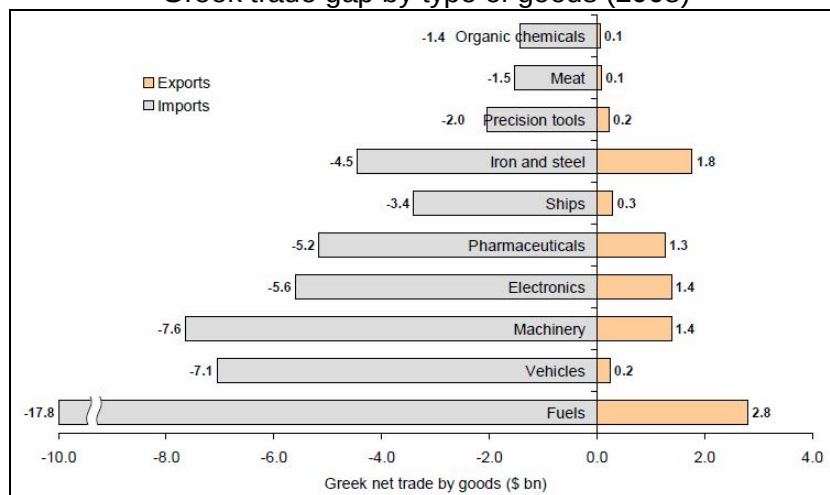
Chart 3.1
Greek foreign trade



Billions euros. Source: Ameco

This chronic trade deficit is explained by a structural dependence on imports in most sectors, as shown in Chart 3.2.

Chart 3.2
Greek trade gap by type of goods (2008)

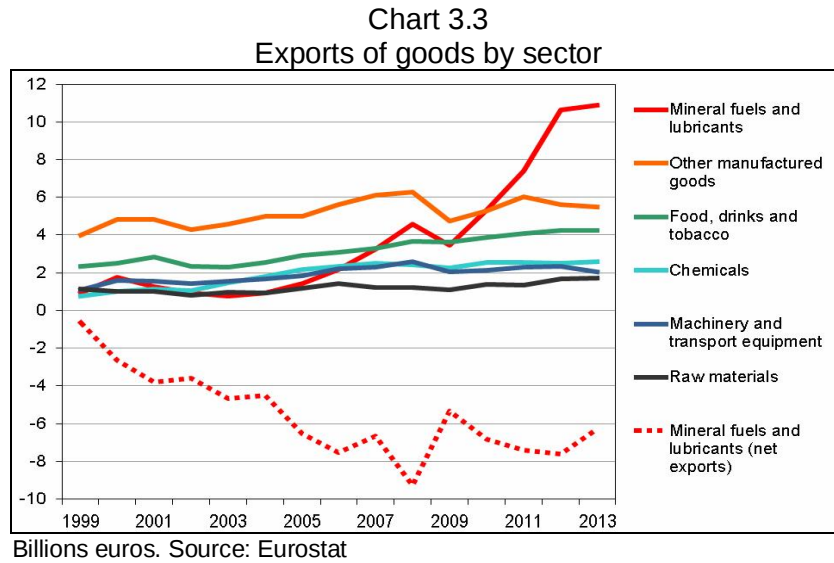


Source: Vanessa Rossi et Rodrigo Delgado Aguilera, "No Painless Solution to Greece's Debt Crisis", *International Economics*, Chatham House, February 2010,

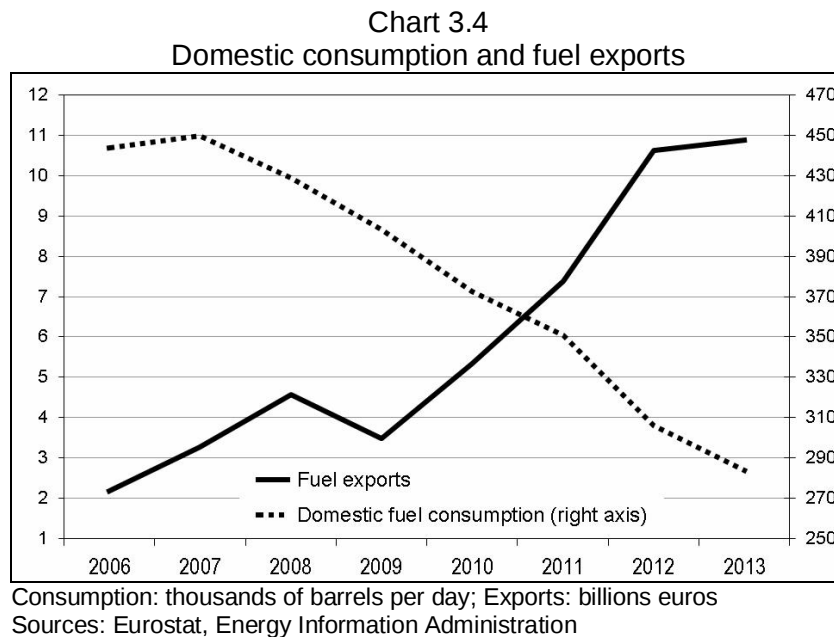
The trade balance is almost zero in 2014. But this is not the outcome of adjustment policies. Chart 3.1 clearly shows that this rebalancing has been achieved by a decrease in imports, which is itself the result of the recession.

The recent recovery in exports is a by-product of the recession

Ronald Janssen had already raised this point²⁶, noting that Greek exports have not increased in the recent period, with the exception of the item "mineral fuels, lubricants and related materials". Updated data from Eurostat confirm that the recent recovery of Greek exports exclusively relies on fuel exports (Chart 3.3). But this is also the outcome of increased refining activity, since net fuel exports are also almost flat over the recent period.



These additional exports are the result of the decline in domestic energy consumption (Chart 3.4). In other words, the firms are exporting the fuel that the domestic market can no longer buy.



Wage cuts were not passed into the export prices

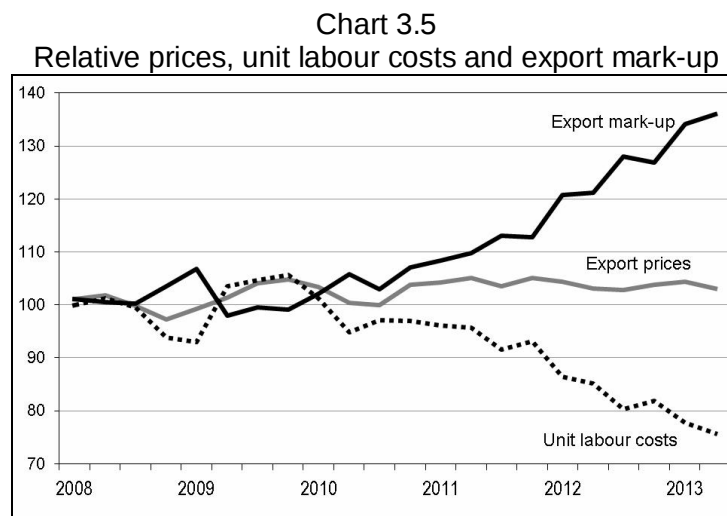
²⁶ Ronald Janssen, ["What really happened with Greek Exports"](#), *Social Europe Journal*, 18 October 2012.

According to the mainstream theories, the pattern is simple: lower wages will restore price competitiveness and increase exports. Applied to the whole of the euro area, this recipe has led to the recession, to a renewed pressure on employees to increase their share in a flat market. Some countries, especially Spain, have actually increased their exports at the expense of other countries, including France. But in the Greek case, the scenario does not function: the volume of exports remains almost flat and the Greek market share is falling.

The reason is that wage cuts were converted into profits, not lower prices. The European Commission had already highlighted this phenomenon for the so-called "vulnerable" countries, "profit margins (gross operating surplus over value-added) increased – particularly in tradable industries – thus absorbing part of the reduction in unit labour costs²⁷".

Economists from the European Commission have wondered on the "puzzle of the missing Greek exports²⁸". Not surprisingly, they came to this conclusion: "structural reforms improving the Greek institutional framework to the EU/OECD average level would close between ½ and ¾ of the Greek export gap. These findings suggest that, while Greece has already achieved major improvements in cost competitiveness since the start of the Greek adjustment programme, structural reforms must also address non-cost competitiveness factors, such as the underlying institutional deficits, to unlock Greece's export growth potential".

However, the pattern is very clear (Chart 3.5): since 2008, unit labour costs have fallen by 24% compared to the partners of Greece. Export prices remained flat (always relatively to competitors) and export profit margins increased by 36% compared to the average of other countries.



2008 = 100. Source: OECD, [Economic Survey, Greece](#), 2013

Greek exports in the long term

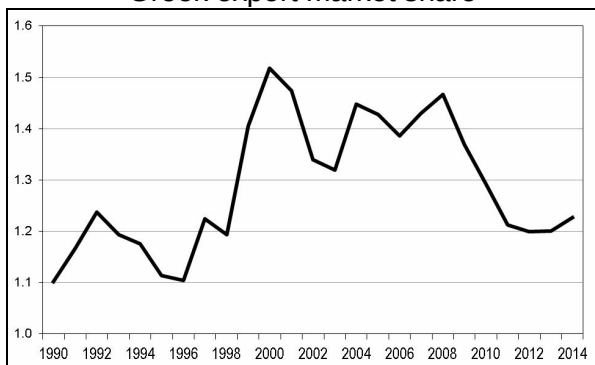
The structural trade deficit of Greece comes from their inadequate level, rather than a lack of dynamism of exports. The end of the dictatorship opened a phase of strong growth of Greek exports: their share in the exports of the European Union had doubled from 0.8 to 1.6%. Then the recession of the early 1980s opens a downswing until the mid 1990s.

²⁷ European Commission, "[Labour Costs Pass-through, Profits and Rebalancing in Vulnerable Member States](#)", *Quarterly Report on the Euro Area*, vol. 12, n°3, 2013.

²⁸ Uwe Böwer, Vasiliki Michou, Christoph Ungerer, "[The Puzzle of the Missing Greek Exports](#)", European Commission, *Economic Papers* n°518, June 2014.

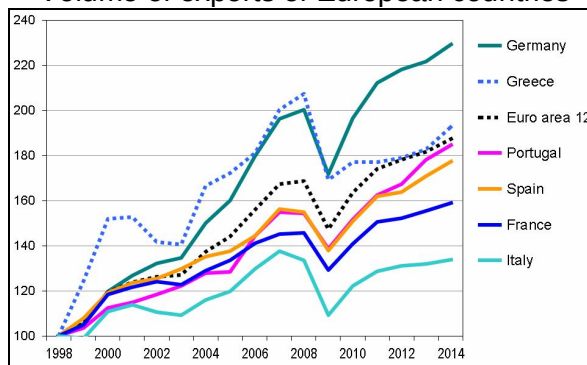
Between 1996 and 2000, the volume of Greek exports doubled: their share in European exports recovers, then stagnates until the crisis and falls at 1.2% (Chart 3.6). Taking 1998 as the base year, it is noticeable that Greek exports performed well compared to other countries in the euro area and have even increased as fast as those of Germany between 1998 and 2007 (Chart 3.7).

Chart 3.6
Greek export market share



% of UE15 exports. Source: Ameco.

Chart 3.7
Volume of exports of European countries



1998 = 100. Source: Ameco.

The fast increase in labour costs in Greece compared to the European average did not lead to a loss of export dynamism in the decade preceding the crisis. This is a result already stressed by the European Commission: "if there is a relation between unitary labour costs and export performance, it is weak and of a secondary order of magnitude compared with the deterioration of the trade balance (and hence the former cannot be the cause of the latter)²⁹".

Wages and profitability

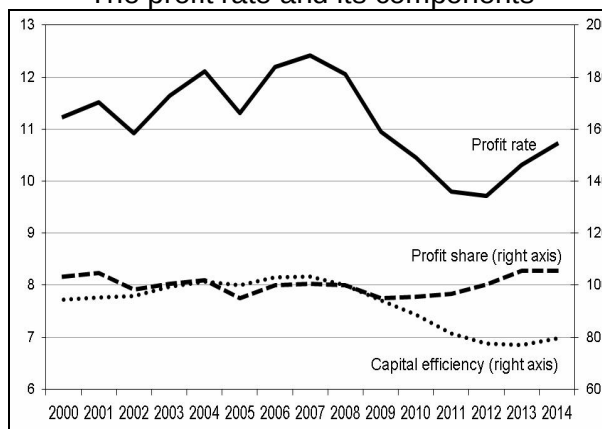
Over the past two decades, the wage share declined sharply between early 1980 and mid 1990. Then it was on an upward trend until the crisis (Chart 3.8). Between 1997 and 2007, real wages grew by 2.8% annually and labour productivity by 2.4%, so that the wage share rose 1.8 point of GDP. This catching up was legitimate, taking into account the huge decline in the wage share between 1980 and 1997. Therefore, it is not possible to invoke a "wage skid": before the crisis, the purchasing power of Greek wages has been grossly in line with productivity gains .

Chart 3.8
Real wage, productivity and wage share



Wage share in % of GDP. Productivity and real wage: 2008=100. Source: Ameco.

Chart 3.9
The profit rate and its components



Profit rate in %. Profit share and capital efficiency: 2008=100. Source: Ameco.

²⁹ European Commission, [European Competitiveness Report 2010](#).

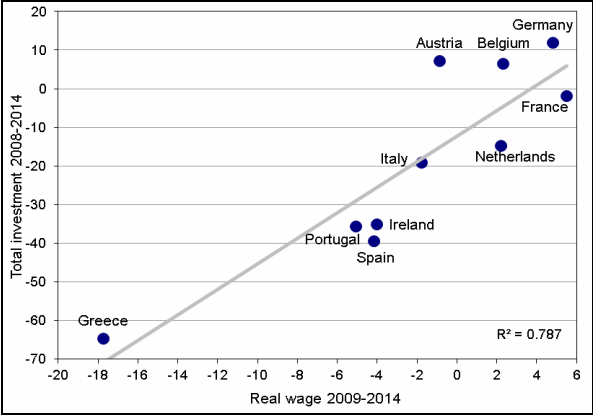
This slight recovery of the wage share was even more sustainable than the profit rate tended to increase during the same period: progress in capital efficiency - the ratio of output to fixed capital - compensated the rise in the wage share (Chart 3.9).

The crisis has mechanically driven down the profit rate due to unused capital. But it tends to recover, thanks to a marked increase in the profit share.

Competitiveness vs. investment

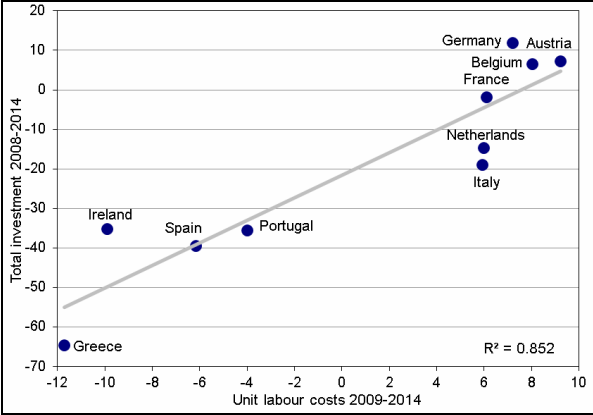
The adjustment policies, combined with the recession, have a dramatic effect on investment. The correlation between "wage moderation" and the decline in investment is very high (Chart 3.10). It is even stronger with the unit labour costs, and Chart 3.11 below clearly shows the gap between "North" and "South" countries of the euro area.

Chart 3.10
Investment and real wage



Source: Ameco.

Chart 3.11
Investment and unit labour costs



Source: Ameco.