

Myths, Mix-ups and Mishandlings: What Caused the Eurozone Crisis?

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Abstract

The Eurozone crisis has been wrongly interpreted as either a crisis of fiscal profligacy or of deteriorating unit-labour cost competitiveness (caused by rigid labour markets), or a combination of both. Based on these diagnoses, crisis-countries have been treated with the bitter medicines of fiscal austerity, drastic wage reductions, and far-reaching labour market deregulation—all in the expectation that these would restore cost competitiveness and revive growth (through exports), while at the same time allowing for fiscal consolidation and private-sector debt deleveraging. The medicines did not work and almost killed the patients. The problem lies with the diagnoses: the real cause of the Eurozone crisis resides in unsustainable private sector debt leverage, which was aided and abetted by the liberalization of (integrating) European financial markets and a “global banking glut”.

JEL classification codes: E00; E02; E12; F02; and F15.

The never ending crisis of the Eurozone

The Eurozone entered a recession in the first quarter of 2008, and quarterly growth rates collapsed in the first quarter of 2009, when the financial crisis hit Europe full-force. The combined real GDP (2008Q1 = 100) of the 18 Eurozone countries fell by a cumulative 5.8 percentage points over six successive quarters (2009Q2 = 94.2), then crept up to 98.1 during 2011Q1-2011Q3, but next declined for seven consecutive quarters (to 96.8 in 2013Q2) to finally climb up again to 98.1 in 2014Q4. Eurozone GDP, in other words, is still not back to its pre-crisis level after six whole years. A few countries, most notably Germany (but also France), have been able to recover from the crisis-induced GDP contraction—but their recovery is far from imposing. Germany's GDP is 3.9 percentage points higher in 2014Q4 than it was in 2008Q1, which implies an average growth rate of real GDP of 0.56 per cent per year; the corresponding average annual GDP growth for France is 0.21 per cent. Southern Europe's crisis countries don't dare to think of recovery—in most cases, the freefall they were in has just about stopped. Greece's GDP in 2014Q4 is down by 26.3 percentage points, Spain's GDP by 5.7 percentage points, Portugal's by 6.8 percentage points, and Italy's GDP shrank by as much as 9.6 percentage points (all compared to 2008Q1).

Inevitably, unemployment has shot up and as many as 19 million workers are jobless in the Eurozone as a whole (in 2013)—7 million more unemployed people than in 2008. The average Eurozone unemployment rate is now 12%, but the employment crisis is far deeper in Southern Europe. Greece, Italy, Portugal and Spain (the data are for 2013) count an unprecedented 11.3 million unemployed workers—6.3 million more than during 2008. The unemployment rate (in 2013) is 27.5% in Greece, 12.2% in Italy, 26.1% in Spain, and 16.4% in Portugal. Such a degree of joblessness has not happened since the 1930s. Poverty is on the rise: income poverty rates have increased during 2008-11 by 4.4, 2.4 and 5.1 percentage points in Greece, Italy and Spain. As Table 1 shows, inequality in the GIPS countries is rising: the lowest income deciles cope with much larger declines in their disposable incomes than the top-10%, and the income ratio of the top-10% to the bottom-10% has gone up. The crisis is creating an even more polarized society in which the poorest have to fight for access to basic items such as critical medicines, have to queue up for the soup kitchens and are ever more often homeless. The crisis has turned the Southern Eurozone into a depressing world of closing of possibilities, hopes and dreams, a dark world of heightened inequalities, high unemployment, pay cuts, rising in-work poverty, and people going hungry, hunting for food through garbage cans—as there is no (longer a) welfare state to fall back upon.

Table 1
Contours of the Eurozone Crisis (2008-2012/13)

	Greece	Italy	Portugal	Spain	Euro-Area
Change in real GDP 2008-2013 (percent)	-23.3	-7.1	-7.9	-6.4	-2.0
Change in manufacturing output 2008-2012 (percent)	-26.1	-7.8	-11.8	-22.1	-8.3
Change in real household consumption 2008-2013 (percent)	-27.9	-6.1	-12.2	-9.0	-2.0
Change in real domestic demand 2008-2013 (percent)	-31.5	-10.8	-17.1	-15.7	-5.2
Change in real investment 2008-2013 (percent)	-30.7	-8.5	-12.3	-14.0	-4.3
Change in the (real) wage share 2008-2012 (percent)	-5.9	1.6	-4.6	-6.9	1.8
Change in the real wage rate (per hour of work) 2008-2012 (percent)	-14.2	0.9	0.2	2.0	4.5
Change in hourly labour productivity 2008-2012 (percent)	-8.3	-0.7	4.8	8.9	2.7
Unemployment rate in 2013, Quarter 1 (percent)	26.6	11.9	17.6	26.5	12.1
Unemployed persons (millions) in 2012	1.20	2.74	0.86	5.77	18.07
Change in the unemployment rate 2008-2013Q1 (percent)	18.9	5.1	9.1	15.1	4.5
Change in unemployment 2008-2012 (million persons)	0.83	1.05	0.39	3.18	6.13
Youth unemployment (%) in 2013 Q1	60.1	39.2	40.6	55.7	24.1
Income poverty in 2008 (percent)	18.5	18.3	17.0	15.9	14.6
Poverty threshold 2011 (euros/month)	549	799	421	626	
Increase in income poverty during 2008-2011 (percent)	4.4	2.4	-1.2	5.1	1.8
Increase in income poverty during 2008-2011 (1000 persons)	483	1,454	-128	2,336	5,886
Change in disposable income during 2007-2010: all deciles (in %)	-4	-1	-1	-3	-0.4*
Change in disposable income during 2007-2010: bottom 10% (in %)	-8	-6	+2	-14	-1.9*
Change in disposable income during 2007-2010: top 10% (in %)	-4	-1	-1	-1	-0.8*
Ratio of top 10% to bottom 10% 2008	10.6	8.8	10.0	10.0	8.0
Increase in ratio top 10% to bottom 10% during 2008-2011	+0.3	+1.7	-0.6	+4.9	+0.2
Memo items:					
Fiscal deficit (% of GDP) in 2007/2012	-6.5 / -10.0	-1.6 / -3.0	-3.1 / -6.4	+1.9 / -10.6	-0.7 / -3.7
Public consolidated debt (per cent of GDP) in 2007 / 2012	107.4 / 156.9	103.3/127.0	68.4 / 123.6	36.3 / 84.2	66.4 / 90.6

Source: Storm and Naastepad (2015A). Data are from the Eurostat Database, except those on changes in disposable income during 2007-2010, which are from OECD (2013).

Notes: At-risk-of-poverty rate is anchored at a fixed moment in time (2005). Income Poverty is defined as the share of people living in equivalised households with less than 60% of median equivalised household income after social transfers. A * indicates that the data are for the OECD area.

Eurozone recovery is widely expected to be slow: according to the IMF World Economic Outlook (2015), Eurozone growth will be 1.2% in 2015 and 1.4% in 2016, while a more optimistic European Commission (2015) expects the Euro Area to grow by 1.3% in 2015 and 1.9% in 2016. The point is not that growth forecasts for Greece and Spain are higher than the Eurozone average, while they are lower for France, Italy and Portugal, but that the recovery process is tardy and fragile. Even if Greek GDP will grow by as much 3% in 2015, it is starting from a base-level which is 26.3% lower than it was in 2008, and in the happy circumstances that this 3%-growth will continue, it will take until 2026 before Greece's GDP is back at its pre-crisis level: 18 lost years. For Italy, Portugal and Spain, it will also take many years for their GDP to make up the loss caused by the crisis. But it is not clear what would drive such growth: the fiscal policy stance is contractionary, households and firms (almost everywhere) suffer from hefty debt overhangs, and external demand remains weak (mostly because each member country is cutting spending and wages). In line with this, forecasts of unemployment show that joblessness remains rampant—the expected unemployment rate for 2016 is divined to be 22% of the labour force in Greece, 20.7% in Spain and 12.6% in Italy and Portugal (European Commission 2015). Those who believe the Eurozone's trials are now past must assume either an extraordinary (*deus-ex-machina*) acceleration of the recovery process or a willingness of those trapped in deep recessions to soldier on, year after year. Neither scenario seems at all plausible.

We argue in this paper that this never ending crisis of the Eurozone is in no small measure caused by a mishandling of the crisis, which in turn is based on wrong diagnoses concerning its causes. We distinguish two dominant narratives—“myths”, in our opinion—about the Eurozone crisis, the first one emphasizing fiscal profligacy as the ultimate cause of the crisis, the other focused on (labour cost) competitiveness. In the first narrative the crisis is seen as a sovereign debt crisis, in the second, it is viewed as a competitiveness crisis. Both narratives heavily dominate Eurozone policy discussions. But, as Tolstoy (1882) wrote in *A Confession*, “wrong does not cease to be wrong, because the majority share in it”—and this holds true in this case as well: both diagnoses are inaccurate and wrong, and these diagnostic errors lead to the wrong treatment in terms of policy prescriptions. The economic—and social as well as political—costs of this mishandling are huge, and—sadly—largely avoidable. It is no understatement if we say that the patient is barely surviving the therapy. A better therapy requires improved diagnosis, and to this task, the remainder of this paper is devoted.

Myth #1: The Eurozone crisis is due to fiscal profligacy and is a sovereign debt crisis right from the start.

This first myth holds that the Eurozone crisis was driven by fiscal indiscipline, even profligacy in Southern Europe—where national debts supposedly had soared already before the crisis. This view is very widespread, and it underlies the continued emphasis by European policymakers in Brussels and Frankfurt on fiscal austerity. “It is an indisputable fact”, Mr. Wolfgang Schäuble (2011), Germany's influential Finance Minister, wrote in the *Financial Times* that “excessive state spending has led to unsustainable levels of debt and deficits that now threaten our economic welfare.” Mr. Jean-Claude Trichet (2010), former President of the ECB, agrees: “I want to be candid with you today. The roots of the sovereign debt tensions we face today lie in the neglect of the rules for fiscal discipline that the founding fathers of Economic and Monetary Union laid out in the Maastricht Treaty.” Mr. Christian Noyer (2012), Governor of the Bank of France, is repeating the party line, stating: the “main origin of the crisis lies in the lack of fiscal discipline on the part of most Member States. [...] [These Member States] ran up deficits and debts, including during times of growth. As a result in 2008, when the crisis started, these countries had no more fiscal room and their public finances deteriorated substantially.” Professor Hans Werner Sinn (2010) concurs, writing that the “lesson to be learned from the crisis is that a currency union needs ironclad budget discipline to avert a boom-and-bust cycle in the first place.”

If fiscal overspending is the problem and the Eurozone crisis is indeed a sovereign debt crisis, as this argument goes, fiscal austerity must be the solution, with public thrift serving to revive investor confidence. For one, significant belt-tightening is only “normal” after years of fiscal profligacy and rising public debts—peripheral states simply cannot continue overspending now at the expense of the future. For another, financial markets will punish countries not doing enough to slash their deficits by making it even more expensive for these cash-strapped countries to borrow. Hence, the leaders of the Eurozone’s core countries have been demanding draconian budget cuts as the price of rescue loans to Greece, Portugal, Spain and Italy. The ECB has been cheering this on and pushing it further. Of course, it is understood that “the necessary comprehensive fiscal adjustment is weighing on near-term economic growth”, as Mr. Mario Draghi explained (at an ECB press conference on May 3, 2012), but “its successful implementation will contribute to the sustainability of public finances and thereby to the lowering of sovereign risk premia. In an environment of enhanced confidence in fiscal balances, private sector activity should also be fostered, supporting

private investment and medium-term growth.” Mr. Draghi’s optimism is founded upon the doctrine of “expansionary fiscal austerity”, which insists that governments should slash spending even in the face of high unemployment, because the fiscal consolidation (if credible) raises households’ expected future disposable income and consumption, and increases investors’ confidence and hence investment (Alesina and Ardagna 2010). In line with this doctrine, Reinhart and Rogoff’s (2010) claimed that economic growth drops off sharply, when debt exceeds 90 percent of GDP.¹ The “austerity is good + debt is bad” doctrine received wholehearted enthusiasm in policy circles in Brussels, Frankfurt, Berlin and Washington, also because it held up hope that the crisis-countries could actually help themselves without much further support of or adjustment in Europe’s North. Belief in it became so strong that Europe’s Stability and Growth Pact was reformed so as to prevent any *fiscal faux pas* by Eurozone states in future.² Fiscal austerity has been enshrined in national law—in a move bypassing national parliaments—in exactly the “ironclad” way advocated by Professor Sinn.

Mix-up #1: The claim proved too good to be true.

The difficulty with the “fiscal profligacy” argument is that the data don’t support it. As Eurostat data collected in Table 2 show, in the 8 years prior to the crisis (2000-2007), government debt (per cent of GDP) in the Eurozone *declined*, on average, by 6 percentage points—which already contradicts the claim of fiscal irresponsibility. Sovereign debt of Italy declined by 7 percentage points during 2000-07, in Ireland by 8 percentage points, and in Spain by as much as 24 percentage points. It is true that the public debt of Greece increased by 4 percentage points during those years, but to call this “profligate”, “reckless” or “excessive”, makes little sense; it would mean the German and French states have been profligate as well, as their debts increased by as much as 5 percentage points during 2000-07. Portugal is the only crisis-country where sovereign debt rose considerably before the crisis—by 13 percentage points from 62.2% of GDP in 2000 to 75.5% in 2007. But it is hard to call Portugal’s public debt in 2007 “excessive” or “irresponsible” if one compares it with public

¹ Reinhart and Rogoff’s claim has been discredited by Herndon, Ash and Pollin (2013) who pointed out a spreadsheet error as well as their questionable statistical procedure.

² The expanded treaty is called the Treaty on Stability, Coordination and Governance in the Economic and Monetary Union and it requires its parties to introduce a national requirement to have a balanced structural budget (a structural budget deficit < 0.5 per cent of GDP). The European Commission is given the right to automatically impose penalties in case of breaches of either the deficit or the debt rules.

debts of Germany (65.7%), France (73%) or Belgium (88%) in the same year. Bond markets were not at all apprehensive about sovereign default risks as member-country-specific risk premiums came down to very low levels and interest rate spreads remained stable and very low until the onset of the crisis (Chen *et al.* 2012). The spread of the Greek bond rate over the German one, for instance, remained as low as 30 bps even at the end of 2007. As far as financial markets were concerned, all countries using Euros could borrow at the same interest rate. There is therefore no basis to claim that national debts had soared already well before the crisis—the fact is that sovereign debts rose sharply only after the crisis, once governments felt forced to bail out collapsing insolvent banks and once GDP started to contract. As a result, public debt in the Eurozone increased by a full 33 percentage points of GDP during 2008-2012—and by 78 %-points in Ireland, 44 %-points in Greece, 48 %-points in Portugal, and 45 percentage points in Spain. We don't need the help of Granger-causality testing to conclude that it's the *socialization* of private debts, especially the debts of banks going belly up, which turned the Eurozone crisis into a sovereign debt crisis *ex post facto*.

Table 2
Increase in indebtedness (per cent of GDP), 2000-07

	Households	Non-Financial Corp.	Financial Corporations	Government	Total debt increase	Real home price index
Belgium	7 (11%)	57	124	-26	162	48.7
Germany	-10 (-25%)	0	33	5	27	-14.0
Ireland	54 (33%)	-13	612	-8	645	52.8
Greece	32 (24%)	13	41	4	90	37.2
Spain	34 (30%)	78	74	-24	162	73.1
France	15 (26%)	20	113	5	152	81.7
Italy	17 (48%)	23	22	-7	55	37.6
Netherlands	32 (53%)	-42	217	-12	195	14.4
Austria	7 (11%)	68	72	-7	140	1.2
Portugal	26 (74%)	12	71	13	122	-11.2
Finland	23 (23%)	-77	70	-11	4	37.7
<i>Eurozone-11</i>	<i>21 (27%)</i>	<i>12</i>	<i>132</i>	<i>-6</i>	<i>159</i>	<i>28.3</i>
Denmark	37 (76%)	60	145	-26	216	57.9
Sweden	24 (25%)	49	70	-10	133	55.3
U.K.	31 (35%)	-34	367	1	365	63.4
<i>Average</i>	<i>23 (30%)</i>	<i>15</i>	<i>145</i>	<i>-7</i>	<i>176</i>	<i>38.3</i>

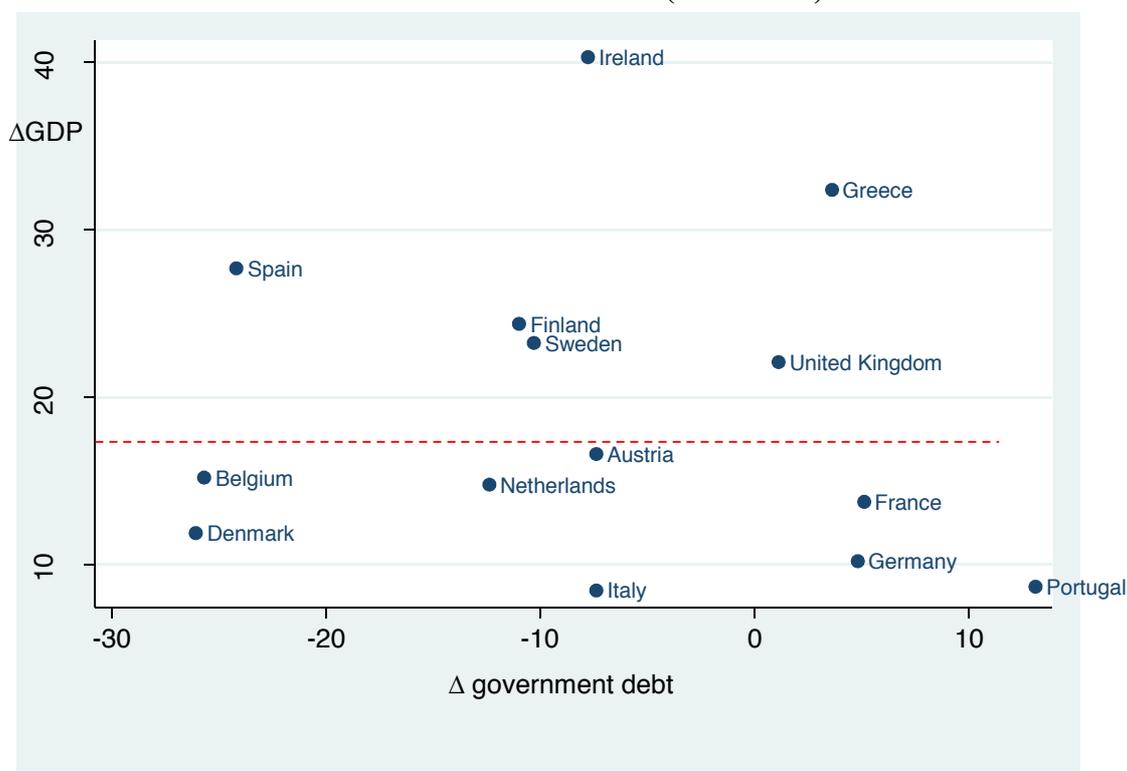
Source: Authors' calculations from Eurostat Data OECD data (for the real home price index).

Note: The percentages within brackets refer to the proportion of real GDP growth (2000-07) which can be attributed to higher household indebtedness, as explained in the text. See Figure 1.

A second point which comes out clearly from Table 2 is that the Eurozone's *aggregate* debt dynamics is almost completely driven by private sector indebtedness—and specifically the dramatically rising debt of financial corporations which, on average and per cent of GDP for the Eurozone, increased by 132 percentage points during 2000-07. Household (mortgage) debts increased by 21 percentage points of GDP, while the liabilities of non-financial corporations rose by 12 percentage points during the pre-crisis years. Growing private-sector debts dwarf the changes in sovereign debts—particularly so in the crisis countries. In Greece, household indebtedness rose by 32 percentage points, corporate indebtedness by 13 percentage points, and financial sector indebtedness by 41 percentage points—trivializing the 4-percentage point increase in public debt. Spain experienced a massive increase in the debts of non-financial corporations (of 78 percentage points during 2000-07), of banks (of 74 percentage points) as well as households (of 34 percentage points)—all participants in Spain's massive property bubble—in a period when sovereign indebtedness was sharply reduced. Undeniably, the Eurozone crisis was triggered by a gigantic unsustainable increase in indebtedness—but why would one single out trifling increases in sovereign debts as the main factor, while neglecting the significant growth in private indebtedness? We may justly ask, with *Matthew verse 7:3*: “And why beholdest thou the mote that is in thy brother's eye, but considerest not the beam that is in thine own eye?”

This point can be further substantiated. We used the debt data (2000-07) for the 14 European countries included in Table 2 to see if there exists a (statistically significant) correlation between higher indebtedness and economic growth, defined here as the percentage increase in real GDP over the period 2000-07. Crucially, we find, for our sample, that there is no (statistically significant) association between economic growth and public debt—the variation in public indebtedness does not (statistically) “explain” the variation in economic growth between these 14 countries. This is illustrated in Figure 1. The lack of correlation is important as it means that we cannot attribute higher growth in the Eurozone periphery to excessive state spending, and hence cannot logically attribute higher real wage growth, loss of cost competitiveness, higher imports and growing current-account deficits to a supposed lack of fiscal discipline in Southern Europe (Storm and Naastepad 2015a). We shall return to this point below.

Figure 1
The Eurozone: the increase in sovereign debt is not associated with increased real GDP (2000-2007)

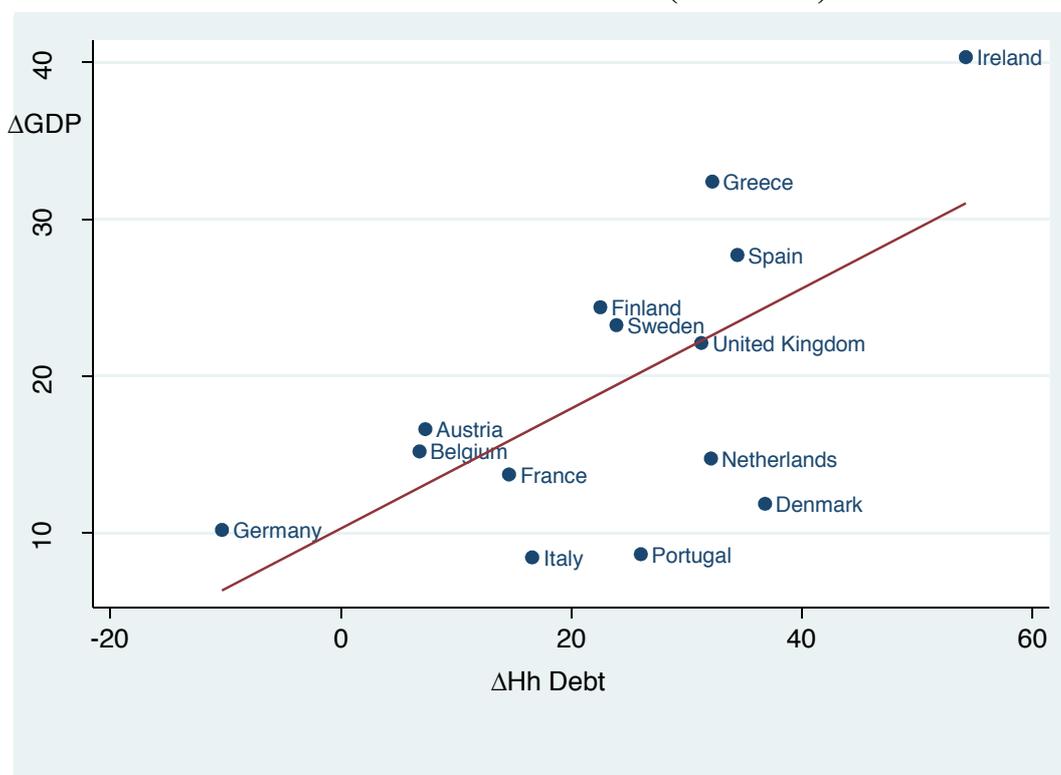


Source: Authors calculations using Eurostat Data.

Note: Δ real GDP = the percentage increase in real GDP (2000-07); Δ government debt = the increase in government debt as a percentage of GDP (during 2000-07). The (dashed) line represents the fitted OLS curve, showing that there is no statistically significant (at 10% or less) association between Δ government debt and Δ GDP.

Likewise, we find no (statistically significant) correlation between economic growth and (higher) indebtedness of non-financial corporations, and between growth and the exploding indebtedness of financial corporations. The latter finding deserves emphasis: it is basically suggesting that the piling-up of debts by the financial sector did *not* trickle down in more rapid Eurozone growth. Eurozone banks took on €13 trillion of additional debt during 2000-2007 with nothing to show for it. If true, one may ask: what has been the use of all the debts of these highly-leveraged financial corporations? Although in theory financial firms are supposed to also hold assets of comparable value, the scale of financial sector liabilities looks alarming—especially relative to bank equity and because the maturity of these liabilities is typically much shorter than the maturity of the corresponding assets. An un-coordinated deleveraging of the financial sector carries high risks of collapsing asset prices, fire sales of securities, and a credit crunch—as did actually happen in 2007/2008.

Figure 2
The Eurozone: the increase in household debt is associated with an increase in real GDP (2000-2007)



Source: Authors' OLS regression estimations based on Eurostat Data.

Note: The regression line is based on the following OLS regression:

$$\Delta \text{ real GDP} = 12.47^{***} + 0.25^* \Delta \text{ Hh Debt} + 14.53^{**} \text{ Ireland-dummy}$$

(7.22) (2.02) (2.54)

$$R^2 = 0.52; F = 8.9^{**}; n = 14.$$

Δ real GDP = the percentage increase in real GDP (2000-07); Δ Hh Debt = the increase in household debt as a percentage of GDP (during 2000-07). The equation was estimated for 11 Eurozone countries (Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Portugal, Spain) plus Denmark, Sweden and the U.K. Robust *t*-values are reported in parentheses. ***, **, * indicate statistical significance at the 1%, 5% and 10% level, respectively. Without the dummy for Ireland, the regression result is:

$$\Delta \text{ real GDP} = 10.30 + 0.38 \Delta \text{ Hh Debt}$$

(3.96)*** (2.99)** $R^2 = 0.41; F = 9.0^{**}; n = 14.$

Turning to household debts, we do find a statistically significant positive association between real GDP growth and household debts in the run-up to the crisis, as shown in Figure 2. According to the regression result, a one point increase in household debt (per cent of GDP) is associated with an increase in real GDP of 0.25 percentage points. (This regression result does not depend on the inclusion of Ireland, which is an outlier. The result does not

change when we exclude anyone country from the sample.) The increased household debt fed back into higher spending—directly by loosening households’ liquidity constraints and indirectly because the credit was used to drive up asset (home) prices and create wealth gains (Barba and Pivetti 2008)—which means that higher household debt contributed to higher aggregate demand and growth. Our estimated coefficient—of 0.25—can thus be used to estimate the contribution of higher household debt (during 2000-07) to real GDP growth (in the pre-crisis period). The proportions of economic growth “explained” by higher household indebtedness are given in Table 2 for each country. On average, for the Eurozone, higher household debts explain about 27% of economic growth (Chmelar 2013). The proportions are much higher for Italy (48%), the Netherlands (53%) and Portugal (74%), but lower in the case of Greece (24%). Germany is the only country where households deleveraged debt (after the unification boom and the *Neuer Markt* IT debacle around 2000)—and this explains sluggish domestic demand and poor growth in Germany during most of 2000-07 (see Storm and Naastepad 2015b).

The role of household debt can be investigated in a bit more detail, since higher household debts in the Eurozone were a major factor in driving up home prices—in turn, the higher house prices, in a process of cumulative causation, enabled households to take on more debt. Figure 3 plots the increase in household debt (as a percentage of GDP, during 2001-07) and the increase in real home price (as given by official OECD statistics). The correlation between household debts and house prices is positive and statistically very significant (at 0.1%), as indicated by the strongly upward regression line. The result does not change when we drop any country from the sample—the correlation remains very significant. Applying the estimated coefficient (of 1.44) to the average increase in household debt for the Eurozone as a whole (of 21 percentage points), we get an estimated real home price increase of 30.9%, which is close to the actual home price increase of 28.3%. In the same manner, we can almost fully “explain” the increase in real house prices in Denmark and Germany, and about 60-85% of the real home price increase in Finland, Italy, Spain, Sweden and the U.K. (Our regression does “over-explain” the real home price change in Austria, Ireland, the Netherlands and Portugal). The evidence of a household-debt funded home-price climb is very strong. We also investigated possible correlations between higher government debts and home prices, and between higher financial-sector indebtedness and home prices. Changes in government debt are not correlated with higher real house prices in any systematic way in our sample. Higher bank debts do exhibit a weak—and non-robust—positive co-movement with higher real home prices, but we cannot draw out any strong inferences from this.

Figure 3
Higher household debt is associated with higher home prices in the Eurozone



Source: Authors' OLS regression estimations based on Eurostat Data and OECD data on real house prices.

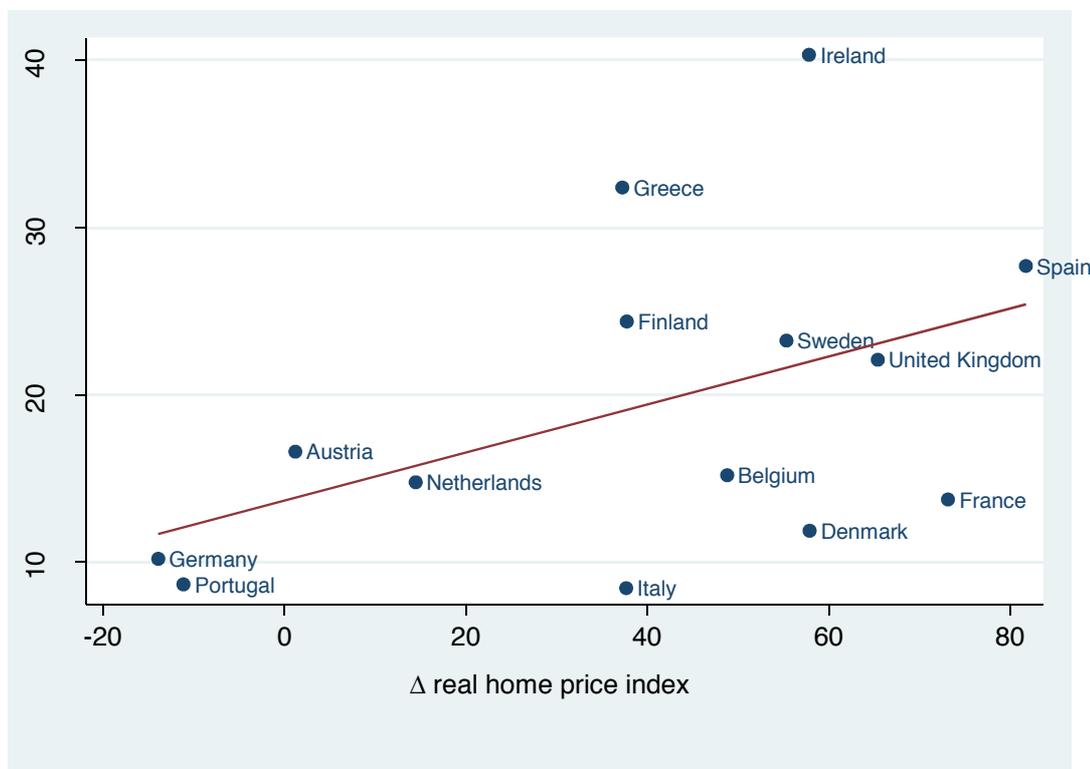
Note: The regression line is based on the following OLS regression:

$$\Delta \text{ real home price} = + 1.44 \Delta \text{ Hh Debt} \quad R^2 = 0.69; F = 35.4^{***}; n = 14.$$

(5.95)***

Δ Home Price = the percentage increase in the real house price (2001-07); Δ Hh Debt = the increase in household debt as a percentage of GDP (during 2001-07). The equation was estimated for 11 Eurozone countries (Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Portugal, Spain) plus Denmark, Sweden and the U.K. Robust *t*-values are reported in parentheses. ***, **, * indicate statistical significance at the 1%, 5% and 10% level, respectively. The results do not depend on the observations of any individual country in the sample.

Figure 4
Higher home prices are correlated with higher GDP growth in the Eurozone



Source: Authors' estimations based on Eurostat Data and OECD data on real house prices.

Note: The regression line is based on the following OLS regression:

$$\Delta \text{ GDP} = 13.70 + 0.14 \Delta \text{ real home price}$$

(7.12)*** (2.72)** $R^2 = 0.21$; $F = 7.4$ ***; $n = 14$.

Δ real GDP = the percentage increase in real GDP (2001-07); Δ real home price = the percentage increase in the real house price (2001-07). Robust t -values are reported in parentheses. ***, **, * indicate statistical significance at the 1%, 5% and 10% level, respectively. The results do not depend on the observations of any individual country in the sample.

Higher (real) house prices, in turn, are associated with more rapid GDP growth—as is illustrated by Figure 4. The slope coefficient of the fitted regression line (which takes a value of +0.14) is statistically significant (at 5%) and does not change when we drop Ireland or any other country from the sample. Higher home prices, raising households' (paper) wealth, enabled them to increase borrowing, and these loans were used for spending and further driving up asset (home) prices—the result has been an unsustainable private leverage boom, especially in Spain and Ireland (IMF 2012; Martin and Philippon 2014). To underscore the

consistency of our various findings (so far), we combine the estimated coefficients of Tables 3 and 4 to obtain the derived impact on real GDP growth of higher household debt as follows:

$$+1\% \Delta \text{ household debt} \times 1.44 = +1.44\% \Delta \text{ home price} \times 0.14 = +0.21\% \Delta \text{ real GDP}$$

A 1-percentage point rise in household indebtedness led to an increase in the real home price by 1.44 percentage points, which in turn is associated with a rise in real GDP of 0.21 percentage points—which is close our direct estimate 0.25%-points in Figure 2. Clearly, Figures 2, 3 and 4 paint a consistent picture: the Eurozone was blighted by private debt—not public debt.

The Germany-inspired focus on sovereign debt is badly misplaced. Eurozone households, corporations and banks have all been taking on debts on an unprecedented scale (see Table 3). For the Eurozone as a whole household debt in 2012 was equal to 79% of GDP, ranging from 131% in the Netherlands to 51% in crisis-struck Italy. Corporate debt in 2012 stood at 212% of Eurozone GDP—being comparatively low in Greece (117%) and Italy (182%), but higher elsewhere (e.g. Belgium and Ireland). Banks' indebtedness in 2012 stood at 522%—with Ireland and the Netherlands, where bank liabilities as a percentage of GDP were 1856% and 1018% respectively, representing cases of hyper-financialization. Excessive bank indebtedness is typical not just of the Irish and the Dutch, however, but also of Germany and France, where the ratio of bank debt to GDP in 2012 was 401% and 363%, which is considerably higher than bank debt (as a percentage of GDP) on average for Greece, Italy, Portugal and Spain which equaled 272%. Faced with the need to strengthen and repair balance sheets, all sectors are now—post crisis—deleveraging, which reduces economic activity and is causing a full-fledged balance-sheet recession, impossible to resolve by reducing sovereign debts. The real issue is how governments can help to clean up the Augean stables of households, corporations and particularly banks. Not surprisingly, in light of the massive private-sector debt build-up, recent research, as by BIS-economists Cecchetti, Mohanty and Zampoli (2011), finds that high corporate and household debt acts as a drag on growth, and recent research for the Euro Area by the IMF-economists Bornhorst and Ruiz-Arranz (2013) concludes that high private debt is more detrimental to growth than high public debt. Their regressions identify a stronger and more statistically significant association between private sector debt and growth than between government debt and growth; and show that excessive sovereign debt reduces growth only when household and corporate sectors are heavily indebted as well.

Table 3
Debts (per cent of GDP), 2012

	Households	Non-Financial Corporations	Financial Corporations	Government	Total
Belgium	57	354	363	106	880
Germany	59	152	401	89	699
Ireland	113	444	1.856	128	2.540
Greece	71	117	238	166	592
Spain	88	228	281	93	690
France	68	226	363	109	766
Italy	51	182	234	142	610
Netherlands	139	245	1.018	83	1.485
Austria	55	197	295	86	632
Portugal	101	263	335	129	827
Finland	70	206	362	64	702
<i>Eurozone-11 average</i>	<i>79</i>	<i>238</i>	<i>522</i>	<i>109</i>	<i>948</i>
Denmark	149	203	624	59	1.035
Sweden	88	340	348	49	825
United Kingdom	99	240	1.192	102	1.633
<i>Average (all countries)</i>	<i>86</i>	<i>242</i>	<i>565</i>	<i>100</i>	<i>994</i>

Source: Authors' calculations from Eurostat Data.

Mishandling #1: Fiscal austerity: wrong medicine for the wrong disease.

If the crisis is due to fiscal excess, then austerity must be the remedy—at least, this is what Mr. Schäuble (2011), in the same *Financial Times* article, claims: “The recipe is as simple as it is hard to implement in practice: Western democracies and other countries faced with high levels of debt and deficits need to cut expenditures, increase revenues and remove the structural hindrances in their economies, however politically painful.” Hence, in the hope that these would at some point become expansionary, tough austerity programmes were (and still are) imposed on the crisis countries. Public spending was cut, while taxes were raised in order to reduce the fiscal deficit and public debt. By far the largest of such fiscal consolidations has taken place in Greece, 9% of GDP on the basis of the change in the structural balance over 2011-13. Portugal has also undertaken large consolidations, close to 7% of GDP, while the adjustment in Ireland amounted to 4% over these years. Consolidation measures in France, Italy and Spain amounted to more than 3.7, 4 and 4.5% of GDP respectively, while Germany also undertook large consolidation measures, despite a larger fiscal space and record low

borrowing costs due to a “flight to safety”. The results were unequivocally counter-productive, as in many cases, the (synchronized) austerity packages led to a greater decline in GDP than in sovereign debt. Mr. Poul Thomsen, a leading architect of the IMF austerity programme in Greece, openly admitted that it failed to work and trapped the country in a vicious cycle where austerity generates recession, followed by more austerity and deeper recession that strangles any prospects for recovery and undermines social cohesion. Mr. Thomsen’s admission reflected a larger transformation of his employer, the IMF—from a strong voice for strict austerity to a strong voice *against*. In its *World Economic Outlook* of October 2012, the IMF presents research to show that deficit reduction harms growth: consistently, it was found that growth came in worse than expected, the more so in economies which were implementing aggressive fiscal consolidation plans than in countries that were not (Guajardo, Leigh and Pescaroti 2011).

This means that the belt-tightening by the government was not just non-expansionary, but more harmful than economists believed it to be—by a lot. Most economists had assumed that cutting the government deficit by 1 percentage point cuts about half a percentage point off economic output, but the actual decline according to the IMF is more like 0.9%-points to as much as 1.7%-points. The IMF estimates of the fiscal multiplier are, if anything, still on the conservative side. Eichengreen and O’Rourke (2012) find that the fiscal multiplier takes a value of 1.6, while Gordon and Krenn (2010) argue that the relevant multiplier value in a deep recession is 1.8. If we assume the fiscal multiplier to equal 1.8, then the fiscal consolidation of 9 percentage points of GDP undertaken by Greece must have reduced Greek GDP by more than 16 per cent—which, in turn, would have raised the public debt-GDP ratio by about 24 percentage points if we assume public debt to be constant. For Portugal, the fiscal cut of 7 percentage points of GDP would have reduced GDP by almost 13 per cent, raising the debt-GDP ratio by 12 percentage points. Such outcomes are typical of fiscal austerity, as is argued by an IMF-study by Ball, Furceri, Leigh and Loungani (2013) which looked at 173 episodes of fiscal austerity in the OECD economies over the past 30 years. Austerity, Ball *et al.* find, lowers incomes in the short term, with wage-earners taking more of a hit than others; it also raises unemployment, particularly long-term unemployment. Specifically, an austerity programme that curbs the deficit by 1 percent of GDP reduces real incomes by about 0.6 percent and raises long-term unemployment by almost 0.5 percentage points. These findings square with European Commission (2012) estimates which show that household disposable incomes fell sharply in Greece (by 11.6%), Italy (−1.6%), Portugal (−6.3%) and Spain (−4.3%) in just 2012. Fiscal austerity, argued to be necessary to pacify investor *Angst*, has

starved the crisis-economies in which the private sector is hard struck by a debt overhang (Tables 2 and 3), of the public investment (and essential public services) that could get the system moving again—thus compounding the suffering of populations having to cope with 25% adult and 60% youth unemployment. Even worse, the programmes have failed to decrease governments’ debt-to-GDP ratios, often even worsening them. The “eat your peas” approach, as austerity is called, is failing big time. Regrettably, however, while the IMF now officially urges Europe to put brakes on its austerity policies, the other members of the “troika” (the ECB and the European Commission) are holding steady. In a much-publicized speech in New York, Mr. Jens Weidmann, Bundesbank President, warns that Europe should stay course: “We can only win back confidence if we bring down excessive deficits and boost competitiveness [...] In such a situation, consolidation might inspire confidence and actually help the economy to grow.”³ And Mr. Draghi (on 2 May 2013) reiterated that it is crucial that Eurozone governments do not unravel the progress made in reducing their borrowing needs and should not give up on austerity.⁴ Fiscal stimulus remains anathema even after it has become clear that “austerity” has been sold on false pretenses.

Myth #2: The Eurozone crisis is crisis of (unit labour) cost competitiveness in combination with fiscal irresponsibility.

The second explanation focuses on the divergence in cost competitiveness (under fixed exchange rates) between the Eurozone core and periphery. It is summarized well by Mr. Lorenzo Bini Smaghi (2013) who argues that “countries which lost competitiveness prior to the crisis experienced the lowest growth after the crisis.” Competitiveness must here be read as meaning cost competitiveness—specifically unit labour cost (ULC) competitiveness—as is done by Mr. Trichet (2011) who defines “competitiveness, as revealed by developments in unit labour costs” or by Mr. Draghi (2012), who thinks that a “useful way to measure excessive imbalances is to look at unit labour costs, as these reflect developments in both productivity and labour costs.” The Eurozone crisis, in Mr. Draghi’s view, is caused by the fact that “since the introduction of the euro, unit labour costs have increased by 28% in deficit countries, 2.5 times as much as in surplus countries.” Or as Professor Sinn (2014, p. 3)

³ See: <http://www.ft.com/intl/cms/s/0/3872fd76-8d39-11e1-8b49-00144feab49a.html#axzz1xCADBnBp>

⁴ See: <http://www.guardian.co.uk/business/2013/may/02/eurozone-crisis-european-central-bank-rates>

opiniates, “[t]he countries in the southern and western periphery lost their competitiveness simply by becoming too expensive.” This loss of competitiveness is argued to have resulted, over time, in growing current account deficits, rising foreign indebtedness and reduced fiscal policy room in the Eurozone periphery, and hence, when the crisis started, these countries lacked the resilience to absorb the shock (unlike the more competitive, stronger German economy which could cope with the fall-out from the Financial Crash). The mistake made by Greece, Italy, Portugal and Spain was—paraphrasing Benjamin Franklin—that by failing to prepare, they were preparing to fail; the “First American” might have astutely added that “an ounce of prevention is worth a pound of cure.”

The increase in ULC in the southern Eurozone meant real wages were growing faster than labour productivity—a trend argued to be caused by their “rigid” inflexible labour markets, strong unions, and strong employment protection (*e.g.*, Dadush 2010; Sinn 2014). The peripheral economies were growing rapidly, mostly because the adoption of the single currency helped lower (real) interest rates and create a surge in (financial market) confidence in Greece, Italy, Portugal and Spain. It was, at least up to the crisis-outbreak, considered part of a healthy convergence process that Europe’s financial integration led capital to flow from the capital-abundant core (Germany) to the relatively capital-scarce countries in the periphery—driving up domestic demand, output as well as imports (Blanchard and Giavazzi 2002; Lane and Pels 2012). In this short era of “Great Expectations”, the hope was that (labour market) institutions and incomes in the periphery would converge to those of Europe’s Northern core countries. With hindsight, southern Europe’s “rigid” labour markets are now seen as the party pooper: by enabling workers to obtain higher wage growth they contributed to a process of wage-push and rising relative unit labour costs, which—in this narrative—killed Southern Europe’s export growth, raised current account deficits and created huge external debts. According to Sinn (2014, p. 2), “The unresolved problem underlying the financial crisis is the lack of competitiveness of the southern European countries and France. If anything, placating investors with taxpayer guarantees postpones the necessary painful adjustments through which competitiveness could be restored.” In this view, the only way out of the crisis is for the deficit countries to reduce their unit labour costs (relative to the surplus countries), by drastically reducing wages (“internal devaluation”) and by a drastic deregulation of their supposedly rigid labour markets. To rebalance their current accounts, Greece, Portugal and Spain should cut their wages by 25-35%, France by 15-25% and Italy by 5-15%—according to Sinn (2014). This view has become codified in policy in the *Euro Plus Pact* (adopted by the European Council in March 2011), the core aim of which is to foster

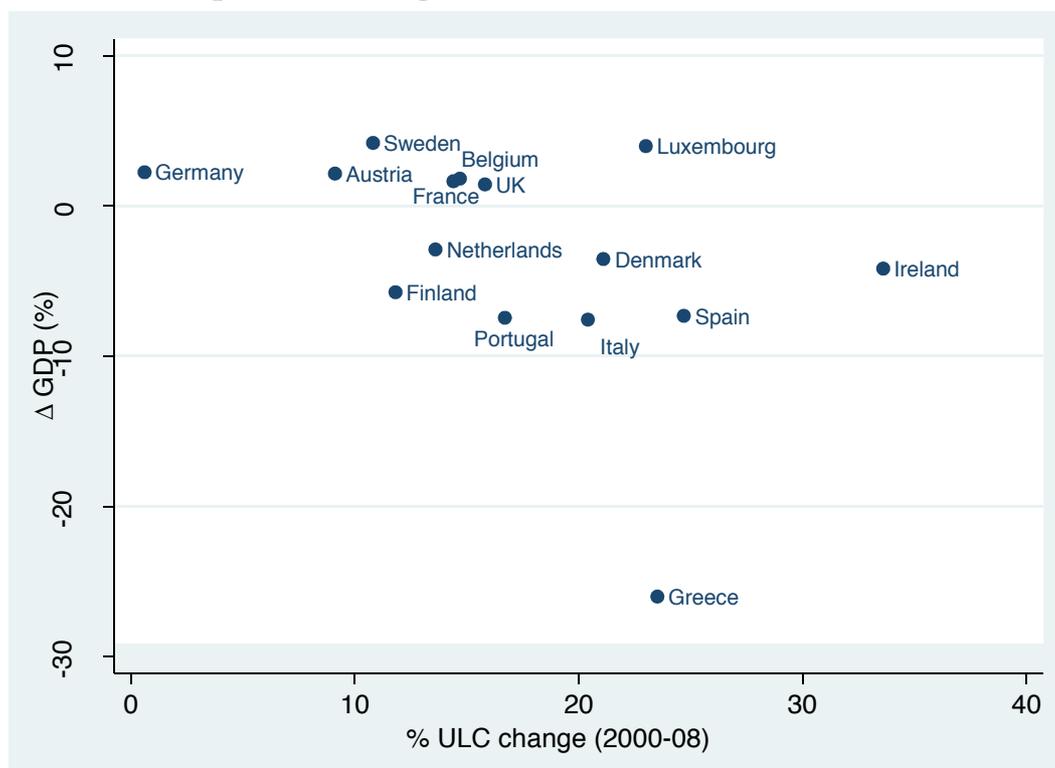
Eurozone (unit labour cost) competitiveness and net exports via labour market deregulation and welfare state reform, in conjunction (of course!) with fiscal austerity (Gros 2011; Gabrisch and Staehr 2014). The latest statement by the *Informal European Council* (February 2015) is just repeating these points (more on this below).

Mix-up #2: Unit labour costs are far less important to a nation’s competitiveness than is generally believed.

The problem with the “labour cost competitiveness” explanation is not that the data—as given in Figure 5—prove Mr. Bini Smaghi wrong, as there is no statistically significant correlation between pre-crisis increases in unit labour costs (ULC) and post-crisis growth performance for Europe and the Eurozone. The problem is a much deeper one as it concerns a leap of logic, a misleading use of the term “competitiveness” which philosophers would label *equivocation*, by which the—broad—concept of “competitiveness” is reduced, with remarkable sleight of hand, to competitiveness in terms of only relative unit-labour costs (or RULC). This is no trivial issue, as, firstly, it is no secret that economics lacks an *agreed* definition and measure of “international competitiveness” (Wyplosz 2013; Storm and Naastepad 2015a), and, secondly, often-used competitiveness indicators, such as RULC and/or current account imbalances, are known to be weak predictors of future export and import performance (Gros 2011; Gaulier and Vicard 2012). Our own research for the Eurozone countries (Storm and Naastepad 2015a, 2015b) shows that the RULC elasticities of export and import demand of Germany, Greece, Italy, Portugal and Spain (and the Eurozone as a whole) are mostly not statistically significantly different from zero and tiny. Instead, we (and others) find that

1. most goods & services imported into the Eurozone are “non-competing” imports used as intermediate inputs in manufacturing or for consumption—hence imports depend almost completely on domestic income (see also Bussière *et al.* 2011).
2. export performance by Eurozone members is overwhelmingly determined by world income growth (see also European Commission 2010; Danninger and Joutz 2007; Schröder 2015). Countries (such as Germany) exporting to fast-growing markets (such as China) experienced rapid export growth, whereas countries (such as Greece, Italy and Portugal) catering to slowly-growing markets had much lower export growth (ECB 2009).

Figure 5
Post-crisis GDP growth (2009-13) is not correlated with
pre-crisis changes in unit labour costs (2000-08)



Source: Authors' estimations based on Eurostat Data.

Note: The conclusion from the OLS regression analysis is that there exists no statistically significant association between the (percentage) change in unit labour costs (2000-08) and real GDP growth (2009-13). The results are sensitive to the outlier observations for Greece, Luxembourg and even Italy and Spain; when we control for these “outliers” (using country dummies for the mentioned countries), the estimated coefficient of % ULC change on real GDP growth is not significant (at 10%).

3. Eurozone current account imbalances are not statistically significantly affected by changes in RULC (see also Gaulier and Vicard 2012; Diaz Sanchez and Varoudakis 2013; Gabrisch and Staehr 2014).

Wage costs don't matter that much, in other words. Why this is so, is not difficult to understand (Storm and Naastepad 2015a, 2015b). What matters in international competition is the “gross output price” of a product or service—the full (national accounts) price which includes the costs of intermediate inputs and labour as well as a profit margin. Let p be the gross output price: $p = (1 + \tau)[W\lambda^{-1} + \alpha p_I]$ where W is the nominal wage rate per hour worked, λ is labour productivity (per hour worked), α is intermediate-input use (per unit of output), p_I is the price of intermediate inputs, and τ is the mark-up rate. (We assume that net

indirect taxes are included in intermediate costs). Unit labour cost (ULC) are equal to $W\lambda^{-1}$. Using this definition and assuming that τ is constant (which means all cost increases are passed on into p), the elasticity of p with respect to ULC is:

$$(1) \quad \varepsilon_{ULC}^p = (dp/p)/(dULC/ULC) = (1+\tau)(ULC/p) = (1+\tau)\xi$$

where ξ ($= ULC/p$) the share of wage cost in gross output price. Let $\varepsilon_p^{EX} = (dEX/EX)/(dp/p)$ be the (relative) price elasticity of export demand, then using (1), we can define the elasticity of export demand with respect to ULC as follows:

$$(2) \quad \varepsilon_{ULC}^{EX} = \frac{(dEX/EX)}{(dp/p)} \times \frac{(dp/p)}{(dULC/ULC)} = \varepsilon_p^{EX} \times \varepsilon_{ULC}^p = \varepsilon_p^{EX} \times (1+\tau)\xi$$

What (2) shows is that the elasticity of exports with respect to (relative) ULC is the product of the (relative) price elasticity of export demand and the elasticity of output price with respect to ULC. Table 4 details the composition of the gross output price for the manufacturing sectors of Germany, Greece, Italy, Portugal and Spain. ULC make up only about 15-24% of the manufacturing gross output price, whereas intermediate input costs account for 67-74% of total costs and the profit mark-up is generally around 10-12% (being higher in Greece). Using these numbers, ε_{ULC}^p takes a value of 0.18 to 0.26. What this means is that if manufacturing ULC increase by one percentage point, the gross output price increases by just 0.18-0.26% when we assume the complete “pass-through” of higher labour costs onto prices. The implication (following from equation (2)) is, to illustrate, that a relative-price elasticity of export demand of -1 is consistent with a RULC elasticity of export demand of around -0.25 . However, if cost pass-through is not complete, but, say, only one-half (which is realistic),⁵ a relative-price elasticity of export demand of -1 is consistent with a RULC elasticity of export demand of just -0.13 , which is close to findings for Germany by Onaran and Galanis (2012) and Storm and Naastepad (2012)—the only two studies directly estimating the RULC elasticity of exports. Accordingly, RULC trade elasticities by definition take a value of only one-fourth to one-eighth of the respective price elasticities (in absolute terms). Mr. Draghi has it wrong, therefore, when he attributes the gain in Germany’s international competitiveness to

⁵ See Goldstein and Khan (1985). Athanasoglou and Bardaka (2010) find a pass-through of between 25 and 50% in the case of Greek manufacturing exports.

the decline in its RULC and the loss in Southern Europe’s competitiveness to the growth in its RULC. Changes in exports, imports and current account balances cannot be explained in a statistically significant or economically meaningful manner by changes in RULC (see: Gabrisch and Staehr 2014; Diaz Sanchez and Varoudakis 2013; Storm and Naastepad 2015a; Schröder 2015).

Table 4
Unit Labour Costs and Gross Output Prices (mid-2000’s)

	Germany	Greece	Italy	Portugal	Spain
1. intermediate input costs per unit of output	0.67	0.68	0.74	0.73	0.73
2. unit labour costs: ULC	0.24	0.15	0.16	0.17	0.16
3. total unit variable cost: $vc = 1 + 2$	0.91	0.83	0.90	0.90	0.89
4. mark-up rate: π	0.10	0.21	0.11	0.11	0.12
5. gross output price: $(1 + \pi) * vc$	1.00	1.00	1.00	1.00	1.00
6. implied “pass-through” elasticity of a one-percentage point <i>decline</i> in ULC	0.26	0.18	0.18	0.19	0.18

Source: Storm and Naastepad (2015a, 2015b). Calculated using the OECD STAN Database input-output tables.

Notes: Gross output price is the average for the manufacturing sectors (C15T16 – C36T37). The gross output price p is defined as: $p = (1 + \tau)[W\lambda^{-1} + \alpha]$, where α is intermediate-input cost (per unit of output), W is the nominal wage rate, λ is labour productivity, and τ is the mark-up rate. $W\lambda^{-1} = \text{ULC}$. Net indirect taxes have been included in intermediate input costs. The implied “pass-through” elasticity measures the decline in the gross output price (in percentage points) caused by a one-percentage point decline in ULC. The estimates in row (6) indicate that if manufacturing ULC are reduced by 10%, output prices will fall by less than 1.8%-2.6%.

However, all this does not mean that “competitiveness” is unimportant. It is *non-price or technological competitiveness* which matters—not price or cost competitiveness. Joseph Alois Schumpeter (1943, p. 84) summarized the key point vividly:

“Economists are at long last emerging from the stage in which price competition was all they saw. (...) But in capitalist reality, as distinguished from its textbook picture, it is not that kind of competition which counts, but the competition from the new commodity, the new technology, the new source of supply, the new type of organization (...) —competition which commands a decisive cost or quality advantage and which strikes not at the margins of the profits and the outputs of the existing firms but at their foundations and their very lives.”

What matters for international competitiveness are technological (non-price) competitiveness and (high-tech) productive capabilities. That is the reason why, for instance, the *Global Competitiveness Report 2014-2015* defines competitiveness as “the set of institutions, policies and factors that determine the level of productivity of a country.” This is brought out in studies by the ECB (2005, 2010), Abaton *et al.* (2010), Felipe and Kumar (2011), Mazzucato and Perez (2014) and Storm and Naastepad (2015a, 2015b). The Mediterranean export structure (in terms of its complexity) is similar to that of China. This is where the real problem of the peripheral countries lies: their lack of competitiveness vis-à-vis Germany is not caused by the fact that their RULC are too high, their problem is that they are locked-in into lower and middle levels of technology. There are, in other words, few Mediterranean names that can rival BMW, Bosch, Mercedes, SAP, or Siemens. Reducing wages and lowering RULC is never going to solve that problem.

Mishandling #2: Cutting wages (internal devaluation) and deregulating labour markets undermines a country’s competitiveness and stall export growth; combined with fiscal austerity this policy cocktail is lethal.

In Myth #2, peripheral Europe’s crisis is interpreted as an existential struggle for survival—which resulted from an inability to absorb the external shock (caused by the Financial Crash). The Southern European economies are, in this view, not “fit”, not competitive enough—unlike “successful” Germany which is held up as a role model of competitive strength, flexibility and resilience. We have argued elsewhere in detail why this view of Germany’s recovery from the crisis is inaccurate and misleading (Storm and Naastepad 2015b) and we will not repeat the arguments here. Our focus here is on the mistreatment of the Eurozone periphery which, in line with Myth #2, is pressed to re-establish cost competitiveness. This view is nowhere expressed better than in the recent (12 February 2015) high-level policy statement by the *Informal European Council*, which includes the 12th President of the European Commission, Mr. Jean-Claude Juncker; the President of the European Council, Mr. Donald Tusk; the President of the Eurogroup & President of the Board of Governors of the European Stability Mechanism (ESM), Mr. Jeroen Dijsselbloem, and Mr. Draghi of the ECB. Their analytical note has as its title: “*Preparing for Next Steps on Better Economic Governance in the Euro Area*”. According to Juncker-Tusk-Dijsselbloem-Draghi (henceforth: JTDD), deep down the Eurozone crisis is a crisis of competitiveness, caused by structural

weaknesses and rigidities, especially in labour markets, which led to rising ULC in a number of Euro Area countries:

“...thereby reducing their competitiveness and leading to a negative balance of payments vis-à-vis other euro area countries which had kept labour unit cost stable or even lowered them. This brought about higher unemployment rates during the crisis (see **Chart 4**). In addition, the relatively favourable financing conditions in the first years of the euro led to a misallocation of sources of financing towards less productive forms of investment, such as real estate, and to a greater risk-taking and indebtedness of many private and public actors. When the crisis hit the euro area and markets reappraised the risk and growth potential of individual countries, the loss of competitiveness became visible and led to outflows of sources of finance strongly needed for investment, thereby further intensifying the impact of the crisis in these countries.”

We reproduce their **Chart 4** as panel A in our Figure 6, as it is used to make the point that lowering wages—and hence ULC—is a *conditione sine qua non* for economic recovery.

The JTDD-chart (in Panel A) suggests that higher wages (or ULC) have led to higher unemployment, or conversely that lowering wages (ULC) will help bring down unemployment in the Eurozone. The Graph is misleading however. For one, the fitted regression line, which is clearly upward sloping, is a statistical artefact, as it depends on one outlier observation, namely the one for Greece. If we leave Greece out, the line turns horizontal (*i.e.* the dashed line)—indicating no statistically significant association between ULC increases and unemployment increases whatsoever.⁶ For another, as Janssen (2015) rightly observes, JTDD compare changes in unemployment *after* the crisis with increases in ULC *before* the crisis—which makes no sense. In panel B of Figure 6, we plot changes in ULC and changes in unemployment both during 2009-2013, and the result is a statistically significant negative correlation—a declining regression line. The statistical significance of this result holds true also if Greece or any other country is left out of the estimation.⁷ Our findings in Panel B are confirmed by Figure 7 which plots changes in ULC against changes in real GDP during 2009-13—the statistically significant positive association tells us that internal devaluations are causing collapses in real GDP growth.

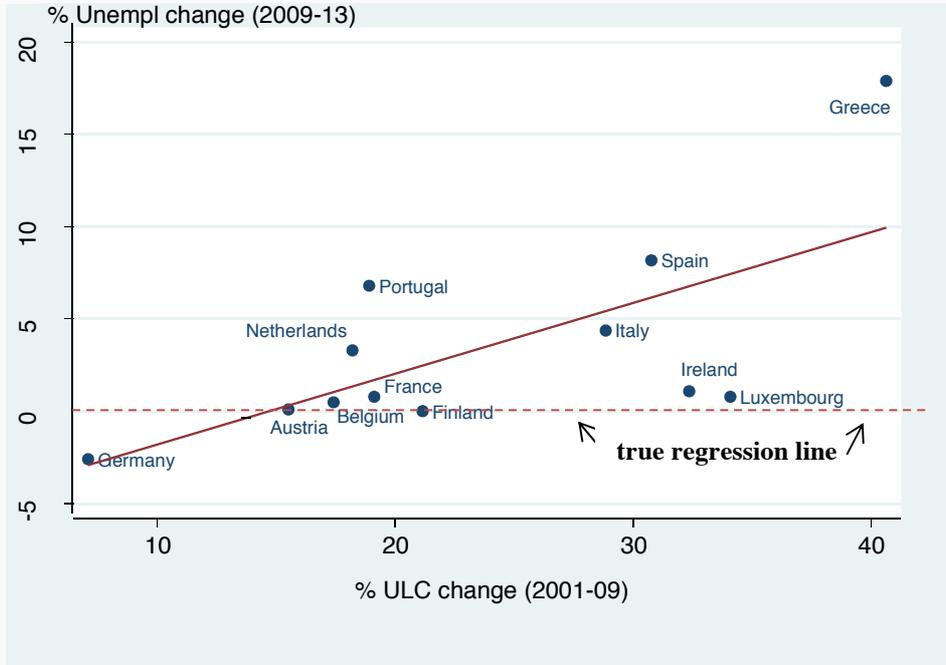
⁶ The coefficient (estimated by OLS) of % change ULC (2001-09) is 0.38 and statistically significantly different from zero (at the 10% level; t -value = 2.17). When we leave out the observation for Greece, the coefficient is 0.20 and is not statistically significantly different from zero (at 10%; t -value = 1.46).

⁷ The coefficient (estimated by OLS) of % change ULC (2009-13) is -0.64 and statistically significantly different from zero (at the 5% level; t -value = -2.75). When we leave out the observation for Greece, the coefficient is -0.37 and is statistically significantly different from zero (at 10%; t -value = -2.22).

Figure 6

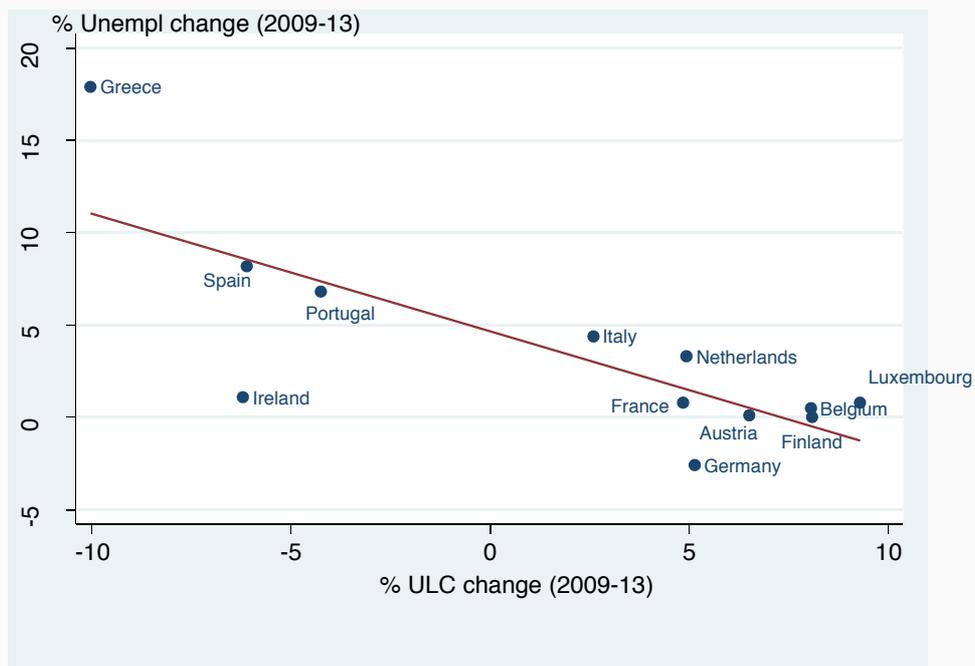
Panel A

Changes in ULC (2001-09) and in the unemployment rate (2009-13)
[reproduced from Juncker, Tusk, Dijsselbloem & Draghi (2015)]



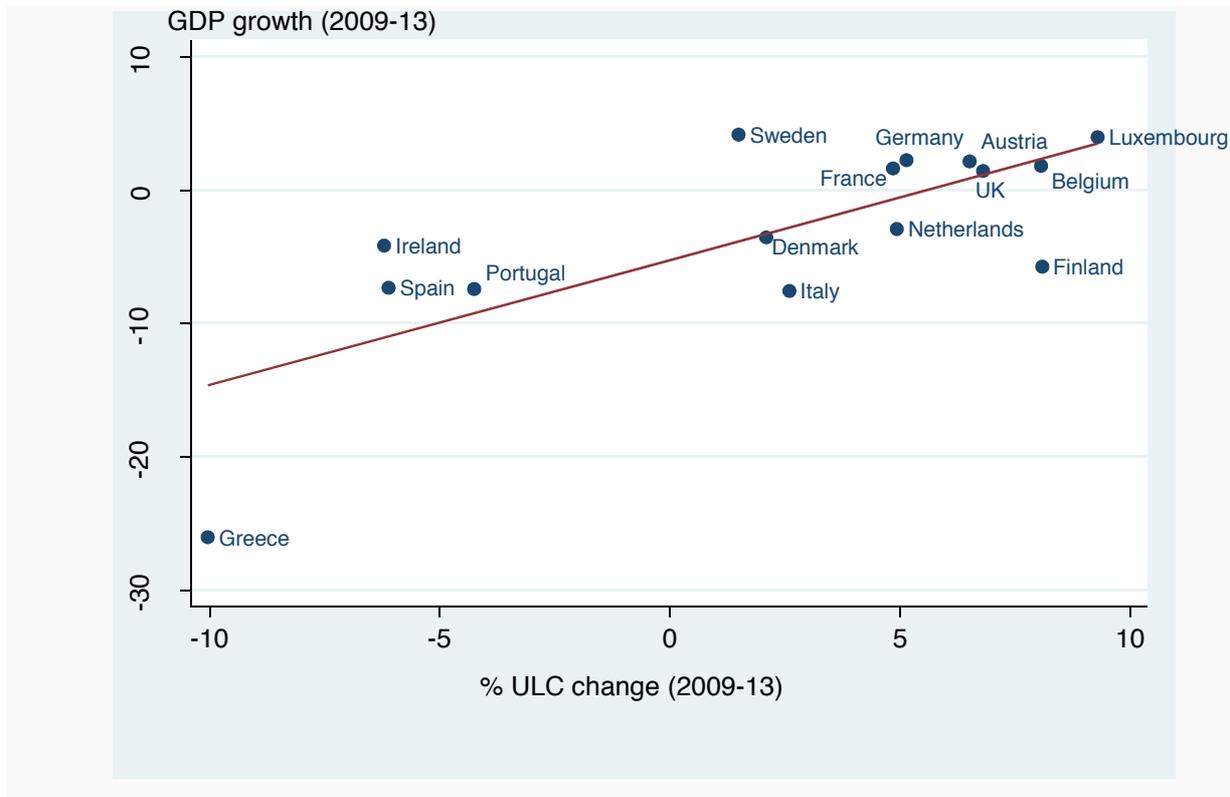
Panel B

Changes in ULC (2009-13) and in the unemployment rate (2009-13)
[reproduced from Janssen (2015)]



Source: Based on Eurostat data.

Figure 7
Post-crisis Eurozone (2009-2013):
internal devaluations are killing economic growth



Source: Authors' estimations based on Eurostat Data and OECD data on real house prices.

Note: The regression line is based on the following OLS regression:

$$\Delta \text{GDP} = -3.10 + 0.51 \Delta \text{ULC} - 17.78 \text{ Dummy for Greece}$$

$$(-3.04)^{***} \quad (3.34)^{***} \quad (-8.73)^{***} \quad R^2 = 0.80; n = 15.$$

Δ real GDP = the percentage increase in real GDP (2009-13); Δ ULC = the percentage increase in average unit labour costs (2009-13). Robust *t*-values are reported in parentheses. ***, **, * indicate statistical significance at the 1%, 5% and 10% level, respectively. The results do not depend on the observations of any individual country in the sample. The regression result for just the 12 Eurozone countries is very similar:

$$\Delta \text{GDP} = -3.69 + 0.53 \Delta \text{ULC} - 17.05 \text{ Dummy for Greece}$$

$$(-3.65)^{***} \quad (3.16)^{**} \quad (-8.69)^{***} \quad R^2 = 0.84; n = 12.$$

Panel B of Figure 6 and Figure 7 show the bleak reality: sharply declining wages in Greece, Ireland, Portugal and Spain, leading to steep declines in aggregate demand and output, and corresponding increases in unemployment (see Storm and Naastepad 2015a). It is the exact opposite of what Messrs. Juncker, Tusk, Dijsselbloem and Draghi are claiming—for some reason we are reminded of the old saying, attributed to Mark Twain, that “figures don’t lie, but liars figure.”

The main plank of the *Informal European Council’s* recovery strategy is to ingrain wage restraint into the fabric of the Eurozone by means of what are euphemistically called “modernizing structural reforms” in the cash-strapped economies, but what in practice are the deregulation of labour markets and the downsizing of welfare states—all as the price to pay for ECB rescue loans. Such “modernizing reforms” are supposed to create a more competitive and flexible system for firms by removing regulatory barriers and institutional “rigidities” by curbing union wage-bargaining power, reducing workers’ sense of entitlement to job security and welfare, and increasing labour mobility. What is, paradoxically perhaps, not understood is that, as Robert Solow (1998) once remarked, every one of these regulations was intended to promote a desirable social purpose—often as a “second-best” response to a “market failure” (Agell 1999, 2002). For example, working time regulations and minimum wages must be seen as responses to coordination failures among employers (Lee and McCann 2011) and employment protection legislation is helping to share employment and income risks between workers and firms (Agell 1999). In the absence of such regulations, the resulting levels of labour inputs and labour productivity are suboptimal (Pissarides 2010). Moreover, in more flexible labour markets, firms will invest less in workers’ firm-specific human capital and this hurts productivity as well (Lee and McCann 2011; Kleinknecht *et al.* 2013). Labour market deregulation may affect productivity through its impact on worker motivation and effort, as it erodes social capital and trust in the labour relation (Storm and Naastepad 2012). Likewise, lower wages and more flexible labour slow down the process of capital deepening, enable inefficient firms to stay in the market and discourage structural change. Finally, lower wage and demand growth reduce the pace at which older vintages of capital stock are being scrapped and new equipment, embodying the latest more productive technologies, is being installed. Taken together, lower wage growth gets reflected in lower labour productivity growth and weaker export performance (for reviews of the evidence, see Storm and Naastepad 2012; Kleinknecht, Naastepad, Storm & Vergeer 2013). Space prevents us from going into greater detail, but our main point is that it is impossible to see how Europe thinks it can reduce the large gaps in labour productivity and technological capabilities between the

Eurozone core and periphery by cutting wages and breaking down “productivist” social overhead structures (Storm and Naastepad 2015c).

This brings us to the real problem of the Eurozone: the widening differentials in labour productivity and technological capabilities between members of the Eurozone. Productive asymmetries have increased within the Eurozone after monetary union. In the pre-crisis years, Germany managed to strengthen its production structure, but the Eurozone periphery lost ground—both their manufacturing activities and export bases became relatively more narrow and technologically stagnant. This has been widely documented (Janger *et al.* 2011; Simonazzi, Ginzburg and Nocella 2013; Botta 2014)—and we use Table 5 to illustrate this structural divergence. Table 5 shows how Eurozone manufacturing production structures changed during 1999 and 2007—relative to Germany’s productive base which became more high- & medium-tech intensive (see Storm and Naastepad 2015b for an analysis of the German case). The value added share of high- & medium-tech manufacturing in Germany was already the highest in the Eurozone in 1999 (being equal to 24.9%) and it increased by 2.4 percentage points during 1999-2007. While most EU countries failed to keep up with Germany’s pace of technological upgrading (meaning there was relative divergence), the value added share of high- & medium-tech manufacturing did register an absolute decline in France (by 3.7 percentage points), Italy (by 1.4 percentage points), Portugal (by 1.7 percentage points) and Spain (by 3.6 percentage points)—which implies *absolute divergence*. At the same time, the value-added share of low-tech manufacturing in Germany was about 2.8 percentage points lower than the EU average in 1999; it was also far lower than that of Greece, Italy, and Portugal—and the difference grew wider between 1999 and 2007. The share of the low-tech sector in GDP was 3.6 percentage points higher in Greece than in Germany in 2007, 4.3 percentage points higher in Italy, and 6.7 percentage points higher in Portugal. These numbers point to divergence, big time—and this conclusion is reinforced when we include the construction sector. While the value-added share of (non-traded) construction came down in Germany from 5.5% in 1999 to 4% in 2007, it increased in France (from 5.1% to 6.3%), Italy (from 5% to 6.2%) and especially Spain (from 7.9% to 12% of GDP). Using a variety of structural indicators for the period 1999-2007, ranging from capital intensity, skill intensity and innovation intensity of sectoral output, Janger *et al.* (2011) obtain a consistent pattern of Germany leaping further ahead and the periphery falling behind ever more. We must note here that Germany’s manufacturing (export) strength, as we argue elsewhere (Storm and Naastepad 2015b), is based on a highly co-ordinated and regulated “model” based on close links and effective “checks & balances” between (often high-tech)

firms, skilled workers (through workers' councils), and committed banks—and not on a system relying on cheap, flexible labour and uncommitted finance as being proposed for Europe's periphery. JDTT who are weighing almost exclusively on cutting ULC, will only be slowing down the rate of labour-saving technological progress and stifling initiatives to diversify and technologically upgrade exports—thus locking the Southern Eurozone into low-wage, relatively non-dynamic export specialization patterns and tourism (as employment option of last resort). The structural imbalances within the Eurozone can only be reduced if the peripheral countries succeed in catching up with German productivity and technological potential (Mazzucato 2012; Mazzucato and Perez 2014). Through its single-minded emphasis on wages and unit labour cost, JDTT will be achieving the exact opposite.

Table 5
Value added share (relative to Germany's), 1999 and 2007
 (percentage differences)

	Manufacturing and market services:						Construction	
	High & Medium-high technology		Medium-technology		Medium-low & low technology			
	1999	2007	1999	2007	1999	2007	1999	2007
France	-3.5	-9.6	-0.5	0.4	1.2	1.3	-0.4	2.3
Greece	-12.9	-14.9	-8.6	-8.3	3.5	3.6	1.6	2.5
Italy	-4.0	-7.8	-2.2	-1.8	4.0	4.3	-0.5	2.1
Portugal	-7.1	-11.2	-2.1	-0.7	5.9	6.7	1.9	2.8
Spain	-5.4	-11.4	-4.9	-3.4	2.4	0.9	2.4	7.9
EU25	-3.2	-5.7	-1.3	-0.1	2.8	2.7	0.1	2.4
<i>memo:</i>								
Germany	24.9	27.3	21.4	21.0	19.9	19.0	5.5	4.0

Source: Data are from OECD STAN Database. See Storm and Naastepad (2015c).

How should one then think about the Eurozone crisis?

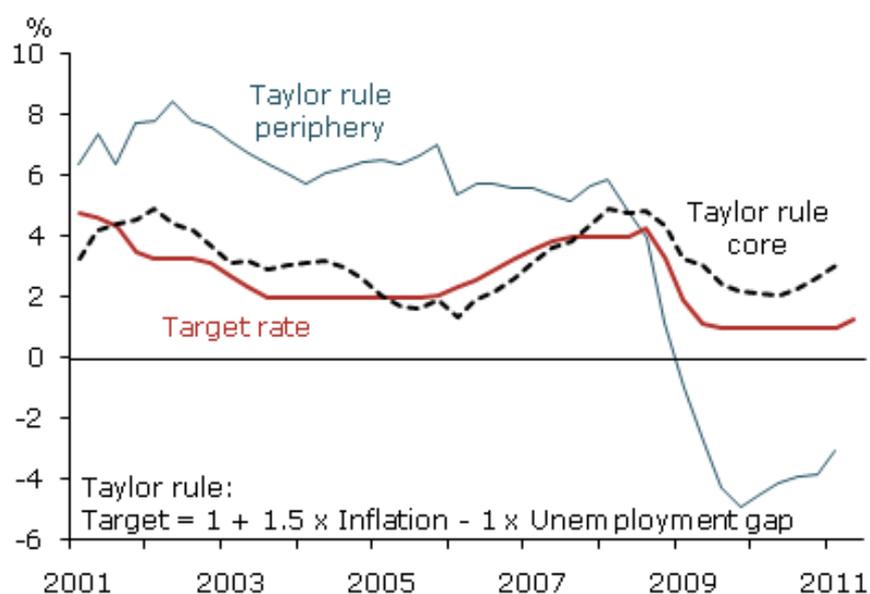
The real cause of the Eurozone crisis is actually quite prosaic: during the first eight years of EMU, massive capital and credit flows, originating from the stagnating Eurozone core (Germany), have been feeding into asset-price bubbles and debt-based spending booms in the periphery, which in turn raised peripheral demand, also for imports, lowered unemployment and pushed up wages and inflation. Econometric evidence strongly indicates that current account deficits in Europe's periphery increased *first*, while their RULC started to increase

only later (Gabrisch and Staehr 2014; Gaulier & Vicard 2012). Hence, Eurozone imbalances arose *as a result of* strong domestic demand growth in the periphery, spurred by a domestic credit boom made possible by European financial integration which removed the obstacles discouraging the flow of private debt from the core to the periphery (Chen *et al.* 2012; Lane and McQuade 2013; Diaz Sanchez and Varoudakis 2013). Cross-border financial flows increased far more than cross-border trade in goods and services, especially during 2003-2007 when there was a striking increase in debt (not equity) flows from Eurozone core banks to the periphery (Waysand, Ross and de Guzman 2010; Lane and McQuade 2013). Hence, unsustainable current account imbalances, in our explanation, were driven by changes in the capital account—as higher debt-financed domestic demand spilled over into higher imports.

The prime factor underlying the credit boom in the periphery were the unusually low long-term interest rates prevailing in the early 2000s (Lane 2012). The ECB decided to lower the interest rate in response to the low inflation and the absence of any inflation threat (given the lackluster growth and high long-term unemployment) in the Eurozone core—and specifically in Germany. Evidence for this appears in Figure 8, which compares policy rates, which were mechanically derived from the Taylor rule for the Eurozone core countries, on the one hand, and, for the periphery on the other hand, with the actual target interest rates set by the ECB (during 2001-2011). It can be seen that the actual ECB interest rate closely tracked the interest rate derived from the Taylor rule for the core—which means macro conditions in the core carried the greatest weight in ECB policy decisions. It is also clear that during 2001-08, the ECB “one-size-fits-all” target rate lay well *below* the level recommended by the Taylor rule for the peripheral countries—which indicates that interest rate policy was out of sync with economic conditions in Southern Europe.⁸

⁸ We do not support the Taylor rule nor want to suggest here that ECB monetary policy should have been more restrictive.

Figure 8
ECB Monetary Policy Rule: Periphery versus Core
 (Quarterly data)



Source: Nechio (2011).

Note: Core countries include Austria, Belgium, France, Finland, Germany and the Netherlands. Peripheral countries include Greece, Ireland, Portugal and Spain.

Table 6
Eurozone: Real Interest Rates and Domestic Demand Growth
 (1992-99 and 2000-2007)

	average real interest rate		average annual rate of domestic demand growth	
	1992-1999	2000-07	1992-1999	2000-07
France	5.14	2.31	1.71	2.16
Germany	4.11	3.44	1.32	0.38
Greece	5.85	1.44	2.63	4.45
Italy	5.36	2.07	1.11	1.36
Portugal	3.55	1.42	3.57	0.96
Spain	4.43	0.41	2.72	4.28
Eurozone	n.a.	1.97	2.56	1.82

Source: Authors' calculations based on AMECO Database. Storm and Naastepad (2015c).

The unified nominal interest rate implied below-average real interest rates in the Eurozone periphery where both growth and inflation were higher—particularly so after country-specific risk premiums had fallen to historically very low levels. This is shown in Table 6. While real interest rates in France, Greece, Italy and Spain were higher than that of Germany in the 1990s, they fell—often far—below Germany’s real interest rate after monetary unification. The Spanish real interest rate during 2000-07 was a historically low 0.4%, while Greece and Portugal had an unusually low average real rate of interest of around 1.4% over the same period. Markets apparently did not expect substantial default risk as bonds of Euro area debtor countries became close substitutes to German Bunds—and definitely they did not expect a fiscal crisis of the scale that would threaten the Euro system as a whole (Temin and Vines 2014). What banks and investors (in the core) actually did, was to develop a false sense of security—even euphoria—about lending to peripheral economies. In any case, with their home market stagnating, there was a “German credit glut”, as internationalizing German banks were all too eager to lend and/or invest abroad (Atoyan, Jaeger and Smith 2012), as BIS data show, whether in U.S. or Spanish mortgage bonds, in interbank lending or sovereign bonds in the euro area (Ma and McCauley 2013). Debt and asset-price booms (which were driving growth in the periphery) could, of course, not last forever—and the end this time came in 2008/2009, after the governments of Greece, Ireland, Portugal, and Spain had socialized mountains of private-sector debt, only to find themselves punished by what Ronald Janssen (2015) aptly calls a “financial sector strike”. The rest is history.

The cheap credit was indeed misallocated, as JTDD (2015) claim, towards real estate and other non-traded, low-tech activities, but JTDD are mistaken when they blame this on “significant nominal and real rigidities”, especially in labour markets. The “misallocation” was the result of impeccable capitalist logic—as capital was allocated to those activities with the highest private returns. We document this process in Table 7 which presents evidence on the composition of aggregate fixed investment in Germany, Italy and Spain in the 1990s and early 2000s as well as the industry-wise (*ex-post*) rates of return on capital for six broad sectors during the 1990s and 2000-07 (see Storm and Naastepad 2015c). What the numbers show is that, in all three economies, average rates of return on manufacturing are generally lower than in construction—but in Germany the gap in returns earned in these sectors narrowed down from 21.9% in the 1990s to 6.9% during 2000-07, whereas in Spain it more than doubled from 10.2% to 21.2%. These trends explain why construction investment (as a share of GDP) came down in Germany, while it went up in Spain. Moreover, returns to

investment were generally low in (stagnating) Germany across all activities, and this constituted a major push factor driving private capital flows to southern Europe, where returns were much higher.⁹ Spain's construction and tourism sectors offered by far the highest returns on capital in the Eurozone—hence it is little wonder that German and French banks were lining up to offer credit to Spanish project developers and tourism businesses. This was a profoundly disturbing trend, because these investment did amount to nothing whatsoever when it came to building up productive capacity and technological capabilities. This way, these massive capital flows within the monetary union reinforced existing structural differences in productive capabilities and export specialization between Europe's core and periphery, as has been extensively documented (Janger *et al.* 2011; Simonazzi, Ginzburg and Nocella 2013; Botta 2014; Storm and Naastepad 2015c). The Eurozone periphery lost ground—both their manufacturing activities and export bases became relatively more narrow and technologically stagnant. This is Europe's real competitiveness problem. And now that debtor-countries are forced to deregulate and cut wages, they get trapped in low-wage low-productivity activities with an export specialization that overlaps with even-more-low-wage China.¹⁰

Monetary and financial integration has thus been driving European economies and nations apart—and propelled by these centrifugal forces, the old debate about a political (and fiscal) union, which has been kept on the back burner ever since the Maastricht Treaty of 1992, is back. Many observers see it as perhaps the only way to hold the Eurozone together. But in our opinion, as long as European integration remains (financial) market-led, even a fiscal union will be too weak a mechanism to counter the structural centrifugal forces which are entrenching a two-tier Europe with two classes of members, as both Ulrich Beck (2013) and George Soros (2014) fear, with the “second-class” members structurally dependent upon transfers from the “first-class” members. The centre cannot hold.

⁹ Atoyan, Jaeger and Smith (2012) conclude that push factors (low returns in the core), rather than pull factors (high returns in the destination countries) drove most of the capital flows coming from the Eurozone core.

¹⁰ Indeed, ECB economists Benkovskis *et al.* (2013) find that competitive pressure from China is strongest and growing for the Southern periphery, Ireland and Central, Eastern and Southeastern European EU members. German firms, on the other hand, do not get pushed out of their export markets by Chinese newcomers.

Table 7
Real Gross Fixed Capital Formation and Rates of Return on Capital:
Germany, Italy and Spain
(1992-99 versus 2000-2007)

Real Gross Fixed Capital Formation (% of GDP):						
	Germany		Italy		Spain	
	1992-99	2000-07	1992-99	2000-07	1992-99	2000-07
Machinery and Equipment	10.1	13.2	10.7	15.2	8.7	13.8
<i>of which: ICT capital</i>	3.1	6.3	2.2	5.3	2.7	6.0
Construction	14.3	11.0	11.1	11.3	15.7	18.5
<i>of which: residential</i>	8.1	6.3	5.2	4.9	6.3	8.9
non-residential	6.2	4.6	5.9	6.4	9.4	9.6
Total fixed investment	24.5	24.2	21.9	26.5	24.4	32.3
Industry-specific Rates of Return on Capital (%):						
	Germany		Italy		Spain	
	1992-99	2000-07	1992-99	2000-07	1992-99	2000-07
Total manufacturing	6.9	11.0	7.5	6.0	13.5	13.0
Construction	28.8	17.9	22.2	18.4	23.7	34.2
Wholesale and retail trade	9.6	10.6	21.6	12.3	16.7	15.5
Hotels and restaurants	-17.0	-6.0	7.6	9.1	25.2	31.9
Transport, storage & communications	2.8	5.5	3.8	6.3	10.4	9.4
Finance, insurance and real estate	7.7	6.2	8.3	8.8	6.8	10.5

Source: Authors' calculations from EU-KLEMS Database. See Storm and Naastepad (2015c).

Breaking the deep slumber of decided opinion on the Eurozone crisis

Our conclusions can be relatively brief:

1. It is “an indisputable fact” that excessive state spending and unsustainable public debts did not cause the Eurozone crisis. Sovereign debt build-up was dwarfed by the accumulation of private-sector debts (especially household debts and financial-sector debts, see *Tables 2 and 3*), which fuelled and were made possible by unsustainable asset-price booms (see *Figures 2 and 3*). Fiscal austerity is the wrong medicine for the wrong disease, bringing only pain (first)—and no gain (later).
2. The rise in (relative) unit labour costs did not lead to the higher current account deficits in the Eurozone periphery. International competitiveness is not about wage costs, but about technology and innovation. Given a country's technological capabilities as reflected by its productive structure, export growth and import growth are overwhelmingly determined, not by unit labour costs, but by (foreign and domestic) demand. Attempts to improve

“competitiveness” by wage cuts and labour market deregulation can only backfire (see Figure 4, panel B)—no country has managed to climb up the technological ladder (upgrading exports and strengthening *non-price* competitiveness) based on low wages and footloose, fractured and flexible workers. Messrs. Juncker, Tusk, Dijsselbloem and Draghi (JTDD) are not just barking up the wrong tree, but their *Next Steps* constitute a sure-fire recipe for further *divergence*, not convergence within the zone (again, see Figure 4, panel B).

3. The only sensible way to think about the Eurozone crisis is in terms of a private-sector debt crisis, aided and abetted by the liberalization of (integrating) European financial markets and a “global banking glut”. With this understanding, we can start thinking about more effective, efficient and just ways to bring about economic recovery in the Eurozone. Without doubt, such a recovery package must include a coordinated demand stimulus, a directing of credit towards productive investments and “smart” innovation (also through a “socialization of investments” à la Keynes), a bailing out of cash-strapped and insolvent governments (by the ECB), and “mission-oriented” industrial policies to restructure and upgrade peripheral manufacturing (Mazzucato and Perez 2014). This requires, at the EU level, coordination of economic decision-making, or what Beck (2013) calls a “new social contract for Europe”—not the beggar-thy-neighbour competition propagated by JTDD or the “eat your peas” solution of Mr. Schäuble.

4. Needless to say, none of these proposals is being seriously entertained by Eurozone leadership, as the *Informal European Council*, as long as it dwells in Mill’s “deep slumber of a decided opinion.” (*On Liberty*, p. 95). This unwillingness to tackle the true causes of the crisis is not without risk, since the strains of on-going divergence within the zone cannot be endured endlessly politically.

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