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Over-indebted Youth: Unemployment and Deleveraging in the Euro Zone*

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Our Youth: Conflict or Prosperity?, Maastricht, The Netherlands, 4 September 2012

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by

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Abstract:
This paper looks at the Euro-zone crisis from the point of view of the Euro-zone youth. Young people in many Euro-zone countries are today confronted with high and persistent unemployment with potentially long-lasting "scarring effects" compromising their present and future well-being. While lower and sustainable public debts are desirable from the point of view of inter-generational justice, it is argued that this objective cannot be achieved by means of front-loaded austerity policies. With long-term negative consequences of short-term austerity it is shown that not only social consideration but also the underlying public debt dynamics in the presence of scarring and other hysteresis effects make a strong case for a gradual growth-oriented approach to deleveraging that carefully aims at balancing short- and long-term costs and benefits while protecting vulnerable young people.

JEL Classifications: E6, F4, H63, J4

Keywords: Youth unemployment, scarring effects, hysteresis, debt deleveraging, European Monetary Union, financial crisis.

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1. Introduction

This paper looks at the Euro-zone crisis from the point of view of the Euro-zone youth. Young people in many Euro-zone countries are today confronted with three dramatic challenges that threaten their present and future well-being.

First, the youth is hit disproportionately hard by the economic crisis. In many countries of the Euro zone the recessionary impact has even been threefold: (1) by the great recession starting in 2008 where the negative impacts could at least partly been smoothed out by fiscal and monetary stimuli, (2) by the subsequent debt and economic crisis in several Euro-zone countries, and (3) by the still-ongoing threat of a break-up of the Euro zone with the potential of further deepening an already deep crisis. Today youth unemployment rates in Europe are 2.5 time higher than overall unemployment rates with peaks in problem countries like Spain where youth unemployment stands above 50%.

Second, the current youth unemployment can lead to persisting long-run effects on the labor market chances and life opportunities of young people in the Euro zone. Without a soon and strong recovery, according to the OECD Employment Outlook 2012 "… a significant and growing proportion of youth, even among those who would have found jobs in good times, are at risk of prolonged unemployment or inactivity, with potentially long-term negative consequences for their careers, or so-called 'scarring effects'. These risks include long-term difficulty finding employment and persistent pay differentials with their peers." (OECD 2012a).

Third, the youth in many countries of the Euro zone is now being burdened with excessive public debts which they will have to repay with their taxes in the future and which at the same time strongly limit the possibilities of many Euro-zone countries to finance education, employment initiatives and growth-enhancing public investments which are often complementary to private investments.

If proponents of an "expansionary contraction" would have been right, a credible fiscal austerity would have restored the confidence of financial market and private agents in the over-indebted economies, thus allowing interest rates to fall quickly and the recovery setting in soon. Unemployment would have been temporary, scarring effect would be limited and public debt levels would have been reduced fast. Unfortunately, four year after the start of the great recession and two years after the Greek debacle that started the Euro-zone crises to it now clear, that the austerity policy and the hopes for an "expansionary contraction" did not materialize. Youth unemployment is higher than ever, long-lasting with a dramatic potential of scarring effects, and public and private debts are higher than before. Deleveraging has not even begun.

In this paper, I will review the most recent evidence on the impact of the threefold crisis on youth unemployment and the involved short- and long run costs (section 2). I will then show that exactly these long term cost of a not-well engineered and front-loaded austerity policy will contribute to a self-defeating deleveraging process (section 3). Section 4 concludes with a plea in favor of a deleveraging process that carefully balances short- and long-term costs and benefits.

2. Unemployed and Scarred Youth in the Euro Zone

2.1. Youth Unemployment after the Great Recession: Structural or Cyclical?

Youth unemployment increased drastically in problem debtor countries after 2007 albeit with differing intensities across countries (see Table 1 and Figure 1), regardless whether we measure the unemployment rate in per cent of labor force (which is the standard measure) or in percent of population as proposed by Hill (2012) as a more meaningful measure when young people move out of the labor force into education or vocational training (thus reducing the numerator and "inflating" unemployment ratios, as argued by Hill)[1]. Table 1 also reveals dramatic differences in youth employment levels and employment systems across the Euro zone with Greece and Italy showing the lowest employment-to-population and labor force participation ratios while the Netherlands being in both categories at the top. Moreover, while some, though not much convergence has been taking place in the Euro zone before the crisis, involving young people in the employment system is now even more divergent than in 2000.

While the magnitude of youth unemployment relative to overall unemployment differs across countries reflecting the differing labor market conditions (see Figure 2), a first inspection seems to point to the conclusion that structural conditions are mainly affecting the *level* of youth unemployment while the *trend* is predominantly, though not entirely driven my macroeconomic factors (see e.g. Chowdhury 2012). The figures 3 and 4 give a first impression for impact of GDP growth from the great recession to date (2007-2011) on the change in overall and youth unemployment rates. The graphs are drawn in the spirit of Okun's Law, i.e. they show the percentage reaction (or elasticity) of the unemployment rate with respect to output growth. As expected, the negative impact of the recession is strong and most pronounced for youth unemployment rates, pointing to the fact that labor protection for young people is less restrictive with a lot of temporary labor contracts in place. Nevertheless, the correlations are less than perfect and Spain stands out with an overly strong negatively reacting labor market, pointing to specific structural features of the Spanish labor market.

[1] The criticism by Hill (2012) does eventually apply to Greece and Portugal where labor market participation fell drastically but to a much lesser extent to Spain.

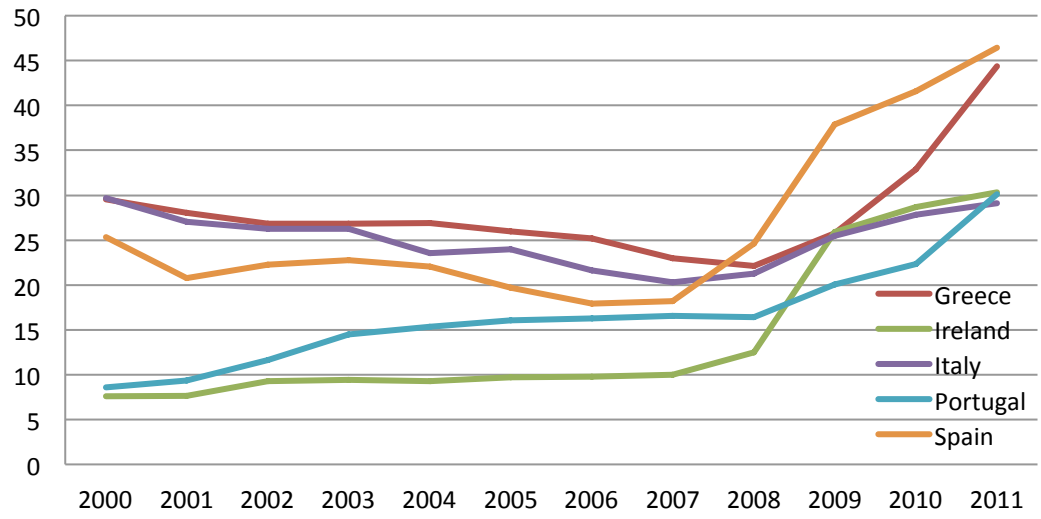
[2] In an interview with La Republica on 16 June, 2010, ECB President Trichet states: "As regards the economy, the idea that austerity measures could trigger stagnation is incorrect… In fact, in these circumstances,

Table 1: Youth (15-24 years) Employment, Labor Force Participation and Unemployment is Selected Countries of the Euro Zone in 2000, 2007, and 2011

	Employment-Population Ratio			Labor Force Participation Rate			Unemployment rate			Unemployed/Population Ratio		
	2000	2007	2011	2000	2007	2011	2000	2007	2011	2000	2007	2011
Austria	52,8	55,5	54,9	55,7	60,8	59,9	5,1	8,7	8,3	2,8	5,3	5,0
Belgium	30,3	27,5	26,0	35,7	33,9	32,0	15,2	18,8	18,7	5,4	6,4	6,0
Finland	42,9	46,4	42,3	53,8	55,0	52,2	20,3	15,7	18,9	10,9	8,7	9,9
France	28,3	31,0	29,9	35,6	38,4	38,4	20,6	19,1	22,1	7,4	7,3	8,5
Germany	47,2	45,9	48,2	51,5	52,0	52,7	8,4	11,7	8,5	4,3	6,1	4,5
Greece	26,9	24,0	16,3	38,1	31,1	29,2	29,5	22,9	44,4	11,3	7,1	13,0
Ireland	49,4	49,8	28,1	53,4	55,4	40,4	7,6	10,0	30,3	4,1	5,5	12,2
Italy	27,8	24,7	19,4	39,5	30,9	27,4	29,7	20,3	29,1	11,7	6,3	8,0
Netherlands	66,5	65,5	63,6	70,8	70,4	68,9	6,1	7,0	7,7	4,3	5,0	5,3
Portugal	41,8	34,9	27,1	45,7	41,9	38,8	8,6	16,6	30,1	3,9	6,9	11,7
Spain	36,3	42,9	24,1	48,5	52,4	45,0	25,3	18,2	46,4	12,3	9,5	20,9

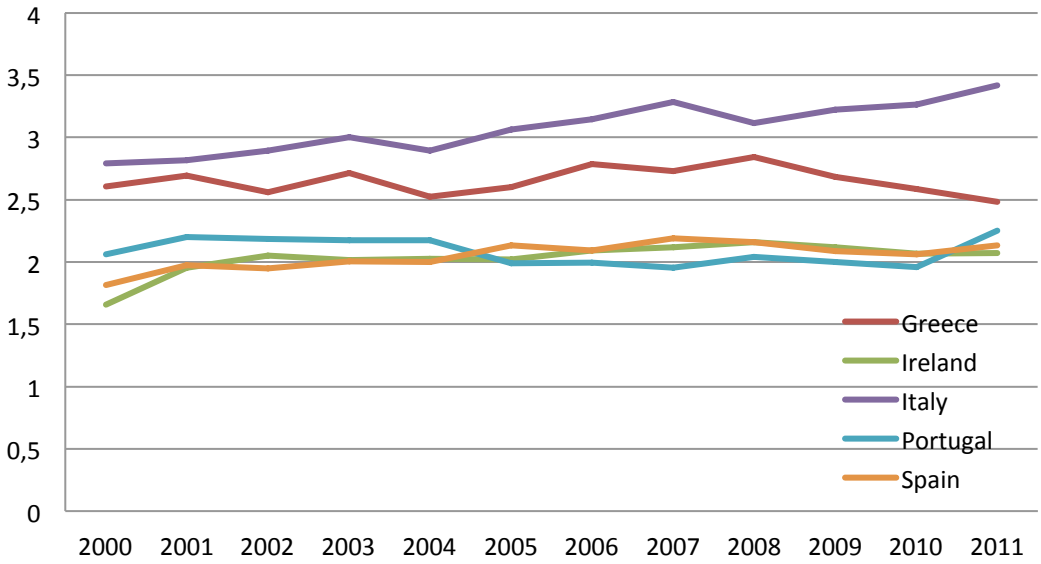
Source: OECD. Stat and own calculations . Data extracted on 27 Aug 2012 09:51 UTC (GMT) from OECD.Stat.

Figure 1: Youth Unemployment Rate (15-24 years) in Selected Euro-Zone Countries (in % of labor force)



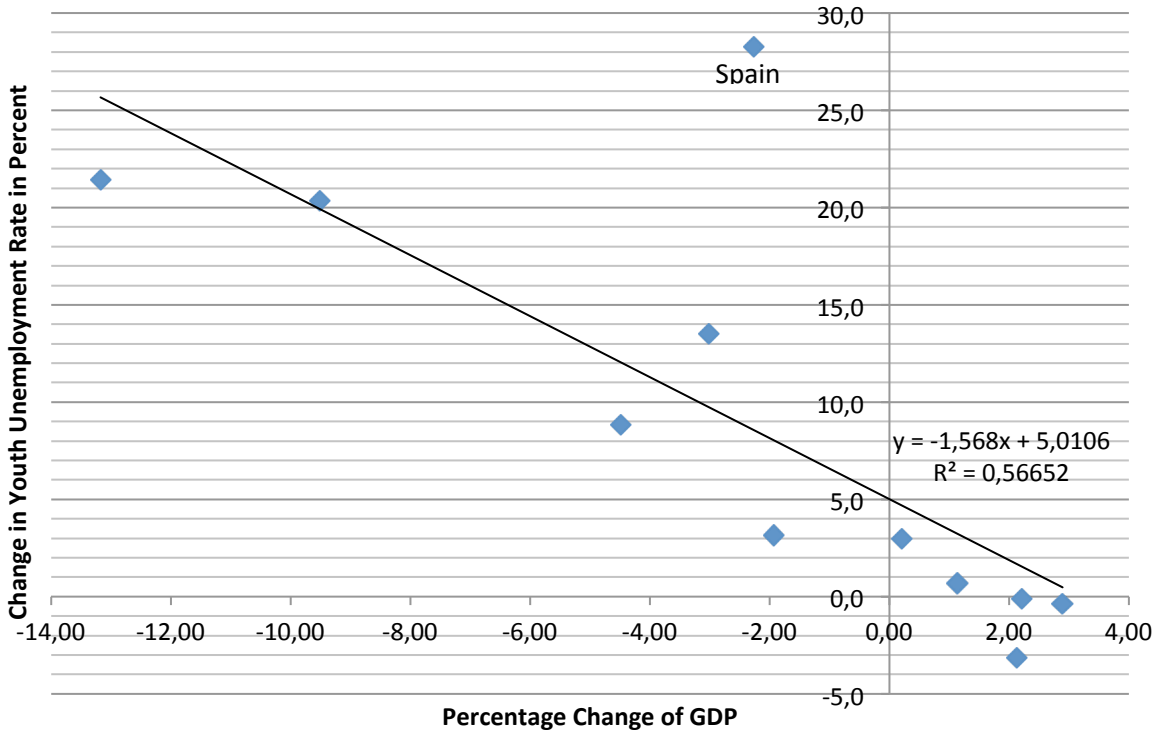
Data Source: OECD.Stat, Data extracted on 27 Aug 2012 10:43 UTC

Figure 2: Youth Unemployment Rate (15-24 years) Relative to Overall Unemployment Rate (15-64 years) in Selected Euro-Zone Countries



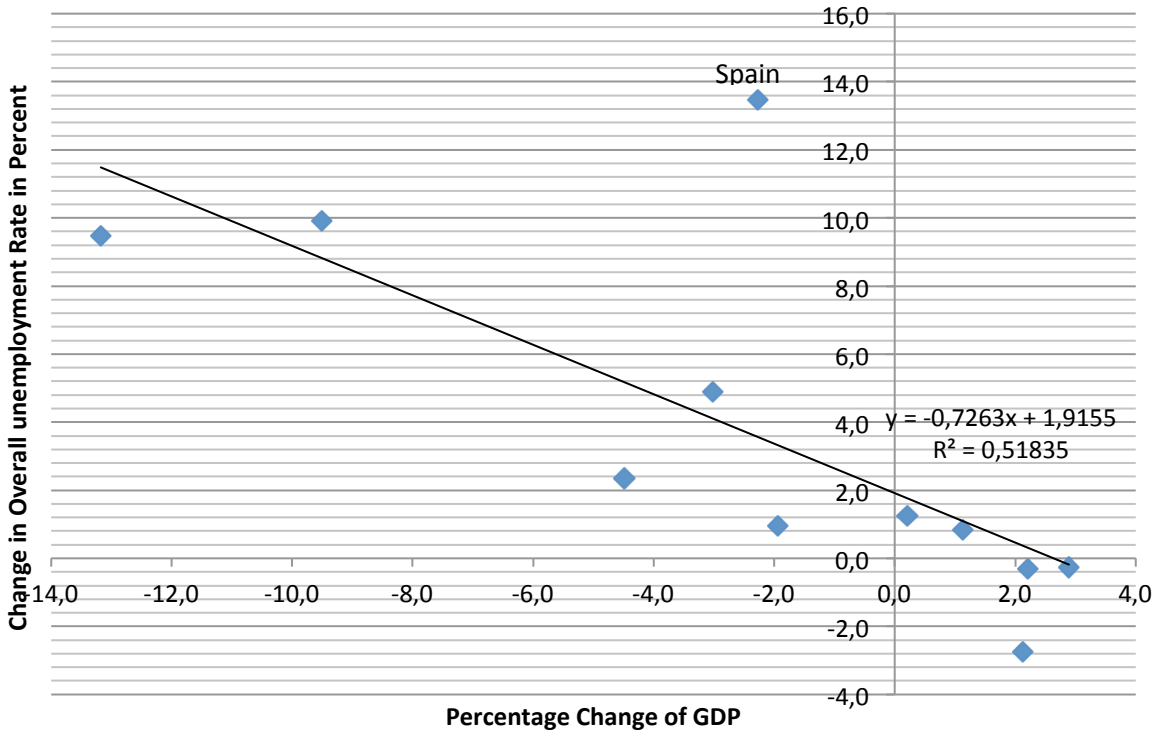
Data Source: Own calculation based on OECD.Stat data

Figure 3: Change of Youth Unemployment Rate (15-24 Years) and Percentage Change of GDP from 2007 to 2011



Data Source: OECD.Stat data

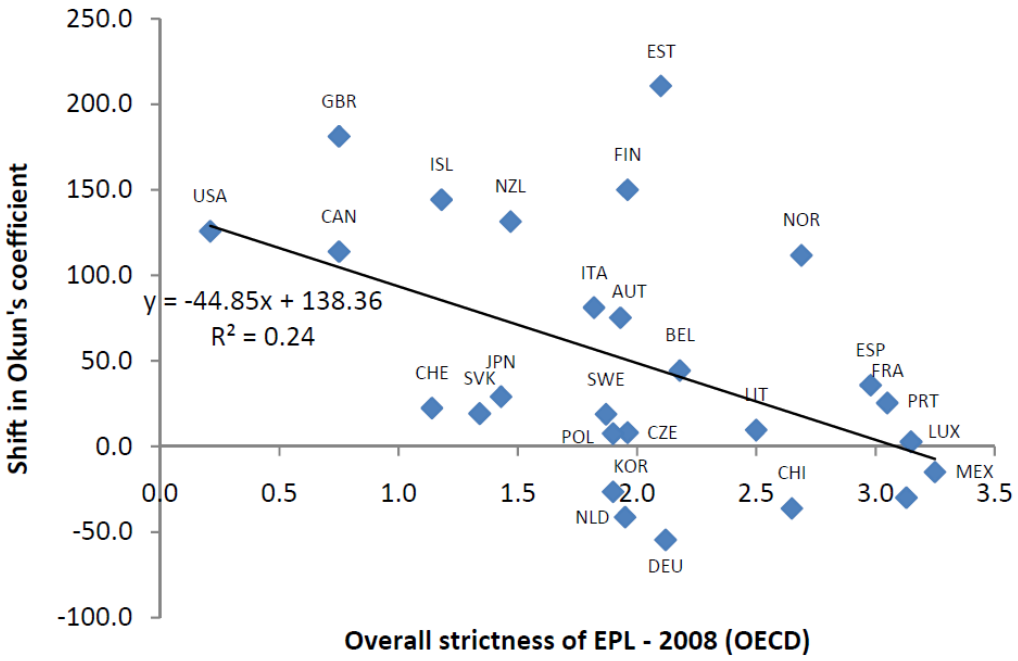
Figure 4: Change of Overall Unemployment Rate (15-64 Years) and Percentage Change of GDP from 2007 to 2011



Data Source: OECD.Stat data

Of course these figures are just illustration on a largely descriptive level with just one crisis period of investigation. To disentangle structural and cyclical effects for the great recession Cazes et al. (2011) provide more sophisticated long-run rolling regression of Okun-coefficients for overall unemployment rates. Their major results show that overall unemployment rates responded different in the great recession to economic growth than in previous periods, although with very different pattern across countries. In particular, in some countries Okun-coefficients increased sharply (USA, UK, Spain) while in some others (in particular Germany and the Netherlands) Okun-coefficients fell drastically, meaning that the recession had a much lower impact on the labor market the earlier. This suggests that (1) labor market institutions matter greatly; and that (2) direct policy response to the crisis matter, too. In particular, Germany's short term work schemes allowed (and financed) the reduction of working hours instead of dismissing workers has been considered to be very successful in both, keeping unemployment rates in check and stabilizing domestic demand and thus the economy. Moreover, and contrary to conventional wisdom, it is shown that more liberal labor markets are not a beacon to reduce the impact of recessions on employment. In fact, Cazes et al. (2011) show that stricter employment protection legislation has been helpful to mitigate the impact of the great recession on the unemployment rates as shown in Figure 5 which is reproduced from their paper.

Figure 5: Relationship Between Employment Protection Legislation (EPL) and Shift in Okun's Coefficient During the Global Financial Crisis 2007-2010



Source: OECD statistics, authors' calculations.

Notes: Shift = the percentage change in the estimated Okun's coefficient between the peak of GDP to the subsequent trough. Outliers where the shift was greater than 250% or less than -250% were removed (this represented three observations). Country codes: AUT=Austria; BEL=Belgium; CAN=Canada; CHI=Chile; CZE=Czech Republic; EST=Estonia; FIN=Finland; FRA=France; DEU=Germany; ISL=Iceland; ITA=Italy; JPN=Japan; KOR=Korea; LIT=Lithuania; LUX=Luxembourg; MEX=Mexico; NLD=Netherlands; NZL=New Zealand; NOR=Norway; POL=Poland; PRT=Portugal; SVK=Slovak Republic; ESP=Spain; SWE=Sweden; CHE=Switzerland; GBR=United Kingdom; USA=United States.

Source: Reproduced from Cazes et al. 2012, p. 12

With respect to the impact financial crises on youth unemployment rate Choudhry et al. (2010) find that previous financial crises had an impact on youth unemployment that exceeded the impact that could be expected from GDP changes. Moreover, the impact of financial crises on youth unemployment exceeds the impact on overall unemployment. And – most worrying – financial crises seem to affect youth unemployment rates for five years after the start of crises with the most adverse effects in the second and third year after the financial crisis. The sharp impact of financial crises on unemployment and in particular youth unemployment is also documented by Bernal-Verduga et al. (2012). These authors link, however, the short and longer-terms effect to the degree of labor market flexibility and conclude that "…in countries with more flexible labor markets, the impact of financial crises is sharper but short-lived. Conversely, in countries with more rigid labor markets, the effect of financial crises appears to be initially more subdued, but highly persistent. The effects are more pronounced for youth unemployment in the short term, perhaps underscoring their higher vulnerability as well as declining labor market participation in the medium term." (Bernal-Verduga et al. 2012: 18).

O'Higgins (2012) also focuses especially on the youth labor market but looks more deeply into youth employment rates rather than unemployment rates. Moreover, and unlike to Choudhry et al. (2010) he includes the great recession. In contrast to Bernal-Verduga et al. (2012) who use a large panel of 97 developed and developing countries he focuses on European countries. O'Higgins (2012) finds that the reactiveness of youth employment to GDP developments has risen strongly after 2007, thus young people were and are hit particularly hard be the great recession. He attributes the cross-country differences in the reaction to the recession to the responsiveness of youth unemployment to adult unemployment, which – according to the author – are rooted in different institutional structures of the youth labor market, in particular in the "relative ease with which temporary contracts allow adjustment at the margin through hiring and firing young workers". Again, it is in this respect that more labor market flexibility is not a simple recipe to shield the youth from unemployment.

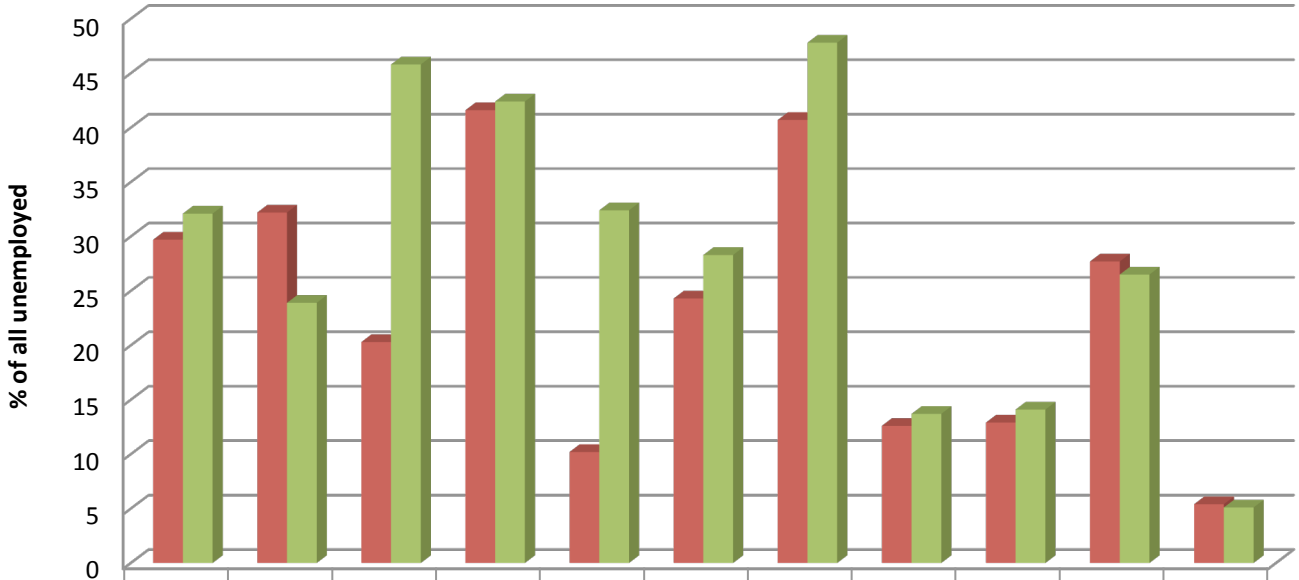
There is by now a large and partly contradictory literature on the impact of employment protection legislation on employment and youth employment and it goes beyond the scope of this small article to review it (see ILO 2012 for an overview and discussion). But there are some lessons that can be learned by now. First, cyclical components are important and structural reform in itself cannot solve the problem alone. In fact, in some cases the empirical evidence contradicts the "conventional wisdom" that more flexible labor markets are a beacon to more employment. In the great recession, sometimes less flexibility helped to keep workers in jobs and revive the economy fast as the positive example of the German short-term work scheme has demonstrated. Second, there is no singular approach for all countries. The labor markets in the Euro zone are so different that tailor-made responses, rather than general call for labor market flexibility are needed. Third, for youth employment and unemployment what matters is the *relative* flexibility of the adult and youth labor market. Here it turns out that a too flexible youth labor market with

temporary contracts is especially hurting the youth in deep recession. Fourth, it is not only youth labor market regulation that matter but also the interaction with education systems and especially the existence of a vocational training systems. Fifth and finally, as financial crises will have long lasting effects on the youth labor markets, it is therefore even more important to "right-size" the flexibility of the labor market and its surrounding institution. This is even the more important to recognize when we consider long-run scarring effects of youth unemployment.

2.2. Long-Term Scarring Effects of Short-Term Youth Unemployment

In problem debtor countries, especially in Ireland and Spain, and, to a lesser extent but at a much higher level in Italy, the great recession has increased the incidence of long-term unemployment, i.e. unemployment that lasts longer than one year (see Figure 6). Such high and lasting unemployment is known to have "scarring" effects on young people with long-term consequences on their lives as the failure to find a (first) job can results in serious deterioration of motivation and skills (see Morsy 2012 for an overview article). The lack of experience can lead to less productivity of the workers and potential employers may use longer-term unemployment as negative selection criteria.

Figure 6: Incidence of Long-Term Youth (15-24 Years) Unemployment in Selected Euro-Zone Countries 2007 and 2011



	Belgium	Germany	Ireland	Greece	Spain	France	Italy	Nether-lands	Austria	Portugal	Finland
2007	29,7	32,2	20,3	41,6	10,2	24,3	40,7	12,6	12,9	27,7	5,4
2011	32,1	23,9	45,8	42,4	32,4	28,3	47,8	13,7	14,1	26,5	5,1

Data Source: Eurostat; http://appsso.eurostat.ec.europa.eu, 29 August 2012

Studies of scarring effects show that that people who experience unemployment in their youth are more likely to suffer from unemployment later again, and typically earn less over their lifetime than people without early unemployment experience. As such, youth unemployment also contributes to more income inequality and has high individual and societal cost. A recent UK study (ACEVO 2012) has attempted to quantify the societal costs of youth unemployment including scarring effects.

As for the current cost the study finds costs of about £ 15.5 billion which amounts to about 1% of the British GDP of which £4.2 billion are welfare benefits paid, £ 0.6 billion are taxes forgone and – most importantly – a loss in output of about £ 10.7 billion. Naturally, the future costs of the scarring effects are more difficult to calculate. But several previous studies can give some guidance. According to the ACEVO (2012: 13) commission report

> "[R]esearch for the Commission suggests that individuals unemployed at a young age will on average spend approximately an extra 2 months per year (8.41 weeks for men, 10.70 weeks for women) out of work aged 26 to 29 than they would have done otherwise" …"Research for the Commission suggests that for men unemployed at a young age, the average wage penalty by the age of 30/34 will be just under 16%, with the equivalent figure for women being just over 17%. Given the different average earnings and spells in employment for men and women, that equates to men earning just over £3,300 less per year by their early thirties, and women earning just under £1,800 less per year in the same period. For comparison, estimates of the earnings premium to a university degree in the UK are typically about 20-25%."

In sum, the ACEVO (2012) report calculates scarring cost of about £ 9.2 billion per annum, composed out of future benefit payments of $ 0.7 billion p.a., future tax losses of £ 2.2 billion, p.a. and yearly future output losses of about £ 6.3 billion.

Given the long-lasting effects of financial crises on unemployment and especially youth unemployment, the long-term costs for the Euro-zone countries are becoming more and more dramatic for the problem debtor countries the longer it takes to resolve the Euro crisis and revive the economy. It is not just about going to a period of internal devaluation which may require some output losses to reduce wages. It is about scarring a whole generation of young people who were unfortunate enough to enter the labor market at a time when the combined fall-out effects of an under-regulated global financial market and a mal-designed common currency experiment hit their economies and their individual lives.

3. Deleveraging for Prosperity of the Young Generation

3.1. The Failure of Expansionary Contraction

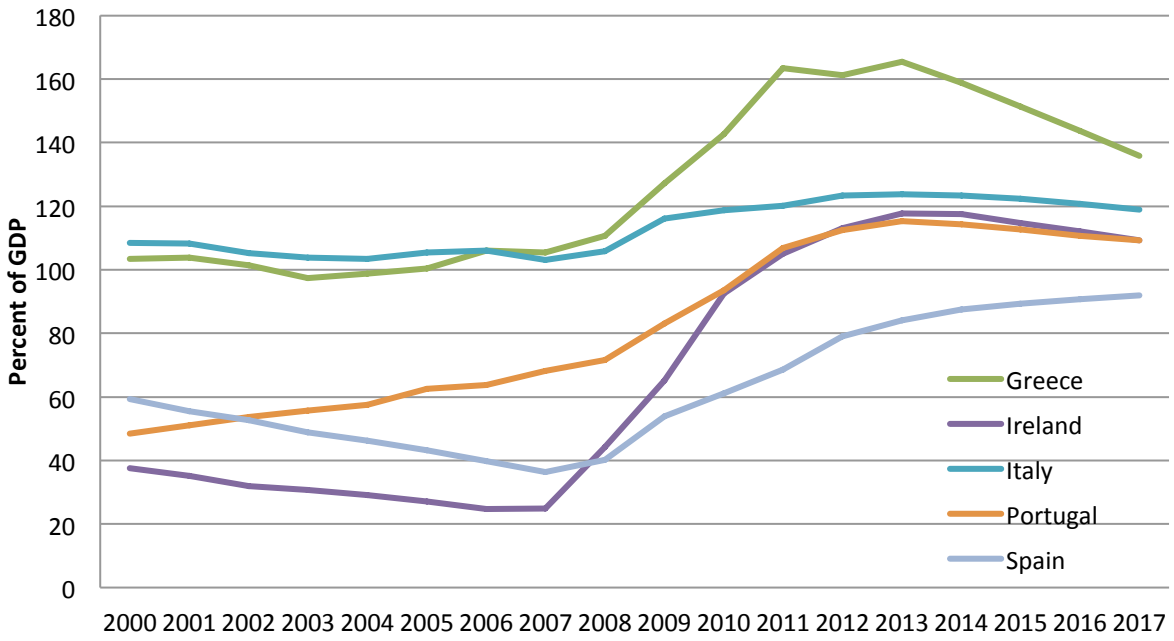
The idea that front-loaded austerity programs can be expansionary and thus reduce debt-to-GDP levels gained wide acceptance after its successful application during the Clinton administration. However, that episode started in a period of economic recovery and was supported by a looser monetary policy, thus maintaining aggregate demand and the recovery. The fiscal consolidation was expected to increase confidence, thus allowing risk premia on long-term interest rates to fall. As a consequence, medium term growth was positively expected and debt-to-GDP ratios fell fast. The theory of an "expansionary contraction" played an important role in the early responses to the debt-crisis in the problem debtor countries and has been an integral part of the view of the ECB in the early phase of the Euro-zone crisis.[2]

Figure 7 shows the developments of debt-to-GDP ratios for the major problem countries in the Euro zone, including the IMF projections up to 2017. The figure shows that these countries dramatically failed to stabilize these ratios with the economies sliding deeper and deeper into recessions and risk premia on their sovereign debts soaring. Obviously confidence has not been restored by front-loaded austerity. Going back to the experience of the Clinton administration it becomes clear why: (1) austerity is now pursued in the middle of a severe recession, (2) without an own national central bank willing and able to support the strategy, and (3) with debts which – in case a Euro-zone break up would materialize – would be denominated in a foreign currency.[3]

[2] In an interview with La Republica on 16 June, 2010, ECB President Trichet states: "As regards the economy, the idea that austerity measures could trigger stagnation is incorrect… In fact, in these circumstances, everything that helps to increase the confidence of households, firms and investors in the sustainability of public finances is good for the consolidation of growth and job creation. I firmly believe that in the current circumstances confidence-inspiring policies will foster and not hamper economic recovery, because confidence is the key factor today." (see:http://www.ecb.int/press/key/date/2010/html/sp100624.en.html).

[3] Borrowing in foreign currency is known to increase vulnerability to financial and currency crises in emerging economies that pursue free capital mobility and has been dubbed as "original sin (see Eichengreen et al. 2005). It is now widely accepted that with the introduction of the common currency, Euro-zone countries introduced "original sin" and thus financial vulnerability into their economies (see e.g. Rossi and Dufflon 2012).

Figure 7: General Government Gross Debt in Percent of GDP for Selected Euro Zone Countries 2000-2017[a]



Source: International Monetary Fund, World Economic Outlook Database, April 2012
a) IMF estimates from 2011 onward except Greece and Portugal where estimates start from 2010

There is a huge and expanding literature discussion on the timing of a fiscal consolidation with an emerging consensus that fiscal austerity is best been pursued in a period of recovery rather than in a recession. Already in 2010, Olivier Blanchard and Carlo Cottarelli published in the IMFdirect blog "Ten Commandments for Fiscal Adjustments in Advanced Economies" the Commandment II: "You shall not front-load your fiscal adjustment, unless financing needs require it. For a few countries, frontloading may be needed to maintain access to markets and finance the deficit at reasonable rates—but, in general, a steady pace of adjustment is more important than front-loading, which could undermine the recovery and be reversed."[4] A more recent OECD (2012b) study argues that fiscal tightening in the present situation with an already exhausted monetary stimulus may be too costly. For a broader discussion and most recent simulation on how best to design a successful austerity strategy that is most effective in terms of reducing a country's debt-to-GDP ratio a recent IMF working paper concludes that "… smooth and gradual consolidations are to be preferred to frontloaded or aggressive consolidations, especially for economies in recession facing high risk premia on public debt, because sheltering growth is key to the success of fiscal consolidation in these cases (Batini et al. 2012). The key features of the latter study are that it takes explicitly takes into account the state of the business cycle, that corresponding monetary policy stance and the impact the fiscal adjustment will have on regime switching in the economy between recessions and expansion. Thus, rather than

[4] See: http://blog-imfdirect.imf.org/2010/06/24/ten-commandments-for-fiscal-adjustment-in-advanced-economies/

taking the favorable condition of the Clinton experience for granted, successful "expansionary contractions" are nowadays considered to be state dependent – and exactly these states are not given in the problem countries of the Euro zone.

3.2 Debt Dynamics and Deleveraging for the Youth

Turning the youth into the focus of requires to engineer a deleveraging process that does not only focus on the debts but also on the assets we bequeath. The situation of the youth in the Euro-zone periphery is seriously hit by the mistakes made by the generation of their parents. They are burdened in three ways: by high unemployment with long-term effects on their well-being, by an austerity policy that is likely to reduce investment in education and future growth-enhancing infrastructure and environmental investment, and a bequest of high public and private debt. Given the evident failure of the "expansionary contraction" approach, deleveraging cannot mean a front-loaded austerity program. It has to be a growth-oriented long-term effort to bring public and private debts back in line with the relative amounts that creditors are willing to accept.

A deleveraging process that respects the interests of the youth has therefore to balance carefully the cost and benefits of present and future generation. Four principles stand out of which the first two are the traditional points made:

- The cost of austerity programs need to be evaluated carefully in terms of unemployment and short-term output losses
- Securing the sustainability of future sovereign debt path

Since it is not only the debt we bequeath to present and future generations but also the size of the economy we also need to consider:

- Long-term consequences of today's policies consequences, a.k.a. hysteresis effects, including scarring effects.
- Foregone investments today in future assets, including human capital, matter as they increase the future size of the economy.

With hysteresis effects, like scarring effects, being important in the labor markets the debt arithmetic for long-term sustainability changes dramatically. Without resorting to market psychology etc. investors will typically look at (the development of debt-to-GDP figures. Simple debt arithmetic states that when governments maintain a balanced (primary) budget, i.e. a budget excluding interest payments on outstanding government debts, the Debt to GDP ratio stabilizes when the real (inflation adjusted) interest rate (r) equals the (long-run) growth rate of the economy (g). In other words, the condition for deleveraging is

(1) $r < g$.

If the real interest rate is below the growth rate of the economy, the country has to run primary surpluses to stabilize the debt ratio. Given low growth or even negative growth and very low inflation in the problem countries it is clear that this condition is not met for these countries, especially with very high nominal interest rates being charged (on new debt) driving up the debt ratios. A first line of arguments is relating to the short-run effects of self-defeating fiscal austerity: it may simply push the economy into a recession with low (or even negative) growth and inflation rates so that no political plausible primary balance improvement would be sufficient to fulfill condition (1). And with debt ratios rising confidence will not be restored and interest rates will increase further finally leading to an unsustainable spiral of increasing debts ratios.

The situation can be exaggerated even when we take hysteresis effects into account as it has been proposed in a recent paper by DeLong and Summers (2012). Their point is that in a severely depressed economy, a fiscal contraction can have lasting negative effects in the short- and long-run. Consequently this makes a case for expansionary fiscal policy reaction to severe, but only severe recessions. The authors argue that in a deeply depressed economy close to lower zero bound nominal interest rates positive policy-relevant fiscal multipliers (μ) are likely to be existent. Policy-relevant multipliers are those fiscal multipliers that take into account the monetary policy reaction which would most likely be closer to zero when the economy would be closer to its potential. That is, a fiscal expansion (increase in government spending) can have short-run positive effects on output (and employment), and vice versa. Thus, in principle we can now model the impact of austerity policy on debt ratios. However, for long-run effects to be present, short-term policies should have long-run hysteresis (η) effects on future output and – via the output-taxation link (with τ signifying the tax rate) – on the future budget balance. Under this condition, DeLong and Summers (2012) show that an increase in government spending will lead to a *lower* debt-to-GDP ratio when condition (2) is fulfilled.

(2) $$r < g + \frac{\eta\mu\tau}{1-\mu\tau}$$

Conversely, in the presence of hysteresis and negative immediate impacts of austerity on current GDP, austerity programs are more likely to be counter-productive. As it is easy to verify with a policy-relevant fiscal multiplier of zero (μ=0) and/or without any hysteresis effects (η=0) equation (2) would simply be reduced to the r<g condition (1). But do we have plausible reasons to expect self-defeating austerity in the problem debtor countries on the base of this approach? Or to put the question differently, can a growth-oriented adjustment program succeed in the long-run?

Starting with the multipliers, it is clear that the economies under questions are indeed deeply depressed and operating far below potential output. As such a positive multiplier seems to be plausible, not least given the now well-documented negative output effects of fiscal austerity. Batini et al. (2012) have simulated the state-dependent multipliers for the Euro zone as well as for France and Italy. The asymmetry of multipliers in recessions

and expansions is confirmed and the results point to a sizeable multiplier effect in the case of expenditure cuts. However, austerity is potentially less self-defeating in the case of tax hikes. These results suggest that austerity programs may better resort to tax increases rather than expenditure cuts.

Table 2: Simulated Cumulative Fiscal Multipliers

	Recession		**Expansion**	
	Expenditure Cut	**Tax Hike**	**Expenditure Cut**	**Tax Hike**
Euro Zone	-2.56	-0.35	-0.43	0.20
France	-2.08	0.03	-1.55	0.12
Italy	-1,57	-0.17	-0.41	-0.07

Source: Batini 2012.

Secondly, we can reasonable expect substantial hysteresis effects in Europe. Hysteresis in European labor markets have been subject to a long discussion, including the role of cyclical and structural effects and should not be repeated here.[5] Most observers agree that substantial hysteresis is present in European labor markets exists, and that the hysteresis parameter may be quite high. DeLong and Summers (2012) report estimates that point to values for η around 1/3 per annum obtained from previous disinflation periods. Surely, labor market reforms have been introduced in some Euro-zone countries since then, notably in Germany, but especially problem debtor countries have been slow in labor market reforms and not all hysteresis can be attributed to structural factors. Moreover, in our context, we have discussed to long-term impact of the crisis on the labor market and especially the scaring effects for youth employment. If we trust that the UK study can give some guidelines we have longer run effect in the range of 0.5% of GDP per annum. This may even be conservative estimates, given the much higher youth unemployment ratios in the problem debtor countries and that the UK labor markets are likely to be more flexible. In addition, many other channels for hysteresis effects exist, including the long term effects of lower private investment in physical capital as well as in research and development which can have negative effects on future potential output. In sum, η may take a sufficiently high value to justify lasting and policy-relevant effects.

Table 3 replicates the critical values for a real government borrowing rate that DeLong and Summers (2012) have compiled for a long-term real growth rate of 2.5% p.a. and a tax share τ of 1/3. It shows that even under modest assumptions on policy-relevant fiscal multipliers and hysteresis strict austerity policy can easily be self-defeating in both, deleveraging and securing the living conditions of all people and the youth in Euro-zone debtor countries.

[5] The reader may refer to the excellent summary discussion in the DeLong and Summers (2012) paper.

Table 3: Critical Values for Treasury Real Borrowing Rates

μ	0.0	0.5	1.0	1.5	2.5
η					
0.000	2.50%	2.50%	2.50%	2.50%	2.50%
0.025	2.50%	2.99%	3.73%	4.95%	14.29%
0.050	2.50%	3.49%	4.96%	7.40%	26.07%
0.100	2.50%	4.48%	7.43%	12.30%	49.64%
0.200	2.50%	6.45%	12.35%	22.10%	96.97%

Source: Reproduced from DeLong and Summers (2012)

Finally, austerity program that are having direct negative effect public investment, in particular investments in infrastructure and education can have direct negative effects on future potential output.

4. Conclusions

This paper documents how the triple shock of the great recession, the Euro crisis and a deleveraging strategy that focuses on front-loaded programs has severely hit especially the youth labor markets and young people's living conditions and future prospects. Several conclusions emerge.

First, it has become clear that deleveraging should not be front-loaded as it burdens present generation and the youth with excessive cost, both in the short term and in the long term. Deleveraging is long-run process in which restoring fiscal sustainability should be viewed as a credible long-run project to anchor expectations, thus allowing government sovereign borrowing rates fall over the medium term. Needless to say, that here is an important role for the Central Bank to play too.

Second, research on fiscal austerity points to the fact that unavoidable fiscal consolidation in recessions may be better based on higher taxation rather than cutting expenditure. Such policies should have a greater focus on addressing income inequalities and reducing vulnerabilities of people, especially the youth.

Third, public investments especially in education and infrastructure should be secured. Partly this can be achieved by redirecting public consumption expenditure public investments. It is noteworthy that in this respect to the suggested European fiscal compact may be too restrictive and that Europe may need a different "golden rule" for public finances that allows a debt financing of growth enhancing, and thereby self-financing public investments, eventually even using Euro-bond for pan-European projects (Rossi and Sander 2012).

Fourth, the crucial issue of labor market reforms and especially youth labor markets and protection emerges. The existing evidence is here not as clear cut as some may wish for. Simply creating more flexible labor markets is not the panacea.[6] Rather, a careful assessment of potential labor markets reforms on an individual country base, taking into account the interdependencies between adult and youth labor markets and installing necessary, but not distorting protection mechanism may be in the best interest of our youth, their present living conditions, and future living chances.

In sum, we may wish to keep in mind a point that Martin Wolf (Financial Times, 30 July 2012) has made on deleveraging: "[N]ot least, people who are living right now matter. Too often, fiscal conservatives sound like the revolutionaries who were prepared to sacrifice present generations for what turned out to be imaginary future benefits."

[6] Eggertsson and Krugman (2012) warn that a deflationary deleveraging process can lead to a topsy-turvy economy in which the aggregate demand responds positively to higher prices. In such an economy more labor market flexibility could even lead to less, rather than more production – the so-called paradox of flexibility.

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