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# How to close the European investment gap?

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## Abstract

This paper compares and evaluates eleven proposals, which suggest policies and institutional arrangements to close the European investment gap. The differences between the proposals analyzed here are notable but the majority of them share a large common ground regarding size, financing, institutional set-up and areas to invest in. Most proposals want to mobilize between 100 and 300 bn€ p.a. of private capital by leveraging funds from either the EU or government budgets or the EIB or new public investment funds. They intend to channel this capital into projects with long-term benefits for Europe, primarily infrastructure and energy.

The major drawbacks are:

- The size of the investment falls short of the gap defined as the difference between pre- and post-crisis levels of investment.
- It is far from sure that private investors will take the carrot and leverage the limited public funds.
- Private investors will expect guaranteed returns, which are unlikely to arise from infrastructure projects or have to burden consumers through higher user fees or costs.
- Even if the desired investment takes place its effect on growth might be delayed and/or negligible.
- There is a lack of regional allocation priorities that target member states with special problems.
- The strategy needs to focus on rebalancing the external accounts by promoting exports and import substitution in deficit countries.

Nonetheless the programs will promote growth and employment in so far as they create additional demand, primarily for investment goods; but there should be second-round and multiplier effects on consumption and higher tax revenues.

## 1. Investment – an ambiguous concept

Investment can mean very different things depending on the context and the perspective of investors or other stakeholders such as governments, banks, or borrowers.

In the national accounts statistics, investment is an expenditure on a good (or an intellectual property), which is used in production and whose lifetime or use exceeds the given time period, usually a year. From this gross investment the depreciation (= the calculated loss of value of the used item over the year) is subtracted delivering net investment. Depreciation rates vary from capital good to capital good depending on their lifetime and obsolescence.

From a macro-economic perspective, investment is an expenditure, which increases the actual or potential output of an economy thus leading to stronger growth. This should obviously include spending on education, which, however, is not counted as investment in the national accounts while it should exclude construction of buildings for consumptive purposes, which might increase welfare but will not increase income or gross domestic product (GDP) beyond the construction phase.

From the perspective of the (private) investor, an investment is an expenditure, which is supposed to give a return that should exceed the original investment. The purchase of a capital good (as in the national accounts) is just one variety. A purely financial investment is the purchase of a financial instrument (a bond, a share, a derivative) in the expectation that it will provide a revenue stream and/or it can eventually be sold at a higher price. The latter option applies to all (speculative) purchases of goods that do not create periodic returns (e.g. gold, commodities, art) but might gain in value.

Many apparently profitable private investments do not enhance growth or welfare but inflate asset prices. On the other side, the provision of public goods will promote growth and welfare but will not – by its very definition as public goods – provide a revenue stream as a return on investment.

Investments can be financed either by previous savings (possibly by saving the counter-values of amortization) or by borrowing. The latter implies the build-up of debt, which must be served out of the returns. An investor will compare the cost of credit with the expected return on investment. Lower interest rates will thus tend to increase investment as more projects become profitable (also compared to the return on deposits).

Investments possibly contribute to growth in two ways:

1. By increasing demand in the sector that provides the investment goods (construction, machinery etc.); this effect depends on the volume and the multiplier effects. Basically, it is not different from the effect of demand for consumption or export.
2. By raising output due to more employment and/or higher productivity. A new additional machine will require more labour to be employed. A better machine, which replaces an old one, might increase productivity (e.g. when an excavator replaces a shovel). This effect will continue over the lifetime of the capital good as long as there is sufficient demand to fully use the new capacity.

These ambiguities will affect any plan to increase investment, as will be shown later.

## 2. The European Investment Gap and Growth

The growth of the EU-28 economy has been weakening after 2010. Real GDP had grown by 2.5% on average between 1998 and 2008. After the deep recession, growth resumed briefly in 2010 but entered another recession in 2012/13 (double-dip). The recovery afterwards has been slow. The causes of this slow-down, which leads to high and persistent unemployment, are intensively debated. Mateusz Szczurek (2014) has clearly presented the two major competing explanations:

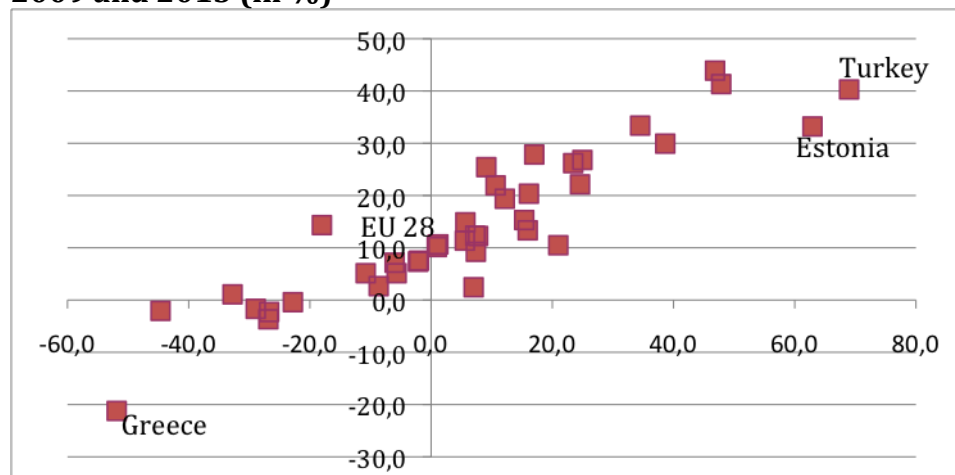
1. The EU economy is only suffering from depressed demand in the aftermath of the global financial crisis and sovereign debt troubles in Europe. In this scenario, EU could and should return to the pre-crisis potential growth path (dashed line). Expansionary macroeconomic policies are needed in order to achieve this goal.
2. The EU has entered a prolonged period of slow or non-existent growth, which fully explains the current output size. In this scenario, the EU's potential growth is permanently lowered due to productivity slowdown, regulatory burden and demographic changes, and deep structural reforms are needed to boost long-run growth.

Both interpretations fit to another possible cause: low investment. Actually, investment as a share of GDP has declined, which might be explained by a lack of demand or by a lack of profitable opportunities due to structural rigidities. Conversely, a rise of investment would contribute to higher demand (at least during the investment period proper) and improve supply by increasing productivity and/or employment.

If one follows this view (for a critical assessment see below), more investment is key for the European recovery and lower unemployment. How big is the investment gap? Before 2008, the share of gross fixed capital formation in GDP has been around 20%. It has declined to little above 17% in 2013. If one assumes that it should go back to the pre-crisis level, the resulting gap is therefore between 2 and 3% of GDP or around 300 bn€ annually for the EU-28. If one compares the actual level with the peak level of 2007, the gap widens to 450 bn€.

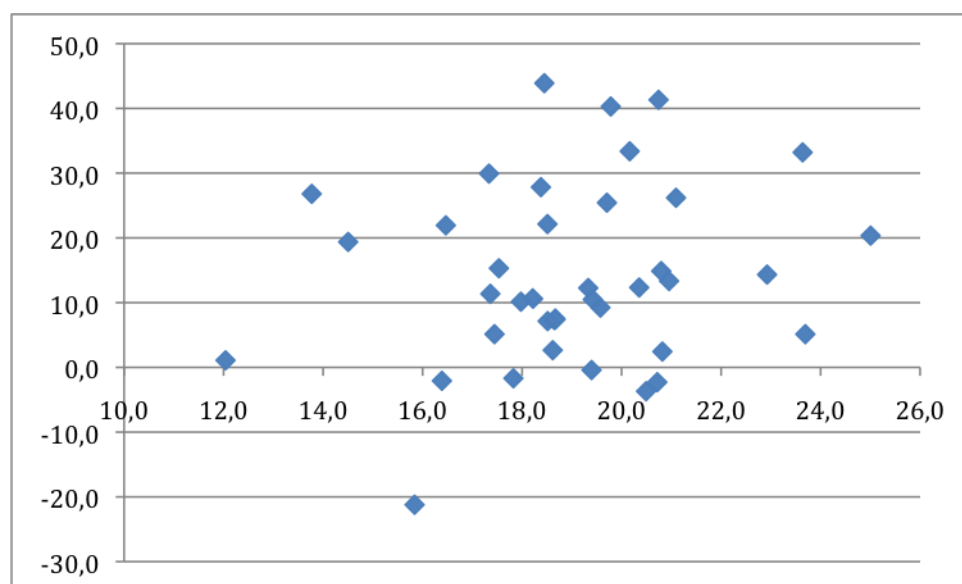
Growth of GDP and growth of investment are strongly correlated (see figure 1) but the direction of causality remains to be determined as it plausibly works in both directions. Much less clear is the connection between the level of investment and GDP growth (figure 2).

**Figure 1: Growth of GDP (vertical axis) and investment (horizontal axis) between 2009 and 2013 (in %)**



Source: Eurostat, own calculations

**Figure 2: Average level of investment (horizontal axis, share of GDP in %) and growth of GDP (2009-2013; vertical axis, in %)**



Source: Eurostat, own calculations

Figure 1 indicates a relatively stable ratio between investment and GDP growth, as the changes in investment are proportional to the changes in output (GDP). The weak relationship between investment and growth in figure 2 indicates a high variance of the incremental capital-output ratio (ICOR), which could result from differences of the capital productivity or its inverse, the capital-output ratio, between countries. Low levels of investment lead to reasonable growth in some countries (e.g. in the UK with investment of 14.5% of GDP and 19.4% growth) while others needed investing 25% of GDP to achieve a similar rate of growth (20.3% for Romania). Some analysts argue that more investment will not lead to more growth, as it will be hardly productive due to an already high capital-output ratio and unfavourable structural and political circumstances (Gros 2014).

Growth is likely to depend on other causes such as internal demand and wages, which are often reduced or stagnating due to policies that are supposed to promote growth through higher investment. There are several studies based on macro-economic models that show the negative effects on growth of declining wages (Onaran/Obst 2015, Storm/Naastepad 2012). Heimberger (2015) also presents empirical data on the correlation of real wage growth and the change of domestic demand and unemployment. The latter tends to increase the more the more real wages fall. These findings point to a different approach to restore growth.

### 3. European Growth and the Debt Deleveraging Trap

The European economy suffers from several problems: the threat of deflation; high unemployment; high gross debt levels; a still weak banking sector; a constrained fiscal policy; an almost exhausted monetary policy. Competitiveness is not a problem. The Euro has weakened against the US Dollar and the trade surplus has increased substantially during the last years.

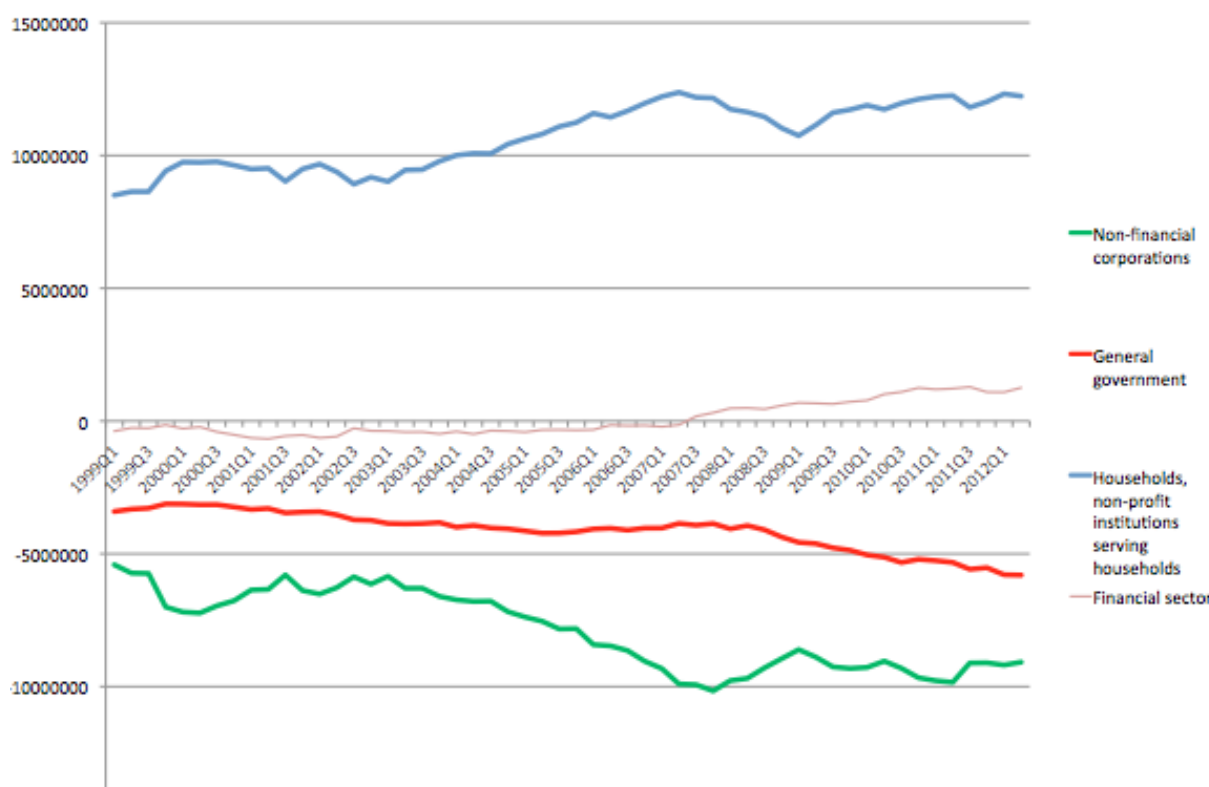
Weak growth after the Great Recession is not a universal problem. Even within the EU, some member states show decent growth rates between 2009 and 2013, as can be seen



in the figures 1 and 2. Generally, EU-28 growth has been somewhat stronger than the growth in the Euro area although there are large disparities within the Euro area, too. The common problem is the balance-sheet recession. In many member states the private sectors and governments have accumulated high levels of gross debt until 2008 and are now willing (or forced) to deleverage. The counterpart of this debt is the net wealth of parts of the private sector, which has accumulated savings.

Recovery depends largely on the resolution of the debt problem. On the one hand, there is a problem of high gross debt of both, the private and the public sector. On the other hand, net debt (and wealth) is clearly distributed. Households save and their accumulated savings, which constitute their wealth, consist of the debt of the corporate and the public sector (see figure 3). Total net debt is virtually zero except the net foreign investment position.

**Figure 3: Net wealth and debt in the Euro zone (in million Euros)**



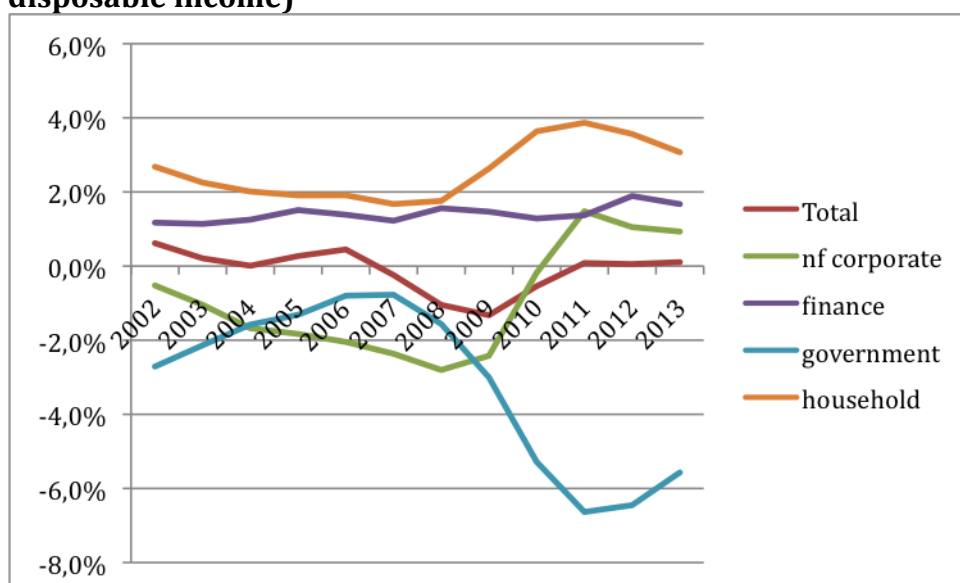
Source: ECB; author's calculations

Public debt increases, when the corporate sector (or the rest of the world) cannot absorb the savings of the private household sector (see also figure 4). As the balance of the Euro zone with rest of the world is negligible, the balance depends mostly on the domestic private sectors. It is an illusion to think that the public sector can autonomously determine its balance. When the corporate sector does not absorb the private savings the state has to do it unless it wants to provoke a recession. The other option is foreign debt (that is third countries go into debt in order to finance current account deficits vis-à-vis the country, which saves more than it invests).

In the Euro zone, all private sectors together are now saving (= deleveraging). As one can see in figure 4, even the non-financial corporations, which are usually supposed to

borrow and invest, are saving since 2010. The financial sector, which in an ideal-type capitalist economy is simply transforming private household savings (deposits) into credits to private investors, is building up a net wealth position. The external accounts of the Euro zone are virtually balanced. The slight improvement of the government balance since 2011 is mainly due to lower household savings, probably resulting from the recession.

**Figure 4: Net borrowing/lending by sector in the Euro zone (as a percentage of disposable income)**



Source: ECB; author's calculations

The distribution of wealth and debt has two dimensions: between sectors and between countries. Current account deficits reflect increasing net debt of, on balance, all sectors of the national economy. This does not imply that all sectors are increasing their net debt. Some may run surpluses while others may run deficits that are larger than these surpluses. Correcting the accumulated imbalances requires approaching both dimensions:

1. Imbalances between countries: There are deficit/debtor countries, which have current account deficits and invest and consume more than they save. As a result, substantial net investment positions have been created (see figure 5).
2. Imbalances within countries: As all sectors try to deleverage (= reduce their net debt) there is no sector left to borrow the resulting surplus savings. An ever deeper recession results from this.

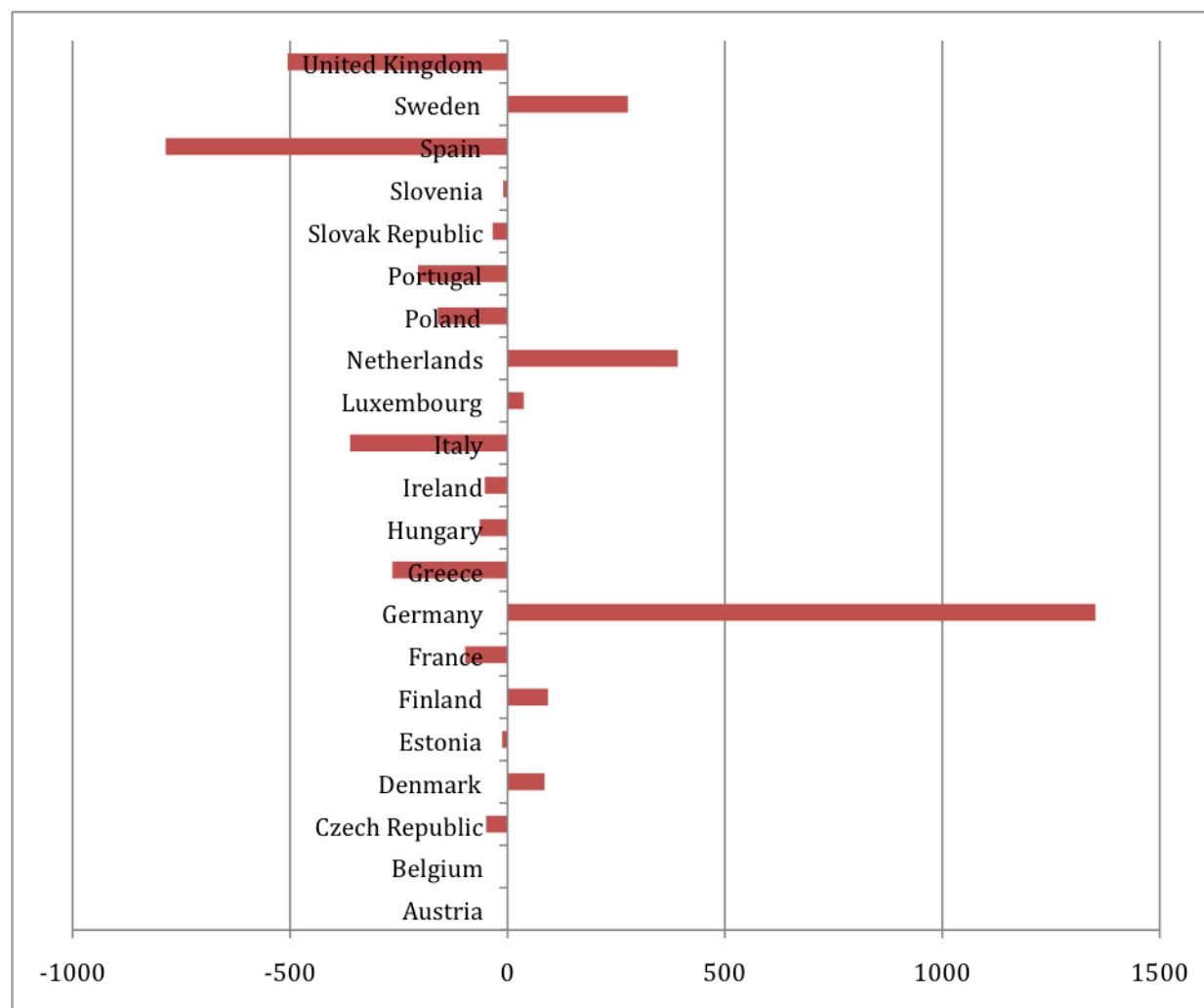
There are basically three options for reducing unsustainable debt levels:

1. Continued deleveraging by the debtor countries and sectors, which leads to recession, deflation and stagnation.
2. Inflation, which increases nominal GDP, devalues the real debt burden and reduces the debt/GDP-ratio.
3. Growth, which has the same effects as inflation, but in real terms. It results from increased spending by creditors rather than reduced spending by debtors.

If one puts these two views together, it becomes clear that the least painful solution requires surplus countries and rich private households to spend more and to reduce their monetary wealth. Such a rise of spending might also lead to some higher inflation,

which adds to the desired effect. The question, which arises from this analysis, is: How to get the rich creditors to spend more? Low (or negative) interest rates certainly help. But it has led to asset bubbles rather than to more real growth and employment. The conservative view is that investments must become more profitable thanks to lower taxes and wages. Basically, all talk about “structural reforms” means, on balance, redistributing future income to the investors who are already the rich creditors.

**Figure 5: Accumulated current account imbalances within the EU (2000-2010 in billions USD)**



Source OECD; author's calculations

The currently discussed proposals to stimulate investment in the EU have to be checked how far they contribute to getting out of that impasse.

#### 4. Overview of proposals to stimulate EU investment

In this section, 11 proposals will be reviewed in a highly condensed way, focussing on the total amount of investment to be achieved, the sources of funds, the institutional set-up, and the type of investment envisaged. Many proposals are embedded in broader analysis of the EU economic problems and proposals beyond pure investment such as structural reforms and industrial policies. The 11 proposals are:



1. The Juncker plan by the EU Commission is the actual plan, which has the best chances of implementation and the largest administrative and analytical support..
2. The parliamentary group of the Socialists and Democrats (S&D) has presented its own proposal.
3. Similarly, the Greens have a proposal focussing on green growth and the mitigation of climate change.
4. The Liberals (ALDE = Alliance of Liberals and Democrats for Europe) stress the role of the private sector
5. The German Trade Union Federation (DGB) has elaborated a Marshall plan for Europe involving levies and taxes on the wealthy.
6. Close to the S&D group, there are two studies published by FEPS (Foundation of European Progressive Studies), one by Kollatz-Ahnen (former vice president of EIB) and Udo Bullmann (MEP) and
7. One by the two academics Cozzi and Griffith-Jones.
8. The Polish finance minister Mateusz Szczurek has presented a proposal at Breugel, a Brussels think-tank
9. The European NGO "Europe 2030" has a proposal that differentiates between short-, medium- and long-term measures.
10. Enderlein and Pisani-Ferry (two experts from Germany and France) have elaborated a paper for the French and German economics ministries, which focuses on Germany and France but includes two European proposals.
11. Three academics from the Keynesian left (Varoufakis, Holland, Galbraith) have written a modest proposal to deal with the Euro crisis, which includes on chapter on investment (Varoufakis is now Greek minister of finance).

The following table 1 gives an overview with brief descriptions of the amounts to be invested, their financing, and institutional and political implementation and target sectors.

If one compares these proposals many commonalities emerge: The amounts vary but are mostly within a range of 100-200 bn € per year. Virtually all proposals avoid new debt by the member states' governments. Several expect member states to provide capital to other bodies (the EIB or new funds), which would not be counted as net government debt. Some proposals suggest setting up new institutions (funds), some rely on existing entities such as the EIB. In most cases, the bulk of the capital is expected to come from private sources. Their propensity to invest is supposed to be increased by reducing the risk to be borne by the private investor and shifting it to public bodies such as EIB or EIF. The ALDE proposal offers tax relief and more deregulated markets. Only the DGB's Marshall plan and the Europe 2030 proposal suggest new taxes.

There are few differences between the proposals regarding the use of funds. All target infrastructure and energy as the major areas of investment. Further often mentioned sectors are the digital economy, research and development and education (human capital). The DGB presents the longest list of possible investment projects if one excludes the list compiled by the EU commission on the base of project lists provided by member states which comprises 610 pages (EU Commission 2014)

**Table 1: Overview of proposals for a European investment strategy**

<b>Proposals</b>	<b>Total investment</b>	<b>Sources/leverage</b>	<b>Institutions, policies</b>	<b>Uses</b>
EU Commission (Juncker-Plan):	315 bn € over 3 years (2015-2017)	16 bn € funds from EU budget + 5 bn € EIB = 21 bn € No new public debt Rest (294 bn €) private sector Leverage ratio 15	European Fund for Strategic Investment	Project pipeline: Infrastructure R&D Environment
S&D Group:	800 bn € over 6 years (2015-2020)	100 bn € (MS + EU) + 300 bn € (credits) + 100 bn € (private) 150 bn € (private – insured by ESM:) 114 bn € private and public + 38 bn € EIB = 152 bn €	New European Investment Instrument (capital from MS and EU + capital markets;) ESM EIB	Sustainable development (energy, transport); Digital society; Human capital
Green Investment Plan for Europe	750 bn € over 3 years	250 bn€ public 167 bn € 8per year) = 500 bn € private Leverage ratio: 2	Member states, EU Commission	“Energy Union” Sustainable and inclusive local development Innovation
ALDE plan	700 bn €	Guarantees from MS 8%, EIB 8%, EFSM 4%, remaining 80% private (senior tranche) Tax exemption of investments in the EUIF Start: 200bn EIB bonds to exchange against MS investment with tax cuts for households and SME	European Investment and Recovery Act: EU Investment Fund (under EIB auspices) Tax exemption of investments in the EUIF	
DGB Marshall Plan for Europe	260 bn € p.a. (150 Energy + 110 other)	260 bn € p.a. wealth levy, “New Deal bonds” Financial Transaction Tax,	European Future Fund (wealth levy), “New Deal bonds” Financial Transaction Tax,	Energy Transport infrastructure Broadband network

				Industry and services Education training Elderly Water resources Infrastructure, energy efficiency, corporate investment
Kollatz-Ahnen-Bullmann (FEPS)	Total investment 1480 bn€ (of which 700 bn € additional) 2015-20	EIB 234 bn€ + 234 bn € private= 468 bn€ EIB 156 bn € + 156 bn € private= 312 bn€ Insurance 75 bn€ + 75 bn€ private = 150 bn€ EIB 2x19bn€ + private = 75 bn€ Budgetary injection 100 bn€ + 300 bn € private = 400 bn € Leverage: 2-4	Investment Vehicle EII (subsidiary of EIB)	
Cozzi-Griffith-Jones (FEPS)	200 bn € (over 4 years ?)	10bn€ more paid-in capital EIB = 80 bn more EIB lending = 160 bn total lending (due to cofinancing) 5 bn risk buffer = 10bn more EIB lending = 40 bn investment Leverage 2-4	None (project bonds)	Infrastructure Innovation
Szczurek plan	700bn € over 5 years (2015 and 2019 0.5% = 65 bn; 2016 and 2018 155 bn, peak 2017 2% = 260 bn)	Member states paid-in capital: Amount and leverage unclear	European Fund for Investments (not EIF!) with injection of paid-in capital and guarantees by member states	Energy Transportation ICT
Euro 2030	300 bn €	EIF: short term 63 bn (13 EFSM, 30 EU budget, 10 EIB, 10 national budgets); medium	European Investment Fund long term: own	

		term: 150+ bn (from savers/investors);	resources Financial activity tax + European corporate tax	
Enderlein-Pisani Proposal E1: Private investment booster	No data	20bn€ EU + 30bn€ Member States = 50bn€	New Fund (venture capital type)	Energy, digital infrastructure, transportation
Proposal E2: Public investment booster	42 bn € over 3 years	31.5 bn€ MS (new debt) +10.5 bn€ not used structural funds = 42 bn €	New Fund (providing grants to MS)	
Varoufakis Holland Galbraith	No amounts given	EIB credits financed by EIB bonds, co-financed by EIF (also re-financed by bonds). Yield management through ECB on the secondary market. No government guarantees.	Investment-led Recovery and Convergence Programme, which is part of a larger 4-point strategy dealing with four crises (banking, debt, investment and social). European Venture Capital Fund.	No indications

Source: own compilation; abbreviations: bn = billion; MS = member state, EIB = European investment Bank, EIF = European Investment Fund; ESM = European Stability Mechanism

## 5. Evaluation

The following evaluation will look at the size of the proposed investment, its financing and its probable impact.

### *Size*

To close the investment gap in Europe all proposals are too small. The gap has a size of at least 300bn€ per year (see section 2 above). The only proposal, which comes close to this figure, is the paper by Kollatz-Ahnen and Bullmann, which aims at approx. 1500 bn € over 5 years. But the amount of new, additional investment is just 700 bn€. This points to a basic problem of the whole approach of stimulating growth via more investment. There is a danger that the investment projects, which are triggered by subsidies, reduced risk and co-financing, are not really additional but investment that would have been made anyway and is now just less risky and more profitable. The optimistic scenario is that more spontaneous, new private investment might follow after the pump has been primed and growth has picked up. In the latter case, total investment would increase by more than the sums directly included in the proposals.

### *Financing*

Almost all proposals rely on the private sector as the prime source of capital. This is necessary because all EU governments are supposed to balance their budgets and to stabilize or reduce their debt ratios. It makes also most sense given the macroeconomic imbalances described above (section 3). Although the gross debt will increase by the funds raised by the new entities, the EIB or by member states that pay in more capital the bulk of investment is supposed to come from the private sector, ideally by using existing financial wealth not yet invested in the real economy.

But these private investors will expect a risk-adjusted profit. Possibly the co-financing or the insurance-type schemes suggested by some proposals will reduce the risk and attract investors to projects with relatively lower returns. But in many cases, in particular in sectors like infrastructure, environment, research and education, there are no direct returns. There might be positive effects on long-term growth and general welfare but no earnings that can be appropriated by private investors except in rare cases such as toll roads or research where resulting innovations can be protected as private intellectual property. This probably is one of the reasons why private investors have not invested in these sectors. Governments that will reap the fruits of subsequent growth through higher tax revenues, which in turn can be used to service the debt, must therefore do such investments.

What remains is the energy sector and lending to small and medium-sized enterprises (SME) and start-ups. The energy sector is an illuminating example as there has been substantial investment in the past. Germany has more than doubled its capacity of renewable energy production since 2004. The Bundesverband Erneuerbare Energien expected investment to rise from 4.4 bn € in 2010 to 11.3 bn € in 2020 (Prognos 2010). The key driver of this investment has been the high returns due to guaranteed high prices, which were paid by the households.

More generally, investment depends on a market for its output. In so far as governments and the EU can and are ready to redistribute income from consumers (usually households, possibly corporations, too) to investors, they are likely to get the investment. It is this area of changing the distributive playing field, which is addressed in several proposals (e.g. Juncker plan: chapter 4 Improving the investment environment; ALDE: chapter III). Privatizing infrastructure would be another approach along the same lines.

### *Use*

Infrastructure, energy and, to a lesser extent, innovation are the target areas the majority of proposals aim at. As infrastructure projects take a long time to plan, prepare and implement, their effects will be probably felt later. Other growth-enhancing activities such as human capital or education appear on the list of SD, Greens and DGB. Projects that are likely to increase welfare (and promote growth only indirectly) such as care for the elderly (DGB) or inclusive local development (Greens) are rare exceptions. These limits indicate that a narrow concept of investment (see section 1 above) dominates most proposals. Even that concept might be too broad for many private, profit-oriented investors, as the projects will not have direct returns. Such a choice will avoid windfall investment and assure that additional investment will take place – if it takes place.

Purely financial investment is largely excluded by the proposals. However, some investment in SME and innovation will be channelled through other financial institutions or venture capital units. Another largely missing sector is construction – probably due to the bad experience of pre-crisis property bubbles.

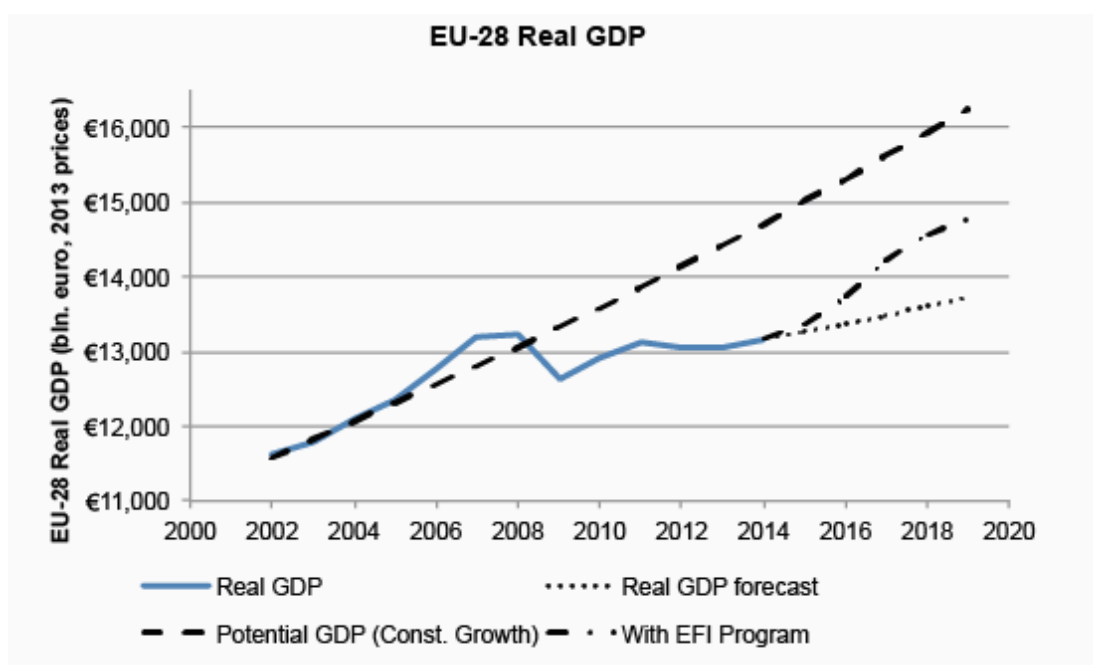
The proposals show few regional priorities. In order to correct actual imbalances within the EU investment should flow to crisis countries where growth is lacking although this might worsen the current account when the capital inflow increases imports. But from a political perspective it is paramount to create employment in countries with high levels of unemployment such as Greece or Spain.

### *Impact*

What are the potential effects of these proposals? Some studies (Cozzi/Griffith-Jones, Szczurek) have their own impact estimates, which are (unsurprisingly) optimistic. They hope that the additional investment will bring the European economy back on its former growth path (see figure 6).

### **Figure 6: Effect of the investment program on growth**





Source: Szczurek 2014 (figure 4).

But how realistic are these assumptions? And which investment projects would actually lead to higher GDP? As pointed out in section 1 and 2, spending additionally two or three hundred bn € will by itself boost GDP, but only once by about 2%. Any prolonged higher growth must come from increased output due to an enlarged capital stock, more employment and/or higher productivity. However there are some doubts if this will happen. Gros (2014) fears that more investment in the Eurozone will only increase the capital-output-ratio, implying little growth and declining returns on capital. Even if such a general pessimistic outlook were not appropriate, the data presented in figure 2 (above) show that more investment does not necessarily lead to higher growth.

**Table 2: Investment, growth and their relation**

	2009-13			1998-2008			
Region/country	IQ	GDP growth	growth/IQ	IQ	GDP growth	growth/IQ	$\Delta g/IQ$
EU-28	18,2	10,6	0,6	20,3	52,8	2,6	-77,6
Euro area	18,7	7,4	0,4	20,9	50,1	2,4	-83,4
Belgium	20,4	12,3	0,6	20,7	51,7	2,5	-75,7
Bulgaria	22,9	14,3	0,6	23,6	203,4	8,6	-92,7
Czech Republic	23,7	5,1	0,2	27,0	169,8	6,3	-96,6
Denmark	17,4	11,4	0,7	20,3	51,5	2,5	-74,3
Germany	17,5	15,3	0,9	19,0	27,1	1,4	-38,7
Estonia	23,6	33,2	1,4	31,4	224,8	7,2	-80,4
Ireland	12,0	1,1	0,1	24,0	128,9	5,4	-98,3
Greece	15,8	-21,2	-1,3	20,0	114,0	5,7	-123,5
Spain	20,7	-2,3	-0,1	27,8	102,6	3,7	-103,0
France	19,6	9,2	0,5	19,2	47,3	2,5	-80,8
Croatia	20,5	-3,7	-0,2	23,9	112,1	4,7	-103,8
Italy	18,6	2,7	0,1	20,7	44,0	2,1	-93,3
Cyprus	16,4	-2,1	-0,1	19,5	103,0	5,3	-102,4
Latvia	21,1	26,2	1,2	28,7	270,3	9,4	-86,8
Lithuania	17,3	29,9	1,7	23,5	222,9	9,5	-81,8
Luxembourg	18,4	27,8	1,5	21,3	116,1	5,4	-72,2

Hungary	18,5	7,1	0,4	22,7	147,0	6,5	-94,0
Malta	16,5	21,9	1,3	20,0	70,0	3,5	-61,9
Netherlands	17,4	5,1	0,3	20,4	65,2	3,2	-90,8
Austria	21,0	13,3	0,6	22,5	48,3	2,1	-70,3
Poland	19,7	25,4	1,3	20,8	136,7	6,6	-80,4
Portugal	17,8	-1,7	-0,1	24,4	56,8	2,3	-104,1
Romania	25,0	20,3	0,8	25,1	276,6	11,0	-92,6
Slovenia	19,4	-0,4	0,0	26,0	91,7	3,5	-100,6
Slovakia	20,8	14,9	0,7	26,6	223,0	8,4	-91,5
Finland	19,3	12,3	0,6	20,0	60,2	3,0	-78,9
Sweden	18,4	43,9	2,4	18,1	46,7	2,6	-8,1
United Kingdom	14,5	19,4	1,3	17,2	39,2	2,3	-41,4

Source: Eurostat; author's calculations; IQ = investment as percent of gdp;

In the pre-crisis decade (19998-2008) the data support the traditional view that investment will be most productive in poor countries with relatively low capital stocks. The ratio of growth to investment was highest (highlighted green in table 2) in the poor new member states of Central and Eastern Europe but also in Greece and Cyprus. Based on recent performance after the great recession (2009-2013), investment seems to produce most growth in Sweden, Poland, UK, Luxembourg and the Baltic countries (see table 2, highlighted yellow). But how realistic is it to assume a strict and direct causal relationship? The fact that the indicator used in table 2 (growth/investment) has declined dramatically in virtually all member states (on EU average by 80%) points to other causes. The other causes could hardly be different structural conditions such as more rigid labour markets, tighter regulation and more generous welfare states, which could be changed by structural reforms. The prime suspect is lack of demand due to deleveraging (see section 3 above).

### *Focus on exports*

In the light of section 3 above, the investment program should focus on restoring the imbalances in the European economy, in particular within the Euro area. To this purpose, the supported projects should increase the capacity of the debtor countries to sell goods and services to the creditor countries. Such an approach implies assistance to enterprises and industries in the export sector of debtor countries such as Greece, Spain, Portugal or Italy. As an alternative option, the investment could be oriented towards import-substituting industries in the debtor countries. Both ways should lead to lower current account deficits and, ideally, to surpluses that can be used to reduce debt. A possible obstacle this approach is facing is the EU's competition policy, which prevents targeted aid to specific enterprises or industries. This conflict could be to some extent avoided by choosing indirect types of assistance such as education and training of the workforce needed, infrastructure to alleviate exports, funding necessary research and development and extending credit to financial institutions supporting exports such as trade insurance or credits.

## **6. Conclusions**

The differences between the various proposals are notable but the majority of them share a large common ground regarding size, financing, institutional set-up and areas to invest in. Most proposals want to mobilize between 100 and 300 bn€ p.a. of private capital by leveraging funds from either the EU or government budgets or the EIB or new

public investment funds. They intend to channel this capital into projects with long-term benefits for Europe, in particular infrastructure and energy.

The major drawbacks are:

- It is far from sure that private investors will take the carrot and leverage the limited public funds.
- Private investors will expect guaranteed returns, which are unlikely to arise from infrastructure projects or have to burden consumers.
- The size of the investment falls short of the gap defined as the difference between pre- and post-crisis levels of investment.
- Even if the desired investment takes place its effect on growth might be late and/or negligible.
- There is a lack of regional allocation priorities.
- The strategy needs to focus on rebalancing the external accounts by promoting exports and import substitution in deficit countries.

Nonetheless the programs will promote growth and employment in so far as they create additional demand, primarily for investment goods; additionally, there should be second-round and multiplier effects on consumption.

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# **How to close the European investment gap?**

**Michael Dauderstädt**

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## Abstract

This paper compares and evaluates eleven proposals, which suggest policies and institutional arrangements to close the European investment gap. The differences between the proposals analyzed here are notable but the majority of them share a large common ground regarding size, financing, institutional set-up and areas to invest in. Most proposals want to mobilize between 100 and 300 bn€ p.a. of private capital by leveraging funds from either the EU or government budgets or the EIB or new public investment funds. They intend to channel this capital into projects with long-term benefits for Europe, primarily infrastructure and energy.

The major drawbacks are:

- The size of the investment falls short of the gap defined as the difference between pre- and post-crisis levels of investment.
- It is far from sure that private investors will take the carrot and leverage the limited public funds.
- Private investors will expect guaranteed returns, which are unlikely to arise from infrastructure projects or have to burden consumers through higher user fees or costs.
- Even if the desired investment takes place its effect on growth might be delayed and/or negligible.
- There is a lack of regional allocation priorities that target member states with special problems.
- The strategy needs to focus on rebalancing the external accounts by promoting exports and import substitution in deficit countries.

Nonetheless the programs will promote growth and employment in so far as they create additional demand, primarily for investment goods; but there should be second-round and multiplier effects on consumption and higher tax revenues.

## 1. Investment – an ambiguous concept

Investment can mean very different things depending on the context and the perspective of investors or other stakeholders such as governments, banks, or borrowers.

In the national accounts statistics, investment is an expenditure on a good (or an intellectual property), which is used in production and whose lifetime or use exceeds the given time period, usually a year. From this gross investment the depreciation (= the calculated loss of value of the used item over the year) is subtracted delivering net investment. Depreciation rates vary from capital good to capital good depending on their lifetime and obsolescence.

From a macro-economic perspective, investment is an expenditure, which increases the actual or potential output of an economy thus leading to stronger growth. This should obviously include spending on education, which, however, is not counted as investment in the national accounts while it should exclude construction of buildings for consumptive purposes, which might increase welfare but will not increase income or gross domestic product (GDP) beyond the construction phase.

From the perspective of the (private) investor, an investment is an expenditure, which is supposed to give a return that should exceed the original investment. The purchase of a capital good (as in the national accounts) is just one variety. A purely financial investment is the purchase of a financial instrument (a bond, a share, a derivative) in the expectation that it will provide a revenue stream and/or it can eventually be sold at a higher price. The latter option applies to all (speculative) purchases of goods that do not create periodic returns (e.g. gold, commodities, art) but might gain in value.

Many apparently profitable private investments do not enhance growth or welfare but inflate asset prices. On the other side, the provision of public goods will promote growth and welfare but will not – by its very definition as public goods – provide a revenue stream as a return on investment.

Investments can be financed either by previous savings (possibly by saving the counter-values of amortization) or by borrowing. The latter implies the build-up of debt, which must be served out of the returns. An investor will compare the cost of credit with the expected return on investment. Lower interest rates will thus tend to increase investment as more projects become profitable (also compared to the return on deposits).

Investments possibly contribute to growth in two ways:

1. By increasing demand in the sector that provides the investment goods (construction, machinery etc.); this effect depends on the volume and the multiplier effects. Basically, it is not different from the effect of demand for consumption or export.
2. By raising output due to more employment and/or higher productivity. A new additional machine will require more labour to be employed. A better machine, which replaces an old one, might increase productivity (e.g. when an excavator replaces a shovel). This effect will continue over the lifetime of the capital good as long as there is sufficient demand to fully use the new capacity.

These ambiguities will affect any plan to increase investment, as will be shown later.

## 2. The European Investment Gap and Growth

The growth of the EU-28 economy has been weakening after 2010. Real GDP had grown by 2.5% on average between 1998 and 2008. After the deep recession, growth resumed briefly in 2010 but entered another recession in 2012/13 (double-dip). The recovery afterwards has been slow. The causes of this slow-down, which leads to high and persistent unemployment, are intensively debated. Mateusz Szczurek (2014) has clearly presented the two major competing explanations:

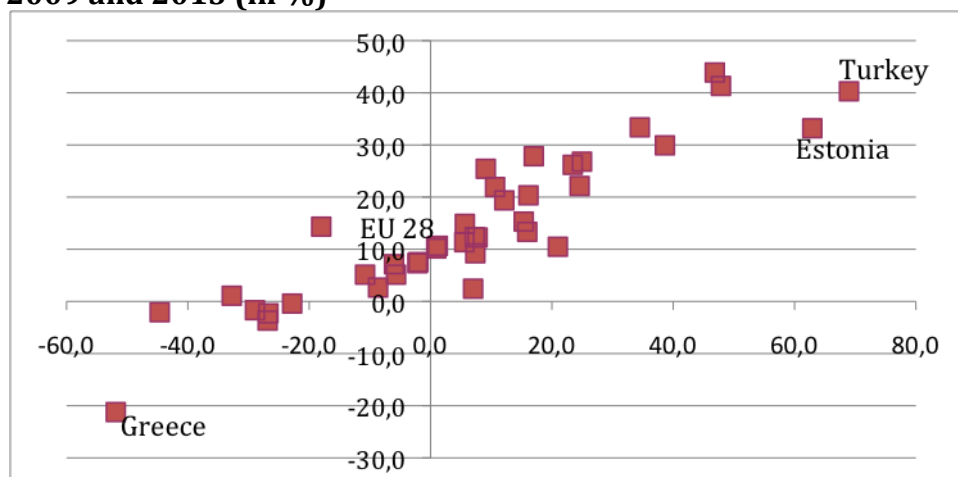
1. The EU economy is only suffering from depressed demand in the aftermath of the global financial crisis and sovereign debt troubles in Europe. In this scenario, EU could and should return to the pre-crisis potential growth path (dashed line). Expansionary macroeconomic policies are needed in order to achieve this goal.
2. The EU has entered a prolonged period of slow or non-existent growth, which fully explains the current output size. In this scenario, the EU's potential growth is permanently lowered due to productivity slowdown, regulatory burden and demographic changes, and deep structural reforms are needed to boost long-run growth.

Both interpretations fit to another possible cause: low investment. Actually, investment as a share of GDP has declined, which might be explained by a lack of demand or by a lack of profitable opportunities due to structural rigidities. Conversely, a rise of investment would contribute to higher demand (at least during the investment period proper) and improve supply by increasing productivity and/or employment.

If one follows this view (for a critical assessment see below), more investment is key for the European recovery and lower unemployment. How big is the investment gap? Before 2008, the share of gross fixed capital formation in GDP has been around 20%. It has declined to little above 17% in 2013. If one assumes that it should go back to the pre-crisis level, the resulting gap is therefore between 2 and 3% of GDP or around 300 bn€ annually for the EU-28. If one compares the actual level with the peak level of 2007, the gap widens to 450 bn€.

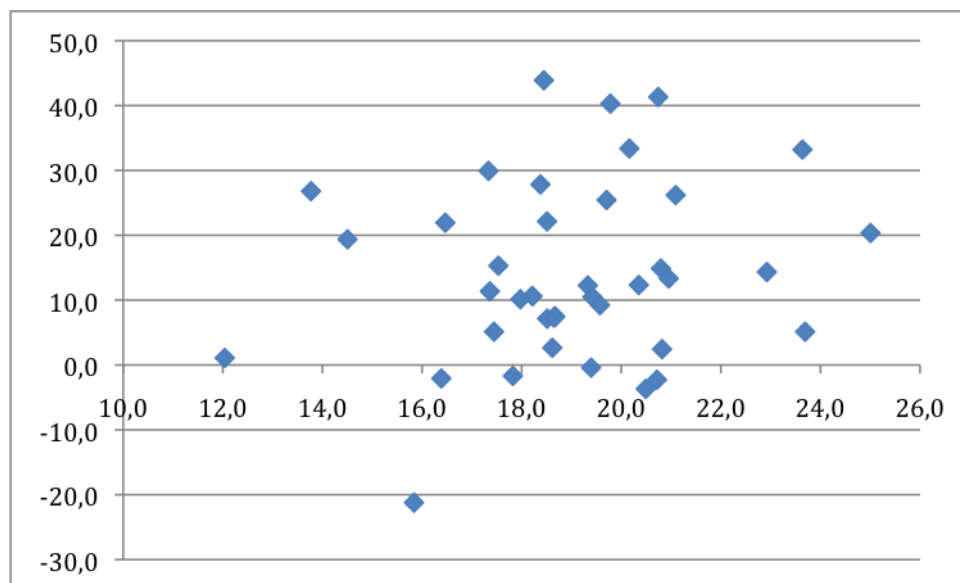
Growth of GDP and growth of investment are strongly correlated (see figure 1) but the direction of causality remains to be determined as it plausibly works in both directions. Much less clear is the connection between the level of investment and GDP growth (figure 2).

**Figure 1: Growth of GDP (vertical axis) and investment (horizontal axis) between 2009 and 2013 (in %)**



Source: Eurostat, own calculations

**Figure 2: Average level of investment (horizontal axis, share of GDP in %) and growth of GDP (2009-2013; vertical axis, in %)**



Source: Eurostat, own calculations

Figure 1 indicates a relatively stable ratio between investment and GDP growth, as the changes in investment are proportional to the changes in output (GDP). The weak relationship between investment and growth in figure 2 indicates a high variance of the incremental capital-output ratio (ICOR), which could result from differences of the capital productivity or its inverse, the capital-output ratio, between countries. Low levels of investment lead to reasonable growth in some countries (e.g. in the UK with investment of 14.5% of GDP and 19.4% growth) while others needed investing 25% of GDP to achieve a similar rate of growth (20.3% for Romania). Some analysts argue that more investment will not lead to more growth, as it will be hardly productive due to an already high capital-output ratio and unfavourable structural and political circumstances (Gros 2014).

Growth is likely to depend on other causes such as internal demand and wages, which are often reduced or stagnating due to policies that are supposed to promote growth through higher investment. There are several studies based on macro-economic models that show the negative effects on growth of declining wages (Onaran/Obst 2015, Storm/Naastepad 2012). Heimberger (2015) also presents empirical data on the correlation of real wage growth and the change of domestic demand and unemployment. The latter tends to increase the more the more real wages fall. These findings point to a different approach to restore growth.

### 3. European Growth and the Debt Deleveraging Trap

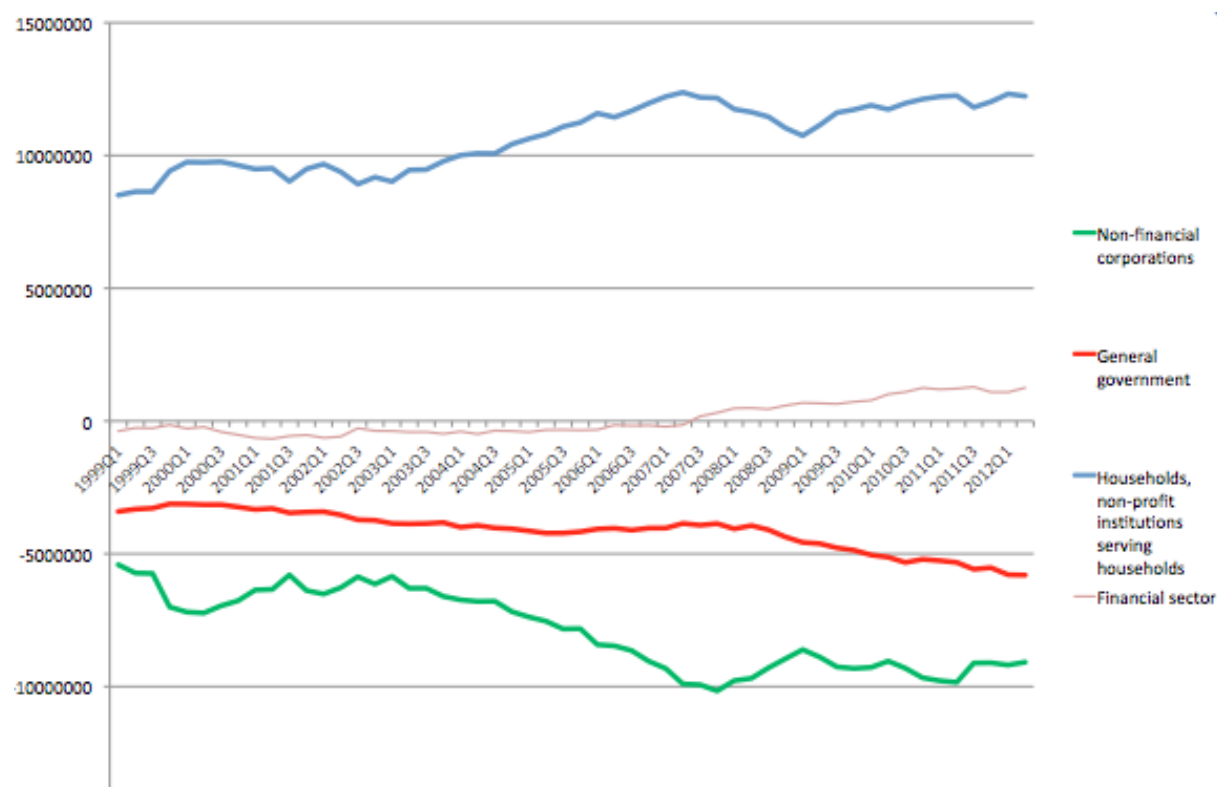
The European economy suffers from several problems: the threat of deflation; high unemployment; high gross debt levels; a still weak banking sector; a constrained fiscal policy; an almost exhausted monetary policy. Competitiveness is not a problem. The Euro has weakened against the US Dollar and the trade surplus has increased substantially during the last years.

Weak growth after the Great Recession is not a universal problem. Even within the EU, some member states show decent growth rates between 2009 and 2013, as can be seen

in the figures 1 and 2. Generally, EU-28 growth has been somewhat stronger than the growth in the Euro area although there are large disparities within the Euro area, too. The common problem is the balance-sheet recession. In many member states the private sectors and governments have accumulated high levels of gross debt until 2008 and are now willing (or forced) to deleverage. The counterpart of this debt is the net wealth of parts of the private sector, which has accumulated savings.

Recovery depends largely on the resolution of the debt problem. On the one hand, there is a problem of high gross debt of both, the private and the public sector. On the other hand, net debt (and wealth) is clearly distributed. Households save and their accumulated savings, which constitute their wealth, consist of the debt of the corporate and the public sector (see figure 3). Total net debt is virtually zero except the net foreign investment position.

**Figure 3: Net wealth and debt in the Euro zone (in million Euros)**



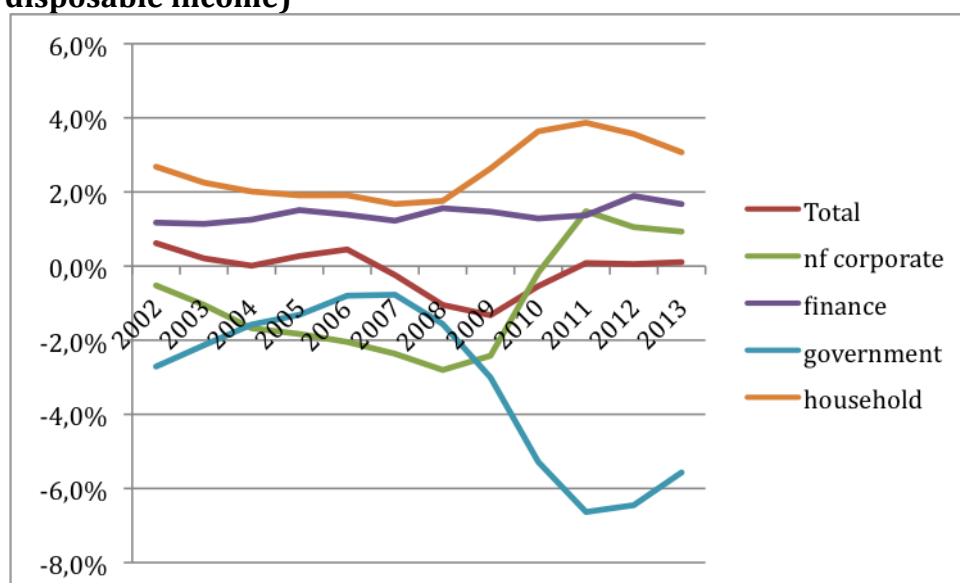
Source: ECB; author's calculations

Public debt increases, when the corporate sector (or the rest of the world) cannot absorb the savings of the private household sector (see also figure 4). As the balance of the Euro zone with rest of the world is negligible, the balance depends mostly on the domestic private sectors. It is an illusion to think that the public sector can autonomously determine its balance. When the corporate sector does not absorb the private savings the state has to do it unless it wants to provoke a recession. The other option is foreign debt (that is third countries go into debt in order to finance current account deficits vis-à-vis the country, which saves more than it invests).

In the Euro zone, all private sectors together are now saving (= deleveraging). As one can see in figure 4, even the non-financial corporations, which are usually supposed to

borrow and invest, are saving since 2010. The financial sector, which in an ideal-type capitalist economy is simply transforming private household savings (deposits) into credits to private investors, is building up a net wealth position. The external accounts of the Euro zone are virtually balanced. The slight improvement of the government balance since 2011 is mainly due to lower household savings, probably resulting from the recession.

**Figure 4: Net borrowing/lending by sector in the Euro zone (as a percentage of disposable income)**



Source: ECB; author's calculations

The distribution of wealth and debt has two dimensions: between sectors and between countries. Current account deficits reflect increasing net debt of, on balance, all sectors of the national economy. This does not imply that all sectors are increasing their net debt. Some may run surpluses while others may run deficits that are larger than these surpluses. Correcting the accumulated imbalances requires approaching both dimensions:

1. Imbalances between countries: There are deficit/debtor countries, which have current account deficits and invest and consume more than they save. As a result, substantial net investment positions have been created (see figure 5).
2. Imbalances within countries: As all sectors try to deleverage (= reduce their net debt) there is no sector left to borrow the resulting surplus savings. An ever deeper recession results from this.

There are basically three options for reducing unsustainable debt levels:

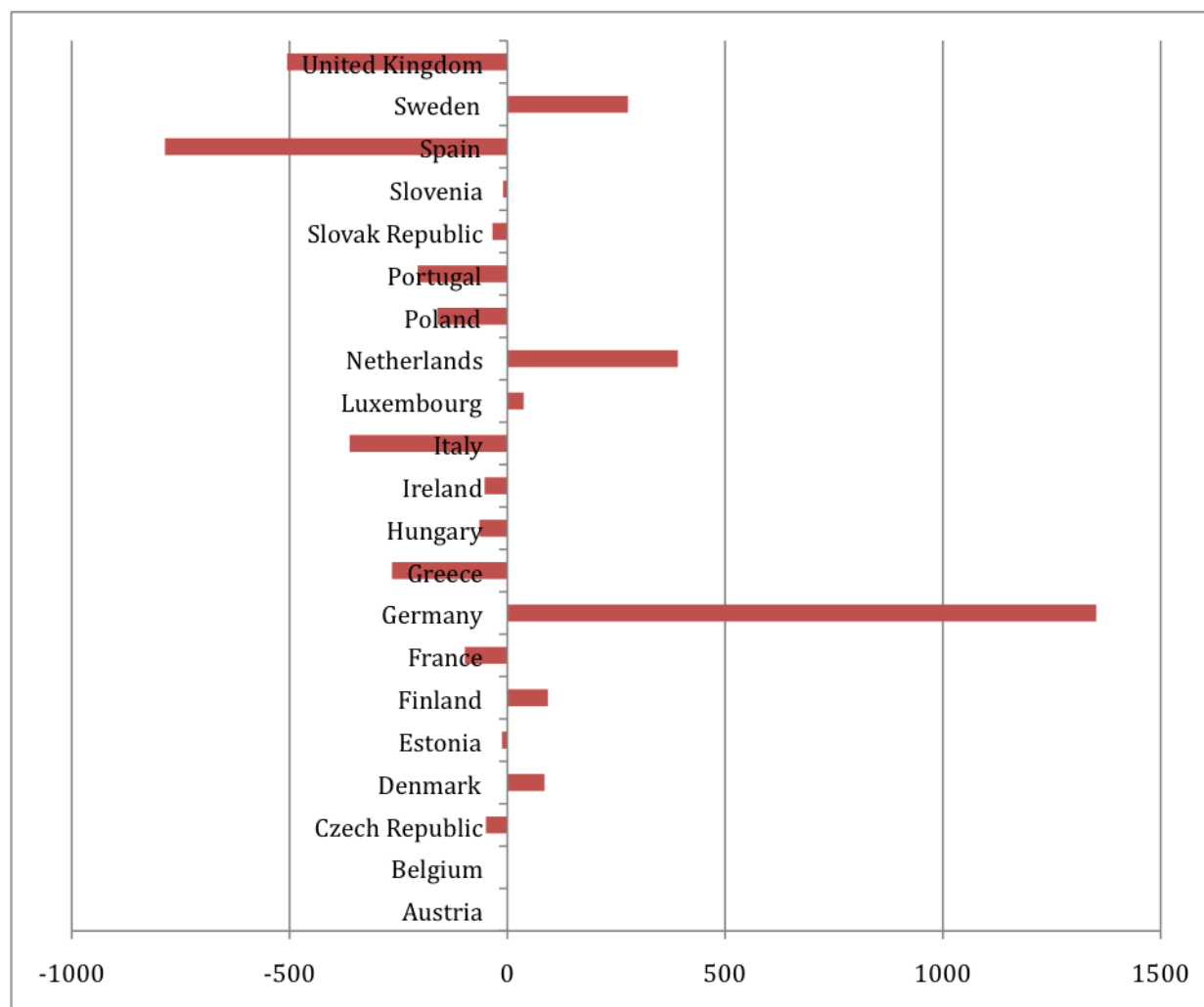
1. Continued deleveraging by the debtor countries and sectors, which leads to recession, deflation and stagnation.
2. Inflation, which increases nominal GDP, devalues the real debt burden and reduces the debt/GDP-ratio.
3. Growth, which has the same effects as inflation, but in real terms. It results from increased spending by creditors rather than reduced spending by debtors.

If one puts these two views together, it becomes clear that the least painful solution requires surplus countries and rich private households to spend more and to reduce their monetary wealth. Such a rise of spending might also lead to some higher inflation,



which adds to the desired effect. The question, which arises from this analysis, is: How to get the rich creditors to spend more? Low (or negative) interest rates certainly help. But it has led to asset bubbles rather than to more real growth and employment. The conservative view is that investments must become more profitable thanks to lower taxes and wages. Basically, all talk about “structural reforms” means, on balance, redistributing future income to the investors who are already the rich creditors.

**Figure 5: Accumulated current account imbalances within the EU (2000-2010 in billions USD)**



Source OECD; author's calculations

The currently discussed proposals to stimulate investment in the EU have to be checked how far they contribute to getting out of that impasse.

#### 4. Overview of proposals to stimulate EU investment

In this section, 11 proposals will be reviewed in a highly condensed way, focussing on the total amount of investment to be achieved, the sources of funds, the institutional set-up, and the type of investment envisaged. Many proposals are embedded in broader analysis of the EU economic problems and proposals beyond pure investment such as structural reforms and industrial policies. The 11 proposals are:

1. The Juncker plan by the EU Commission is the actual plan, which has the best chances of implementation and the largest administrative and analytical support..
2. The parliamentary group of the Socialists and Democrats (S&D) has presented its own proposal.
3. Similarly, the Greens have a proposal focussing on green growth and the mitigation of climate change.
4. The Liberals (ALDE = Alliance of Liberals and Democrats for Europe) stress the role of the private sector
5. The German Trade Union Federation (DGB) has elaborated a Marshall plan for Europe involving levies and taxes on the wealthy.
6. Close to the S&D group, there are two studies published by FEPS (Foundation of European Progressive Studies), one by Kollatz-Ahnen (former vice president of EIB) and Udo Bullmann (MEP) and
7. One by the two academics Cozzi and Griffith-Jones.
8. The Polish finance minister Mateusz Szczurek has presented a proposal at Breugel, a Brussels think-tank
9. The European NGO "Europe 2030" has a proposal that differentiates between short-, medium- and long-term measures.
10. Enderlein and Pisani-Ferry (two experts from Germany and France) have elaborated a paper for the French and German economics ministries, which focuses on Germany and France but includes two European proposals.
11. Three academics from the Keynesian left (Varoufakis, Holland, Galbraith) have written a modest proposal to deal with the Euro crisis, which includes on chapter on investment (Varoufakis is now Greek minister of finance).

The following table 1 gives an overview with brief descriptions of the amounts to be invested, their financing, and institutional and political implementation and target sectors.

If one compares these proposals many commonalities emerge: The amounts vary but are mostly within a range of 100-200 bn € per year. Virtually all proposals avoid new debt by the member states' governments. Several expect member states to provide capital to other bodies (the EIB or new funds), which would not be counted as net government debt. Some proposals suggest setting up new institutions (funds), some rely on existing entities such as the EIB. In most cases, the bulk of the capital is expected to come from private sources. Their propensity to invest is supposed to be increased by reducing the risk to be borne by the private investor and shifting it to public bodies such as EIB or EIF. The ALDE proposal offers tax relief and more deregulated markets. Only the DGB's Marshall plan and the Europe 2030 proposal suggest new taxes.

There are few differences between the proposals regarding the use of funds. All target infrastructure and energy as the major areas of investment. Further often mentioned sectors are the digital economy, research and development and education (human capital). The DGB presents the longest list of possible investment projects if one excludes the list compiled by the EU commission on the base of project lists provided by member states which comprises 610 pages (EU Commission 2014)

**Table 1: Overview of proposals for a European investment strategy**

<b>Proposals</b>	<b>Total investment</b>	<b>Sources/leverage</b>	<b>Institutions, policies</b>	<b>Uses</b>
EU Commission (Juncker-Plan):	315 bn € over 3 years (2015-2017)	16 bn € funds from EU budget + 5 bn € EIB = 21 bn € No new public debt Rest (294 bn €) private sector Leverage ratio 15	European Fund for Strategic Investment	Project pipeline: Infrastructure R&D Environment
S&D Group:	800 bn € over 6 years (2015-2020)	100 bn € (MS + EU) + 300 bn € (credits) + 100 bn € (private) 150 bn € (private – insured by ESM:) 114 bn € private and public + 38 bn € EIB = 152 bn €	New European Investment Instrument (capital from MS and EU + capital markets;) ESM EIB	Sustainable development (energy, transport); Digital society; Human capital
Green Investment Plan for Europe	750 bn € over 3 years	250 bn€ public 167 bn € 8per year) = 500 bn € private Leverage ratio: 2	Member states, EU Commission	“Energy Union” Sustainable and inclusive local development Innovation
ALDE plan	700 bn €	Guarantees from MS 8%, EIB 8%, EFSM 4%, remaining 80% private (senior tranche) Tax exemption of investments in the EUIF Start: 200bn EIB bonds to exchange against MS investment with tax cuts for households and SME	European Investment and Recovery Act: EU Investment Fund (under EIB auspices) Tax exemption of investments in the EUIF	
DGB Marshall Plan for Europe	260 bn € p.a. (150 Energy + 110 other)	260 bn € p.a. wealth levy, “New Deal bonds” Financial Transaction Tax,	European Future Fund (wealth levy), “New Deal bonds” Financial Transaction Tax,	Energy Transport infrastructure Broadband network

				Industry and services Education training Elderly Water resources
Kollatz-Ahnen-Bullmann (FEPS)	Total investment 1480 bn€ (of which 700 bn € additional) 2015-20	EIB 234 bn€ + 234 bn € private= 468 bn€ EIB 156 bn € + 156 bn € private= 312 bn€ Insurance 75 bn€ + 75 bn€ private = 150 bn€ EIB 2x19bn€ + private = 75 bn€ Budgetary injection 100 bn€ + 300 bn € private = 400 bn € Leverage: 2-4	Investment Vehicle EII (subsidiary of EIB)	Infrastructure, energy efficiency, corporate investment
Cozzi-Griffith-Jones (FEPS)	200 bn € (over 4 years ?)	10bn€ more paid-in capital EIB = 80 bn more EIB lending = 160 bn total lending (due to cofinancing) 5 bn risk buffer = 10bn more EIB lending = 40 bn investment Leverage 2-4	None (project bonds)	Infrastructure Innovation
Szczurek plan	700bn € over 5 years (2015 and 2019 0.5% = 65 bn; 2016 and 2018 155 bn, peak 2017 2% = 260 bn)	Member states paid-in capital: Amount and leverage unclear	European Fund for Investments (not EIF!) with injection of paid-in capital and guarantees by member states	Energy Transportation ICT
Euro 2030	300 bn €	EIF: short term 63 bn (13 EFSM, 30 EU budget, 10 EIB, 10 national budgets); medium term: 150+ bn (from	European Investment Fund long term: own resources Financial activity tax + European corporate tax	

		savers/investors);		
Enderlein-Pisani Proposal E1: Private investment booster	No data	20bn€ EU + 30bn€ Member States = 50bn€	New Fund (venture capital type)	Energy, digital infrastructure, transportation
Proposal E2: Public investment booster	42 bn € over 3 years	31.5 bn€ MS (new debt) +10.5 bn€ not used structural funds = 42 bn €	New Fund (providing grants to MS)	
Varoufakis Holland Galbraith	No amounts given	EIB credits financed by EIB bonds, co-financed by EIF (also re-financed by bonds). Yield management through ECB on the secondary market. No government guarantees.	Investment-led Recovery and Convergence Programme, which is part of a larger 4- point strategy dealing with four crises (banking, debt, investment and social). European Venture Capital Fund.	No indications

Source: own compilation; abbreviations: bn = billion; MS = member state, EIB = European investment Bank, EIF = European Investment Fund; ESM = European Stability Mechanism

## 5. Evaluation

The following evaluation will look at the size of the proposed investment, its financing and its probable impact.

### Size

To close the investment gap in Europe all proposals are too small. The gap has a size of at least 300bn€ per year (see section 2 above). The only proposal, which comes close to this figure, is the paper by Kollatz-Ahnen and Bullmann, which aims at approx. 1500 bn € over 5 years. But the amount of new, additional investment is just 700 bn€. This points to a basic problem of the whole approach of stimulating growth via more investment. There is a danger that the investment projects, which are triggered by subsidies, reduced risk and co-financing, are not really additional but investment that would have been made anyway and is now just less risky and more profitable. The optimistic scenario is that more spontaneous, new private investment might follow after the pump has been primed and growth has picked up. In the latter case, total investment would increase by more than the sums directly included in the proposals.

### Financing

Almost all proposals rely on the private sector as the prime source of capital. This is necessary because all EU governments are supposed to balance their budgets and to stabilize or reduce their debt ratios. It makes also most sense given the macroeconomic imbalances described above (section 3). Although the gross debt will increase by the funds raised by the new entities, the EIB or by member states that pay in more capital the bulk of investment is supposed to come from the private sector, ideally by using existing financial wealth not yet invested in the real economy.

But these private investors will expect a risk-adjusted profit. Possibly the co-financing or the insurance-type schemes suggested by some proposals will reduce the risk and attract investors to projects with relatively lower returns. But in many cases, in particular in sectors like infrastructure, environment, research and education, there are no direct returns. There might be positive effects on long-term growth and general welfare but no earnings that can be appropriated by private investors except in rare cases such as toll roads or research where resulting innovations can be protected as private intellectual property. This probably is one of the reasons why private investors have not invested in these sectors. Governments that will reap the fruits of subsequent growth through higher tax revenues, which in turn can be used to service the debt, must therefore do such investments.

What remains is the energy sector and lending to small and medium-sized enterprises (SME) and start-ups. The energy sector is an illuminating example as there has been substantial investment in the past. Germany has more than doubled its capacity of renewable energy production since 2004. The Bundesverband Erneuerbare Energien expected investment to rise from 4.4 bn € in 2010 to 11.3 bn € in 2020 (Prognos 2010). The key driver of this investment has been the high returns due to guaranteed high prices, which were paid by the households.

More generally, investment depends on a market for its output. In so far as governments and the EU can and are ready to redistribute income from consumers (usually



households, possibly corporations, too) to investors, they are likely to get the investment. It is this area of changing the distributive playing field, which is addressed in several proposals (e.g. Juncker plan: chapter 4 Improving the investment environment; ALDE: chapter III). Privatizing infrastructure would be another approach along the same lines.

### *Use*

Infrastructure, energy and, to a lesser extent, innovation are the target areas the majority of proposals aim at. As infrastructure projects take a long time to plan, prepare and implement, their effects will be probably felt later. Other growth-enhancing activities such as human capital or education appear on the list of SD, Greens and DGB. Projects that are likely to increase welfare (and promote growth only indirectly) such as care for the elderly (DGB) or inclusive local development (Greens) are rare exceptions. These limits indicate that a narrow concept of investment (see section 1 above) dominates most proposals. Even that concept might be too broad for many private, profit-oriented investors, as the projects will not have direct returns. Such a choice will avoid windfall investment and assure that additional investment will take place – if it takes place.

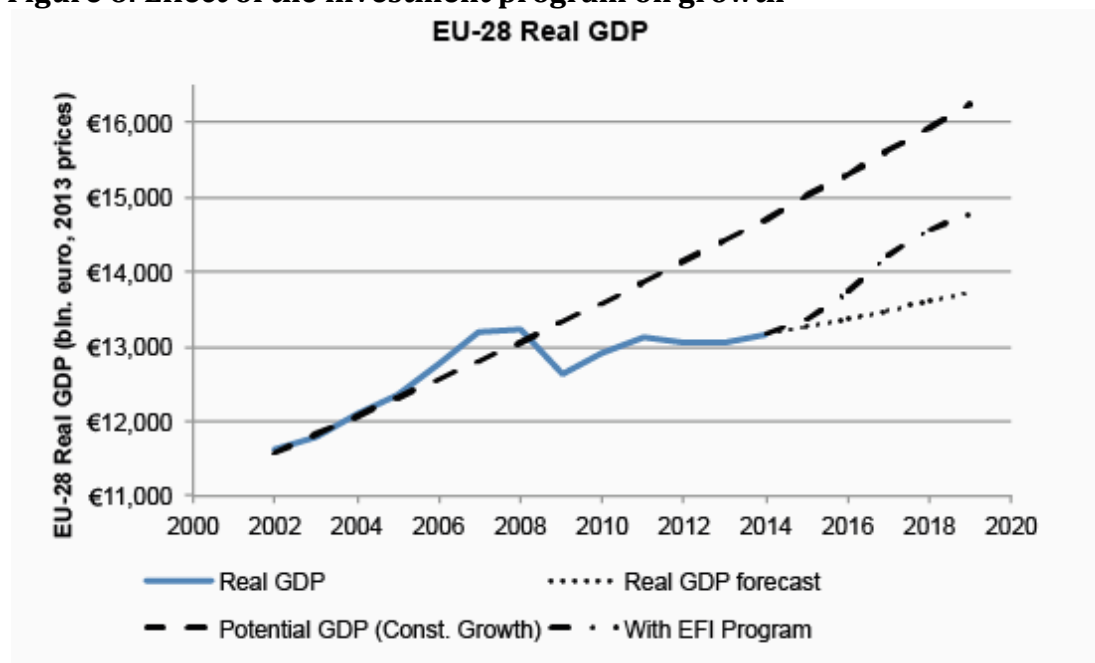
Purely financial investment is largely excluded by the proposals. However, some investment in SME and innovation will be channelled through other financial institutions or venture capital units. Another largely missing sector is construction – probably due to the bad experience of pre-crisis property bubbles.

The proposals show few regional priorities. In order to correct actual imbalances within the EU investment should flow to crisis countries where growth is lacking although this might worsen the current account when the capital inflow increases imports. But from a political perspective it is paramount to create employment in countries with high levels of unemployment such as Greece or Spain.

### *Impact*

What are the potential effects of these proposals? Some studies (Cozzi/Griffith-Jones, Szczurek) have their own impact estimates, which are (unsurprisingly) optimistic. They hope that the additional investment will bring the European economy back on its former growth path (see figure 6).

**Figure 6: Effect of the investment program on growth**



Source: Szczurek 2014 (figure 4).

But how realistic are these assumptions? And which investment projects would actually lead to higher GDP? As pointed out in section 1 and 2, spending additionally two or three hundred bn € will by itself boost GDP, but only once by about 2%. Any prolonged higher growth must come from increased output due to an enlarged capital stock, more employment and/or higher productivity. However there are some doubts if this will happen. Gros (2014) fears that more investment in the Eurozone will only increase the capital-output-ratio, implying little growth and declining returns on capital. Even if such a general pessimistic outlook were not appropriate, the data presented in figure 2 (above) show that more investment does not necessarily lead to higher growth.

**Table 2: Investment, growth and their relation**

	2009-13			1998-2008			
Region/country	IQ	GDP growth	growth/IQ	IQ	GDP growth	growth/IQ	$\Delta g/IQ$
EU-28	18,2	10,6	0,6	20,3	52,8	2,6	-77,6
Euro area	18,7	7,4	0,4	20,9	50,1	2,4	-83,4
Belgium	20,4	12,3	0,6	20,7	51,7	2,5	-75,7
Bulgaria	22,9	14,3	0,6	23,6	203,4	8,6	-92,7
Czech Republic	23,7	5,1	0,2	27,0	169,8	6,3	-96,6
Denmark	17,4	11,4	0,7	20,3	51,5	2,5	-74,3
Germany	17,5	15,3	0,9	19,0	27,1	1,4	-38,7
Estonia	23,6	33,2	1,4	31,4	224,8	7,2	-80,4
Ireland	12,0	1,1	0,1	24,0	128,9	5,4	-98,3
Greece	15,8	-21,2	-1,3	20,0	114,0	5,7	-123,5
Spain	20,7	-2,3	-0,1	27,8	102,6	3,7	-103,0
France	19,6	9,2	0,5	19,2	47,3	2,5	-80,8
Croatia	20,5	-3,7	-0,2	23,9	112,1	4,7	-103,8
Italy	18,6	2,7	0,1	20,7	44,0	2,1	-93,3
Cyprus	16,4	-2,1	-0,1	19,5	103,0	5,3	-102,4
Latvia	21,1	26,2	1,2	28,7	270,3	9,4	-86,8
Lithuania	17,3	29,9	1,7	23,5	222,9	9,5	-81,8

Luxembourg	18,4	27,8	1,5	21,3	116,1	5,4	-72,2
Hungary	18,5	7,1	0,4	22,7	147,0	6,5	-94,0
Malta	16,5	21,9	1,3	20,0	70,0	3,5	-61,9
Netherlands	17,4	5,1	0,3	20,4	65,2	3,2	-90,8
Austria	21,0	13,3	0,6	22,5	48,3	2,1	-70,3
Poland	19,7	25,4	1,3	20,8	136,7	6,6	-80,4
Portugal	17,8	-1,7	-0,1	24,4	56,8	2,3	-104,1
Romania	25,0	20,3	0,8	25,1	276,6	11,0	-92,6
Slovenia	19,4	-0,4	0,0	26,0	91,7	3,5	-100,6
Slovakia	20,8	14,9	0,7	26,6	223,0	8,4	-91,5
Finland	19,3	12,3	0,6	20,0	60,2	3,0	-78,9
Sweden	18,4	43,9	2,4	18,1	46,7	2,6	-8,1
United Kingdom	14,5	19,4	1,3	17,2	39,2	2,3	-41,4

Source: Eurostat; author's calculations; IQ = investment as percent of gdp;

In the pre-crisis decade (1999-2008) the data support the traditional view that investment will be most productive in poor countries with relatively low capital stocks. The ratio of growth to investment was highest (highlighted green in table 2) in the poor new member states of Central and Eastern Europe but also in Greece and Cyprus. Based on recent performance after the great recession (2009-2013), investment seems to produce most growth in Sweden, Poland, UK, Luxembourg and the Baltic countries (see table 2, highlighted yellow). But how realistic is it to assume a strict and direct causal relationship? The fact that the indicator used in table 2 (growth/investment) has declined dramatically in virtually all member states (on EU average by 80%) points to other causes. The other causes could hardly be different structural conditions such as more rigid labour markets, tighter regulation and more generous welfare states, which could be changed by structural reforms. The prime suspect is lack of demand due to deleveraging (see section 3 above).

### Focus on exports

In the light of section 3 above, the investment program should focus on restoring the imbalances in the European economy, in particular within the Euro area. To this purpose, the supported projects should increase the capacity of the debtor countries to sell goods and services to the creditor countries. Such an approach implies assistance to enterprises and industries in the export sector of debtor countries such as Greece, Spain, Portugal or Italy. As an alternative option, the investment could be oriented towards import-substituting industries in the debtor countries. Both ways should lead to lower current account deficits and, ideally, to surpluses that can be used to reduce debt. A possible obstacle this approach is facing is the EU's competition policy, which prevents targeted aid to specific enterprises or industries. This conflict could be to some extent avoided by choosing indirect types of assistance such as education and training of the workforce needed, infrastructure to alleviate exports, funding necessary research and development and extending credit to financial institutions supporting exports such as trade insurance or credits.

## 6. Conclusions

The differences between the various proposals are notable but the majority of them share a large common ground regarding size, financing, institutional set-up and areas to invest in. Most proposals want to mobilize between 100 and 300 bn€ p.a. of private capital by leveraging funds from either the EU or government budgets or the EIB or new

public investment funds. They intend to channel this capital into projects with long-term benefits for Europe, in particular infrastructure and energy.

The major drawbacks are:

- It is far from sure that private investors will take the carrot and leverage the limited public funds.
- Private investors will expect guaranteed returns, which are unlikely to arise from infrastructure projects or have to burden consumers.
- The size of the investment falls short of the gap defined as the difference between pre- and post-crisis levels of investment.
- Even if the desired investment takes place its effect on growth might be late and/or negligible.
- There is a lack of regional allocation priorities.
- The strategy needs to focus on rebalancing the external accounts by promoting exports and import substitution in deficit countries.

Nonetheless the programs will promote growth and employment in so far as they create additional demand, primarily for investment goods; additionally, there should be second-round and multiplier effects on consumption.

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