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Falling Rate of Investment causes Stagnation in Europe and Persistent Structural Budget Deficits
by
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Summary

Looking at data for Europe (euro (15) provided by OECD), one finds that the share of real investments in GDP has been on a falling trend from early 1970s (26 pct. of GDP) to the present day's low level of only 19 pct. of GDP.

My hypothesis is that the European unemployment crisis to a large extent can be explained by this falling ratio of real investment. In fact, the R^2 in a simple regression between investment share and unemployment is above 0,9 (1970-2013).

This falling rate of real investments has had a negative impact on GDP growth rates for at least two reasons: 1. short term multiplier effects – one can detect continuous 'business cycles' during the 40 years period, and 2. long term effects of lower productivity due to this reduced rate of capital accumulation (and implemented innovations).

Furthermore, decreasing private real investments have not only caused higher unemployment, but also increased public sector budget deficits, which clearly can be seen in the data for the Euro (15).

This chain of causality is not present in conventional general equilibrium models used by many economists advising governments and Bruxelles. The analysis of a reduction of a public sector deficit is often undertaken in isolation from the economy as a whole and not considering the macroeconomic causality. Therefore, public investment is not seen as a substitute for private investments in the macroeconomic adjustment process. This missing causality is also intrinsic in the European Stability Pact/Fiscal Compact. Here, public investment is not separated from public consumption although the impact on the growth process is highly different.

The paper with contain a simple model showing these basic macroeconomic relationships for Europe as a whole and illustrate the positive consequences of increased private and public investments on structural imbalances.

Introduction

Unemployment has been on a rising trend in Europe since the middle of the 1970s. Figures deviate from country to country; but looking at Europe as a whole it cannot be questioned that unemployment is at its highest level since the war. More than 26 mill people are registered as unemployed, which correspond to 12½ percentage of the labour force.

Due to the high level of integration within trade and financial flow and the relative limited external transactions in traded goods and services it is reasonable to analyse Europe as one

macroeconomic entity. On the other hand Europe is highly integrated except for the labour market. Here we have experience widely different national developments in unit labour costs and in unemployment rates: Varying from around 25 percent in Spain and Greece to 5 percent in Austria and Germany.

Within the paper I will set-up a simple macroeconomic model to explain development in unemployment and public sector budget deficits in Europe as a whole – short term, long term and leave the national differences for another time. The magnitude of some of the most important coefficients is empirically estimated using simple regression technique, and at the end of the paper a few policy proposals to limit unemployment and budget deficits are calculated to demonstrate how important it is to get the macroeconomic causality right.

The paper does not discuss whether the European economy (Euro-area) is wage- or profit-led. The literature seems to be rather clear on this question, see Stockhammer *et al.* (2009). My concern is the link between real investment (as a share of GDP) and unemployment. How can it be that these two time series are very highly correlated and what are the long term consequences for growth potentials? Productivity plays an important role establishing links between real investment and employment. Allow me to quote a recent survey by Lavoie & Stockhammer (2012), p. 21:

All these studies face challenges in identifying the direction of causality [between real wage and productivity] and the distinction between short-run and long-run effects, and more research is certainly needed. Indeed, simple national growth accounting makes clear that faster productivity growth should be associated with faster real wage growth, thus bringing about the problem of reverse causality.[1]

With regard to the development in potential output in the future productivity is crucial. The investment ratio and productivity seem to be positively correlated. The implication is that a smaller investment ratio reduces potential output. The paper is finished by a calculation of the 'missed productivity', which could have improved welfare in many ways – not necessarily by increasing traditional output. To the contrary a deliberate economic policy could transform increased productivity into more investment in sustainability, health care or shorter working hours per week/year. From this potential welfare point of view productivity is even more important than the development in (un)employment.

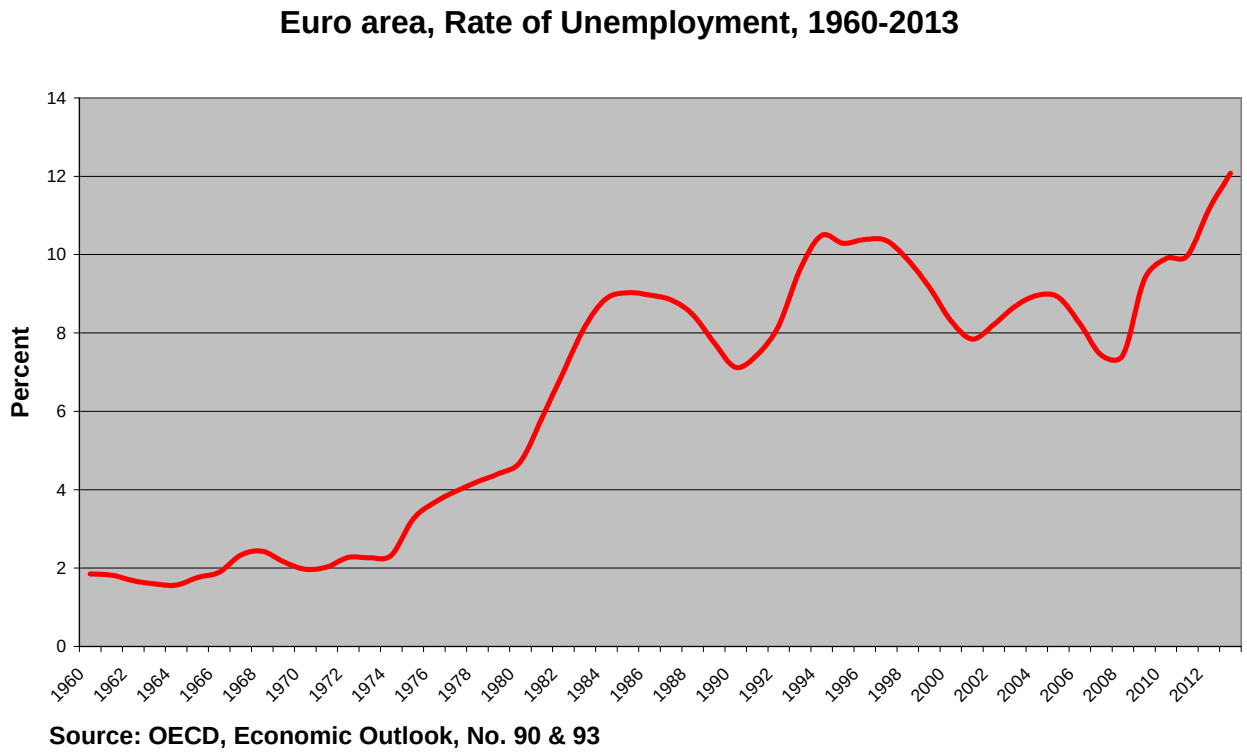
Why rising Unemployment?

There are as many attempted explanations of rising unemployment as there are schools and sub-schools in economics.

So, we better start to look at some numbers showing the development in unemployment and employment. The puzzling matter is that during the period under consideration, 1960-2013 there have been upward trends in both employment and unemployment. As we shall see there has been a few periods where employment fell, and here we see, as expected, a substantial rise in unemployment. We also see periods where employment has expanded so fast that unemployment has fallen; but there are rare and brief.

[1] The paper goes on arguing that the causality most like runs from higher wage to increased productivity. I hope to investigate this matter more thoroughly at a later stage.

Figure 1



Source: OECD, Economic Outlook, No. 90 & 93

. We could also present unemployment measured directly as the number of human beings, who wants a job and is ready to take it up, if offered (this is the definition used by the OECD-Office of Statistics and Eurostat for that matter). Due to an increased labour force this number has gone up even more and looks, therefore, more scaring.

But unemployment was for more than 20 years until mid-1970s rather constant and very low. The rate of unemployment was around 2 percent for Continental (Western) Europe as a whole. After 1974 the number started moving upwards; but in a rather bumpy way wavering around a shifting upward trend. The trend looks rather steep from mid-1970s until mid-1990s. Then it became flatter. Some economists would argue that a new stationary/structural rate of unemployment

has established itself around 9 percent; but that argument hardly make sense when the very, very uneven distribution among the countries is taken into consideration. Other economists speak about rising structural unemployment; but miss really to give convincing arguments. What are the fundamental differences between the 1960s and today, which qualify this argument? Of course, one can see many differences between then and now, but they point in different direction. On average labour is better educated, social barriers are reduced and on average labour markets have become more flexible than in the 1960s. Perhaps, one can say that in some countries the welfare system developed since the 1960s has reduced economic incentives to take up a job straight on, and maybe the increased number of immigrants had made labour market integration more difficult[2].

Figure 2

Source: OECD, Economic Outlook, no. 90 & 93

So let us look at the numbers of employed people. In figure 2 we see that *employment* has, in fact, all the way through been on an upward trend; but interrupted by the down-swing of business cycles reducing employment transitory. Falls in employment were until the early 1980s minor and brief; since then business cycles appear more eruptive and to take longer time to be overcome. For instance, one can see that the present down-swing has not yet come to an end, making this 'crisis'[3] the longest in the recorded European after-war history.

[2] Labour market immigration started in fact back in the 1960s where lack of labour called a number of so-called guest-workers to Continental Europe. When unemployment started to creep into the economy they were in a risky position of loosing their jobs, which not prevent some of the guest-workers to stay on, but in a vulnerable position of prolonged unemployment.

[3] For convenience I define a 'crisis' as a period with falling employment. This means that Europe as a whole might be 'out of crisis' during the year 2014, when employment starts to pick up. One could also define that the 'crisis' is going on as long as unemployment is staggering around a level far above any reasonable definition of 'structural unemployment'. In the latter case it would mean that the crises in Southern Europe would at the best drag on for another

Hence in figure 2 we see that the labour market can create employment, when jobs are there. Until 2008 it was are unlikely that the number of people being employed should fall at all. And if it happened it would only last for a single year. On the other hand we also see that in periods where the creation of jobs is strong, there has even been a fall in unemployment below 9 percent. Unfortunately, these periods with substantial increase in jobs and employment have been short and rare. Anyhow, the argument that unemployment has a structural level of 9 percent cannot really been given qualified support. We have to look at the demand side of the economy and the factors behind the development in productivity.

Some basic principles within macroeconomics

The model is kept within the Post-Keynesian tradition. Here, the dynamic force is characterized as the principle of effective demand. As we know from *the General Theory* effective demand is not just a simple concept determined by aggregate demand. It is a complex analytical concept, which includes a number of components on the demand side (real investment), on the supply side (productivity and organization of labour market, 'normal' unemployment) in combination with financial institutions, Jespersen, 2013.

In this short paper we have to make a number of short-cuts to keep the argument simple. I am looking for the primary driving forces and constraints in the EU considered as a whole. Exogenous demand components are important. Here economic policy and productivity also play important roles. On the other hand foreign trade has until now been close to show a balance with the world outside EU; but inside EU, especially inside the euro-zone, a number of countries have substantial imbalances: Germany and The Netherland are running huge balance of payments surpluses, whereas the Southern Periphery countries have until recently taken the counterpart deficit. Due to the unprecedentedly deep recession in these countries, the euro-zone is for the time being running an overall surplus of approximate 2 percent of GDP. Private banks in Europe seem little by little to have consolidated their books; for that to happen ECB has been very helpful setting the lending rate at next to nil, and at the same time accepting government bonds – also from the Southern periphery – as collateral.

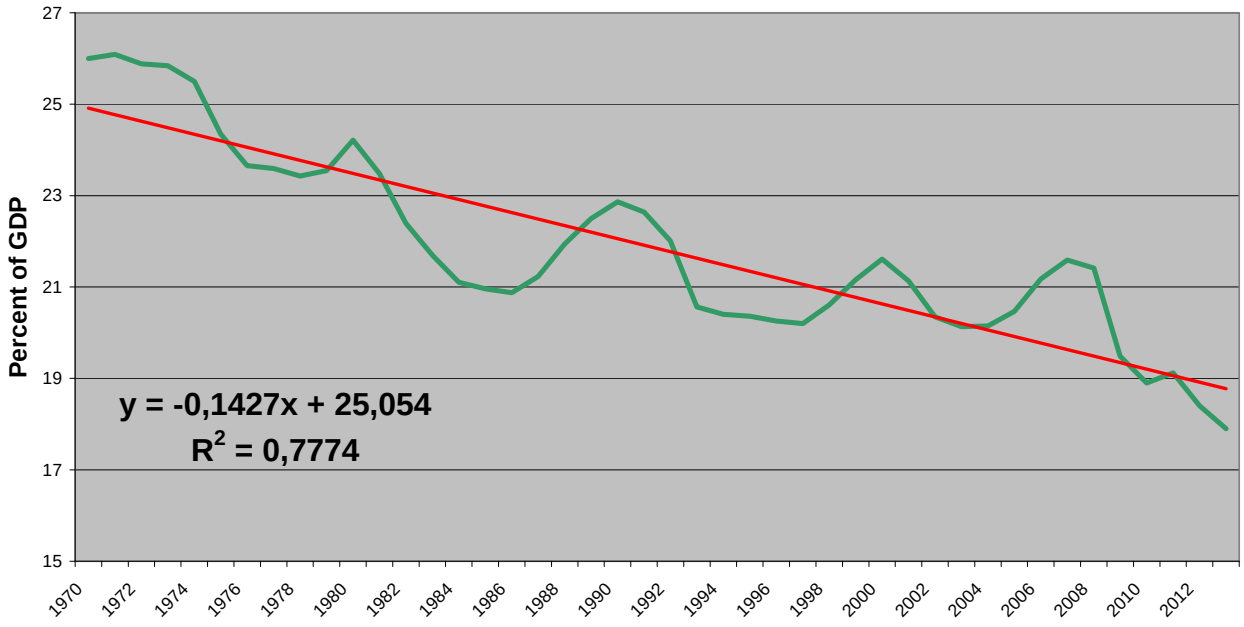
On the supply side the available amount of real capital, the size of the labour force and especially the development in productivity is of crucial importance. We have already seen how the macroeconomic development has underperformed with regard to unemployment. Although employment has gone up nearly each year until 2008, the job creation has lagged behind the supply of labour – causing unemployment to raise, cf. above.[4]

Figure 3

10 years, which is hardly a relevant definition for a 'crisis', which in the ordinary use of the word has an affiliation to acuteness. Hence, Europe is rather in a state of long term stagnation.

[4] This is just one of many empirical evidences that Say's law has hardly any empirical support.

Euro(15): Real Investment/GDP, 1970-2013



Source: OECD, Economic Outlook, no.90 & 92

These observations beg at least two questions: What determines unemployment and real investment, and how are they interrelation?

In this paper I will not investigate the development in the supply of labour – whether it is only demography, or incentives and demand for labour (job creation) also plays a role here. I leave that for another time. On the other hand I will take up the implication for public finances of rising unemployment and increased excess (financial) savings in the private sector. The paper will focus on the macroeconomic causality running from the imbalance in the private sector to the public sector financial imbalance. As we know, in a *closed* economic system the statistics of these two sectors are like Siamese twins – inseparable. If the budget deficit increases it must by definition be mirrored in a euro-to-euro increase in the financial surplus of the private sector: financial savings exceeding real investments. But, and that is an important 'but', the causality behind these identical numerical changes in the twinned sector balances cannot be detected directly from the numbers, because they are identical by definition (in a closed system). Therefore, one has to be rather cautious within the macroeconomic argument to detect where to find the cause of changing balances – *in casu* is the rising public sector deficit an effect or a cause? The causal factor could be an increased excess saving in the private sector often exposed by a lower level of real capital investments, it could be an excessive fiscal policy or both.

To get a picture of the dynamics of European macroeconomics I started by looking at how the fixed capital investment ratio, i.e. the share of GDP has developed within the last 40-50 years. The figure came to me as a real eye-opener. Look at figure 3 and you will see a falling rate from early 1970s (26 pct. of GDP) until the present day's low level of only 18 pct. of GDP. The ratio has fallen by nearly one third during this period, which must have had a significant impact on the macroeconomic dynamics of Europe. One should also observe that this falling rate of investment started long before the euro was introduced to Continental Europe.

My hypotheses, which will be developed in the paper is, that the European imbalances, the reduced growth rates and the unemployment crisis to a large extend can be

explained by this falling ratio of real investment. As we shall see the magnitude of R^2 within a simple regression between real investment and growth in labour productivity is close to 0,8 and even more impressive and thought provoking it is that R^2 is as large as 0.9 with regard to unemployment.

Hence, the falling rate of real investment seems to have had a number of negative effects on the macroeconomic performance. Not only more unemployment; but also lower increases in productivity making the potential GDP grow more slowly than it otherwise could have done. If the economic policies had been more directed to productive real investment during the period 1974-2013 the macroeconomic landscape of Europe could have been more healthy even with regard to public finances. One should keep in mind the fundamental relationship between public sector budget balance and the private sector's balance i.e. between savings and real investment. The smaller this imbalance is in the private sector, the equally smaller the public sector imbalance has to be! Hence, one could argue that increased private excess savings combined with growing unemployment are (some of) the main causes for the public sector financial imbalance.

The figure 4 below should at this stage of the analysis only be considered as a surveillance of the macroeconomic landscape to get inspiration for further research according to the procedure described in Jespersen, 2009. How can it be that real investment ratio and unemployment are so apparently highly correlated?

One obvious answer is growth in GDP, because both variables are, of course, closely related to the development in real GDP; but the causality is somewhat blurred when the relationship between investment ratio and labour productivity is added. We need a model to solve out this conundrum.

Figure 4

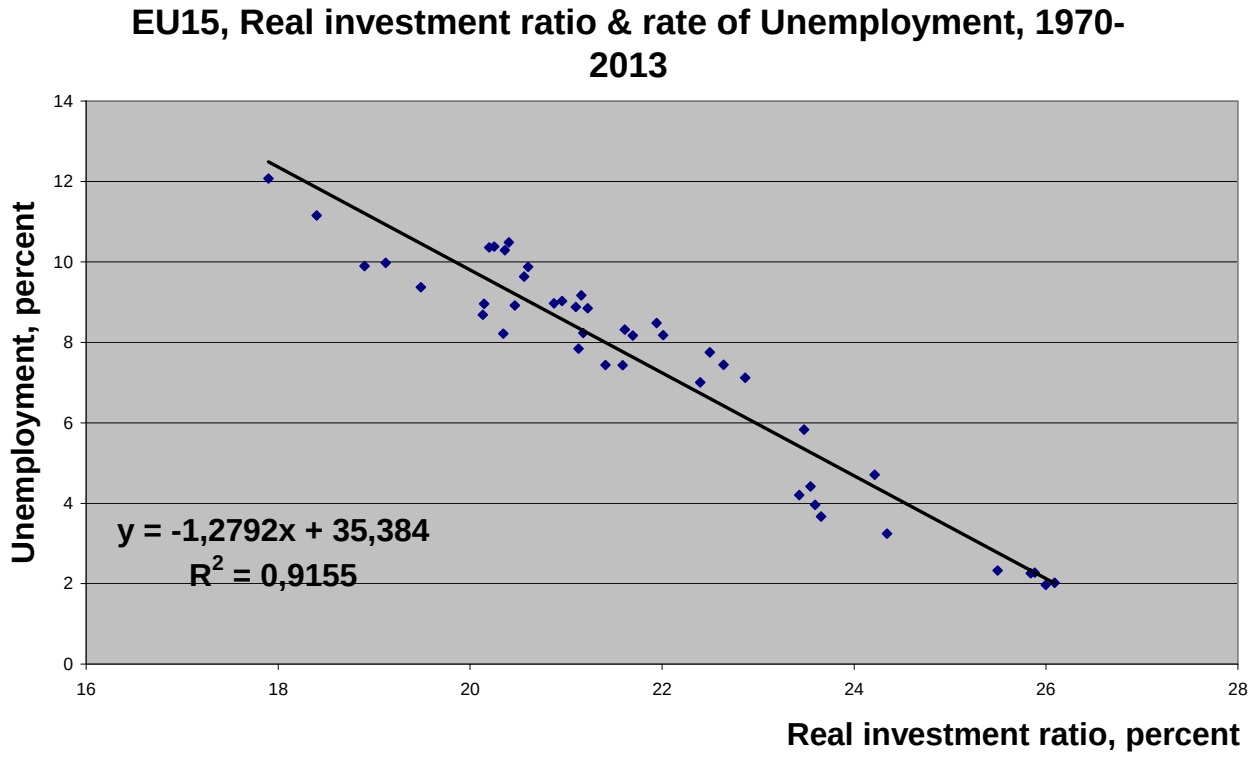


Table 1. Investment ratio and labour productivity, 6 business cycles

	1960-1967	1967-74	1974-1980	1980-1992	1992-2008	2008-2013	Correlation
Investment/GDP ratio	24,1	25,78	24,04	22,14	20,80	19,20	
Increased labour productivity, pct. p.a.	4,77	5,00	2,23	1,76	0,98	0,67	0,89

There seems to be a break in the data-serie after the 'oil-crisis' in mid-1970s. Looking at the after 1974 period the coefficient relating productivity increases to the real investment ratio is halved – only 0,34 see diagram below. The interpretation of this coefficient is, that increasing the investment ratio by 1 percentage point would – ceteris paribus – lift the labour productivity by 0,34 percentage point. It does not sound of very much, but the accumulative effect over 40 years 1974-2013 is astonishing large measured by the size of the development in the *potential* GDP.

Real investment, economic growth, unemployment & productivity[5]

Within the macroeconomic 'landscape' in front of us we have detected three significant empirical relations, where real fixed investment as a share of GDP for Euro(15) is involved:

1. Share of real investment and GDP growth rate
2. Share of real investment and rate of unemployment
3. Share of real investment and increases of labour GDP-productivity

Next step is to develop a macroeconomic structure to make it possible to undertake an organized thinking of these empirical relationships.

A falling rate of investment has dynamic effects for potential supply of output and for demand for output, employment and public finances. For readers who insist on a mathematical presentation of the model, there is a sketch below, which can be skipped by readers who are satisfied by a more intuitive explanation (they should leave the equations aside).

Box 1. Sketch of a dynamic model explaining causal relationships between real investment, output, productivity, employment and public finance.

1. *potential* output Yp = productivity * (labour force ÷ 'normal' rate of unemployment)
2. Δ (labour)productivity = f (I/Ya)
   where, I - real fixed investment can be divided into Ip(private) + Io (public)
   Ya – actual GDP

[5] Disclaimer: these data relates to the past. My project is the find out what could have caused the macroeconomic development in front of us. To what extent these findings might be relevant for the future development in Europe, I shall discuss at the end of the paper.

Δ - change (percentage/ percentage points/ level – depends on the variable and context)

3. demand for output, Yd = effective demand

4. Δ Yd = Δ effective demand ≈ multiplier * Δ (I+G/Ya); (a closed economy approach)
   + Δ (labour)productivity * W/Ya (change in consumption due to real wage increases) + 'Uncertainty'
   where, G – public sector financed consumption
   W/Ya – wage share, (a proxy for private consumption)

(Intuition: 'effective demand' is, what the business sector (plus public sector) plan to produce based on expectations related to an uncertain future: 'exogenous' demand, productivity derived demand + all the things we do not and cannot know about the future).

5. Ya is equal to the smallest of Yp and Yd, (usually Yd)

6. EMPL = Ya/(labour)productivity
   where, EMPL – employment

7. UNPL = Labour force ÷ EMPL (unemployment)

8. 'Normal' employment = Labour force **÷ 'normal' unemployment**

(Intuition: The 'normal' or 'possible' level of unemployment is a congested concept, which cannot be separated from the historical context. Further, it is in a number of respects different from the Friedmanite concept of 'natural rate of unemployment', because it is not realized as a natural outcome of the market (self)adjustment process) does not come by itself.

9. Δ (Public sector balance/Ya) = **÷ (**automatic budget stabilizer * Δ UNPL) + tax * Δ EMPL ÷Δ(G + Io)
   Watch out, Δ public sector net financial savings ≡ Δ private sector financial wealth
   (= Δ [(Ya – C-TAX) ÷Ip] + (balance of payments, current account deficit)

The implication of the model

Within this closed economy model (Euro(15)) the real investments (public or private) are the dynamically exogenous force(s)[6]. They are not explained within the model, because I will investigate the implications of making the level of the real investment ratio a target for economic policy, where public investments are supposed to fulfil a gap[7] between private investments and private savings.

Real investments have an expansionary effect for (at least) three reasons 1) demand side expansion determined by the size of the income multiplier, 2) increased labour productivity spills (often) over into higher real wage and further on into private consumption and 3) more private investment means more real wealth, which makes society richer and may increase private consumption. On the other hand increased productivity may cause higher

[6] I leave for another time to incorporate the endogenous elements of private real investment.
[7] Monetary policy could play a significant role, if it were conducted with smaller consideration to development in inflation.

unemployment, if demand is not expanded equally fast. In this case there is a negative impact on the public budget due to increased spending on social security. In all cases unemployment goes up, if productivity expands more quickly than the effective demand for labour.

In such cases higher unemployment may originate from an imbalance in the private sector, when financial savings exceed real investment and productivity is still rising. The derived public sector deficit cannot be closed by austerity policy. But, even in cases, where private savings and private investments are equal and the public sector budget is balance there could still be unemployment, if private real investments are too small to secure 'normal' level of employment.

Hence, as long as unemployment is high in Europe the policies should be directed towards how to increase real investments ratio. Here, we are in need for a thorough investigation of what factors determine real and productive private investments. But even more important the European politicians could start being respectful to their own decisions on 'the future of Europe: what society do we want for our selves, our children and grandchildren' and suggest an investment policy in accordance we these expressed intentions. Seemingly, a sustainable society does not come by itself: Education, research, private and public savings & investments and social structures have to be guided towards a prosperous future. I leave this for another paper.

How to solve European Employment, Debt and Growth crises?

Following the above arguments, there is a straight forward solution of the European employment, debt and growth crises which is a *higher rate of investment* (private and public).

Using my very rough calculations of the relationship between investment, productivity, growth and unemployment it is possible to make a calculation of the longer term consequences of *an increase in the investment ratio from 19 percent to 24 percent of GDP*.

Table 2. Calculated consequences of an increase in the investment ratio of 5 pct. point.

	Present situation, average of 2008-2013:	'La Futura' 2025?
1. Unemployment rate, pct	10,5 pct.	(10,5-6,4) = **4,1 pct**.
2. Average Growth in GDP, pct. p.a.	-0,1 pct. p.a.	(-0,1+2,7) = **2,6 pct**.
3. Growth of Labour productivity, pct. p.a.	0,7 pct. p.a.	(0,7+ 1,7) = **2,4 pct.**

Where do the numbers come from?

1. Reduction of Unemployment: 1,28 pct. * 5 pp = 6,4 pct. point (figure 4)
2. Increased growth rate of GDP: 0,54 pct. * 5 pp = 2,7 pct. p.a. (figure 8)
3. Growth of Labour productivity: 0,34 pct.* 5 pp = 1,7 pct. p.a. (figure 9)

The cost of falling rate of investment (Euro-15): lower growth in productivity and higher unemployment

It was demonstrated above that the rate of investment has been on a falling trend ever since 1973. Within the model this has caused raising unemployment and much lower increases in productivity than the previous period. One can make a calculation of what potential GDP

could have been, if the rate of investment had stayed at the pre oil crisis level[8]. the 'loss of potential GDP

Table 3. Calculation of the 'missing productivity' due to lower rate of investment

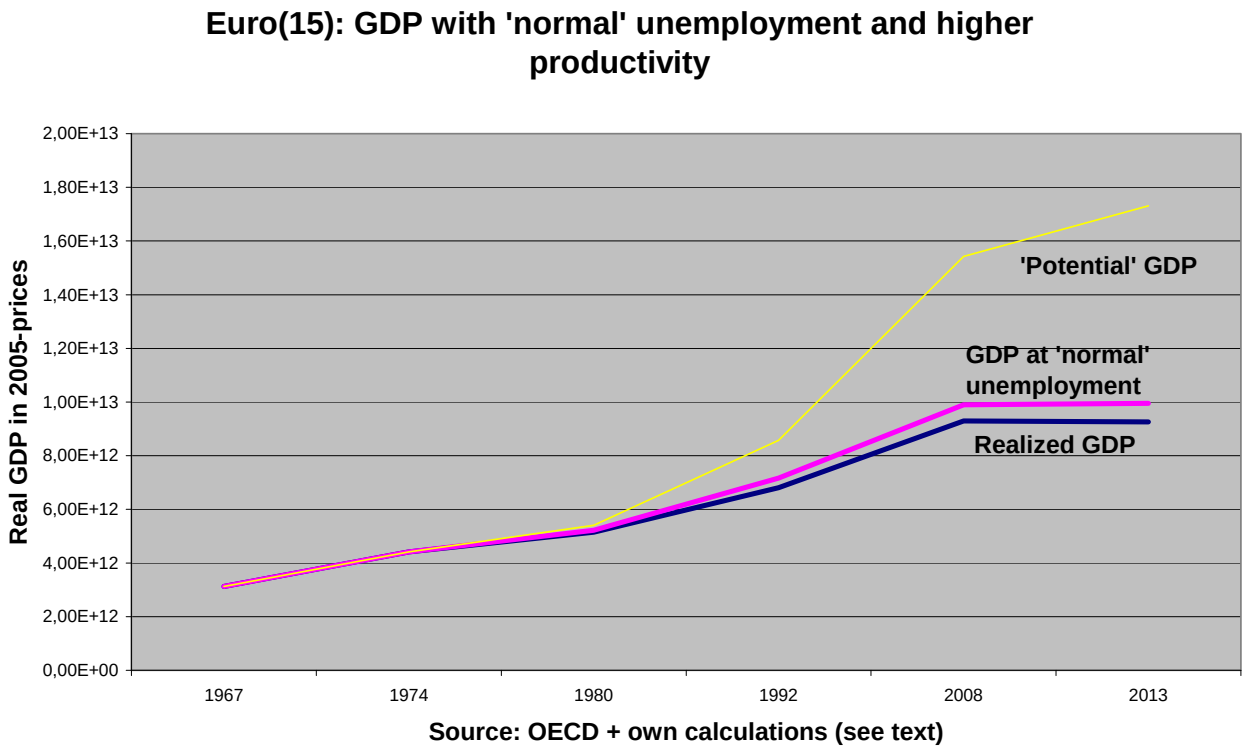
	1974-80	1980-92	1992-2008	2008-2013
a. Investment gap, percent point	1,74	3,63	4,99	6,58
b. missing productivity, pct. p.a.	0,59	1,24	1,70	2,24
'Missing productivity':	1,74*0,343	3,63*0,343	4,99*0,343	6,58*0,343

(Intuition: the 'investment gap' is calculated as the difference between the investment ratio in the most prosperous period 1967-74: 25.8 pp and the investment ratio in each of the sub-periods, for instance 1974-80: 25,78 - 24,04 = 1,74. The calculation of 'Missing productivity' is based on the productivity coefficient of 0,343 pct. per unit of change in the investment ratio, figure 9 in appendix.

If the investment ratio had been kept by an active investment policy at its pre-oil crisis level of 25,78, one could argue that productivity would have been substantially higher, which would have had a significant impact on *potential* output.

Figure 5

[8] In many ways it is paradoxically that the rate of investment did fall in the wake of the oil price shock. One would have expected that society – in this case – would need more investments to make the required restructuring of the economy to higher (and increasing) energy costs (and balance of payments deficit). Why did this not happen?



In the figure above we see, that forty years of lower real investment has really made an impact on productivity and by that on potential output. But, the impact of GDP of reducing unemployment to 2½ percent ('normal' level in the 1950s and 1960s) is in this perspective much smaller. Off course, with regard to well-being one should not confuse the two different phenomena of social well-being: unemployment is concentrated on a few numbers, whereas increased productivity can be spread out via the welfare state. Distribution is mainly a political concern less an economic outcome. With regard to the use of potential output the question has been raised by Skidelsky & Skidelsky: *How much is enough?* Their concern is conventional private consumption, which could easily be saturated making a negative impact on wellbeing when working condition and environmental issues are added.

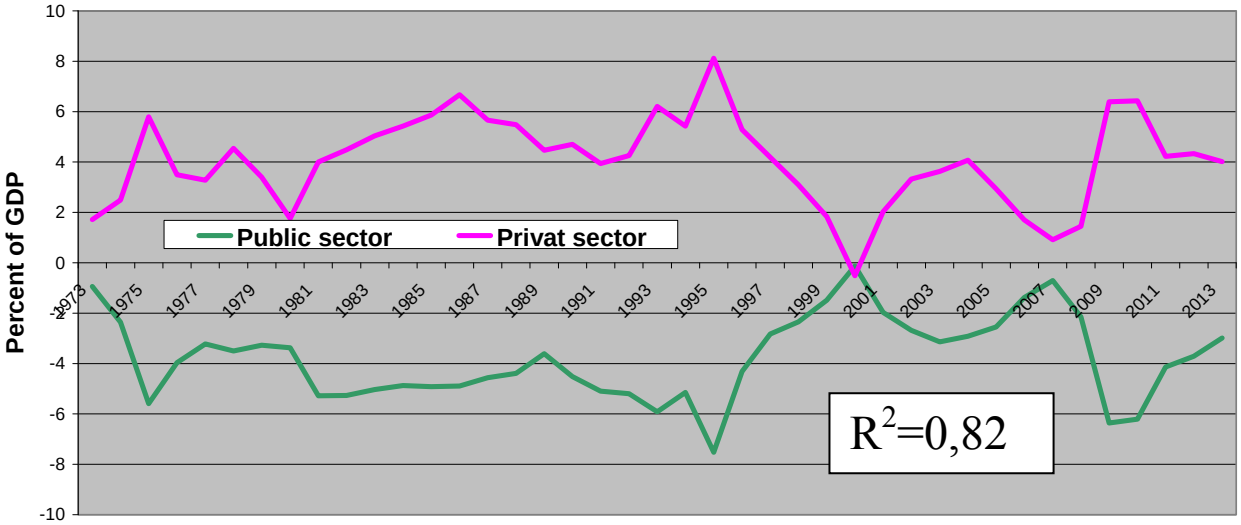
Getting causality right: Private investments ➔ employment ➔ public budget deficit

Countries with decreasing private real investments have experienced excess private financial savings causing higher unemployment and a public sector deficit. Automatic budget stabilizers secure that the financial surplus in the private sector is immediately (partly) mirrored in a deficit in the public sector. In some countries (among other Germany) the private surplus has its major counterpart in a rising balance of payments surplus. But for Europe as a whole, which is pretty much a closed economy, one finds a near one-to-one relationship between the private sector financial surplus and the public sector deficit. One direction of causality runs from lower private investment via increased unemployment to a deterioration of the public sector's budget

Figure 6

EU(15): Getting causality right!

Private Sector surplus <==> Public Sector Deficit?



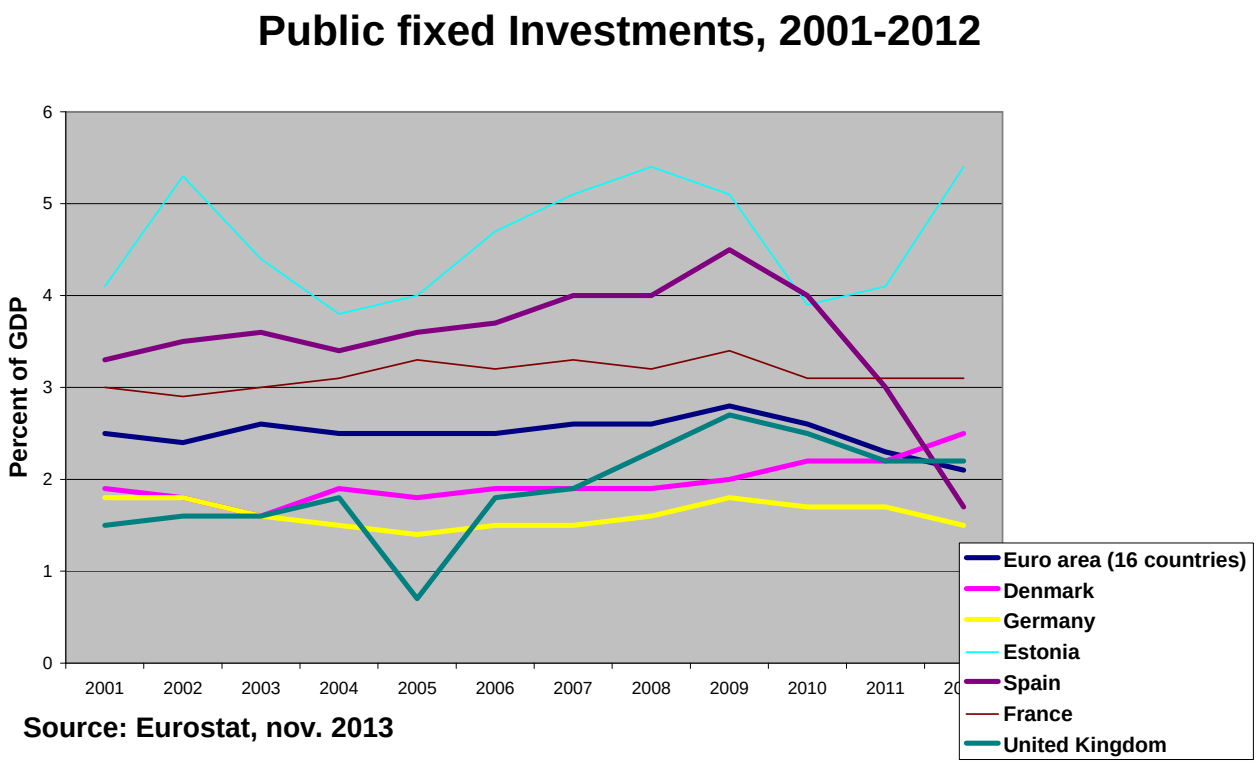
Source:OECD, Economic Outlook, no. 90 & 93

Another chain of causality runs reversely from austerity policy (cuts in public expenditures and tax rates increases) via higher unemployment to a reduction in public sector deficit; but it also reduces productivity due to lower GDP. This causal mechanism is weaker, in the short run, because of higher unemployment activate counterpoising social expenditures and tax shortfalls and in the longer run due to lower productivity for a number of reasons. Austerity policy may have a negative impact on private investment. The latter effect is a serious concern, because the public sector budget will only improve, if the financial excess savings in the private sector is reduced (that private savings are reduce more than private investment is reduce) – as long as the balance of payments is unchanged.

Although this private/public sector imbalances and mutual interrelationship is apparent in reality, see figure 6, they are not present in conventional general equilibrium models used by most economists advising governments in EU-countries and in Bruxelles. The analysis of a reduction of a public sector deficit is within these models conducted by considering the public sector budget balance as an exogenous variable, which can be changes in isolation from the labour market, and the private sector balance adjusts passively. Within those models public investments are not seen as a policy instrument, which can counterbalance a shortfall in private investment. Contrary to this view, public investment is in competition with private investments in a given amount of savings. In general equilibrium models there is a high degree of 'crowding out', because private and public sector compete on a given amount of limited and scarce resources. In accordance to this modelling strategy of general equilibrium the private sector is self-adjusting. This lack of mutual interdependence between the private and public sector is, of course, the *raison d'être* behind the requirement within the European Stability Pact (now Fiscal Compact) that the public sector (inclusive public investment) should be in balance – except for minor (less than 3 percent of GDP) and temporary deviations due to unforeseeable exogenous shocks. Hence, within the Stability Pact public investment is not separated from public consumption although the impact on the growth process, in the real world, is highly different. The outcome of this ultimate requirement of public

sector budget balance has been a fall in public investments in most countries, see figure 7, because when austerity policy is undertaken, it is in practice much easier for a government under pressure to cut public investment than public consumption.

Figure 7



Source: Eurostat, nov. 2013

This lack of awareness of the important roles of public investment as a constructive complement to private investments is unfortunate for many reasons. Taking into consideration that the main cause of the present crisis is excess private financial savings, there is a lack of real investment project to absorb the excess of finance within the private sector. In this case private pensions fund would probably be more than happy to be asked to participate in the financial prospects of specific public investment projects. To make these projects even more attractive to pension funds the interest payments and instalments could be earmarked by earnings from these public projects, and if necessarily to have a government guarantee attached[9].

Conclusions

Europe (in this study represented by Euro(15)) has in the period 1970-2013 experienced a fall in the investment ratio from 25 pct. to 19 pct., unemployment has gone up from 2 pct. to 12 pct. We have seen business cycles during this period, but the trend is undeniable. The paper has search for explanations of this close statistical relationship with an R^2 of 0,9. During the paper we have discussed a number of causal links between real investments and (un)employment. We have detected three links. Firstly we have the well-known short run multiplier effect. Secondly,

[9] If public investments were exempted from the requirement of public sector budget balance, it would not be necessary to make all kind of circumventions by setting up private-public partnerships, which has a government guarantee attached, which is not counted as a public liability according to the Maastricht budget criteria.

we have seen that lower investment ratio causes the growth in labour productivity to be slower. This means that the impact of the fall in demand is softened, because productivity does not increase as fast as previously. Finally, the fall in private investment and the rise in private financial excess savings is mirrored in an equivalent public sector deficit, which following the rules of the Stability Pact has forced austerity policy upon Europe and reduced effective demand even further.

Falling rate of investment has made Europe poorer (less rich) than it otherwise would have been. The reduction in actual GDP compared to the potential GDP has been rather dramatic (figure 5). But, even worse it is that this reduction has been very unevenly distributed among the euro-countries – dependent on the 'euro-internal' balance of payments surpluses and deficit.

Taking the present low level of real investment into consideration it would be straight forward to expect that especially the surplus countries would undertake an expansionary policy with regard to public investments. This is not, in any case, what has happened where Germany of all euro-countries has the lowest level of public real investment as a share of GDP.

It is difficult to see how Europe shall be rescued from the dark and prolonged winter of depression and austerity policies as long as the mainstream economists and the politicians have got the causality between real investment and unemployment so wrongly.

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Appendix with some supplementary figures

Figure 8

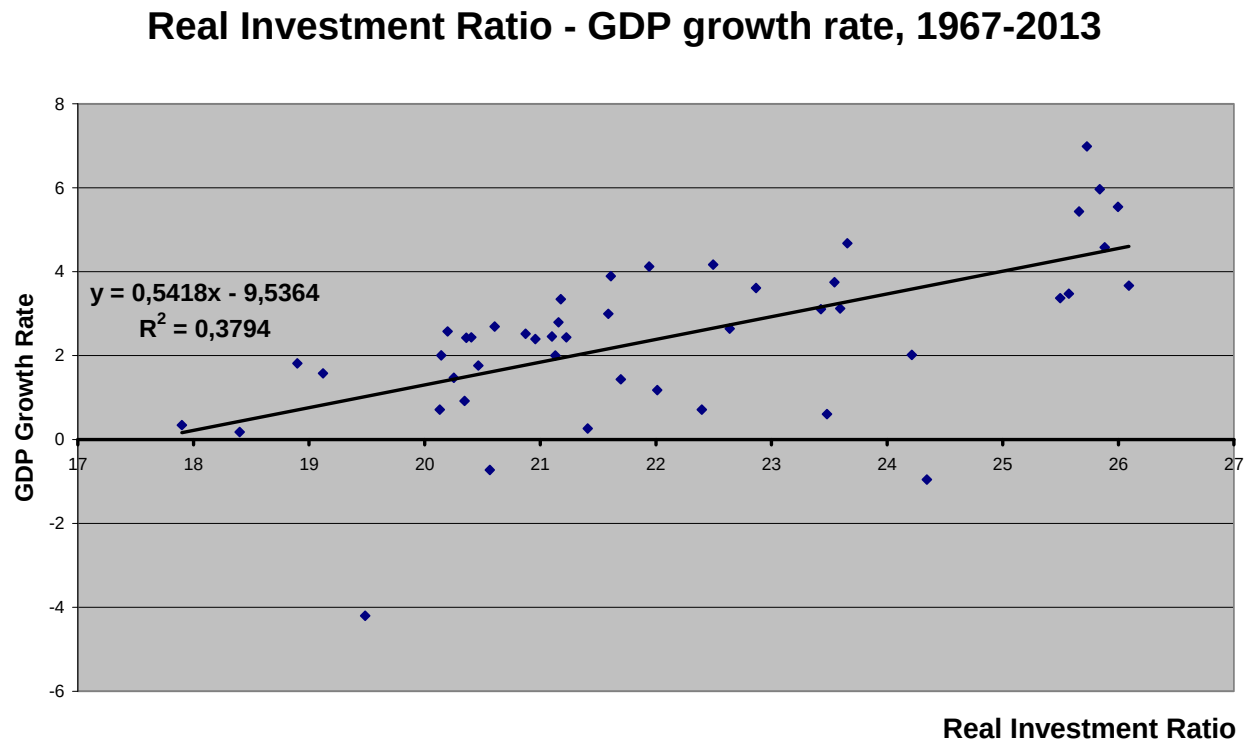

Real Investment Ratio - GDP growth rate, 1967-2013
y = 0,5418x - 9,5364
R2 = 0,3794
GDP Growth Rate
Real Investment Ratio
8
6
4
2
0
-2
-4
-6
17
18
19
20
21
22
23
24
25
26
27

Figure 9

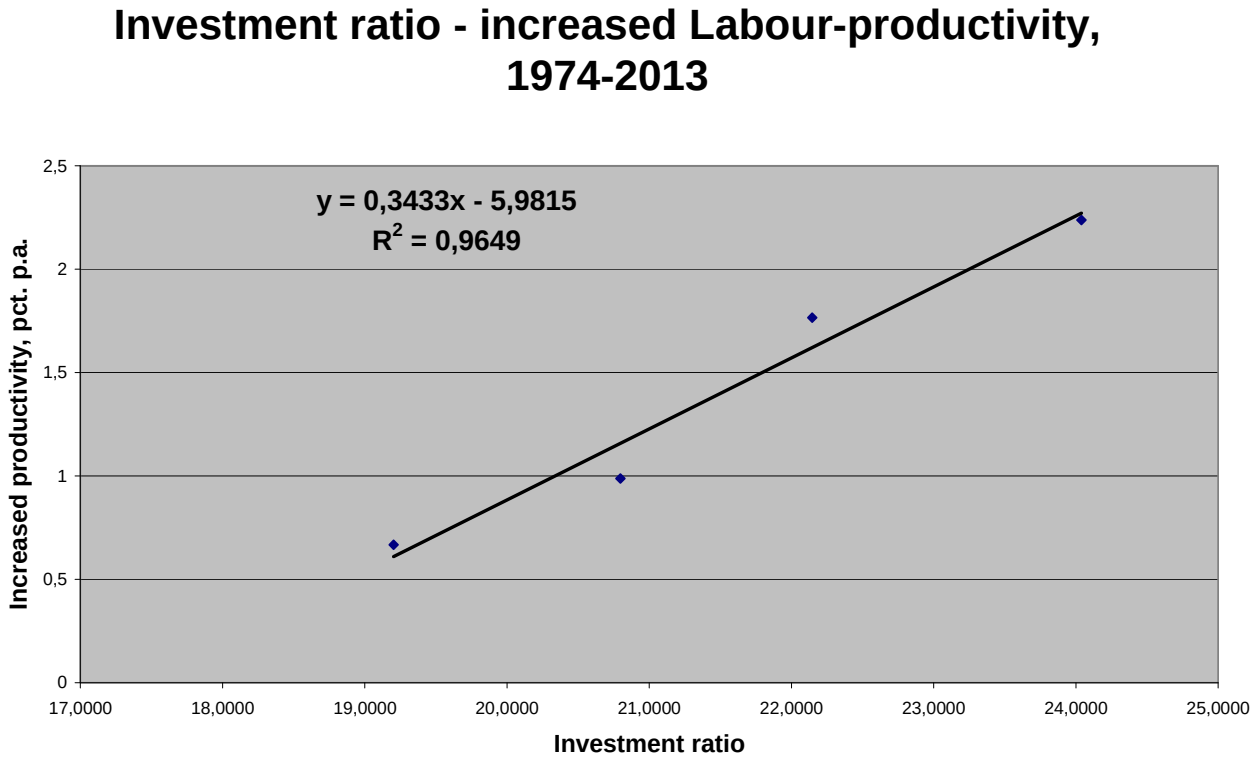
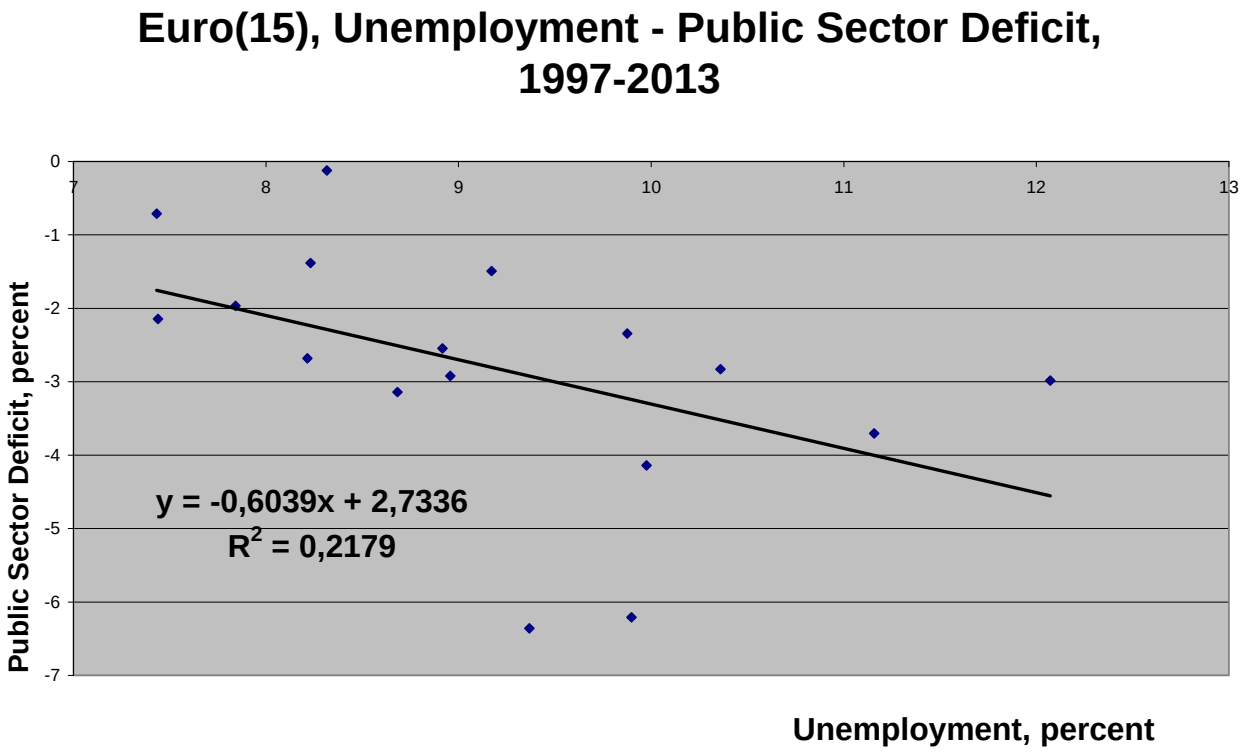

Investment ratio - increased Labour-productivity, 1974-2013
y = 0,3433x - 5,9815
R2 = 0,9649
Increased productivity, pct. p.a.
Investment ratio
2,5
2
1,5
1
0,5
0
17,0000
18,0000
19,0000
20,0000
21,0000
22,0000
23,0000
24,0000
25,0000

Figure 10


Euro(15), Unemployment - Public Sector Deficit, 1997-2013
Public Sector Deficit, percent
0
-1
-2
-3
-4
-5
-6
-7
7
8
9
10
11
12
13
y = -0,6039x + 2,7336
R2 = 0,2179
Unemployment, percent