

Austerity Policies and the EU Debt Crisis

by Jan-Erik Lane

The principle of austerity has been at the core of EU crisis management for some five years. However, it is contested both politically and economically. Examining budgetary data from 2007 to 2012, it can be observed that almost all Member States have been forced to raise their levels of public debt considerably. But there is a large variation across the countries examined in the overall changes of total expenditures and total revenues. This contribution detects four patterns of response to this growth of the debt ratio, including an enquiry into total debt in relation to GDP, economic growth per capita and the basic budget structure in both the Eurozone and all Member States. The evidence suggests that Member States have hardly improved on their respective positions. However, the following counter-factual proposition may still hold: without austerity policies, more countries could have fallen into the debt trap.

Seit etwa fünf Jahren spielt das Austeritätsprinzip eine zentrale Rolle im Krisenmanagement der EU, obwohl es sowohl von politischer als auch ökonomischer Seite kritisiert wird. Bei Betrachtung der Jahre 2007 bis 2012 fällt ins Auge, dass nahezu alle Mitgliedstaaten ihre Staatsschuld beträchtlich ausweiteten – allerdings bei stark divergierender Einnahmen- und Ausgabenstruktur. Der Beitrag identifiziert vier Reaktionsmuster, die sich innerhalb wie außerhalb der Eurozone mit der benannten Entwicklung verbanden, so am Beispiel des Verhältnisses von Gesamtschuld und Sozialprodukt, dem Pro-Kopf-Wirtschaftswachstum oder der grundlegenden Haushaltsstruktur. Die Datenlage dokumentiert, dass es den Mitgliedstaaten kaum gelang, ihre Position zu verbessern. Gleichwohl dürfte als kontrafaktische Hypothese gelten: Ohne Austeritätspolitik fänden sich heute noch mehr Staaten in der Schuldenfalle.

I. Introduction

The first major enquiry into how budget deficits and mountains of debt influence day-to-day politics was *White's* and *Wildavsky's* work "The Deficit and the Public Interest".¹ Today, the politics of the EU in general and the Eurozone in particular could not be understood unless the nature of budgeting as well as budgetary outcomes at various levels are recognized and taken into account.²

- 1 *White, J./Wildavsky, A.*: The deficit and the public interest: The search for responsible budgeting in the 1980s, Berkeley, 1991.
- 2 *Obinger, H./Wagschal, U.*: Social Expenditures and Revenues, in: Castles, F.G./Leibfried, S./Lewis, J./Obinger, H./Pierson, C. (eds.): The Oxford Handbook of Welfare States, Oxford, 2010, 333-352.

Austerity policies have now been in place in many EU Member States for some five years. There is no need to underline that the concept is contested. It is not only a matter of concern to people that live under the precarious life situation of humiliating poverty, but whole sections of the working and middle classes are also negatively affected. It is as if large parts of the population in several countries cannot count upon the promises made within the conception of the welfare state. Thus, one observes rising unemployment, the loss of entire labour market segments, expenditure cuts, tax increases, augmentation of charges, lowering of social security transfer payments, etc.

The austerity policies of EU Member States have been in place now for such a long period that they must affect the model of the European welfare state. As governments in Greece, Spain and Portugal can no longer afford to offer basic individual welfare protection, the life situation of many people has changed for the worse. Italy and France are developing in a similar direction, whereas Ireland seems to recover from its worst predicament.

To fully understand the debt trap that several of the EU countries have fallen into, one must closely examine the data on expenditures and revenues for the most recent years. This economic recession has been particularly severe, resulting from the private sector financial crisis in 2007-2008 and the Chinese supply shock. There has, furthermore, been much talk about a loss in competitiveness on the part of European countries or firms. Some commentators call for productivity enhancing reforms, which would somehow entail a transformation of the European welfare state. Others look upon the debt problem as convincing evidence to the effect that the Eurozone is far from an optimal currency area, especially given the present and sharp economic North-South divide.³

II. Theoretical Implications

The EU debt crisis has significant implications for at least the following social and economic theories:

- *Level of human development.* In countries that have fallen into the debt trap, austerity policies are at times so harsh that the poverty line has risen and entire segments of the population are faring badly; precariousness and voluntary assistance from the third sector – new key terms in social policy-making and the study of social outcomes – are on the rise in many Member States.⁴

3 *Feldstein, M.*: The Failure of the Euro, in: Foreign Affairs online, 13 December 2011.

4 *Wallis, J./Lane, J.-E.*: NPOs and CSOs: On the Nature of Leadership in New Service Delivery, in: mimeo, University of Sharjah, 2013.

- *The welfare state.* The European welfare state has been heavily transformed in several countries – both in the South (Spain, Portugal, Greece) and in the North (Sweden) – so that the classical *Esping-Anderson* 3-types-model is decreasingly applicable.⁵ Only the Swiss and Norwegian welfare states appear to remain fully intact. Governments cut back on services and introduce more and more business methods with charges for services.
- *Macro-economic policy-making.* It seems as if the classical models do not fit the EU debt crisis. The call for Keynesian policies of one kind or another appears too risky, as a country may fall into the debt trap where expenditure cuts or revenue increases only bring up the debt ratio. On the other hand, monetarism focussing single-mindedly upon the value of the Euro may have hindered an early exit followed by a sharp devaluation and debt forgiveness for Greece that would no doubt have been the best for all parties involved.
- *The global league of affluent countries.* The debt crisis is only a surface indication of the profound economic growth problematic in many EU countries, especially the Eurozone South. Globally, it has made it much easier for certain developing countries to “catch-up”. Only Northern countries are still economically dynamic, at least to some extent, whereas Southern countries have stagnated economically, including France.

III. Methodology

This contribution asks whether the austerity policies work in the sense of lowering or at least stabilising overall debt levels of a country. It will employ data from Eurostat, namely the Government Finance Statistics for 2007 to 2012. First, the methodology is stated, emphasizing the difference between absolute numbers and relative measures. To handle the huge numbers on GDP, public debt and characteristics of the individual budgets, the analysis will employ logarithms. A key problem with austerity policy is that it may have a negative impact on GDP, which might, in terms of the overall fiscal effect, lead to a cancellation of any expenditure cuts and tax increases. Austerity policy has one single objective, namely to reduce public debt. And the means to that end are cuts in public expenditures on the one hand and increases in public revenues on the other. Asking whether this policy is successful, one would have to look at numbers of debt, overall expenditures and total revenues. One may employ two kinds of data, absolute or relative (meaning using the GDP as the denominator).

It is very important to be aware of the difference between absolute and relative numbers. The GDP is affected by expenditures and revenues, which entails the

5 *Castles, F.G.* et al. (eds.), Handbook, op. cit., 2010.

possibility of absolute numbers falling while relative numbers rise. The focus is on the following aspects of the public household, employing logarithmic data (ln, cf. appendices I-IV):

- absolute changes in expenditures and revenues,
- absolute changes in debt,
- relative changes in debt, and
- affluence (GDP) and economic growth.

Austerity policies could be questioned, if changes in absolute numbers in key budget items – expenditures and revenues – fail to reduce overall debt in relation to GDP. The macroeconomic policy debate about the impact of austerity upon GDP and economic growth will not be brought up, even though it is an essentially contested topic among economists. Of course, Keynesian economists reject the austerity approach.⁶

IV. The Overall Picture

One may begin by analysing the entire picture for the EU. Is overall public debt going down, absolutely and relatively? Table 1 suggests a negative answer to this question. The background of the present call for austerity is demonstrated by the data. The overall debt level in the Eurozone has risen steadily during the first years in the 21st century, both absolutely and relatively. This is a major concern for bond markets, whatever macroeconomic school one may believe in.

Table 1: Overall debt in the EU and the Eurozone (absolute and relative to GDP)

	EU		Eurozone	
	Abs	Rel	Abs	Rel
2001	5.852.571,8	61,0	4.831.626,8	68,2
2007	7.319.787,6	59,0	5.994.511,6	66,4
2008	7.763.975,1	62,2	6.489.962,1	70,2
2009	8.765.652,4	74,6	7.136.526,1	80,0
2010	9.825.305,7	80,0	7.831.370,7	85,4
2011	10.435.932,0	82,5	8.225.806,9	87,3
2012	11.011.797,0	85,3	8.600.983,2	90,6

Source (all tables and figures): *Eurostat*: Government Finance Statistics, 2013.

6 *Krugman, P.*: End this depression now!, New York, 2012.

It can be asked: what has contributed the most to the changes in the absolute figures – the expenditure side or the revenue side? Table 2 provides relevant data. Recently and in some countries, the rise in total public expenditures has been halted and government revenues have risen. Despite these manifestations of austerity, the overall level of governmental debt has increased. This is a counter-argument to the entire approach of austerity, supporting the critique that it is somehow self-defeating. Thus, in the Eurozone total expenditures have stagnated and total revenues have increased, but overall debt has not been reduced.

Table 2: Overall levels of expenditures and revenues in the EU and the Eurozone

	EU				Eurozone			
	Expenditures		Revenues		Expenditures		Revenues	
	Abs	Rel	Abs	Rel	Abs	Rel	Abs	Rel
2001	4.423.599,5	46,2	4.277.926,8	44,6	3.344.617,4	47,2	3.204.558,7	45,2
2007	5.656.456,5	45,6	5.543.388,1	44,7	4.153.893,2	46,0	4.091.355,0	45,3
2008	5.875.008,3	47,1	5.571.678,6	44,7	4.357.029,1	47,1	4.159.952,8	45,0
2009	6.001.562,9	51,1	5.194.075,6	44,2	4.571.555,2	51,2	4.004.462,0	44,9
2010	6.216.983,9	50,6	5.415.344,8	44,1	4.677.351,9	51,0	4.108.378,5	44,8
2011	6.211.646,8	49,1	5.650.620,5	44,7	4.662.709,1	49,5	4.272.524,5	45,4
2012	6.377.282,6	49,4	5.862.844,0	45,4	4.738.235,0	49,9	4.386.481,0	46,2

V. The Debt Trap

Governments must conduct policies that prevent their countries from falling into the debt trap. This is a most painful predicament, as Greece has been experiencing for several years. Spain, Portugal and Ireland also know what the debt trap entails. France and Italy barely stay out of it. In the debt trap, the cost of borrowing becomes unsupportable, even in the short run.

The logic of the debt crisis is clearly documented in table 3. Expenditures still go up in most countries, revenues are stagnating or falling, governments must therefore resort to borrowing. And the cost of borrowing – interest payments – become one of the biggest items on the budget – if not *the* largest single cost item. No Member State has managed to reduce total debt.

In almost all countries, governments operate on the expenditure side where the increases are not matched by augmentations in taxes and charges. This is unsustainable in the long-run. Very few EU countries can show a reduction in expenditures and increase in revenues.

Table 3: Changes in Expenditures, Revenues and Debt 2012-2007 (ln)

<i>Area</i>	<i>Code</i>	<i>Expenditure Growth</i>	<i>Revenue Growth</i>	<i>Debt Growth</i>
European Union	EU27	1,04	0,49	3,55
Euro area	EA17	1,14	0,60	3,14
Belgium	BE	2,11	1,46	2,48
Bulgaria	BG	1,41	0,96	2,85
Czech Republic	CZ	1,98	1,24	5,20
Denmark	DK	2,00	0,59	5,15
Germany	DE	1,03	1,02	2,72
Estonia	EE	2,01	1,37	9,28
Ireland	IE	-0,09	-1,81	12,18
Greece	EL	0,01	-0,42	2,08
Spain	ES	1,55	-1,09	7,28
France	FR	1,29	0,97	3,60
Italy	IT	0,59	0,37	1,86
Cyprus	CY	2,00	0,03	4,35
Latvia	LV	0,62	0,41	13,50
Lithuania	LT	1,53	0,95	8,81
Luxembourg	LU	2,94	1,94	11,34
Hungary	HU	-0,53	0,04	1,29
Malta	MT	2,09	1,90	3,16
Netherlands	NL	1,35	0,60	4,35
Austria	AT	1,52	1,26	2,79
Poland	PL	1,79	1,34	3,39
Portugal	PT	0,37	-0,24	4,94
Romania	RO	0,04	0,01	10,60
Slovenia	SI	1,46	0,73	7,62
Slovakia	SK	3,09	2,49	7,16
Finland	FI	2,13	0,84	4,25
Sweden	SE	1,83	1,12	1,50
United Kingdom	UK	0,19	-0,45	6,00

VI. The Country-specific View: Four Policies

It is interesting to enquire into which countries have experienced this self-defeating aspect of the austerity policy, meaning that the overall debt level stays too high. Here we will look at a few of the countries in the Eurozone: Spain, Italy, France and Portugal, as well as compare them with a few countries outside the Eurozone: Hungary, Poland, Slovenia and Sweden. Is there any country

where governments have succeeded in the strategy of bringing down the overall debt level of the country by means of changes in expenditure and revenue?

Figure 1 sheds light on the policy choices for selected countries. Some governments still increase expenditures and revenues whereas other governments do the opposite. Only a few cut expenditures and increase revenues in order to hold down total debt.

A set of countries – Ireland (IE), Hungary (HU), Romania (RO), Greece (EL), the UK and Portugal (PT) – display almost zero change in expenditures while revenues tend to fall (figure 1). Most countries, however, have increased both revenues and expenditures. Only Spain is different: increasing expenditures but falling revenues, bringing the country close to the debt trap. No country displays decreases in debt by means of revenue increases (figure 2).

Most EU countries have increased their revenues – taxes and charges, but this has not been accompanied by any reduction in debt. There is further evidence in figure 3 concerning expenditure changes to the effect that the overall debt level is not reduced by means of the austerity policy, not even in countries where total expenditures are cut.

Figure 1: Austerity Policies: Expenditures and Revenues (ln)

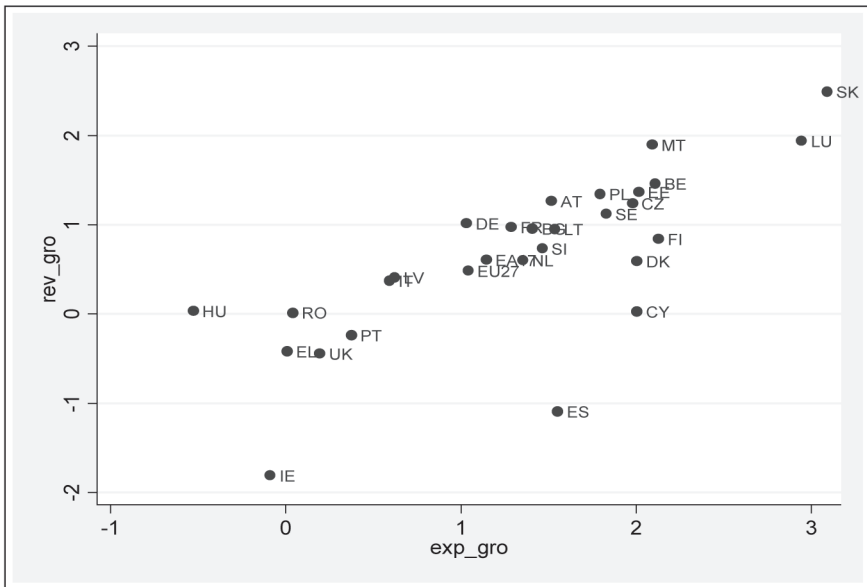


Figure 2: Changes in Revenues and Debt (ln)

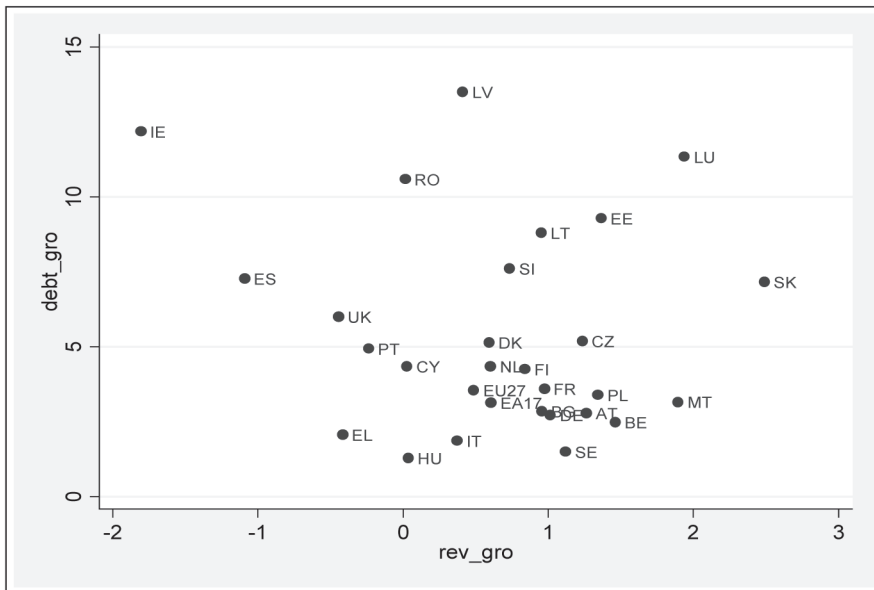
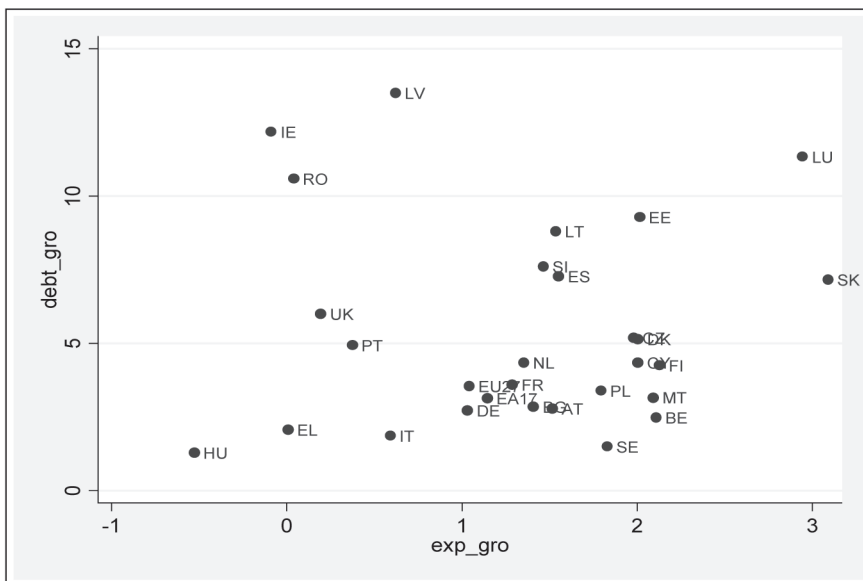


Figure 3: Changes in Expenditures and Debt (ln)



In general, there is much variation in the basic data for the public household – expenditures, revenues and total debt – among members of the EU. The numbers appear to be marginally better for countries outside the Eurozone, but some of them face debt difficulties, such as the UK. As a matter of fact, countries such as Luxembourg, Estonia and Slovakia have increased their expenditures quite considerably, but without any dynamic effects reducing the overall debt.

There is, thus, evidence from several EU countries to the effect that the overall debt level is not reduced by means of the austerity policy, not even in countries where total expenditures are cut. Take for instance the Southern European countries. The French debt level has risen, at the same time as taxes and charges have been increased considerably despite weak economic growth rates.

In order to make the austerity policy operational, governments cut the budgets with often painful consequences for the population. The reductions in public expenditures concern both allocative programs and social security. Thus, budgeting for health care and education has been reduced in several countries. Unemployment benefits and pensions have been lowered in some countries as well. This is very disadvantageous for ordinary citizens. It also calls into question the long-standing welfare state commitment of governments – this special European regime with a legacy of almost 100 years.

In some countries, the cuts in social expenditures have been so severe that broad groups in the population are facing social precariousness, at least relatively speaking. The social budget covers both allocation (education, health and social care) as well as transfer payments (pensions, unemployment benefits etc.). Cuts in both of them at the same time make life truly miserable for many people, especially in Greece, Spain and Portugal.

As regards the two basic strategic tools of the austerity approach, expenditure cuts and revenue increases, most Member States have resorted to increases in various taxes and charges. They may not be as painful as the expenditure reductions, as revenue increases target the entire economically active population, whereas expenditure cuts hit special groups, such as the unemployed and pensioners. Yet, increases in taxes and charges decrease disposable income.

Again, the welfare state commitments are called into question, since a basic idea in this political economy regime is that of securing a basic standard of living for all people. When revenue increases are combined with expenditure cuts, the promise of maintaining a certain basic living standard cannot be fulfilled.

VII. Affluence and Growth

A disturbing fact about the austerity approach in the EU is that debt levels are not falling. As a matter of fact, they keep increasing in several countries of the Eurozone. It is true that interest rates have come down, as financial markets appear to be calmed. However, the dynamic effect upon private sector investments is entirely lacking. The evidence shows that unemployment is rising in the Eurozone, thus further decreasing state revenues and increasing expenditures, making further reductions of the debt level particularly painful. The debt crisis is, furthermore, to a large extent a reflection of a profound growth problem in many European economies. Several countries display negative growth numbers or hover around zero (cf. table 4).

Table 4: Affluence: GDP and GDP Growth (ln)

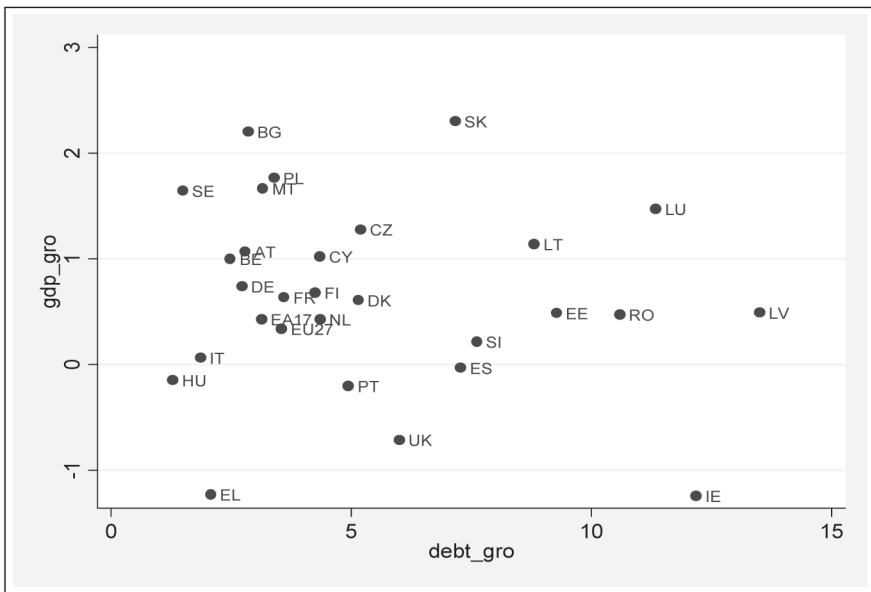
<i>Area</i>	<i>Code</i>	<i>ln gdp07</i>	<i>ln gdp12</i>	<i>growth</i>
European Union	EU27	7,09	7,11	0,34
Euro area	EA17	6,96	6,98	0,43
Belgium	BE	5,53	5,58	1,00
Bulgaria	BG	4,49	4,60	2,21
Czech Republic	CZ	5,12	5,18	1,28
Denmark	DK	5,36	5,39	0,61
Germany	DE	6,39	6,42	0,74
Estonia	EE	4,21	4,23	0,49
Ireland	IE	5,28	5,21	-1,24
Greece	EL	5,35	5,29	-1,23
Spain	ES	6,02	6,02	-0,03
France	FR	6,28	6,31	0,63
Italy	IT	6,19	6,19	0,07
Cyprus	CY	4,20	4,25	1,02
Latvia	LV	4,32	4,35	0,49
Lithuania	LT	4,46	4,52	1,14
Luxembourg	LU	4,57	4,65	1,47
Hungary	HU	5,00	4,99	-0,15
Malta	MT	3,75	3,83	1,67
Netherlands	NL	5,76	5,78	0,43
Austria	AT	5,44	5,49	1,07
Poland	PL	5,49	5,58	1,77
Portugal	PT	5,23	5,22	-0,20
Romania	RO	5,10	5,12	0,48
Slovenia	SI	4,54	4,55	0,22

Area	Code	ln gdp07	ln gdp12	growth
Slovakia	SK	4,74	4,85	2,30
Finland	FI	5,25	5,29	0,68
Sweden	SE	5,53	5,61	1,65
United Kingdom	UK	6,31	6,28	-0,71

The *North-South divide* in the EU⁷ characterizes the economic growth numbers for 2005-2012. Some countries in the North perform relatively well: Poland, Sweden, Finland, Luxembourg, Austria, Lithuania, the Czech Republic, Slovakia and Germany. Almost all countries in the South have stagnating or contracting economies, except Malta and Bulgaria. Ireland has performed badly, experiencing the hazard of the debt trap, which only lately hit Cyprus.

It is, however, not necessary to enter the macroeconomic controversy about the dynamic implications of debt reductions upon economic growth here.⁸ Figure 4 indicates that a few countries with reasonable economic growth enjoy lower rate

Figure 4: Changes in Debt and GDP (ln)



7 Hesse, J.J.: Die europäische Verschuldungskrise: eine dreifach unerledigte Agenda, in: ZSE 9/3 (2011).
 8 Reinhart, C.M./Rogoff, K.S.: Growth in a Time of Debt, NBER Working Paper No. 15639, Cambridge (MA), 2010; Herndon, T./Ash, M./Pollin, R.: Does high public debt consistently stifle economic growth? A critique of Reinhart and Rogoff, Amherst (MA), 2013.

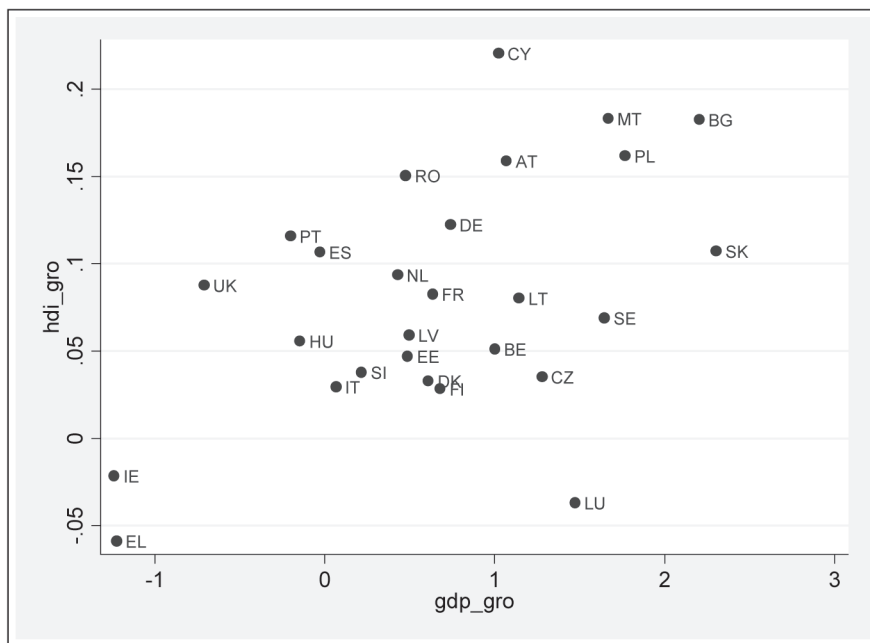
of debt increase and that only Slovakia combines high debt growth with strong economic growth.

When looking at the overall meagre economic growth rates in the EU, especially the Eurozone, one is reminded of the great French economist *Say's* proposition according to which supply creates demand. The overall consumption of EU citizens in several countries must have fallen during these years of austerity policies. The economic importance of Europe in the world economy is not what it used to be, as European governments look for the dynamic developments in the East and South Asian economies to strengthen demand in Europe.

VIII. Conclusion: “Creative Re-construction”

This contribution has asked whether the available statistical data show that the austerity approach works. The answer is: despite expenditure cuts and revenue increases, debt levels are not coming down. The futility of the austerity approach explains why several governments are now demanding some kind of policy change. However, the counter-factual statement could also be true, as things might have been even worse.

Figure 5: Changes in Debt and HDI (ln)



It is economic growth that is too low in the EU, especially the Eurozone. Stun-ningly, some EU member states have had their position reduced not only in the league of countries according to GDP per capita but also on the UN indicator of human development (HDI). Austerity policies may destroy a person's life situa-tion, although the global economic system is generally characterised by an im-mense increase in inequality – in both income and wealth.⁹

The EU countries are in need of re-industrialisation in order to regain competi-tiveness within the global markets. This can only come from vibrant private sectors, delivering high value-added goods and services. What governments can do is to make the allocative part of the public sector more efficient as well as transform the transfer payments part of the public sector (social security) with a view upon incentive compatibility.

It was the genius of young *Wildavsky* to make budgeting the basis of politics, as governments cannot do much without money. Without proper budgeting, there could be no stable policy-making and legislation.¹⁰ In his budgetary theory, he reserved the category of repetitive budgeting for Third World countries. Aston-ishingly, some EU countries now practice repetitive budgeting, involving fre-quent changes in policy programs, expenditure items and transfer payments, among them France.

The older *Wildavsky* concentrated upon culture and risk instead of budget-making, predicting the unstoppable growth of egalitarian value-orientations in the politics of advanced economies such as the EU.¹¹ Yet, the arrival of the aus-terity approach to budgeting has definitely strengthened individualistic values despite all protests from the social movements. When the state is forced to re-nege upon its welfare state promises, then people turn to the private sector to buy protection, i.e. insurance.

Returning briefly to the catch-up perspective upon global economic dynamism and the rapid changes in GDP as well as GDP per capita, one may understand the disappointment of French sociologist *Touraine* over general economic and spe-cific budgetary developments in the EU when measured by global indicators.¹² His own government is raising taxes and charges in repetitive budgeting *à la*

9 *Stiglitz, J.E.*: The price of inequality, New York, 2013.

10 *Wildavsky, A.B.*: Budgeting: A comparative theory of budgetary processes, New Brunswick, 1986.

11 *Wildavsky, A.B.*: The rise of radical egalitarianism, Washington, D.C., 1991.

12 *Touraine, A.*: Après la crise, Paris, 2013.

Wildavsky, while at the same time cutting expenditures in an anti-Keynesian fashion. *Touraine's* despair echoes *Ferguson's* projections of a major shift in the global centre of economic activities.¹³ Yet, the EU holds two key advantages that seem almost impossible to challenge, or at least unlikely to be matched very soon, namely:

- the firm institutionalisation of the rule of law in the sense of the World Bank's prescriptions¹⁴ that should entail a sound basis for creative reconstruction, following the teachings of the "Law and Economics" school¹⁵;
- a myriad of universities and colleges, from which free research could result in the innovations that propel economic development in *Schumpeterian* spirit.¹⁶

Appendix I: Public Finances (absolute, 000 €)

	<i>expenditure</i>	<i>expenditure</i>	<i>revenue</i>	<i>revenue</i>	<i>gross debt</i>	<i>gross debt</i>
<i>Area</i>	2007	2012	2007	2012	2007	2012
European Union (27)	5.656.456,5	6.377.282,6	5.543.388,1	5.862.844,0	7.319.787,6	11.011.797,0
Euro area (17)	4.153.893,2	4.738.235,0	4.091.355,0	4.386.481,0	5.994.511,6	8.600.983,2
Belgium	161.999,8	206.490,2	161.676,3	191.321,6	282.106,1	375.388,9
Bulgaria	12.061,1	14.180,7	12.418,3	13.861,7	5.296,9	7.357,7
Czech Republic	54.135,0	67.985,0	53.174,0	61.307,2	38.434,4	69.932,5
Denmark	115.600,0	145.583,8	126.519,6	135.453,5	61.667,4	111.574,2
Germany	1.056.760,0	1.189.880,0	1.062.300,0	1.194.080,0	1.583.660,9	2.166.278,4
Estonia	5.460,2	6.885,3	5.843,8	6.839,4	592,2	1.723,5
Ireland	69.539,4	68.832,4	69.678,2	56.592,7	47.338,7	192.460,6
Greece	105.998,0	106.084,0	90.914,0	86.662,0	239.300,0	303.918,0
Spain	412.963,0	493.660,0	433.209,0	382.044,0	382.307,0	883.873,0
France	992.618,8	1.151.123,0	940.719,9	1.052.321,0	1.211.563,0	1.833.810,0
Italy	740.269,0	792.504,0	715.564,0	746.837,0	1.605.126,4	1.988.658,0
Cyprus	6.572,1	8.277,5	7.128,4	7.150,2	9.307,3	15.349,5

13 *Ferguson, N.*: Civilization: The West and the rest, New York, 2012; *Ferguson, N.*: The great degeneration: How institutions decay and economies die, New York, 2013.

14 *Kaufmann, D./Kraay, A./Mastruzzi, M.*: Governance matters VIII: Aggregate and individual governance indicators 1996-2008, Washington, D.C., 2009.

15 *Cooter, R./Ulen, T.*: Law and economics, Boston, 2012.

16 *Schumpeter, J.*: Essays on entrepreneurs, innovations, business cycles, and the evolution of capitalism, New Brunswick, 1989.

	<i>expenditure</i>	<i>expenditure</i>	<i>revenue</i>	<i>revenue</i>	<i>gross debt</i>	<i>gross debt</i>
<i>Area</i>	2007	2012	2007	2012	2007	2012
Latvia	7.559,4	8.119,5	7.478,2	7.841,8	1.911,0	9.042,8
Lithuania	9.953,5	11.877,2	9.663,6	10.782,5	4.836,1	13.333,1
Luxembourg	13.596,5	19.082,1	14.976,9	18.723,1	2.502,0	9.232,2
Hungary	50.400,3	47.425,7	45.308,7	45.495,9	66.036,6	76.568,4
Malta	2.329,6	2.963,9	2.201,3	2.738,0	3.385,1	4.871,2
Netherlands	258.843,0	302.455,0	259.772,0	278.429,0	258.982,0	427.515,0
Austria	133.180,4	158.575,6	130.456,3	150.890,8	165.023,7	227.431,1
Poland	131.201,7	161.297,3	125.351,4	146.310,4	147.313,2	217.667,9
Portugal	75.112,7	78.418,6	69.673,6	67.794,2	115.786,4	204.485,0
Romania	47.690,7	47.905,1	44.058,1	44.132,7	14.763,0	49.997,0
Slovenia	14.680,8	17.377,0	14.664,9	15.959,3	7.980,9	19.189,4
Slovakia	18.750,9	26.757,6	17.756,5	23.650,7	16.324,9	37.244,5
Finland	85.219,0	108.869,0	94.820,0	104.448,0	63.225,0	103.131,0
Sweden	172.193,5	212.538,9	184.293,5	209.661,5	133.185,4	158.231,1
United Kingdom	901.768,1	922.134,3	843.767,7	801.515,7	851.832,0	1.700.080,9

Appendix II: Public Finances (€, logarithmic)

		<i>ln</i>	<i>ln</i>	<i>ln</i>	<i>ln</i>	<i>ln</i>	<i>ln</i>
<i>Area</i>	<i>Code</i>	<i>Expenditure 2007</i>	<i>Expenditure 2012</i>	<i>Revenue 2007</i>	<i>Revenue 2012</i>	<i>Gross Debt 2007</i>	<i>Gross Debt 2012</i>
European Union	EU27	6,752544	6,804636	6,743775	6,768108	6,864498	7,041858
Euro area	EA17	6,618455	6,675617	6,611867	6,642116	6,777754	6,934548
Belgium	BE	5,209514	5,314899	5,208646	5,281764	5,450412	5,574481
Bulgaria	BG	4,081387	4,151698	4,094062	4,141816	3,724022	3,866742
Czech Republic	CZ	4,733478	4,832413	4,725699	4,787511	4,58472	4,844679
Denmark	DK	5,062958	5,163113	5,102158	5,13179	4,790056	5,047564
Germany	DE	6,023976	6,075503	6,026247	6,077033	6,199662	6,335714
Estonia	EE	3,737209	3,837923	3,766695	3,835018	2,772468	3,236411
Ireland	IE	4,842231	4,837793	4,843097	4,75276	4,675216	5,284342
Greece	EL	5,025298	5,02565	4,958631	4,937829	5,378943	5,482756
Spain	ES	5,615911	5,693428	5,636697	5,582113	5,582412	5,94639
France	FR	5,996782	6,061122	5,97346	6,022148	6,083346	6,263354
Italy	IT	5,86939	5,899001	5,854648	5,873226	6,205509	6,29856
Cyprus	CY	3,817704	3,917899	3,852992	3,854318	3,968824	4,186094
Latvia	LV	3,878487	3,909529	3,873797	3,894416	3,281261	3,956303
Lithuania	LT	3,997976	4,074714	3,985139	4,032719	3,684495	4,124931

<i>Area</i>	<i>Code</i>	<i>ln</i> <i>Expendi-</i> <i>ture 2007</i>	<i>ln</i> <i>Expendi-</i> <i>ture 2012</i>	<i>ln</i> <i>Revenue</i> <i>2007</i>	<i>ln</i> <i>Revenue</i> <i>2012</i>	<i>ln</i> <i>Gross</i> <i>Debt 2007</i>	<i>ln</i> <i>Gross</i> <i>Debt 2012</i>
Luxembourg	LU	4,133427	4,280626	4,175422	4,272378	3,398287	3,965305
Hungary	HU	4,702433	4,676014	4,656182	4,657972	4,819785	4,88405
Malta	MT	3,367281	3,471864	3,342679	3,437433	3,529572	3,687636
Netherlands	NL	5,413036	5,480661	5,414592	5,444714	5,41327	5,630951
Austria	AT	5,12444	5,200236	5,115465	5,178663	5,217546	5,35685
Poland	PL	5,117939	5,207627	5,098129	5,165275	5,168242	5,337794
Portugal	PT	4,875713	4,894419	4,843068	4,831193	5,063658	5,310661
Romania	RO	4,678434	4,680382	4,644026	4,64476	4,169175	4,698944
Slovenia	SI	4,16675	4,239975	4,166279	4,203014	3,902052	4,283061
Slovakia	SK	4,273022	4,427447	4,249357	4,373844	4,212851	4,571062
Finland	FI	4,930536	5,036904	4,9769	5,0189	4,800889	5,013389
Sweden	SE	5,236017	5,327438	5,26551	5,321519	5,124457	5,199292
United Kingdom	UK	5,955095	5,964794	5,926223	5,903912	5,930354	6,23047

Appendix III: GDP per capita (€)

<i>Area</i>	<i>Code</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>	<i>2011</i>	<i>2012</i>
European Union	EU27	25.000	25.000	23.500	24.500	25.100	25.600
Euro area	EA17	27.600	28.100	27.000	27.700	28.300	28.500
Belgium	BE	31.600	32.299	31.600	32.700	33.700	34.100
Bulgaria	BG	4.000	4.600	4.600	4.800	5.200	5.400
Czech Republic	CZ	12.800	14.800	13.600	14.300	14.900	14.500
Denmark	DK	41.700	42.800	40.500	42.600	43.200	43.700
Germany	DE	29.500	30.100	29.000	30.500	31.700	32.299
Estonia	EE	12.000	12.100	10.300	10.700	11.900	12.700
Ireland	IE	42.900	39.800	35.500	34.300	35.200	35.600
Greece	EL	19.900	20.800	20.500	19.600	18.500	17.200
Spain	ES	23.500	23.900	22.800	22.800	23.100	22.700
France	FR	29.600	30.100	29.200	29.900	30.600	
Italy	IT	26.200	26.300	25.200	25.700	26.000	25.700
Cyprus	CY	20.700	21.800	20.900	21.000	21.100	20.500
Latvia	LV	9.600	10.500	8.600	8.600	9.800	10.900
Lithuania	LT	8.900	10.200	8.400	8.900	10.200	11.000
Luxembourg	LU	78.000	76.400	72.300	78.600	82.100	83.600

<i>Area</i>	<i>Code</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>	<i>2011</i>	<i>2012</i>
Hungary	HU	9.900	10.500	9.100	9.700	10.000	9.800
Malta	MT	13.600	14.500	14.400	15.200	15.700	16.100
Netherlands	NL	34.900	36.200	34.700	35.400	36.100	35.900
Austria	AT	33.000	33.900	33.000	34.100	35.700	36.600
Poland	PL	8.200	9.500	8.100	9.200	9.600	9.900
Portugal	PT	16.000	16.200	15.900	16.300	16.100	15.600
Romania	RO	5.800	6.500	5.500	5.800		
Slovenia	SI	17.100	18.400	17.400	17.400	17.600	17.200
Slovakia	SK	10.200	11.900	11.600	12.100	12.700	13.200
Finland	FI	34.000	34.900	32.299	33.300	35.200	35.900
Sweden	SE	36.900	36.100	31.500	37.300	41.000	42.900
United Kingdom	UK	33.800	29.500	25.500	27.500	27.800	30.100

Appendix IV: Total GDP (absolute numbers) and Debt Ratios

<i>Area</i>	<i>Code</i>	<i>2007 Total GDP (000 €)</i>	<i>2007 Debt Ratio (%)</i>	<i>2012 Total GDP (000 €)</i>	<i>2012 Debt Ratio (%)</i>
European Union	EU27	12.473.092,3	59,0	12.899.149,5	85,3
Euro area	EA17	902.9745,9	66,4	9.487.372,5	90,6
Belgium	BE	335.815,0	84,0	376.840,0	99,6
Bulgaria	BG	30.772,4	17,2	39.667,7	18,5
Czech Republic	CZ	131.908,6	27,9	152.828,0	45,8
Denmark	DK	227.533,9	27,1	244.063,7	45,8
Germany	DE	2.428.500,0	65,2	2.643.900,0	81,9
Estonia	EE	16.069,4	3,7	16.998,2	10,1
Ireland	IE	188.729,2	25,1	163.595,4	117,6
Greece	EL	223.160,1	107,4	193.749,0	156,9
Spain	ES	1.053.161,0	36,3	1.049.525,0	84,2
France	FR	1.886.792,1	64,2	2.029.877,4	90,2
Italy	IT	1.554.198,9	103,3	1.565.916,1	127,0
Cyprus	CY	15.901,5	58,8	17.886,8	85,8
Latvia	LV	21.026,5	9,0	22.258,0	40,7
Lithuania	LT	28.738,8	16,8	32.781,8	40,7
Luxembourg	LU	37.496,8	6,7	44.425,7	20,8
Hungary	HU	99.422,8	67,0	97.756,3	79,2
Malta	MT	5.575,4	61,9	6.755,9	72,1

<i>Area</i>	<i>Code</i>	<i>2007 Total GDP (000 €)</i>	<i>2007 Debt Ratio (%)</i>	<i>2012 Total GDP (000 €)</i>	<i>2012 Debt Ratio (%)</i>
Netherlands	NL	571.773,0	45,3	600.638,0	71,2
Austria	AT	274.019,8	60,2	309.900,9	73,4
Poland	PL	311.001,7	45,0	381.213,5	55,6
Portugal	PT	169.319,2	68,4	165.409,2	123,6
Romania	RO	124.728,5	12,8	131.747,0	37,8
Slovenia	SI	34.593,6	23,1	35.466,3	54,1
Slovakia	SK	54.810,8	29,6	71.463,0	52,1
Finland	FI	179.830,0	35,2	194.469,0	53,0
Sweden	SE	337.944,2	40,2	408.467,2	38,2
United Kingdom	UK	2.063.475,8	44,2	1.901.001,4	90,0