4. Critical approach to European austerity policies – A statistical analysis

Marcell Zoltán Végh – Klára Kazár

The Great Recession started in 2008 has induced a desperate crisis management procedure among the member states of the EU. Without sufficient common budget and legitimate common crisis management strategy, member states had to apply their own set of measures to moderate the economic and social effects of the crisis. Most member states suffered a W-shaped crisis, with a recession in 2008-2009, followed by a short period of stagnation or modest growth in 2010, and then in 2011, a second, more severe and prolonged relapse got started. Accordingly, the general phases of crisis management can be defined: firstly, anticyclical measures were dominant to restore the declining demand while, when the sovereign debt crisis burst out, restrictive policies and austerity became dominant.

The purpose of restrictive policies has been to restore confidence on the markets by setting a sustainable and credible government budget. It can be realized by increase of tax revenues or cuttings in government spending; although the first choice seems to be easier to realize, cuts in government spendings or the combination of both appears more effective. Moreover, balance-improving measures are often futile if not accompanied by adequate structural reforms. Austerity policies are frequently criticized because they strangle economic growth and disregard social sacrifices like unemployment or income inequalities. However, in times of such hectic trends in sovereign markets, for member states with massive levels of public debt austerity does not have a real alternative.

In our study, we aim to apply statistical analysis on austerity measures. As previous research suggests, too much austerity can be proven harmful for economic growth and impedes reaching pre-crisis levels of income. Our hypothesis is that member states applying the largest austerity packages recover more slowly than those applying moderate austerity. We collected our data from the AMECO database to examine the change in austerity measures and in recovery from the crisis for the EU-27 member states. We used variables such as the governments' total expenditures or social benefits to estimate the austerity measures; and the recovery from crisis was measured, among others, by the unemployment rate or by the gap between the actual and potential GDP. In our methodology, we examined the relations between austerity measures and recovery from crisis variables with the help of graphical and correlation analysis. Our study confirms our hypothesis and reveals additional information about fiscal consolidation.

Keywords: Great Recession, Eurozone crisis, economic policy, austerity policy, fiscal consolidation

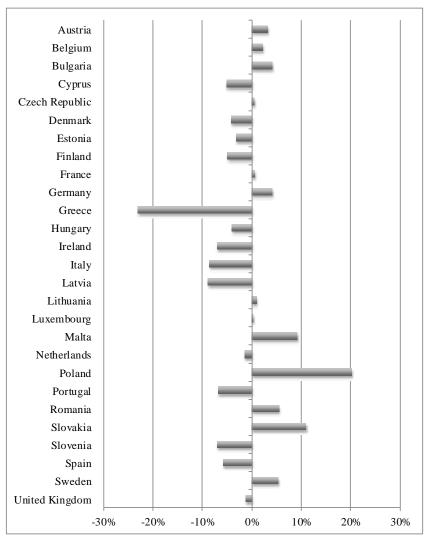
1. Introduction

After Europe's mostly prosperous decade, the Great Recession started in 2008 brought numerous years of recession in the economy of the European Union. Real gross domestic product of the EU-27 fell by 4.5% in 2009 and, although the general economic climate ameliorated in 2010-2011, the 2013 GDP at constant prices was still almost 1 percentage point below the 2007 level (AMECO 2014). Some member states suffered deeper recession; others were not seriously affected by the crisis, in terms of change in GDP (Figure 1). While the outlook of other economic regions (e.g. Japan and the US) looks brighter in early 2014, prospects of the EU-28 are still worrying (OECD 2013). While the sovereign default crisis seems to be over in Europe because of the moderation of sovereign bonds in the peripheral member states (Krugman 2014), the capability of resisting future crises seems unclear even if vast efforts have been made to strengthen the economic integration.

As stated earlier (Végh 2014), several EU-level attempts have been made to fight the early effects of the crisis but crisis management mostly remained as a member state competence. The reason for this lies in the small size of the common budget, which did not let the EU launch sufficient subsidy programs to restore aggregate demand in times of crisis (Wyplosz 2013). Common financial assets like the European Stability Mechanism basically could not decrease refinancing costs in the Eurozone. Moreover, the common monetary policy in the Eurozone has deprived its members of the option of generating inflation and performing currency devaluation (Krugman 2012, Dixon 2013) (Figure 2). This puts a different pressure on member states. Moreover, many member states have had to perform serious austerity measures to restore market confidence, especially where an EU-IMF intervention was realized. These austerity programs were often compelled and not well-founded and were mostly forced in a much criticized, 'one-size fits for all' method (Regan 2013).

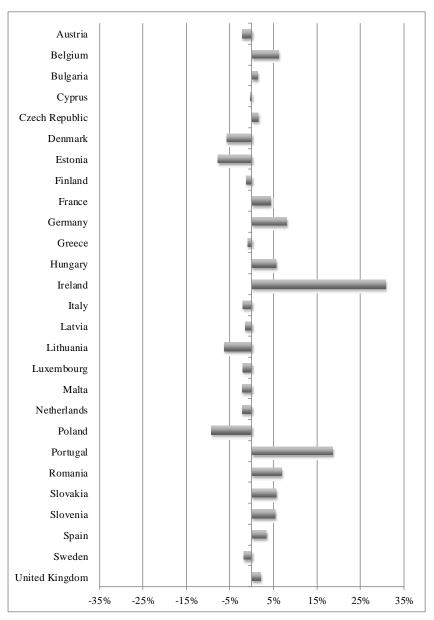
In this paper, our goal is to present critical arguments towards restrictive policies of the EU member states. We identify and examine indicators to measure their volume and compare them with economic performance indicators. To establish a connection between the two sets of variables, we use correlation analysis and cluster analysis.

Figure 1. Change in real GDP at constant prices of EU-27 (percentage, 2007-2013)



Source: AMECO Database

Figure 2. Net export of goods and services per current GDP of the EU-27 in 2010



Source: Ameco Database

2. Austerity policies in the EU

Comparison between economic policies of the EU member states can be trouble-some. As Corsetti et al. (2012) points out, not only measures at country level, but conditions at regional and global levels could also affect macroeconomic results of an applied economic policy. What's more, economic policy measures cannot be examined without international context as one country's measures could affect the other's economic performance. Nonetheless, we aim to grab the general characteristics of economic policy through a statistical analysis. We believe that a general deduction can be established in respect of austerity policies. However, we know that our analysis has its limitations.

2.1. Necessity of austerity

Before the Great Recession, the dominant economic framework was based on the faith of markets behaving rationally and in a self-correcting way, so market imperfections are unlikely. Policy-making emphasized the importance of good macroeconomic governance; the school of saltwater economics dominated economic thinking. As Lucas (2003) concluded, the problem of depression-prevention has been permanently solved by modern monetary policy. Unexpectedly, the Great Recession revealed that market failures do occur, that financial markets are not necessarily self-correcting and that investor rationality cannot be taken for granted (Masera 2010).

In the EU, first reactions to the crisis were underestimating the volume of the economic shock. Firstly, the European Commission launched demand-increasing and job creating programs, to which member states reacted by applying anti-cyclical economic policies (Pelle 2010). However, due to the unexpected economic shock and risk avoidance, the costs of the demand-restoring packages had been underestimated. Tax revenues dried up as well so, in 2009, governments had to face the unsustainability of public finances. This was accompanied by the continuous augmentation of refinancing costs and rise of country-specific risks. In 2010, Ireland and Greece had to request financial help from the International Monetary Fund.

Austerity can be an effective crisis management tool: if an economy's refinancing costs decline and a balanced fiscal position can be restored, reimbursement of government bonds and their interest can be guaranteed so escape of capital can be stopped and investments can rise again. According to the neo-Wicksellian equilibrium (Savings[Y] - NX = Δ Bond_holdings[i - π , ρ]), within the framework of the EU, member states' economies could only be boosted by reducing the riskiness of bonds as these economies were in a liquidity trap, making monetary policy ineffective

(DeLong–Summers 2012). Member states requesting financial help from the Troika (IMF, EU, ECB) of international lenders¹ had to apply subsequent austerity packages (IMF 2011, Seitz–Jost 2012). Policy-makers from well-performing member states (e.g. Germany) urged austerity as well (Schäuble 2011). On the other hand, countries realizing fiscal consolidation took the risk of slow economic growth, persistent unemployment and social tension. In spite of the current decrease of refinancing costs, some argue that fiscal consolidation has not brought much success. Some blame austerity measures to be the very reason for permanent economic slump. Furthermore, even the IMF has partially shifted emphasis towards the importance of fiscal multipliers and stimulation (Plumer 2012, IMF 2012). By 2012 it became clear that the high level of indebtedness has no real effect on economic performance (Panizza-Presbitero 2012) and the popular Reinhart-Rogoff argument was also proved to be wrong (Herndon et al. 2013).

Recently, the arguments against forced fiscal consolidation have strengthened, (Krugman 2012, Stiglitz 2014) as it worsens competitiveness (Bagaria et al. 2012), scrutinizes the so far achieved social standards (Pelle 2013) and, as a natural consequence, creates social resistance among voters. Even if so, for economies with high sovereign risk, austerity remains an important tool. The European financial framework in its current form is still rather rigid and the Stability and Growth Pact does not leave much space for financial stimulation for indebted member states.

2.2. Measurement and hypothesis

Knowing all these arguments, our goal was to find an answer to the following questions: Is there any correlation between the size of fiscal consolidation and the volume of economic relapse? Is it possible to make critical remarks the current economic framework of the EU, which demands continuous austerity from the member states? Has austerity proven harmful for the member states by resulting in several years of recession and longer recovery?

Accordingly, we define our hypothesis:

H: For the EU member states, the larger the size of austerity, the longer the period of recovery from the current recession.

In our statistical analysis, we use data from the AMECO database for the 2007-2013 period. The basic unit of our analysis is a member state of the EU-27. We use data from 2007 as a reference point as it is regarded as the last full year pre-

¹ Ireland, Greece, Hungary, Romania, Cyprus, Latvia, Portugal.

ceding the crisis. For describing the current economic situation of member states, we chose data from 2013.

To measure the volume of fiscal consolidation, we have chosen the following indicators (reallocation variables):

- Change of government total expenditure in percentage of GDP: this indicator can reveal the increase or decrease of reallocation level within a member state; however it can be distorted by the change of GDP as well.
- Change of government total revenues in percentage of; it can also reveal the change of reallocation and also refers to the change of tax increases or decreases.
- Change of current tax burden in the percentage of GDP.
- Change of social benefits in percentage of GDP. This indicator is connected to the first one; it implies that fiscal consolidation is often accompanied by cuts in social spending.
- Change of gross public debt in percentage of GDP. It shows the change in the level of indebtedness. Anti-cyclical measures are often accompanied by increase of debt levels while austerity programs aim to decrease indebtedness.

To measure economic recovery after the crisis, we defined three indicators (recovery variables):

- Change of unemployment rate: one sign of the end of the crisis in an economy is when employment is restored to pre-crisis levels.
- Change of GDP at constant prices: it refers to the most common concept of crisis being over when GDP reaches pre-crisis levels.
- Gap between actual and potential GDP in 2013.

3. Data analysis

Firstly, we introduce descriptive statistics followed by results of our correlation analysis. Finally, the cluster analysis is displayed.

3.1. Descriptive statistics

In our analysis, we examined the EU-27 member states, variables of reallocation change were expressed in percentage of GDP. We calculated a difference between 2013 and 2007, thus the variables show the change in reallocation expressed in percentage points. Within the recovery dataset, the unemployment rate also showed the difference between 2013 and 2007 in percentage points. The GDP at constant prices can be found on AMECO at 2005 market prices; we examined the ratio between

2013 and 2007, which is expressed in percentage. The gap between the actual and potential GDP can also be found on AMECO at 2005 market prices; we examined the gap in 2013, which is expressed in percentage points (Appendix).

In the case of reallocation variables, it can be seen that the means cannot be typical values for the EU-27 because the standard deviations are high compared to the means (Table 1, Appendix).

Table 1. Descriptive statistics about the variables of reallocation change (percentage point)

Indicator	Mean	Median	Std. Deviation	Minimum	Maximum
Expenditure change (2013-2007)	3.79	3.88	3.41	-1.92	10.72
Revenue change (2013-2007)	0.28	0.90	2.55	-5.05	3.91
Current tax burden change (2013-2007)	-0.50	0.13	2.37	-5.56	3.46
Social benefits change (2013-2007)	2.46	2.61	1.47	-0.55	5.19
Gross public debt change (2013-2007)	29.73	23.23	22.82	1.13	99.52

Source: Own calculation

It can be seen that in expenditure change, the maximum value was 10.72 percentage points (Greece). Greece had the maximum value in revenue change (3.91 percentage points), Luxembourg had the maximum value in current tax burden change (3.46 percentage points), Spain had the maximum value in social benefit change (5.19 percentage points) and Ireland had the highest value in gross public debt change (99.52 percentage points). Half of the countries had at least 23.23 percentage points change (median) in gross public debt

In the case of recovery variables, the standard deviations are also high compared to the means, therefore the means are less informative in the EU-27 (Table 2).

The maximum value in unemployment rate change was 18.70 percentage points (Greece) while the minimum value was a 3.3 percentage points decrease (Germany). Only Germany and Malta had a decrease in unemployment rate and half of the countries had at least a 3.4 percentage points (median) increase. Regarding GDP at constant prices, Poland had a 20 percent increase (from 2007 to 2013) while Greece had a 23 percent decrease (from 2007 to 2013).

Std. Minimum Maximum Indicator Mean Median **Deviation** Unemployment rate change (2013-2007) 4.75 18.70 3.40 5.16 -3.30 (percentage point) GDP at 2005 market prices change 0.99 0.98 0.08 0.77 1.20 (2013/2007) (percentage) Gap between actual and potential gross domestic product (2013) (percentage -12.80 -2.81-2.352.62 1.24

Table 2. Descriptive statistics about the variables of recovery

Source: Own calculation

3.2. Correlation analysis of the reallocation change and recovery

Our research focuses on the relationship between the change of reallocation and recovery from crisis, which can be examined by correlation analysis. Some of the variables (revenue change, gross public debt change, unemployment rate change and gap between actual and potential GDP) do not have a normal distribution (p-value of Shapiro-Wilk statistics for each variable is <0.05), therefore Spearman's correlation coefficients were calculated. According to the correlation coefficients (Table 3), we can describe the relationships between each reallocation change and recovery variables.

Table 3. Correlation analysis between reallocation change and recovery variables

Variables	Unemployment rate change (2013-2007)	GDP at constant prices change (2013/2007)	Gap between actual and potential gross domestic product (2013)
Expenditure change (2013-2007)	0.312	-0.543	-0.430
Revenue change (2013-2007)	-0.146	-0.250	-0.130
Current tax burden change (2013-2007)	-0.319	-0.063	-0.069
Social benefits change (2013-2007)	0.631	-0.698	-0.454
Gross public debt change (2013-2007)	0.617	-0.700	-0.447

Source: Own calculation

In the case of expenditure change and unemployment, the coefficient $(r_s=0.312)$ shows a weak relationship with a positive direction but in the case of GDP at constant prices change and gap between actual and potential GDP, there are

moderate relationships with negative directions (r_s =-0.543, r_s =-0.430). This implies that countries with higher expenditure changes have lower changes in GDP at constant prices (and vice versa).² In the line of revenue change and current tax burden change, the correlation coefficients show only weak relationships.

The social benefits change has a stronger than moderate relationship with a positive direction in relation to the unemployment rate change (r_s =0.631). It implies that countries with higher social benefits changes have higher unemployment rate changes so increasing social benefits do not cause decreasing unemployment change. The social benefits change has a stronger than moderate relationship with a negative direction in relation to the GDP at constant prices change (r_s =-0.698). It refers to the fact that countries with higher social benefits changes have lower GDP at constant price changes so increasing social benefits cause decreasing GDP at constant price change. The social benefits change has a moderate relationship with a negative direction in relation to the gap between actual and potential GDP (r_s =-0.454). It means that countries with higher social benefits changes have lower gaps between actual and potential GDP.

The gross public debt change has a stronger than moderate relationship with a positive direction in relation to the unemployment rate change (r_s =0.617). It shows that countries with higher gross public debt changes have higher unemployment changes so increasing gross public debt does not cause decreasing unemployment change. The gross public debt change has a strong relationship with a negative direction in relation to the GDP at constant prices change (r_s =-0.700). It refers to the fact that countries with higher gross public debt changes have lower GDP at constant prices changes so increasing higher public debts cause decreasing GDP at constant prices change. The gross public debt change has a moderate relationship with a negative direction in relation to the gap between actual and potential GDP (r_s =-0,447). It means that countries with higher gross public debt changes have lower gaps between actual and potential GDP.

Based on the relationships, we can be conclude that some of the variables (social benefits change, gross public debt change) support our hypothesis according to which greater reallocation change does not lead to more favorable changes in recovery. However, the rest of the reallocation change variables (expenditure change, revenue change, current tax burden change) did not support our assumption clearly, which suggests that further analysis is necessary. As it was mentioned in the descriptive statistics part, the standard deviations of the indicators were quite high, which

² For correlation coefficients, causality can be interpreted from the point of view of both variables.

suggests that more homogenous groups of the countries should be created by cluster analysis.

3.3. Cluster analysis based on the reallocation change variables

The core idea of our study is to examine the effect of changes in reallocation on changes in recovery. We applied a hierarchical clustering (Ward's method, Euclidean distance).³ The number of clusters can be determined based on the increase in squared Euclidean distance (Sajtos–Mitev 2007), which suggested a 4-cluster solution. We also examined the 3- and 5-cluster solutions but the interpretability was better in the 4-cluster solution. The clusters can be interpreted by the means of clustering variables (changes in recovery variables). A mean can be a typical feature in a group if the group's standard deviation is lower than the total (EU-27) standard deviation (Kovács et al. 2006). This criterion was fulfilled in the majority of the cells; there is only one high value in the fourth group, for gross public debt change.

There are nine member states (Belgium, Denmark, Greece, France, Luxembourg, Portugal, Slovenia, Finland, United Kingdom) in the first cluster where all of the means of reallocation change variables were higher than the mean in EU-27, thus higher changes in reallocation variables can be in this group (see Table 4).

In the second group, six countries can be found (Bulgaria, Latvia, Lithuania, Poland, Romania, Sweden) where the expenditures, revenues and current tax burdens decreased. The social benefits change was positive but lower than the EU-27 mean and the gross public debt change was lower than the EU-27 mean. This group can show lower changes in reallocation than other groups or the EU-27 means.

There are nine countries (Czech Republic, Germany, Estonia, Italy, Hungary, Malta, Netherlands, Austria and Slovakia) in the third cluster. All of the means of reallocation change variables were positive but only the mean of revenue change and the mean of current tax burden change were higher than the means in EU-27. This cluster is similar to the first one but shows more moderate changes in reallocation variables than the first group.

The fourth group contains three countries (Ireland, Spain, Cyprus) where there was a higher increase in expenditures, a higher decrease in revenues and a higher decrease in current tax burden than the EU-27 value. The highest social benefit and gross public debt changes can be seen in this group among the clusters, causing a high standard deviation. It can be questioned why Greece does not belong to this group as, similarly to these countries, Greece also has a quite high gross public debt change (Appendix). The explanation can be found in revenue changes. While

³ For our analysis, we used SPSS 22.0 statistical program.

Ireland, Spain and Cyprus had a decrease in revenues, Greece had an increase similar to the other countries in the first cluster.

Table 4. Cluster means based on the change in reallocation variables (percentage point)

Cluster	rs	Expenditure change (2013-2007)	Revenue change (2013-2007)	Current tax burden change (2013-2007)	Social benefits change (2013-2007)	Gross public debt change (2013-2007)
1 (n=9)	Mean	7.01	2.33	1.45	3.35	35.88
	Std. Deviation	2.49	1.18	1.19	0.66	19.80
2 (n=6)	Mean	-0.34	-2.56	-3.08	1.59	16.47
	Std. Deviation	1.37	1.50	1.24	0.98	13.16
3 (n=9)	Mean	2.65	1.36	0.36	1.47	18.43
	Std. Deviation	1.66	0.67	1.01	1.32	8.23
4 (n=3)	Mean	5.84	-3.46	-3.79	4.48	71.74
	Std. Deviation	0.77	1.53	1.60	0.64	24.06
Total (EU-27)	Mean	3.79	0.28	-0.50	2.46	29.73
	Std. Deviation	3.41	2.55	2.37	1.47	22.82

Source: Own calculation

After the description of the clusters based on changes in reallocation, the changes in recovery in each group can be examined. In the first cluster, all of the countries had increasing unemployment rates, however, the mean (5.09 percentage points) is not a typical value due to the high value of standard deviations (Table 5, Appendix). The change in GDP at constant prices shows also a mixed picture because Greece had a 23 percent decrease, which pulled down the mean of this group. As regards the gap between actual and potential GDP, the standard deviation is also higher than the EU-27 value, thus a typical feature cannot be drawn based on this variable. This group showed the highest changes in reallocation variables, however, only a mixed picture can be drawn about the changes in recovery indicators.

Table 5. Change in recovery in the clusters

Cluster		Unemployment rate change (2013-2007) (percentage point)	GDP at constant prices change (2013/2007) (percentage)	Gap between actual and potential gross domestic product (2013) (percentage point)
	Mean	5.09	0.95	-4.10
1 (n=9)	Std. Deviation	5.67	0.08	3.42
2 (n=6)	Mean	3.85	1.04	-1.29
	Std. Deviation	2.92	0.09	1.09
3 (n=9)	Mean	2.18	1.01	-2.14
	Std. Deviation	2.81	0.06	1.88
4 (n=3)	Mean	13.23	0.93	-3.98
	Std. Deviation	4.86	0.01	2.65
Total (EU-27)	Mean	4.75	0.99	-2.81
	Std. Deviation	5.16	0.08	2.62

Source: Own calculation

The second cluster has lower standard deviations (compared to the EU-27 values); therefore the means describe this group well. The change in unemployment rate was lower, the change in GDP at constant prices was higher, and the gap between the actual and potential GDP is lower than the EU-27 value. This group had the lowest changes in reallocation but the highest values in recovery. The third cluster has also lower standard deviations (compared to the EU-27 values) and the means show a better picture in changes in recovery than the EU-27 values. This group had moderate changes in reallocation variables.

In the fourth cluster, change in unemployment rate was higher and change in GDP at constant prices was lower than the EU-27 values. The change in gap between actual and potential GDP also shows a less favorable picture than that of the EU-27, however, there are differences in this indicator among the three countries. This group had the highest change in expenditure, social benefits and gross public debt change as well but the change in recovery variables cannot yet describe a prosperous situation.

These results show that the changes in reallocation or the increase of reallocation do not clearly affect positive changes in recovery. Moreover, some of the correlation coefficients and the results of the cluster analysis highlight that decreasing reallocation can be coupled with more favorable changes in recovery, which supports our hypothesis.

4. Conclusion

In this paper, our goal was to examine austerity policies applied in the EU member states during the years of the Great Recession. We presented the theoretical framework for fiscal consolidation, and also presented various related economic views. Our hypothesis was that the larger the size of austerity, the longer the period of recovery from the current recession. We used descriptive statistics and cluster analysis to approach this question. Of the most important results of the analysis we highlight that greater positive change in reallocation does not help economic recovery, which more social spending does not help fight unemployment, and that gross public debt change has a strong negative correlation with GDP at constant prices.

With our results, we regard our hypothesis as confirmed, namely that larger austerity is not accompanied by quicker recovery. However, with our current statistical assets, causality cannot be defined: we cannot claim that recovery is slow as a consequence of austerity, or austerity had to be applied because of economic slump and slow recovery. We plan to develop our model further in order to find statistical evidence concerning causality. We could overcome a serious limitation of the analysis by using data in proportion of potential GDP instead of real GDP because, by using the second one, the results are distorted by economic relapse.

References:

Ameco (2014): Annual macro-economic database. European Commission, Brussels.

Bagaria, N. – Holland, D. – van Reenen, J. (2012): Fiscal Consolidation During a Depression. *Centre for Economic Performance*, Special Paper No. 27, London.

Corsetti, G. – Kuester, K. – Meier, A. – Mueller, G. J. (2012): Sovereign Risk, Fiscal Policy, and Macroeconomic Stability. *IMF Working Papers* No. 12/33.

DeLong, J. B. – Summer, L. H. (2012): Fiscal Policy in a Depressed Economy. *Brookings Papers on Economic Activity*, volume 44, pp. 233-297.

Dixon, H. (2013): *A Tool Kit for Future Euro Crises*. The New York Times. Accessed: 6 March 2014. http://www.nytimes.com/2013/09/23/business/global/a-tool-kit-for-future-euro-crises.html.

- Herndon, T. Ash, M. Pollin, R. (2013): Does High Public Debt Consistently Stifle Economic Growth? A Critique of Reinhart and Rogoff. *Political Economy Research Institute Workingpaper Series*, No. 322, Massachusetts.
- IMF (2011): *Navigating stormy waters*. Regional Economic Outlook, Europe, International Monetary Fund, Washington.
- IMF (2012): Coping with High Debt and Sluggish Growth. World Economic Outlook, International Monetary Fund, Washington.
- Lucas, R. (2003): Macroeconomic Priorities. *The American Economic Review*, volume 93, No. 1, pp. 1-14.
- Kovács P. Petres T. Tóth L. (2006): Válogatott fejezetek statisztikából, többváltozós statisztikai módszerek. JATEPress, Szeged.
- Krugman, P. (2012): End this depression now! W. W. Norton & Company, New York.
- Krugman, P. (2014): *The State of the Euro, in One Graph*. The Conscience of a Liberal, The New York Times Opinion Pages. Accessed: 6 March 2014. http://krugman.blogs.nytimes.com/2014/01/01/the-state-of-the-euro-in-one-graph/.
- Masera, R. (2010): Reforming financial systems after the crisis: a comparison of EU and USA. *PSL Quarterly Review*, volume 63, No. 255, pp. 297-360.
- OECD (2013): Economic Outlook. Volume 2013, Issue 2, Paris.
- Panizza, U. Presbitero, A. F. (2012): Public Debt and Economic Growth: Is There a Causal Effect? *MoFiR working paper* No. 65, Ancona.
- Pelle A. (2010): State Aid in the EU Less and More Targeted? *Vysoká škola ekonomická v Praze Recenzované studie Working Papers*, 13/2010, Prague.
- Pelle A. (2013): The European social market model in crisis: at a crossroads or at the end of the road? *Social Sciences*, volume 2, Special Issue, pp. 131-146.
- Plumer, B. (2012): *IMF: Austerity is much worse for the economy than we thought.* The Washington Post. Accessed: 6 March 2014. http://www.washingtonpost.com/blogs/wonkblog/wp/2012/10/12/imf-austerity-is-much-worse-for-the-economy-than-we-thought/.
- Regan, A. (2013): The 'one size fits all' approach risks intensifying Europe's North-South divide. Policy Network. Accessed: 6 March 2014. http://www.policy-network.net/pno_detail.aspx?ID=4525&title=The-%E2%80%98one-size-fits-all-approach-risks-intensifying-Europes-North-South-divide.
- Sajtos L. Mitev A. (2007): SPSS kutatási és adatelemzési kézikönyv. Alinea Kiadó, Budapest.
- Schäuble, W. (2011): Why austerity is only cure for the eurozone. Financial Times. Accessed: 6 March 2014. http://www.ft.com/intl/cms/s/0/97b826e2-d7ab-11e0-a06b-00144feabdc0.html#axzz2vBPM2y00.
- Seitz, F. Jost, T. (2012): The role of the IMF in the European debt crisis. *HAW im Dialog Weidener Diskussionspapiere*, No. 32, Amberg.
- Stiglitz, J. (2014): *An Agenda to Save the Euro*. Project Syndicate. Accessed: 6 March 2014. http://www.project-syndicate.org/commentary/joseph-e--stiglitz-says-that-the-europe-will-not-recover-unless-and-until-the-eurozone-is-fundamentally-reformed.

- Végh M. Z. (2014): Has austerity succeeded in ameliorating economic climate? Lessons from the cases of some EU member states IN *'The Eurozone Crisis: A Multidisciplinary Perspective'*, Social Sciences, Basel. Under revision.
- Wyplosz, C. (2013): The Eurozone Crisis and the Competitiveness Legend. *Asian Economic Papers*, volume 12, No. 3, pp. 63-8.

APPENDIX

Country	Ex- pendi- ture change (2013- 2007)	Revenue change (2013-2007)	Current tax bur- den change (2013- 2007)	Social benefits change (2013- 2007)	Gross public debt change (2013- 2007)	Unemployment rate change (2013-2007)	GDP at 2005 market prices change (2013- 2007)	Gap between actual and potential gross domestic product at 2005 market prices (2013)
Austria	3,47	1,99	1,95	1,61	14,61	0,70	1,03	-1,04
Belgium	5,85	3,06	1,77	2,67	16,41	1,10	1,02	-1,71
Bulgaria	-1,69	-4,81	-5,13	2,64	2,22	6,00	1,04	-1,68
Cyprus	6,73	-5,05	-5,56	4,30	57,24	12,80	0,92	-5,84
Czech Republic	2,29	0,15	-0,49	1,64	21,10	1,80	1,01	-3,39
Denmark	7,39	0,70	0,63	2,98	17,14	3,50	0,96	-4,71
Estonia	4,61	1,86	0,71	2,38	6,30	4,70	0,97	1,24
Finland	10,48	2,52	1,78	4,45	23,23	1,30	0,96	-2,71
France	4,47	3,07	2,80	2,61	29,28	2,60	1,01	-2,89
Germany	1,17	0,90	0,28	-0,55	14,34	-3,30	1,04	-0,96
Greece	10,72	3,91	1,72	3,77	68,90	18,70	0,77	-12,80
Hungary	-0,35	1,65	-1,55	-0,20	13,68	3,60	0,96	-3,48
Ireland	5,35	-2,01	-2,46	3,95	99,52	8,60	0,93	-0,95
Italy	3,33	2,07	1,25	3,56	29,71	6,10	0,91	-4,46
Latvia	0,22	-0,80	-3,04	2,35	33,41	5,20	0,91	0,20
Lithuania	0,26	-1,76	-2,94	2,07	23,09	7,90	1,01	-0,04
Luxem- bourg	7,77	3,22	3,46	3,07	17,84	1,50	1,00	-2,16
Malta	2,69	1,56	0,16	0,55	11,88	-0,10	1,09	-0,48
Nether- lands	4,89	1,45	0,83	2,39	29,55	3,40	0,98	-3,35
Poland	-0,66	-3,62	-3,35	0,43	13,20	1,10	1,20	-2,09
Portugal	4,77	2,07	0,85	4,18	59,44	8,50	0,93	-4,59
Romania	-1,92	-1,46	-1,25	1,72	25,74	0,90	1,04	-1,77
Slovakia	1,80	0,58	0,10	1,85	24,73	2,70	1,11	-3,33
Slovenia	7,78	2,08	0,13	3,50	40,08	6,20	0,92	-3,14
Spain	5,43	-3,32	-3,36	5,19	58,47	18,30	0,94	-5,16
Sweden	1,73	-2,93	-2,77	0,35	1,13	2,00	1,06	-2,35
United Kingdom	3,88	0,36	-0,12	2,95	50,55	2,40	0,98	-2,23