

# Stability and Growth Pact Reform and Public Expenditure Structure in the European Union Member States

Kristina Petrova\*

## Summary:

This paper studies the problems of convergent and divergent tendencies in the functional allocation and structure of public expenditure in the EU Member States and the effect of the Stability and Growth Pact reform of year 2011 on them. The study is based on sigma convergence analysis. The dispersion between the countries is measured via the coefficient of variation. The dispersion is calculated as an average value for each of the two periods under examination - before and after the reform of the Stability and Growth Pact. The empirical results show that the reform leads to greater convergence between the Member States in terms of the structure of public expenditure.

**Key words:** Stability and Growth Pact reform, public expenditure structure, convergence, European Union

**JEL Classification:** E61, H50, O52

## 1. Introduction

The significance of the issues related to the functional allocation and structure of the public expenditure in the EU Member States has increased in recent years. The reason is the fact that in the light of strengthening the

requirements for observing fiscal discipline, the Member States shall restrict the public expenditure growth. This draws attention to their structuring, directing and effective utilization. Moreover, political decisions about the manner of using public resources have major significance for reaching national as well as common European objectives. Through the Stability and Growth Pact reform, through which is enhanced the attention towards direction and structuring of public expenditure in the Member States, a convergent process between EU countries in this sphere can be launched. This, in turn, could help the convergence to the degree of achieving common goals.

By creating supranational regulations and common policies through primary and secondary legislation, the European Union aims at gradual and phased synchronization in the national policies of the Member States. The aim is the differences between EU countries in terms of achieving the common objectives to gradually be reduced. At supranational level it may influence the type, nature and priorities of the national policy. Through conscious and planned actions the Member States may show their resolve to pursue supranational requirements and conduct their national policies accordingly. National level decisions about directing and disbursement of public expenditure are important for achieving common European

\* Asst. Prof., Ph.D., Department of Economics, University of National and World Economy, email: kristina\_petrova\_s@abv.bg

goals. They affect certain parameters of development, but it depends on the specific economic and social conditions and processes in a certain country, which is an objective fact.

Despite the important role of policy, modeling the functional distribution of public expenditure in the Member States in achieving the common objectives of the European Union, there are no strict supranational regulations in the field. Member States are given certain freedom in deciding the characteristics of the national policy, but gradually, by supranational legislation all policies are directed in a unified direction. The reform of the Stability and Growth Pact (SGP) in 2011 marked the beginning of the new economic governance in the EU, aiming namely to strengthen coordination between EU countries regarding the conduct of economic and budgetary, including the policy in the field of spending.

The purpose of this paper is to analyze the supranational regulations in the area of expenditure policy and explore the nature of processes in the structure of public expenditure in the EU countries. The changes that have taken place in terms of coordination and surveillance of budgetary policies since the 2011 reform of the SGP could lead to greater convergence between Member States concerning the structure of public expenditure.

## **2. Supranational regulations in the area of expenditure policy**

It can be generally state that expenditure policy is part of the economic and budgetary policy of the Member States. The Treaty on European Union (TEU) stipulates that the Member States shall conduct their economic policies as a matter of common significance and shall coordinate them within the Council, as the latter formulates the guidelines for the economic policies of

the Member States. TEU also states that Member States should avoid excessive budgetary deficits and government debt over benchmark values. It could be argued that compared to the areas in which the Union enjoys exclusive competence, in this area of supranational policy it has significantly less power.

The key regulations in terms of expenditure policy are currently contained in Stability and Growth Pact, adopted in June 1997. It was adopted in order to specify provisions, enshrined in the Treaty on European Union, on coordination and control over economic and financial policy and tightening the requirements for the reference levels of budget deficit and government debt. SGP commits Member States to control their budget deficits in order to avoid fiscal imbalances as it contains preventive and corrective part. Thus the state's role in the economy is controlled - national fiscal policies are required to be stable, predictable and sustainable. Member States must maintain low budget deficits (below 3% of GDP) and government debt below 60% of GDP. In this regard, it can be assumed that in order to achieve fiscal consolidation it is necessary that public expenditure level is restricted. However, it should be noted that in the period prior to the economic crisis and to reform in the SGP, there was no such formal requirement whether in primary or secondary legislation. Nor were there any clear guidelines with regard to the structuring of expenditure and the directing of expenditure. These can be found in the Broad Economic Policy Guidelines (BEPGs), regulating a wider range of issues than the Stability and Growth Pact, including pension reform, directing public expenditure towards growth stimulating directions and strengthening fiscal stimulus enhancing employment increase.

The Council adopts Broad Economic Policy Guidelines (drawn up each year

## Articles

with Council's recommendations and as of 2003, prepared for a three-year period and annually updated, if necessary) on the grounds of article 121 of the Treaty on the Functioning of the EU (TFEU). This article states that Member States shall regard their economic policies as a matter of common concern and shall coordinate them within the Council. Since the year 1997 in the BEPGs always present is the requirement for consolidation of public finance according to the requirements of Stability and Growth Pact. In addition, it is stated that Member States should restrict their public expenditure. This recommendation is also in the Broad Economic Policy Guidelines in the period between 1996 and 2000 including, and also in those for the period from 2005 to 2008. In this respect it can be assumed that budget consolidation shall be performed mainly through decrease of the GDP expenditure share.

Apart from the requirement to reduce total public expenditure in the Member States, in the BEPGs there are requirements for the priority areas in which they need to be directed, or, in other words, requirements for how Member States to structure their public expenditure.

The very first guidelines (1993) contain requirements for allocation of expenditure to growth stimulating directions. In the guidelines for the years from 1996 to 1998 it is stated that Member States should direct their public expenditure towards investments in infrastructure, human capital and active measures on the labor market. In 1999 the Member States are required to guarantee the efficiency of public finance (e.g. through review of the pension system and investment in human capital).

The Broad Economic Policy Guidelines after the year 2000 are entirely related to the objectives adopted by the EU strategies – initially by the Lisbon strategy and then with the Strategy "Europe 2020".

According to the objectives of the Lisbon strategy, the BEPGs are focused on the opportunities suggested by globalization and the new knowledge-based economy. In this regard, Member States are required to redirect public expenditure towards growth-enhancing areas such as accumulation of physical and human capital, infrastructure, innovation, research and development (R&D) and information and communication technologies (ICT). Achieving sustainable development and related environmental protection also come to the fore among the objectives of the EU.

In the Broad Economic Policy Guidelines for the period from 2005 to 2008 it is stated that public expenditure should be directed towards growth stimulating areas and appropriate interrelation between public expenditure and achievement of common goals should be established.

According to the Council Recommendations on the Broad Economic Policy Guidelines (2008) for the period 2008 to 2010 well-designed tax and expenditure systems that promote an efficient allocation of resources are a necessity for the public sector to make a full contribution towards growth and employment. This can be achieved by redirecting expenditure towards growth-enhancing categories such as Research and Development (R&D), physical infrastructure, environmentally friendly technologies, human capital and knowledge, without jeopardising the goals of economic stability and sustainability. Public resources have to be used in the most efficient and effective manner.

The Broad Economic Policy Guidelines, adopted in 2010, are entirely based on the achievement of the "Europe 2020" strategy, namely smart, sustainable and inclusive growth. These guidelines are relevant today. Based on the objectives of the "Europe 2020" Strategy is also developed the Annual Growth Survey (AGS), which according to

the reformed in 2011 SGP initiated the European semester.

In summary it may be stated that in the Broad Economic Policy Guidelines there are requirements that relate to limitation of the share of total public expenditure in GDP and the priority areas in which they should be directed. The leading idea is to guide them towards growth stimulating areas.

It is important to note, however, that before the reform of the SGP and the introduction of the European semester the control regarding compliance with the requirements of the BEPGs for structuring public expenditure by Member States is weak. The reason for this is that in terms of the guidelines, unlike the commitments to the SGP, Member States shall not be sanctioned if they do not fulfill them. In this regard, their implementation depends on the desire and willingness of the EU countries to adhere to them. The change in this respect and the enhancement of the EU's influence in the area is created by the reform of the SGP in 2011.

The main reason for the reform's implementation is the expansion of economic crisis and its escalation into fiscal and debt crisis as well as the violations of the rules on fiscal consolidation by the Member States. It should also be noted that although violation of the rules occurs mainly after the beginning of the crisis, even prior to its start some countries fail to adhere to the requirements of the Pact, which implies its inefficiency.

The established weakness in economic government in the European Union directs towards such type of reform which is focused on enhancing the observation

and coordination and tightening the requirements to the economic and budget, including expenditure policy of Member States. The purpose is to reach sustainable convergence and economic growth and not to allow development of new debt and fiscal crisis.

Through the SGP reform, applied as of year 2011, known as "Six-Pack"<sup>1</sup>, a clear process of enhancing the degree of supranational regulations with respect to expenditure policy in the European Union starts. Through it for the first time in the secondary legislation of EU appears a requirement for restriction of the growth of public expenditure meaning that fiscal consolidation shall be performed mostly through restricting expenditure.

The revised SGP provides the main tools for supervising the fiscal policies of the Member States (preventive arm) and for correction of excessive deficits (corrective arm). As part of multilateral surveillance under Article 121 of TFEU annually in April, each Member State should submit to the Commission and the Council a Stability program (for Member States in the Euro area) or a Convergence program (for Member States outside the Euro area). The submission and assessment of the stability and convergence programmes form part of the established with the reform in 2011 European semester for economic policy coordination (section 1-A from Regulation (EU) N° 1175/2011, amended with Regulation N° 1466/97), embedded in the preventive arm of the SGP. Namely it is an important step in the direction of increasing control over budgetary policies of the EU countries as it represents a broader and

<sup>1</sup> Regulation (EU) N° 1173/2011: On the effective enforcement of budgetary surveillance in the euro area; Regulation (EU) N° 1174/2011: On enforcement action to correct excessive macroeconomic imbalances in the euro area; [Regulation \(EU\) N° 1175/2011](#) amending Regulation 1466/97: On the strengthening of the surveillance of budgetary positions and the surveillance and coordination of economic policies; [Regulation \(EU\) N° 1176/2011](#): On the prevention and correction of macroeconomic imbalances. The regulation lays out the details of the macroeconomic imbalance surveillance procedure and covers all EU member states; [Regulation \(EU\) N° 1177/2011](#) amending Regulation 1467/97: On speeding up and clarifying the implementation of the excessive deficit procedure; Directive 2011/85/EU On requirements for budgetary frameworks of the Member States.

## Articles

more rigorous process of economic policy, including expenditure policy, coordination within the European Union. The European semester aims at achieving coherent and coordinated economic policies of the Member States. It comprises a six-month period, during which the budget policies of the Member States are investigated and reviewed. At the beginning of the semester, the Council determines the main economic challenges for the EU and gives the Member States the strategic broad policy guidelines that they must comply with, contained also in in the Commission's Annual growth surveys. Subsequently, based on these guidelines, the Member States shall prepare: Stability or Convergence program on budgetary policy (plans for sound public finance), prepared in accordance with EU Regulation N° 1175/2011, and National reform programmes on economic policy (reforms and measures to make progress toward smart, sustainable and inclusive growth). At the end of the European semester and after evaluation of the programmes, the Council sends recommendations to each Member State, based on the Commission's opinion. The Council discloses its assessments before the Member States finalize their budgets for next year. Thus the compilation of the national budgets of Member States is monitored.

The evaluation of the development of the expenditure of the Member States, included in the Stability and Convergence programmes is a new element in the revised SGP in 2011. Regulation (EU) N° 1175/2011 states that sufficient progress towards the medium-term budgetary objective should be evaluated on the basis of an overall assessment with the structural balance as a reference, including an analysis of

expenditure net of discretionary revenue measures.

Through Directive 2011/85/EU On requirements for budgetary frameworks of the Member States, are introduced similar rules in relation with their national budget framework. They are in compliance with the budget observation framework in the European Union with the purpose of supporting the fulfilling of Member States' obligations, prescribed in the Stability and Growth Pact.

It may be said that the main feature of the change in the regulations of national economic and fiscal policies in 2011 is related to the establishment of more rigorous process of coordination between Member States in the field. Meanwhile, for the first time in the secondary EU legislation a requirement for reduction of public expenditure has been envisaged. Until that time, as already noted, such a requirement was contained in the Broad Economic Policy Guidelines in respect of which the control over the Member States concerning their perception on a national level is weak. In this regard, implementation of the guidelines depended on the desire and willingness of the EU countries to comply with them.

In addition to the SGP reform from 2011, in 2013 is adopted the "two-pack"<sup>2</sup>. They aim to additionally support the economic management in the Euro area. They are based on article 136 of the Treaty on European Union allowing Member States, whose currency is the euro, to enhance coordination and monitoring of the budgetary policies with the purpose of ensuring the necessary budgetary discipline in the Euro area. Due to this reason the new legislation is applied only

<sup>2</sup> Regulation (EU) N° 472/2013: On the strengthening of economic and budgetary surveillance of Member States in the euro area experiencing or threatened with serious difficulties with respect to their financial stability; Regulation (EU) N° 473/2013: On common provisions for monitoring and assessing draft budgetary plans and ensuring the correction of excessive deficit of the Member States in the euro area.



within the Euro area where the leading of common monetary policy and the existence of common currency in terms of a crisis unambiguously exposes the need to increase the control, regulations and coordination over the budget and economic policies of the countries.

The first Regulation lays down clear and simple rules for enhanced monitoring of Member States facing serious difficulties with respect to the financial stability of those receiving financial aid, and those who leave the financial support program. The second regulation applies to all Member States of the Euro area, as for those who fall into the corrective part of the SGP, special rules apply, namely the excessive deficit procedure. Through the two pieces of legislation is introduced a common schedule for budget and general budget rules for the Member States of the Euro area. This greatly enhances the role of the EU in the conducting of the budget, including expenditure policies of the countries and takes their sovereignty. But the crisis has shown that it is namely the autonomy of the countries, the various fiscal policies they conduct, the insufficiently strict rules of the SGP and the non-compliance with them have led to the deepening of the debt and fiscal crisis in the Eurozone, which casts doubt on the stability of the unified currency.

The "six-pack" and "two-pack" regulations have significantly strengthened the EU's governance framework in different policy areas. The European Semester combines these different tools in an overarching framework for integrated multilateral economic and budgetary surveillance (European Commission, 2014). An important feature of the SGP reform in 2011 is that with the introduction of the European semester becomes strictly monitored whether the policies of the Member States follow the Broad

Economic Policy Guidelines, containing regulations regarding targeting, structuring and effectiveness of public expenditure.

Based on the BEPGs, adopted in 2010 and the targets of the "Europe 2020" strategy, the Commission prepares Annual growth survey (AGS). Each AGS analyzes the process in EU to long-term and strategic priorities. In them is retained the leading idea of the BEPGs, namely public resources to be directed towards growth stimulating areas. The Annual growth survey indicates economic priorities for the EU and provides Member States with guidelines for the policy for next year by setting of the start of the European semester. The aim is to steer policies in Member States in the direction of achievement of convergence in terms of the degree of reaching of the common goals. It is this feature that determines its particularly important role in the new process of economic governance in the EU. Despite the increased control, what remains essential is the will of national governments to conduct their policies in accordance with broad supranational guidelines.

In the Annual growth surveys for 2011 to 2016 priority is attached to the type of expenditure that boost economic growth. Expenditure on education, scientific research and energy are identified as such expenditures. According to the 2016 Annual growth survey, because of the need to restrict public expenditure to ensure that fiscal discipline is observed, it is crucial that Member States should put an emphasis on the effective budget implementation and direction towards priority areas. The composition of fiscal strategies should further prioritise growth-friendly expenditure and preserve productive public investment.

With the reform of the SGP the imposed policy of budget economies and striving for reaching common goals, including those of the Europe 2020 Strategy, the focus is now on the structuring and redirecting of public

expenditure towards areas that contribute to achieving those objectives. In the review of the Stability and Growth Pact it is noted that by ensuring closer coordination of policies, the new governance system should help foster growth convergence and the achievement of the goals of the Europe 2020 strategy for smart, sustainable and inclusive growth (European Commission, 2014). Achieving convergence in the implementation of these objectives should be mediated by initiating synchronization in the structuring and utilization of public resources as they affect this process. In this regard, essential aspect of the reform is that now the efforts should be focused on the effectiveness of the expenditure. It is the need to limit public expenditure that determines the importance of their structuring and gives grounds to establish a more rigorous monitoring process within the new economic governance in the Union. The reason is that the achievement of consolidation by focusing solely on cutting expenditure is not sufficient. If all efforts are focused only on restricting expenditure, then it is not only short-term economic growth-related goals but also the long-term prospects that may be harmed. It is for this reason that efforts should be focused on the quality of expenditure and it should be guaranteed that future public investments are not disproportionately sacrificed in order to consolidate current budgets. It is necessary to prioritize expenditure in order to influence the long-term sustainable economic development. This implies the need to focus on the quality parameters of expenditure policy (structure and priority focus) that impact a country's economic and social development. According to H. Ferreiro, M. Garcia del Valle and K. Gomez (2012), the current fiscal policy strategy in

the EU has been changing in recent years. Fiscal policies pay a higher attention to the quality of public finance and to the composition of public expenditures.

Even though the reform of the SGP does not set clear and specific quantitative requirements regarding the structure of Member States' public expenditure, the strengthened monitoring and coordination in the area of budgetary policies and the stricter control over the compliance with the common guidelines of the policy could generate convergent process between EU countries in the period after the reform of the SGP compared to the period prior to it. The purpose of the convergence analysis that will be applied is to test such an assumption. Yet it is difficult to assess and make unequivocal conclusions about the impact of the reformed system of economic governance on the convergence in the functional allocation of public resources, considering the short period that has passed since the reform. Another identified limitation is the fact that the system of new economic governance in the EU introduced by the SGP reform is applied in times of economic crisis, which in turn limits the possibilities to analyze its effectiveness in a better economic environment.

Expectations are to achieve incomplete convergence<sup>3</sup>, given the diversity of social and economic models and the specific needs of each EU Member States. Convergence did not suggest that domestic structures should be homogenized. There is no evidence that domestic institutional change involved the complete rejection of national administrative styles, legal cultures, societal relationships, and/or collective identities (Cornelisse and Goudswaard, 2000).

<sup>3</sup> According to Th. Plümper and Ch.Schneider (2009) reaching complete convergence means there is no difference between observations while realization of incomplete or partial convergence suggests a decreasing but still existing difference between observations.

### 3. Convergent or divergent tendencies in the structure of public expenditure between the EU countries

The purpose of the research to be carried out is to investigate whether as a result of the SGP reform, which presumably increases the impact of supranational policy on the structuring and directing of public expenditure, a convergent process between the Member States with regard to the types of expenditure by functions, expressed as a share of the total public expenditure, will be initiated.

The study of convergent or divergent trends in all areas of public expenditure, and hence in their structure, has not yet been given due attention. Recently, the interest in the problem of convergence between public expenditure of the EU countries has increased, though the research interest is focused mainly on the convergence in social expenditure.

Most of the studies in the area of convergence in public expenditure provide an analysis only of the countries' social expenditure (e.g. Goudswaard and Caminada, 2006; Van Vliet and Kaeding, 2007; De Simone et al., 2009; Cornelisse and Goudswaard, 2010; Caminada et al., 2010; Draxler and van Vliet, 2010; O'Connor, 2010). They are perceived as the basis for making a distinction between the models within EU, and it

is the "social" aspect that distinguishes EU from the other industrially developed countries and mostly the United States. Moreover, all European strategies aim at reaching social prosperity for the citizens of the Union. In this respect most studies are carried out in order to identify the mechanism through which supranational policy can impact the social policy pursued by the Member States.

There has been empirical research (e.g. Sanz and Velázquez, 2001; Ferreiro et al., 2012; Petrova, 2014) that covers all types of expenditure and functions. Naturally their purposes and the respective conclusions differ greatly from those based only on social expenditure, as they are related to the pursuit of fiscal policy, and to the overall structuring and directing of public expenditure in priority areas. Expenditure policy can impact other areas apart from the social one, even though most funds are spent on the social area. Nevertheless, in order to grasp the characteristics of the functioning of an economic system consideration should be taken of all varieties of public expenditure.

The processes of convergence or divergence in the structure of public expenditure as per separate functions have been investigated by applying the method of sigma convergence<sup>4</sup>, which is used in most of the similar empirical studies. This

<sup>4</sup> The method of sigma convergence is applied for the first time in the research of income convergence by R. Barro and X. Sala-i-Martin (1991) but is very quickly adapted to research of convergence in other areas. Through this method it is studied whether the variation between the countries with regards to a certain indicator has decreased or increased within the reviewed period. The tools which make it possible to study the degree and direction of the sigma convergence are standard deviation and coefficient of variation. Through standard deviation may be studied how the dispersion between a certain indicator in different countries has changed or how differences in indicators in group of countries have change according to the average value. Standard deviation's negative feature is that its value increases upon increase of the average value of the researched indicator among a group of countries. This negative feature of standard deviation imposes it to be replaced by a coefficient of variation which is a result of dividing standard deviation on the average value of the indicator being studied. Thus the effect of increase of the dispersion indicator caused by the increase of the average value is neutralized. Some authors such as P. Cornelisse and K. Goudswaard (2010) and J. Draxler and O van Vliet (2010) use the term "relative convergence (divergence)" when they observe decrease (increase) of the value of coefficient of variation and respectively the term "absolute convergence (divergence)" when using standard deviation as a measurement of dissipation.



## Articles

method is deemed appropriate<sup>5</sup> in the current analysis and even though this is the first time it has been used to establish income convergence, it could successfully be adapted and applied in the study of convergence in the structure of public expenditure. The question of whether the differences between the countries have increased or decreased over time has also been examined by applying the method.

In order to reveal the existence of convergent or divergent process, the coefficient of variation is used to measure the dispersion. The latter is calculated as an average for the two study periods - before and after the reform of the SGP. The decrease (increase) in the value of the coefficient of variation in given indicator during the second period compared to the first one means that the differences between the countries have decreased (increased) and convergence (divergence) is observed.

The starting period for the study, namely the year 2007, was selected on the grounds that this is the year when Bulgaria and Romania joined the European Union. The purpose is to cover the countries from the EU-27<sup>6</sup>. The end of the period is the year 2013 with a view to the available data about the size and structure of public expenditure of the Member States in Eurostat.

In order to confirm or reject the assumption that the stronger supranational regulations in the area of expenditure

policy and the more rigorous process of monitoring of the compliance with the common goals and guidelines affect the formation of a convergent process within the EU with respect to expenditure policies of the Member States, the sigma convergence between the EU countries is assessed using macro indicators for the structure of public expenditure (share of the different types of expenditure by functions in the total public expenditure). In this way the structuring of expenditure may be captured best.

For the aim of the research is adopted the classification of expenditure by function (Classification of the functions of the Government – COFOG), developed by the World Bank, confirmed as a standard for similar researches and which is used by the EU since 1999. Its main advantage is that it groups the data on the grounds of basic theoretical guidelines or functional directions according to which the budget is distributed<sup>7</sup>. Besides the ten expenditure types by functions, the analysis also covers the expenditure for R&D as a share of the total public expenditure, given that they are stated as priority for the Member States in the Annual growth surveys.

The data used is collected by Eurostat in its capacity of unified statistical organization responsible for the methodological and operative actions on developing massive high-quality information for the EU.

<sup>5</sup> Other widely used method is the one of beta convergence. It is developed for research of income convergence by R. Barro and X. Sala-i-Martin (1991). Through it is researched whether in countries with lower income in the beginning of the period observed is a higher growth of income than in countries with higher values of income in the beginning of period, through which reached is convergence. In this relation the method of beta convergence can be more difficult to be adjusted to a study of the public expenditure structure. It is more inappropriate than the method of sigma convergence because for the purposes of this study it is more important to follow whether differences between Member States decrease in time.

<sup>6</sup> Croatia is excluded from the analysis because it is not a member stated of EU throughout the reviewed period. The country joined EU on 1 July 2013.

<sup>7</sup> The functions are ten: Function 01: General public services; Function 02: Defence; Function 03: Public order and safety; Function 04: Economic affairs; Function 05: Environment protection; Function 06: Housing and community amenities; Function 07: Health; Function 08: Recreation, culture and religion; Function 09: Education; Function 10: Social protection. They are the higher level of statistical data aggregation. To every one of them created in the vertical are hierarchically built groups which additionally provide details at a lower level. Similar hierarchy enhances the more detailed presentation and analysis of certain expenditure directions. To the groups included is a third (lower level) – grades.

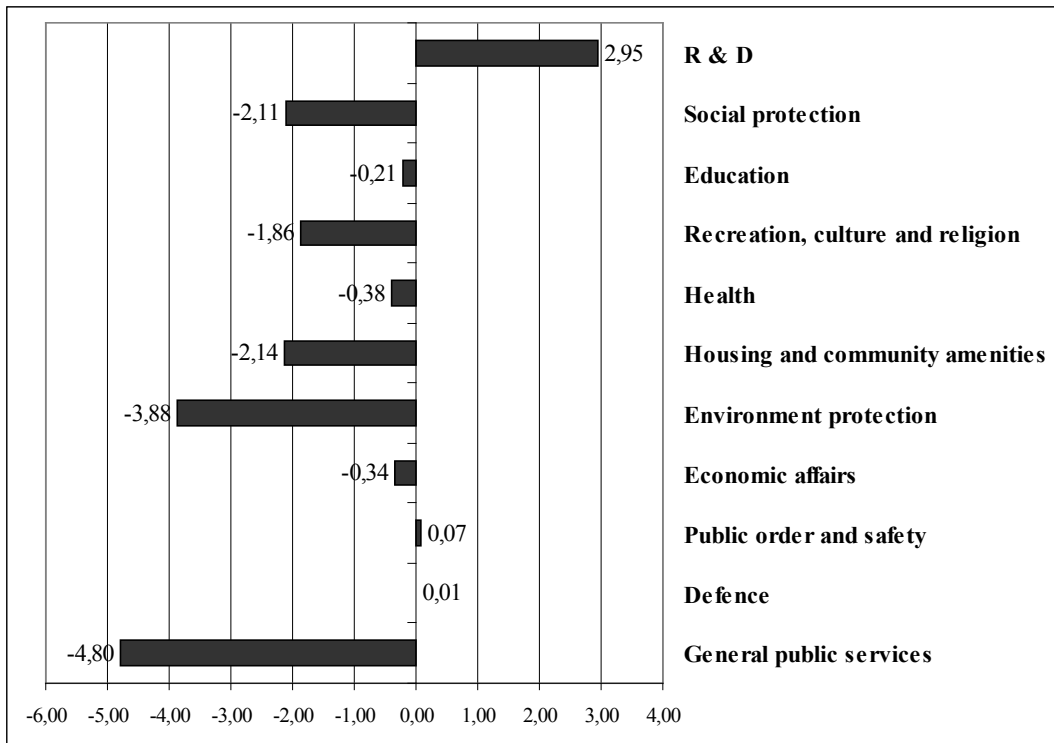


Fig. 1. Convergence / divergence in the expenditure by functions according to the classification of COFOG and expenditure for R & D during the period after the SGP reform as compared to the previous period

Source: Eurostat and author's calculations

This paper examines the convergent or divergent tendencies within the entire European Union (EU-27) in the period after the reform of SGP (2011-2013) as opposed to the period prior to implementing the reform (2007-2010) with regard to the share of the different types of expenditure (expenditure by functions according to COFOG and expenditure for R & D) in the total public expenditure. For that purpose the average values of types of public expenditure are first calculated, and then the coefficient of variation for each separate direction.

Figure 1 reveals the difference between the coefficient of variation with regard to average values for the second (2011-2013) and the first (2007-2010) period for all functional directions of public expenditure (expenditure by functions according to the

classification of COFOG and expenditure for R & D), expressed as a share of the total public expenditure in EU-27. In case a negative difference is established, a conclusion can be made of the relative convergence among the Member States as the dispersion between them, measured through the coefficient of variation, has decreased. In case there is a positive difference, it may be considered that divergence between the EU countries during the reviewed period is observed.

Based on the presented data a conclusion can be reached that in eight out of ten types of expenditure on the COFOG classification, expressed as share of the total public expenditure relative convergence is observed between the Member States during the period after the SGP reform compared to the preceding period.

## Articles

Only in relation with the functional directions of Public order and safety and Defense is observed slight divergence (0.07 % in the Public order and safety and 0.01 % in the Defense function) as the coefficient of variation during the second period is higher in comparison with the one during the first period. With respect to these types of expenditure according to the data presented in Table 1, high average dispersion between the Member States as compared to the remaining types of expenditure by functions is observed.

The stated results give grounds for the conclusion that despite the lack of specific requirements pertaining to the overall structuring of public expenditure, the implementation of more rigorous process of monitoring and coordination in determining the budgets of the Member States has led to convergent process between them in relation to the structure of public expenditure.

Interesting for analysis is the public expenditure for R&D, expressed as a share of the total public expenditure. In relation with it divergence is observed in the period after the reform of SGP as compared to the previous period. This means that in the period after the SGP reform the Member States conduct more varied policies in this area compared to the period 2007-2010. These are namely some of the expenditure which should be increased in the Member States in order to achieve the common European objectives. The Annual growth surveys for the years under examination in the second period state that in their budgetary policy the countries should attach priority to this type of expenditure. Despite the divergence process, it should be noted that the data presented in Table 1 suggest that the average rate of change during the two periods under review has a positive sign, which shows that on average the EU-27 have increased this

type of expenditure. It should be further noted that the differences between the Member States with regards to this type of expenditure are comparatively higher, given that the average coefficient of variation for the period 2007-2013 is 37.06 %. This comes to show that as a whole the countries have very different values of this type of expenditure. While in countries such as Germany, Estonia, Denmark and Finland the share of expenditure is about 2% of the total public expenditure in other countries such as Romania, Bulgaria and Malta it is below 1%. Despite the increase in the expenditure for R&D, it is essential that all Member States continue their efforts to reach more significant increase, as well as the convergent process between the countries. The expenditure for R&D are very important as productive public investments that contribute to the initiation of long-term economic growth.

Besides the presence of convergent or divergent process interesting to analyze is also the direction of change in the types of expenditure by function. In the two specific periods is observed diversely redirection and amendment of half of all types of expenditure by function, namely those for General public services, Public order and safety, Economic affair, Environmental protection and Health, as average rates of change for both periods are with different sign (positive and negative). In relation with the expenditure for Defense, Housing and community amenities, Recreation, cultural and religion and Education are observed negative average rates for both periods. Increase in both periods is observed only in relation with the expenditure for Social protection and R & D. The reason for the observed increase in Social protection expenditure is the downward phase of the economic cycle. Especially favorable is the observed trend of increase in the

Table 1. Average indicators for the types of public expenditure by functions policy towards coope

Types of expenditure	Average rate of change for the period <sup>8</sup> (%)		Average value for the period 2007-2013 (%)	Average value of the coefficient of variation for the period 2007-2013 (%)
	First period (2007-2010)	Second period (2011-2013)		
General public services	-0,98	2,18	14,34	26,73
Defense	-2,55	-5,43	2,86	40,93
Public order and safety	-1,40	0,36	4,17	33,79
Economic affairs	2,25	-2,53	11,24	34,20
Environmental protection	-2,87	0,87	1,73	49,14
Housing and community amenities	-2,66	-2,63	1,83	65,33
Health	-0,29	0,44	13,62	19,41
Recreational, cultural and religion	-0,45	-1,31	2,65	35,15
Education	-1,21	-0,42	11,86	19,70
Social protection	1,01	0,61	35,69	14,05
R & D	0,77	0,65	1,23	37,06

Source: Eurostat and author's calculations

expenditure for R&D, which should be prioritized by Member States.

Special attention requires the changes in expenditure for education as they are namely one of the types of expenditure that should be increased. They come fourth among the remaining types of expenditure in terms of their share in the total public expenditure in the EU-27 and as the remaining functional directions which determine the social model (expenditure for social protection and health) are characterized with comparatively low coefficient of variation between

the countries. Although in relation with them convergence during the second period as compared to the first one is observed, their decrease marks an unfavorable tendency which shall be overcome. Investments in human capital are favorable for the economic growth and the efforts of the EU countries should be aimed at redirecting of public funds to this direction and maintaining their high efficiency.

Concerning the general structure of expenditure as EU-27 average in the period 2007-2013, it may be stated

<sup>8</sup> The average for both periods rates of change of the share of expenditure types as per functions according to the COFOG classification and the expenditure for R&D in total public expenditure average for the EU-27 is calculated in three steps: first are calculated average values for EU-27 for all types of expenditure for all years during the period (2007-2013), then is calculated the rate of change for every year as oppose to the previous one, in the end the annual rates of change are calculated on average separately for the two periods (2007-2010 and 2011-2013).

that expenditure for social protection traditionally holds the largest relative share among all functional directions of public expenditure. It should also be noted that such expenditures reveal the smallest differences between the Member States, measured through the coefficient of variation. Second in terms of the share in total public expenditure come the expenditure for General public services followed by the expenditure for Health, Education and Economic affairs. The remaining types of expenditure (Public order and safety, Defense, Housing and community amenities and Environment protection) hold relatively small shares. The share of expenditure for R&D in total public expenditure is also very small, namely 1.23%. It should be noted that the structure of the public expenditure in the separate countries differs from the EU average as a whole. Concerning Bulgaria it is worth noting that in terms of expenditure for Defense, Public order and safety, Economic affairs, Environment protection and Housing and community amenities, the country shows higher values than the EU-27 average in the period 2007 – 2013. Among the remaining functional directions lower values than the for EU-27 average are observed.

The differences between the countries in relation to the functional allocation of public expenditure can be assessed by the values of the coefficient of variation. The data presented in the last column of Table 1 provide for the conclusion that relatively small dissipation between

the countries is observed with the functional directions of Social protection, Health and Education, determining the social model as well as with expenditure for General public services. Relatively high value of average coefficient of variation is observed mostly with regard to the types of expenditure with a small relative share in the total public expenditure, namely expenditure for Housing and community amenities, Environment protection, Defense, Recreational, cultural and religion and Public order and safety. It is the expenditure for Defense and Public order and safety that reveal the divergence in the second period as compared to the first one. With regards to the dispersion among the expenditure for Economic affairs it could also be stated that a comparatively high value of average coefficient of variation for the period (2007-2013) is observed.

### Conclusion

Based on the analysis of supranational regulations in the field of expenditure policy a conclusion was reached that after the reform in the Stability and Growth Pact was carried out, the coordination and control over the countries' national budget policies, including expenditure, is enhanced. Although there are no specific requirements with regard to the overall structure of expenditure, as a result a convergence between the Member States in this direction was observed in the period after the reform compared to the period



before it. This result is seen as a favorable tendency as it could lead to convergence between the countries with respect to the achievement of common EU objectives. It can therefore be argued that the European Union's new economic governance, which was launched with the reform of the Stability and Growth Pact, will contribute to the achievement of the common goals through compliance with fiscal rules (share of public expenditure in GDP) and mostly through the gradual establishment of a common European model of functional structure of public expenditure. It is also essential that Member States should direct their efforts towards establishing expenditure structure that would boost the sustainable long-term development while maintaining their high efficiency.

### References

- Barro, R., X. Sala-i-Martin, 1991, Convergence across states and regions, Brookings Papers on Economic Activity, 1.
- Börzel, T., Th. Risse, 2000, When Europe Hits Home: Europeanization and Domestic Change, *European Integration online Papers (EIoP)* Vol. 4, No 15.
- Caminada, K., K. Goudswaard, O. Van Vliet, 2010, Patterns of welfare state indicators in the EU: Is there convergence?, MPRA Paper No. 20177.
- Consolidated versions of the Treaty on European Union and the Treaty on the Functioning of the European Union, *Official Journal C* 326, 26/10/2012.

- Cornelisse, P., K. Goudswaard, 2010, On the Convergence of Social Protection Systems in the European Union, MPRA Paper No. 21297.
- De Simone, E., S. Ercolano, G. L. Gaeta, 2009, Is there a common European model in public social expenditures?, Spring Meeting of Young Economists (SMYE), Marmara University, 23-25.
- Draxler, J., O. van Vliet, 2010, European Social Model: No Convergence from the East, *Journal of European Integration*, Vol. 32, No. 1.
- European Commission, 2014, Communication from the Commission to the European Parliament, the Council, the European Central Bank, the European Economic and Social Committee and the Committee of the Regions, Economic governance review Report on the application of Regulations (EU) No 1173/2011, 1174/2011, 1175/2011, 1176/2011, 1177/2011, 472/2013 and 473/2013.
- Ferreiro, J., Garcia-del-Valle, M. Teresa, Gomez, C., 2012, An analysis of the convergence of the composition of public expenditures in EU countries, *American Journal of Economics and Sociology*, 73(4).
- Goudswaard, K., K. Caminada, 2006, Convergence of Net Social Protection Levels', paper prepared for the 62nd Congress of the International Institute of Public Finance.
- O'Connor, J., 2010, EU-related Social Policy in New Member States and Cohesion Countries, Mixed Messages on Convergence, In: EU Enlargement

## Articles

and Turkey: Social Policy, Gender and Citizenship. (Eds: Aybars, IA), Middle East Technical University Press.

Petrova, Kr., 2014, Konvergentni i divergentni tendencii v publichnye razhodi na durjavite-chlenki na Evropeiskiyu suiuz, , Sb. "Ikonomika i obshtestvo: globalni i regionalni predizvikelstva pred Bulgariya", IK – UNSS.

Plümper, Th., Ch.Schneider., 2009, The Analysis of Policy Convergence, or: How to Chase a Black Cat in a Dark Room, Journal of European Public Policy 16 (7).

Regulation (EU) N° 1173/2011; Regulation (EU) N° 1174/2011; Regulation (EU) N° 1175/2011 amending Regulation 1466/97; Regulation (EU) N° 1176/2011; Regulation (EU) N° 1177/2011 amending Regulation

1467/97; Directive 2011/85/EU On requirements for budgetary frameworks of the Member States, Official Journal, L 306, /23 November 2011.

Regulation (EU) N° 472/2013; Regulation (EU) N° 473/2013, *Official Journal of the European Union*, L 140, /25 May 2013.

Sanz, I., Fr. J. Velázquez, 2001, The evolution and convergence of the government expenditure composition in the OECD countries: an analysis of the functional distribution, EEG Working Papers Series, Working Paper no. 9/2001.

Van Vliet, O., M. Kaeding, 2007, Globalisation, European Integration and Social Protection – Patterns of Change or Continuity?, Department of Economics Research Memorandum, Leiden University, Leiden.