The allocation of financial resources of the EU Structural Funds and Cohesion Fund during the period 2007–2013

Alokace finančních prostředků strukturálních fondů EU a Kohezního fondu v období 2007–2013

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Abstract: The article describes a model to predict the allocation of the EU Structural Funds and the Cohesion Fund over the EU member states. By comparing the predicted allocation with the real allocation, it is possible to indicate which member states receive more and which countries receive less than the predicted share. The variables determining the predicted allocation are the GDP per capita and the size of the population.

Key words: Regional policy, Structural Funds, Cohesion Fund, budget allocation

Abstrakt: Příspěvek popisuje model k prognózování alokace Strukturálních fondů EU a Kohezního fondu mezi jednotlivé členské státy EU. Komparací prognózované a skutečné alokace prostředků je pak možno hodnotit, které členské státy obdržely více a které méně, než byl jejich prognózovaný podíl. Jako proměnné determinující prognózovanou alokaci prostředků byly použity HDP na 1 obyvatele a velikost populace.

Klíčová slova: regionální politika, Strukturální fondy, Kohezní fond, rozpočtová alokace

INTRODUCTION: PROBLEM DESCRIPTION AND RESEARCH METHOD

"... the Community shall aim at reducing disparities between the levels of development of the various regions and the backwardness of the least favoured regions or islands, including rural areas."

> *Treaty Establishing the European Community, 1958*

Economic activity, income levels and levels of unemployment are not evenly spread across the European Union. Since the start of the European Integration in 1958, there was the political will to reduce the economic and social disparities between different regions of what is nowadays the EU, leading to the current EU Cohesion Policy[1]. The main purpose of this policy is to stimulate the economic output growth rates by e.g. investments in basic infrastructure and reducing the level of unemployment by sponsoring traineeships and better education of less favoured regions.

The budget for the EU Cohesion Policy is roughly one third of the total EU budget, € 347.410 billion out of € 974.769 billion at current prices (2010) for the planning period 2007–2013, and it is growing in

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[1]In this paper, I will prefer the use of 'Cohesion Policy' over 'Regional Policy'. Cohesion Policy is funded by the ERDF, the ESF and the CF and it is a broader concept than Regional Policy which is specifically linked to the activities of the ERDF. In most literature and even on the official website for Cohesion Policy ("Regional Policy Inforegio"), both terms are used in a confusing way. Further questions to the European Commission revealed, however, that the two terms are not synonyms.

importance, that is, the share of structural spending relative to the total EU budget is increasing. The are different instruments to channel these funds to the eligible regions, of which the most important are the Structural Funds and the Cohesion Fund[2].

Distribution of funds takes place in cooperation with the EU Commission, the national government of a Member State and local authorities. The most important criteria for a region to become eligible for structural assistance is that it must have an economic output per capita at or below 75% of the EU average. The major Eastern enlargement of the EU in 2004 lead to an eastward shift of structural spending away from the "traditional" countries like Greece, Spain and Portugal. It appears that different countries have a different expertise in using the Structural Funds and different economic capabilities to absorb their financial resources.

The central question this paper addresses is: How are the financial resources available for the European Cohesion Policy allocated for the planning period 2007–2013? What is – according to a model of the allocation – the expected structural spending? What is the real (empirical) allocation each EU country was able to attract? What should they get and what are they actually getting? An earlier research shows that some countries were able to receive more money than one would expect (see Heijman 2001 and Vostrovská 2009).

This paper will start with the description of the relevant theoretical background of the Cohesion Policy to place it into a broader context and to be able to make a model of the allocation of structural spending. The description is based on the literature review.

Second, in order to analyze the allocation of the financial resources, a linear-regression model with two specifications will be used to compare the predicted allocation and the real allocation of the financial means to member states over the planning period 2007–2013. This comparison between the model and the 'real-world' data will give an indication whether or not member states are receiving too much or too little of the financial support within the framework of the Cohesion Policy. The model is based on the idea that a country with a large population and a low income – like Poland – gets more money allocated than a country with a small population and a high income like Luxembourg. In the last step, conclusions will be drawn from the results and the outcomes will be discussed.

THE COHESION POLICY OF THE EU

There are considerable disparities of economic activity, income levels and levels of unemployment across the European Union. Regions with a high income in comparison to the average of all EU regions are mainly concentrated in the Northern part of Italy, West Austria, South-West Germany and some regions in Belgium, the Netherlands and Great Britain. The EU countries with the relatively lowest income like Poland, Romania, Bulgaria, the Czech Republic and others are located in the Eastern part of the EU.

The reason for the Cohesion Policy is the existence of economic and social disparities between different regions of the European Union. The policy in general is aiming at reducing these disparities. For the current planning period 2007–2013, the Cohesion Policy has three objectives financed by three different funds, as it is shown in Table 1.

Table 1. Objectives and Instruments of the Cohesion Policy for the current planning period 2007–2013

Objectives	Funds
1. Convergence	ERDF, ESF, Cohesion Fund
2. Regional Competitiveness and Employment	ERDF, ESF
3. European Territorial Cooperation	ERDF

Source: Inforegio (2010g)

In the planning period 2007–2013, for the first time in the history of the Cohesion Policy, all EU regions are eligible for structural spending (Regional Policy Inforegio 2010f, Slide 32).

The Structural Funds budget and its rules are decided by the Council and the European Parliament on the basis of a proposal by the Commission. Each Member State makes a National Strategic Reference Framework for the period of seven years, containing the strategy and operational programs, which were around 450 in total for the current planning period. The operational program lists the individual projects. The supervision of the projects takes place through national or regional management authorities. The Commission commits and pays the expenditures and monitors each operational program alongside the Member State (Regional Policy Inforegio 2010b).

The first objective (convergence) assists 84 NUTS II regions with the gross domestic product (GDP) per

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[2]Other instruments are the Instrument for Pre-Accession Assistance (IPA) and the European Investment Bank (EIB). Unlike the Structural Funds and the Cohesion Fund, these are not part of the budget of the Cohesion Policy.

capita measured in purchasing power parities (PPS) at or below 75% of the EU average. This objective aims to improve the conditions for economic growth and higher employment of the least developed regions by "the increasing and improvement of the quality of investment in physical and human capital, the development of innovation and of the knowledge society, adaptability to economic and social changes, the protection and improvement of the environment, and administrative efficiency" (Official Journal of the European Union 2006a, Article 3 § 2 (a)). In addition to the 84 regions mentioned earlier, financial resources are also allocated to another 16 phasing out (Regional Policy Inforegio 2010g) regions on the basis of the convergence objective, where the GDP level is pushed above the 75% threshold due to the Eastern enlargement in 2004 and 2007, but which would otherwise be eligible for structural assistance. In addition, the regions with a very low population density, island and mountain areas are eligible under the convergence objective. It is by far the most important objective in terms of financial means: 282 billion Euro or 81.5% of the total budget of the Cohesion Policy is allocated to it. Under the convergence objective, the capital is allocated from the European Regional Development Fund, the European Social Fund and the Cohesion Fund.

The second objective for the Regional Competitiveness and Employment aims to improve the competitiveness and attractiveness of regions as well as employment by "... anticipating economic and social changes, including those linked to the opening of trade, through the increasing and improvement of the quality of investment of human capital, innovation and the promotion of the knowledge society, entrepreneurship, the protection and improvement of the environment, and the improvement of accessibility, adaptability of workers and businesses as well as the development of inclusive job markets ..." (Official Journal of the European Union 2006a, Article 3 § 2 (b)). It covers all those regions that are not eligible for the Convergence objective, which is the reason why all EU regions are covered by the Cohesion Policy. The phasing-out regions are also excluded, as they are part of the Convergence objective. The majority of these 168 regions therefore has the GDP per capita higher than 75% of the Community average (Official Journal of the European Union 2006a). 55 billion Euros or 16% of the total budget of the Cohesion Policy are allocated towards this objective.

The third and last objective is the European territorial cooperation objective and it is aiming at reducing the "regional disconnections (European Union Regional Policy 2007b, p. 7)" and to support the EU integration. It is funded by the ERDF with 8.7 billion Euros or 2.5% of the total budget for Cohesion Policy. This objective covers currently three types of programmes:

(A) 52 cross-border cooperation programmes for areas sharing a "common space" (European Union Regional Policy 2007a, slide 2) separated by internal EU borders. Budget: € 5.6 billion.

(B) 13 translations co-operation programmes for large spaces like the Baltic Sea, Alpine and Mediterranean Regions or the Northern Periphery. Budget: € 1.8 billion.

(C) The interregional co-operation programme covering all 27 EU Member States facilitating exchange of experience and the best practice between the regional and local bodies in different countries. Budget: € 445 million.

FUNDING OF COHESION POLICY

The Cohesion Policy is financed by two Structural Funds: the European Regional Development Fund (ERDF) and the European Social Fund (ESF), as well as by the Cohesion Fund (CF). The Instrument for Pre-Accession Assistance (IPA) and the European Investment Bank (EIB) are two financial instruments facilitating the European Cohesion Policy, but they are not part of the budget of the Cohesion Policy.

The two Structural Funds, the ERDF and ESF, are both targeting the NUTS II regions and they support multi-annual programs. The Cohesion Fund supports Member States instead of regions and the financial aid is allocated per project. Instead of the additionality criteria (the EU resources are additional to national resources and no replacement) of the Structural Funds, the conditionality criteria with the objective to keep the public deficit in limits are applied to the Member States receiving the financial support from the Cohesion Fund (Regional Policy Inforegio 2010h). Structural Funds and the Cohesion Fund are different with respect to the execution and the criteria of financial assistance. What they do have in common, is the same goal of economic and social cohesion within the framework of the EU Cohesion Policy.

With the current budget of € 201 billion, the European Regional Development Fund is the most important fund of the Cohesion Policy. Its task is to promote the economic and social cohesion throughout the European Union by reducing the regional disparities and by participating in the development of regions (Official Journal of the European Communities 1999, Article 1). It finances projects of all three objectives

of the European Regional Policy. It contributes to investments that creates sustainable jobs, co-invest into infrastructure which (i) helps to increase the economic potential, development, structural adjustment and creation or maintenance of sustainable jobs in regions covered by the convergence objective, including investments in trans-European networks in the fields of transport, telecommunication and energy infrastructure, especially for insular, land-locked and peripheral regions. It also contributes to investments into infrastructure in regions (ii) with industrial decline, depressed urban areas, rural areas and areas dependent on fisheries, or where investment in infrastructure is a pre-condition for job-creating economic activity (Official Journal of the European Communities 1999, Article 2). The ERDF especially supports small and medium sized enterprises with management, market research, information technology, innovation and with finance and loans.

Established in 1958 with the Treaty of Rome, the European Social Fund is the oldest Fund of the European Cohesion Policy. Its main tasks are the improvement of employment opportunities and human resource development, "by improving employment and job opportunities, encouraging a high level of employment and more and better jobs" (Official Journal of the European Communities 2006b, Article 1).

The Cohesion Fund emerged out of the problem that some of the poorest Member States needed to make big investments into infrastructure as a precondition of economic growth on the one hand, but were not allowed to run budget deficits greater than 3% on the other hand (Regional Policy Inforegio 2010a). To allow those Member States to still make the necessary investments, the Cohesion Fund was legally established in the Maastricht Treaty, article 129c in 1992 and it was set up in 1993 (Official Journal 1992). A Member State is eligible for funding from the CF if its gross national product (GNP) per capita, measured in purchasing power parities, is below 90% of the EU 27 average. In the actual planning period 2007–2013, there are 15 Member States receiving financial aid from the Cohesion Fund: Greece, Spain on a transitional basis, Portugal, Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta,

Poland, Slovakia, Slovenia, Bulgaria and Romania. The Cohesion Fund is operating under the Convergence Objective. With the budget of currently € 70 billion, it invests into the infrastructure of the Trans-European Transport Networks, as well as into environmentally beneficial projects as energy efficiency, the use of renewable energy and the development of railroads (Regional Policy Inforegio 2010a).

ALLOCATION MODELS: PREDICTED VERSUS REAL ALLOCATION OF THE BUDGET FOR STRUCTURAL ASSISTANCE

In order to evaluate whether a member state gets more or less than its "fair" share out of the budget that is available for structural assistance, a linear regression model in two specifications was used:

I. $\quad A_i = \alpha + \beta P_i + \gamma I_i$

II. $\quad A_i = \alpha P_i^{\beta} I_i^{\gamma} \rightarrow \ln A_i = \ln \alpha + \beta \ln P_i + \gamma \ln I_i$

where A is the predicted allocation share of funding of a Member State i, P is the population share of a Member State i and I is the income share of a Member State i. The model follows the logic of the income-based criteria of the allocation of structural funding, where regions with the average GDP per capita below 75% of the average GDP per capita of the European Union are eligible. Regions with a low income and a high population are expected to receive more funding than the regions with a high income and a small population. Both specifications of the model are applied with the data of the gross domestic product measured in Euros at current market prices of 2010, as well as the data measured in purchasing power parity (PPP) at current prices of 2010. The estimated coefficients α, β, γ and the R^2 are shown in Table 2.

Specification I is a linear model and specification II is a Cobb-Douglas function, which is set in natural logarithms to be able to apply the linear regression to it. Both specifications are predicting the actual allocation quite well with R^2 between 0.76–0.85. Figures

Table 2. Estimated coefficients and R^2

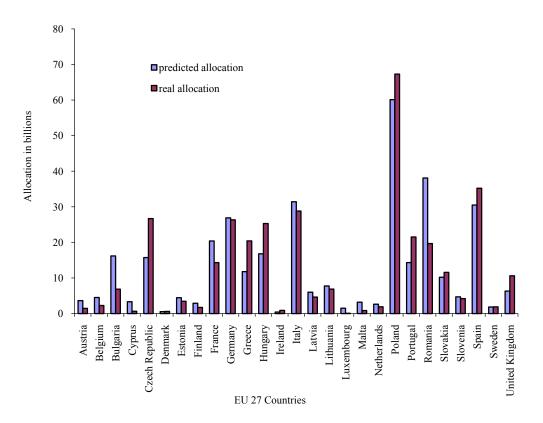|		α	B	γ	R^2
Linear Model	Euro	0.0078	2.82	−2.03	0.85
	PPS	0.0086	3.61	−2.84	0.76
Cobb-Douglas	Euro	−1.086	2.086	−1.25	0.83
	PPS	−1.17	2.8	−2.02	0.81

Figure 1. Allocation of Structural Funds in Euros over 2007–2013 with the linear model

1–4 show the predicted allocation versus the real allocation of funding of the EU Cohesion Policy per Member State of the EU 27, for the planning period 2007–2013. Figures 1 and 2 present the results of the linear model with GDP measured in Euros (Figure 1) and in PPP (Figure 2). Figures 3 and 4 present the results of the Cobb Douglas model with GDP in Euros (Figure 3) and in PPP (Figure 4).

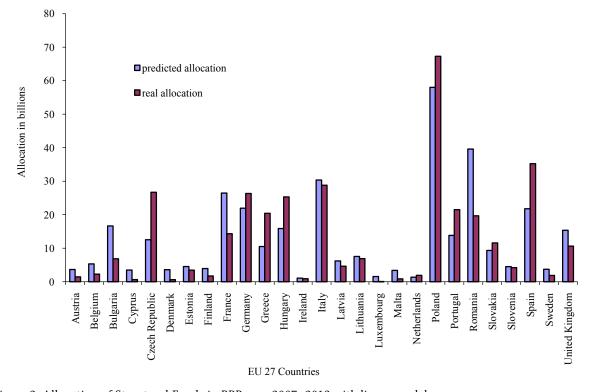The policy implications of an exercise like this are twofold. First, the European Commission may wish

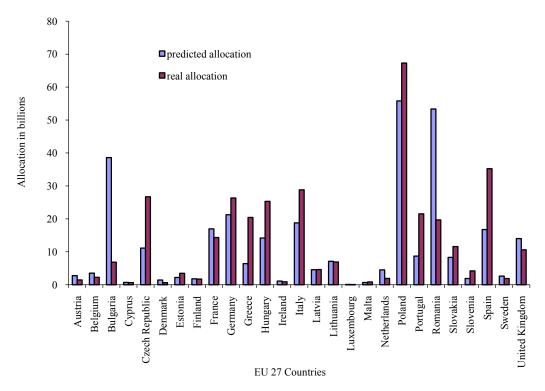Figure 2. Allocation of Structural Funds in PPP over 2007–2013 with linear model

Figure 3. Allocation of Structural Funds in Euros over 2007–2013 with the Cobb-Douglas Model

to evaluate whether member states would not receive too much structural assistance when compared to other member states, because this would cause a political tension between them. This may have negative financial consequences for regions that are located in the countries that are "overrepresented". Second, the individual member states would be able to evaluate whether they should put in an extra effort in order to receive a fair share of the available funds. This would mean that the evaluation procedure mentioned could contribute to a better allocation of the available funds, especially in times of tight government budgets.
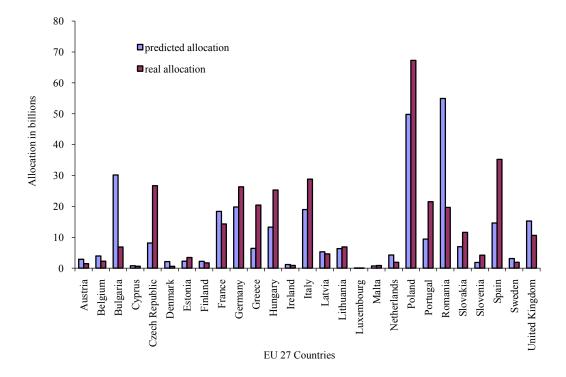

Figure 4. Allocation of Structural Funds in PPP over 2007–2013 with the Cobb-Douglas Model

CONCLUSION

A comparison between the predicted and real allocation indicates that some countries are getting more and others are getting less funding within the framework of the EU Regional Policy. Countries that are getting more money allocated in the planning period 2007–2013 than predicted by the model are Poland, the Czech Republic, Hungary, Portugal, Slovakia and Spain. Members States who are receiving less financial support than expected are clearly Bulgaria and Romania, as well as Austria, Belgium and France. For the remaining countries, mixed results emerged between different specifications of the model. The countries that are getting less in one and more in another specification of the model are left out of the comparison. These differences are likely to be caused by the different specifications of the model rather than the real differences.

Interesting is the comparison of the allocation between the current and previous planning period (Vostrovská 2009). It suggests that Poland, the Czech Republic and Hungary switched from the Member States who were getting too little to the Member States who are getting more than the model would predict. The funding allocated to Spain and Portugal is too high during both planning periods.

The predicted allocation for Bulgaria and Romania is in all four models higher than 4% of GDP per year and it is therefore too high. The financial assistance from Structural Funds and the Cohesion Fund is not allowed to exceed 4% of GDP.

This study gives only an indication that some countries are receiving more and others are receiving less structural assistance from the Cohesion Policy than predicted by the model. Two factors could explain these differences. First, in different countries, different expertise might be available how to attract the EU funds. Second, countries could differ in their absorption capabilities. Money on one hand is not enough; there must also be projects to spend the money in an efficient way. A further research could be done to look at the causes of the different allocations.

Whether the model results would indicate a more efficient allocation of structural funds, is not clear. Generally speaking, structural assistance has a greater effect in the countries with a relatively low income per capita. However, the efficiency of the assistance depends on the specific characteristics of the individual projects. Only a cost benefit analysis could provide some conclusive answers in this domain. The key problem here is: What is the economic efficiency of the current Cohesion Policy and how it could be improved?

It is clear that an evaluation procedure, as it has been carried out in this article, could have serious consequences for the individual regions. The European Commission would be more reluctant to allocate funds to regions situated in the countries that get more than their fair share from the Structural Funds. And further, the individual member states that are "underrepresented" will be stimulated to put more effort in getting structural assistance for eligible regions. Poland, the Czech Republic and Hungary are good examples of this. Generally speaking, the procedure that has been discussed could contribute to a more fair allocation of the available Structural Funds.

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Arrived on 19th October 2010

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