Stoyan Tanchev PhD,* Mariyan Terziev**

EU FUNDS AND ECONOMIC GROWTH IN BULGARIA

In this study the financial resources from the Structural and Cohesion Funds which Bulgaria has received are analyzed, presented as expenditures from the EU budget and their link to economic growth is examined. Quarterly statistical data covering the period 2008-2014 is used, along with 28 observations. A standard linear regression is applied for the calculation of the coefficients and the interpretation of the results in the form of the least squares method. The results of the empirical analysis show that there is a proportional statistically significant link between the financial resources from the EU budget and the economic growth of Bulgaria. It is assumed that the expenditure incurred during the analyzed period under the Structural and Cohesion Funds has led to a 1% increase in the economic growth of the country.

JEL: H24; H25; H63

Keywords: EU funds, economic growth, Cohesion Policy, Structural Policy

The main objective of the EU funds is the financing of projects of a different nature in the field of the Structural and Cohesion Policy of the EU countries. The idea stems from the common European doctrine of promoting employment and striving for higher economic growth, which in turn leads to the faster integration of the countries in the community. Financing EU Member States through Structural and Cohesion Fund expenditure implies not only the development of different sectors and separate regions but also that of entire countries. The EU Structural Funds mainly finance projects aimed at enhancing the competitiveness of the individual enterprise or region and the Cohesion Fund assists whole countries lagging behind in their development (see Nikolov, 2009, p. 154). Hence, the Cohesion Policy is guided by the principle of solidarity, as part of the Union's budget is directed towards the less developed countries (Stoilova, 2013).

It is assumed that the EU's common policies will result in the better development of the economies and increased employment in the Member States. As a result, economic sectors that are economically important are developing and act as a driving force for growth. In this respect, Bachtler and McMaster (2008) and Trón (2009) have come to the conclusion that funding through the Funds is an EU instrument of major importance for the integration of the poorer countries into the richer ones. By implementing these priority Cohesion Policies among its Member States, the Union has become an example of economic power and today it accounts for about 25% of the world's nominal gross domestic product.

Bulgaria is one of the EU Member States which, over the years of its membership, has been using more and more financial resources to develop its economy and generate significant growth. That is why, the financial resources from

* SWU "Neofit Rilski", Faculty of Economics, stoyan_tanchev@yahoo.com

** SWU "Neofit Rilski", Faculty of Economics, mterziev2@abv.bg

the EU budget under the Structural and Cohesion Funds and their link to the country's economic growth are analyzed. A single linear regression in the form of the least squares method is used to analyze the coefficients.[1]

What is the SIBILA model

The SIBILA model is representative of modern macroeconomic theory. It is based on the approaches adopted by the European Commission and the EU Member States in the modeling and impact of the Structural and Cohesion Policy on growth.

It is interesting to point out that the model looks at both sides of economic dynamics – both demand and supply, i.e. it admits the presence of factors affecting the economy, which can be taken into account in both directions. Demand is analyzed through the dynamics of government consumption, government and private investment, and supply is analyzed through the production function of a neoclassical type with fixed labor factors, physical and human capital. In this part of the model, and in view of the choice of approach, it is assumed that growth dynamics is defined within the model itself with an Hicks technology change which is identified with the help of the so-called total factor productivity[2]. Thus, the results from the effects on the supply are accounted for directly on the basis of the costs incurred by the EU funds in terms of physical capital, labor, human capital and the increase in the technological level in the economy.

The SIBILA model contains 170 equations with 202 variables, of which 170 are endogenous and 32 are exogenous.

The Gauss-Seidel method is applied in the calculation of the coefficients. As a result of the applied simulation model "Analysis of sensitivity", the simulated values of the endogenous variables are obtained. The aim is to examine the influence of the variables of the constructed model after a modification in key external (exogenous) variables. The sensitivity analysis defines several types of shocks, including an observation of the behavior of major endogenous variables in the long-term (in this case until 2020):

- an increase in total factor productivity (the remaining unexplained part of the technological level) by 1%;
- an increase in government consumption by 10%;
- an increase in international energy commodity prices by 10%.

The results of the three presented shocks are traced to two possible scenarios – baseline and alternative. The first results do not take into account the cash flows under the Structural and Cohesion Funds, whereas the second ones take them into account. The results of the SIBILA model, covering the period 2005-2015, are

[1]The main basis for conducting the empirical analysis of the economic growth of Bulgaria and the financial resources coming from the EU funds is borrowed from the SIBILA model – *Simulation Model of Bulgaria's Investment in Long-term Advance* (see Tsvetkov, Vasilev, Ganev et al., 2011).

[2] This is an unexplained part of the technological change, also known as Solow's remnant (see Solow, 1957).

presented in Tables 1, 2 and 3 with a view to comparing a baseline and an alternative scenario, but they show the changes only for the last year – 2015 (for more details, see Tsvetkov, Vasilev, Ganev, et al., 2011, p. 131). Another important feature is that the results themselves compare the variance of the variables in the two scenarios. It is also possible to take into account the dynamics of the variables throughout the analyzed period, by comparing the change trends from one period with the ones from another.

Table 1

Results, related to indicators from the real sector

2015	GDP at prices from 2005, million BGN	Private consumption at prices from 2005, million BGN	Government consumption at prices from 2005, million BGN	Private investments at prices from 2005, million BGN	Government investments at prices from 2005, million BGN	Export of goods and services at prices from 2005, million BGN	Import of goods and services at prices from 2005, million BGN
Baseline scenario	61225.9	37491.7	7858.4	7200.5	2608.6	47111.0	46117.5
Alternative scenario	67005.0	39860.0	7956.8	10410.1	3012.9	50970.7	53684.5
Difference, in %	9.4	6.3	1.3	44.6	15.5	8.2	16.4

Table 2

Results* for the labor market indicators and the inflation rate

2015	Workforce (15-64 y. o.), thousands	Employment (15-64 y. o.), thousands	Unemployment (15-64 y. o.), thousands	Unemployment coefficient (15-64 y. o.), %	Average annual salary	Inflation under the HICP
Baseline scenario	3554.1	3370.8	183.3	5.2	7943.97	1.6
Alternative scenario	3635.6	3477.5	158.1	4.3	11490.2	4.0
Difference, in %	2.3	3.2	-13.8	-0.8	44.6	2.4

Table 3

Results for the fiscal and the external sector indicators

2015	Budget balance, % GDP	Fiscal reserve, million BGN	Government debt, million BGN	Government debt, % GDP	Current account, % GDP
Baseline scenario	-5.1	4000	32933.6	36.8	4.7
Alternative scenario	-4.3	4000	30197	30.5	-1.9
Difference, in %	0.9	0	-8.3	-6.3	-6.6

As already mentioned, the results show only the change in 2015. However, this does not mean that the differences are characterized by the strongest trend in this period. As can be seen, the GDP growth in the real sector indicators related to the dynamics of GDP at the end of the period is 9.4%, which is the highest result for the period 2005-2015. In the private consumption dynamics, the indicated increase is 6.3%, with the highest difference recorded in 2013 – 7.8%. In the government consumption dynamics there is a recorded increase of 1.3% in 2015, but the highest growth is recorded in 2012 – 16.2%. Private investment sets the difference for 2015 towards an increase of 44.6%. Government investment accounts for a 15.5% difference, the highest being in 2012 - 52.4%. In terms of the variable for the export of goods and services, the difference is 8.2%, while the import rate is 16.4%, which indicates a change between the baseline and the alternative scenario.

The results for the labor market indicators and the inflation rate show that a 2.3% increase in the workforce (15-64 years) is recorded in 2015, but the largest figure is recorded in 2013, with a 3.3% difference in the values. In the case of the employment of the same age group, the change is 3.2%, the most significant difference being in 2012 – 6.5%. Unemployment has a negative value and marks a decline of -13.8%, with the most drastic difference recorded in 2012 at -40.6%. The unemployment coefficient for 2015 also has a negative value of -0.8%, with the most significant difference showing once again in 2012 at -3.9%. The difference shows a 44.6% increase in the dynamics of the average annual salary. The inflation which accounts for the Harmonized Index of Consumer Prices is 2.4%.

The results for the fiscal and the external sector show that for the variable of budget balance, presented as % of GDP, the difference between the baseline and the alternative scenario is 0.9% and the highest value is recorded in 2013 – 1.1%. The fiscal reserve is at 0.0% for the whole study period. Government debt reported a decrease of -8.3%, the gap being also the most significant difference for the period. Government debt, expressed as % of GDP, also has a negative value of -6.3%. The current account results, expressed as % of GDP, also show a negative value of around -6.6%. For the last three variables, the reported results are the highest for the study period.

In view of the set variables, the econometric approach and the results, some conclusions and summaries can be made. The SIBILA model broadly presents the economic development of Bulgaria in terms of the importance of the EU Structural and Cohesion Funds. It can be seen that the financing of different activities leads to positive dynamics both in the real economy and in the labor market and the fiscal policy indicators. It is established that, with the help of the financial resources provided by the funds, the Bulgarian economy is successfully developing. Positive dynamics have been recorded for important macroeconomic variables (GDP, private and government investment, employment, wage growth), while others have seen negative trends (government debt, unemployment). In these circumstances, it can be summarized that the SIBILA model reflects the positive influence of the

Funds for the economic development of Bulgaria, as well as the dependence of the economic growth on the European financing.

Empirical research on the link between EU funds and economic growth

The topic of Structural and Cohesion Policy is widely discussed both at national and international level. Many empirical studies have been carried out to prove or disprove the importance of the EU funds as a factor for economic development. In a panel study, Albulescu (2014) analyzed the relationship between economic growth and financial resources from EU funds in EU Member States. With the use of the econometric "Generalized Method of Moments" (GMM), the author examines statistical data for the period 2007-2013 and concludes that there is a positive correlation between the variables. Albulescu argues that the financial resources from the EU funds increase economic growth.

In another panel study by Percoco and Gagliardi (2012), the relationship between the EU funds and the economic growth for the period 1999-2008 is also examined. Using regression analysis, the authors empirically prove that the financial resources coming from the EU funds have a positive effect on economic growth in the EU countries.

Dobre (2015) examines the relationship between funds and economic growth in the countries of Central and Eastern Europe, analyzing the funds received during the period 2007-2013 in Bulgaria, Romania, Poland, the Czech Republic and Hungary. The conclusions indicate that the countries have registered higher economic growth as a result of receiving financial resources from the EU funds.

In another research covering the period 2007-2013, Monastiriotis (2011), through the use of regression analysis, also proves that EU funds have a positive effect on the economic growth of EU Member States. In a similar empirical research on the relationship between EU funds and economic growth for the period 2007-2013, Puigcerver-Peñalver (2007) establishes that the EU funds are in a proportional relationship to economic growth and increase its dynamics. In a panel study by Mann (2015) for Poland, Slovakia, Hungary, Latvia, Bulgaria and Romania for the period 2004-2007, the positive impact of the EU funds on the dynamics of economic growth is empirically confirmed.

Álvarez-Martínez (2014), through applying the econometric method of the "Calculated general equilibrium model" for the Spanish regions of Madrid and Andalusia, argues that the EU Structural Funds have had positive short-term effects on investment. In a study on the economic growth of Lithuania conducted by Dapkus and Streimikiene (2014), it is established that the Structural Funds are a good tool for attracting investment.

Interesting results for Bulgaria's economic development and its link to EU funds are presented in an empirical study by the IMF (see Paliova and Lybek, 2014). The study shows that EU funds can be an effective instrument for the management of demand for the mitigation of the consequences of the economic crisis, stating

that they are able to increase the potential growth of the country. However, it is assumed that the use of Structural and Cohesion Funds as a financial instrument for stimulating demand and increasing potential growth also suggests a good management of public finances, because their absorption tends to be ineffective as a result of the high level of grants.

Interesting conclusions are presented by Ganchev (2013, p. 45), who argues that the richer EU countries, which maintain a higher level of taxation, raise the issue of limiting the transfers from the Structural Funds to the low-tax countries in the future. This can severely limit the opportunities for the absorption of EU funds, which in turn increases the risks to the programs for poverty reduction and social integration financed by the EU funds.

Different results are formed in a study by Bachtler and Gorzelak (2007) on the impact of the EU funds on the growth of the countries in the individual regions of the EU. The conclusions are that the Structural and Cohesion Funds are not capable of providing sustainable growth in lagging regions. It has been empirically proven that there is a trend towards increasing differentiation. Similar results are formed in a panel study by Martin (2007) for the period 1994-2006 – they show that financing by the Funds does not have a significant impact on the growth of EU economics. Similar results are found in a research done by Kyriacou and Roca-Sagalés (2012). With the help of a regression model for the period 2007-2013, they find that in the short-term period the financial resources from the EU funds are in an inverse proportional relationship with the economic growth, while in the long-term period a weak but positive influence is formed. Ederveen, de Groot, and Nahuis (2006) examine the relationship between economic development and Structural Funds in the EU-15 countries for the period 1960-1995 with the use of a linear regression model and conclude that “European support has not improved the growth in the countries.”

Methodology of the study and empirical results

The use of monthly or quarterly data in the modeling of time series of data requires from them to be seasonally adjusted. The data is adjusted with a *Seasonal adjustment (Census X12).*

The analysis of the statistical data with a linear method requires the use of a procedure for estimating the presence of a unit root in the time series. The time series data are stationary when the arithmetic mean, variance and autocovariance of the submitted phenomena and processes are independent over time (see Arkadiev, 2005, p. 140).

The stationary check of the variables in the time series is based on the Augmented Dickey-Fuller Test with a preset error probability level of 5% (see Dickey and Fuller, 1979).

The results show that the revenue variable taken from the EU funds registers a non-stationary process (see Table 4). Trends in dependence over time are also found in the dynamics of GDP. As a result of the registered trends and as an important condition for the application of a linear regression, it is necessary to

note that the variables of both values have to be transformed into first difference or second difference. After the transformation of the variables, a stationary process in the dynamics of GDP is formed in the calculation of the first difference, and a stationary process in the dynamics of the revenues from the EU funds is formed in the calculation of the second difference.

Table 4

Unit root test on the variables GDP and EU funds for the period 2008-2014

Critical value at 5%	Statistics of Dickey-Fuller	t-statistics	Probability of error
EU funds	-2.986225	7.010028	1.0000
D(EU funds)	-2.998064	-1.371542	0.5780
D(EU funds,2)	-2.998064	-8.539242	0.0000
GDP	-2.986225	-2.915900	0.0577
D(GDP)	-3.029970	-6.056895	0.0001

Note: The results in brackets show first or second differences of the variables.

Source: Own calculations.

Under these circumstances, it becomes necessary to determine long-term dependencies in relation to the examined variables. One of the ways to verify whether or not cointegration dependence is present is through the use of the Johansen test (1988). According to it, the null hypothesis (H0) rejects the assumption for the presence of cointegration between the examined variables and the alternative hypothesis (H1) confirms the presence of a cointegration process. The basic information in the test is based on Trace Statistics (see Table 5), where the null hypothesis is rejected at a pre-set error probability level of 5%. The alternative hypothesis or the number of cointegrated relationships is confirmed by the result of the Max-Eigen Statistics (see Table 6).

Table 5

Hypothesis	Eigen-value	Trace Statistics	Critical value 0.05	Probability of error
None*	0.359466	17.39983	15.49471	0.0255
At most 1*	0.243868	6.708949	3.841466	0.0096

Source: Own calculations.

Table 6

Hypothesis	Eigen-value	Max-Eigen statistics	Critical value 0.05	Probability of error
None*	0.359466	0.69088	14.26460	0.1704
At most 1*	0.243868	6.708949	3.841466	0.0096

Source: Own calculations.

In view of the results of the Johansen test, it can be concluded that long-term dependence between the variables is present. It becomes evident from the Trace

Statistics that the alternative hypothesis can be accepted due to the lower registered coefficient (0.0096). The Max-Eigen Statistics also provides reliable information, namely that there is a cointegrating relationship between the variables – again with a registered coefficient (0.0096).

After establishing the presence of a stationary process through the use of the Dickey-Fuller test and the presence of long-term dependence through the use of the Johansen test, a linear method for the calculation of the regression coefficients can be applied in the form of an Ordinary Least Squares Method (OLS). The regression equation has the following form:

(1) $Y_t = C + X_{it} + \varepsilon_t$, where:

Y_t is the GDP growth in Bulgaria for the period 2008-2014;
X_{it} – the financial recourses from the Structural and Cohesion Funds for the same period;
ε_t – the vector of residues.

Table 7 presents the coefficients and results from the regression equation.

Table 7

Dependent variable: GDP

Variable	Coefficient	Standard error	t-statistics	Probability of error
Constant	99.57565	0.776822	128.1833	0.0000
EU funds	0.010948	0.143724	2.467722	0.0452

R-squared	0.082366	Mean dependent var.	100.4171
Adjusted R-squared	0.044131	S.D. dependent var.	2.733806
S.E. of regression	2.672803	Akaike info criterion	4.877936
Sum squared resid.	171.4530	Schwarz criterion	4.974713
Log likelihood	-61.41317	Hannan-Quinn criterion	4.905804
F-statistic	2.154209	Durbin-Watson stat	0.649900
Prob(F-statistic)	0.155164		

Source: Own calculations.

In view of the results, it can be pointed out that the absorption of Structural and Cohesion Policy funding from the EU programs has had a positive impact on the dynamics of the economic growth in Bulgaria. This is confirmed by the existence of a proportional relationship between the dynamics of the revenues from the EU funds and the economic growth in our country. The formed coefficient of the funds is (0.010948) and that of the economic growth has a registered value of (99.57565). It can be seen that the formed positive relationship leads to results which prove that the financial resources received form EU funds lead to an increase of about 1% in economic growth. Therefore, 1% of the aggregate economic growth is due to these financial resources.

This study is evidence that the EU revenues are important for Bulgaria in terms of the increase in the aggregate economic growth. It complements scientific knowledge and is in line with studies by other authors (Marco Percoco, Luisa Gagliardi, Reiner Martin, Andreas Kyriacou, Vassilis Monastiriotis and Mari Carmen Puigcerver-Peñalver), which prove that there is a positive relationship between EU funds and economic growth in the EU countries. Therefore, the revenues which Bulgaria receives from the Structural and Cohesion Funds are identified as an important determinant of growth stimulation.

In support of these results and conclusions, the Ramsey test for the presence of linearity between the used variables is applied (Table 8).

Table 8

The Ramsey test

Variable	Coefficient	Standard error	t-statistics	Probability of error
Constant	99.57565	0.776822	128.1833	0.0000
EU funds	0.010948	0.143724	2.467722	0.0452

R-squared	0.944073	Mean dependent var.	53.45410
Adjusted R-squared	0.941392	S.D. dependent var.	5.131261
S.E. of regression	1.242232	Akaike info criterion	3.322247
Sum squared resid.	225.2985	Schwarz criterion	3.480011
Log likelihood	-247.8130	Hannan-Quinn criterion	3.386330
F-statistic	352.0805	Durbin-Watson stat	2.005666
Prob(F-statistic)	0.000000		

Source: Own calculations.

In view of the results obtained, the Ramsey test confirms the objectivity of the conclusions drawn from the application of the linear regression. The null hypothesis (H0) states that no linearity occurs and the alternative hypothesis (H1) proves the opposite. The basis of the Ramsey test is that the so-called additional variable is used, which assumes that if the R^2 recorded therein is higher than the R^2 recorded in the OLS; it is believed that there is a linear relationship between the analyzed variables. As it can be seen, the Ramsey test has a higher coefficient (0.944073) than that of the OLS, whose coefficient is (0.082366). Under these circumstances, the null hypothesis can be rejected and the alternative hypothesis can be accepted. Ceteris paribus, it can be concluded that the revenues from the EU funds have a positive effect on the dynamics of the economic growth in Bulgaria.

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Based on the applied econometric OLS Model and based on the result of this study, it can be summarized that:

The empirical analysis shows that a statistically significant relationship is formed between the financial resources received from the EU funds and the economic growth of Bulgaria. The empirical analysis uses a standard methodology in the form of the Ordinary Least Squares Method for the calculation of the coefficients.

The results of the study show that there is a proportional relationship between the financing received through the Structural and Cohesion Funds and the economic growth of Bulgaria for the period 2008-2014. The absorption of financial resources from EU Structural and Cohesion Policy funds has a positive impact on the dynamics of the aggregate economic growth in our country during the analyzed period – about 1% of the aggregate growth is due to the financial resources received from the EU funds. The reliability of the result in this study is further supported by the application of the Ramsey test. It is established that there is a linear corelation between the variables of the financial resources coming from the Structural and Cohesion Funds and the economic growth in Bulgaria.

It must be pointed out that, in view of the used econometric method and the obtained results, this study does not claim to be thorough and exhaustive in respect to the topic of EU funds and economic growth. Despite the choice of a simple econometric approach (using only two variables), the conclusions drawn are in synch with and support the results and conclusions reached with the SIBILA model.

References:

Albulescu, C., D. Goyeau (2014). EU Funds Absorption Rate and the Economic Growth. – Timisoara Journal of Economics and Business, 6(20), p. 153-170, retrieved from http://www.tjeb.ro/index.php/tjeb/article/view/TJEB20_153to170

Álvarez-Martínez, M. T. (2014). The Effects of European Structural Funds in the Spanish Regions Using CGE Models. – Investigaciones Regionales, 29, p. 129-138, Section Articles.

Arkadiev, D. (2005), Econometrics. Stara Zagora (*in Bulgarian*).

Bachtler, J., G. Gorzelak (2007). Reforming EU Cohesion Policy. A reappraisal of the performance of the Structural Funds. – Policy Studies, Vol. 28, N 4.

Bachtler, J., I. McMaster (2008). EU Cohesion Policy and the Role of the Regions: Investigating the Influence of Structural Funds in the New Member States. – Environment and Planning C: Government and Policy, Vol. 26, p. 398-427, DOI: 10.1068/c0662

Dapkus, R., D. Streimikiene (2014). The Use of EU Structural Funds for Sustainable Development in Lithuania. – International Journal of Social Science and Humanity, Vol. 4, N 2, March.

Dickey, D., W. Fuller (1979). Distribution of the Estimators for Autoregressive Time Series With a Unit Root. – Journal of the American Statistical Association, Vol.74, N 366, p. 427-431.

Dobre, A. (2015). The Impact of EU Funds on Romanian Economy, ftp.repec.org

Ederveen, S., H. L. F. de Groot, & R. Nahuis (2006). Fertile Soil for Structural Funds? A Panel Data Analysis of the Conditional Effectiveness of European Cohesion Policy. – KYKLOS, Vol. 59, N 1, p. 17-42.

Ganchev, G. (2013). Combating Poverty in the Context of the National Development Program, the Convergence Program (2011) and the National Roma Integration Strategy of the Republic of Bulgaria (2012-2020). Institute of Economics and International Relations, Friedrich Ebert Foundation (*in Bulgarian*).

Johansen, S. (1988). Statistical Analysis of Cointegration Vectors. – Journal of Economic Dynamics and Control, Vol. 12, Issues 2-3, June-September, p. 231-254, https://doi.org/10.1016/0165-1889(88)90041-3

Kyriacou, A., O. Roca-Sagalés (2012). The Impact of EU Structural Funds on Regional Disparities within Member States. – Environment and Planning C: Government and Policy, 30(2), January, p. 267-281, DOI10.1068/c11140r

Mann, K. (2015). The EU, a Growth Engine? The Impact of European Integration on Economic Growth in Central Eastern Europe. FIW Working Paper No. 136, http://hdl.handle.net/10419/121136

Martin, R. (2007).The Impact of the EU's Structural and Cohesion Funds on Real Convergence in the EU, http://pki.nbp.pl

Monastiriotis, V. (2011). Regional Growth Dynamics in Central and Eastern Europe, LEQS Paper No. 33/2011 April 2011, http://www.lse.ac.uk

Nikolov, C. (2009). Global Economy. Blagoevgrad: PH "Bon" (*in Bulgarian*).

Paliova, I., T. Lybek (2014). Bulgaria's EU Funds Absorption: Maximizing the Potential! IMF WP/14/21, February 2014

Percoco M., L. Gagliardi (2012). Understanding European urban development: A review of selected issues, p. 1-27, www.unibocconi.it

Puigcerver-Peñalver, M. C. (2007). The Impact of Structural Funds Policy on European Regions Growth. A Theoretical and Empirical Approach. – The European Journal of Comparative Economics, Vol. 4, N 2, p. 179-208.

Solow, R. (1957). Technical Change and the Aggregate Production Function. – The Review of Economics and Statistics, Vol. 39 (3), p. 312-320.

Stoilova, D. (2013). The Use of EU Structural Funds in Combating Poverty in Bulgaria. Institute of Economics and International Relations, Friedrich Ebert Foundation (*in Bulgarian*).

Tsvetkov, S., V. Vasilev, G. Ganev, R. Ganeva, & P. Chobanov (2011). Simulation Model of Bulgaria's Investments in Long-Term Advance – SIBILA. Development of an Econometric Model for the Impact Assessment of the Structural and Cohesion Funds of the European Union Under Project No. 0018-ЦИО-3.2, funded under the Technical Assistance Operational Programme (*in Bulgarian*).

Trón, Z. (2009). Evaluation Methods of European Regional Policy and Reasons for Different Outcomes. The Romanian Economic Journal, Year XII, N 32 (2).

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