Local Fiscal Capacity in the New Members of the European Union: Is It Efficient?

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Abstract

Purpose – This paper aims to analyze the efficiency of the fiscal capacity of the local governments in the new members of the EU.

Design/methodology/approach – The impact of the locally collected taxes on economic growth is analyzed by the means of regression analysis. The GDP growth rate is adopted as a dependent variable in the model and its deviations are explained via tax instruments for building fiscal capacity.

Findings – Strong positive effects on economy, when property taxes come in local budgets.

Research limitations/implications – There are many factors affecting the economic growth, which are not included in the regression model. The effects of the charges levied by local governments also remain without estimation.

Originality/Value - The study fills in the gap of research on the benefits of local fiscal capacity in the countries of interest.

Key words: property taxes; shared taxes; total government expenditure; economic growth; research; new member states, synergy.

Paper type – Research paper

1. Introduction

According to the literature, the basic economic argument in favor of fiscal decentralization is based on two complementary assumptions: 1) decentralization will increase economic efficiency because local governments are better positioned than the national government to deliver public services as a result of information advantage; and 2) population mobility and competition among local governments for delivery of public services will ensure the matching of preferences of local communities and local governments (Tiebout, 1956; Oates, 1972; Davoodi & Zou, 1998).

The establishment of a financially decentralized government structure is related to any outlays whose amount must be paid by society. Consequently, such kind of reform must lead to higher profits than initial expenses. The definition we have cited above insists on the increase in economic efficiency as a result of fiscal decentralization. It means that public sector will realize an economy of resources because of a more efficient provision of public goods. Thus, the more efficient resources allocation will contribute to the

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efficiency gains of total public sector. Other results from the decentralized public service are a higher level of the quality of the public service and ensuring fuller compliance of the resident consumers. At least, an eventual reduction of the tax burden is also possible in terms of more effective public goods productivity.

The qualitative public service provided by the government in a local jurisdiction would reduce the current costs of the resident firms. Thus, the local self-government unit will be more attractive for nonresident business agents and high-income individuals. All the things will influence on the potentiality for economic development of the same jurisdiction.

The central authority transfers financial powers to the sub-national government levels in order to guarantee their fiscal autonomy. Local budget is the "financial expression" of local self-government. The tax revenues collection is a significant part of the financial powers. Thus, local governments are able to provide public goods and services linked to the preferences and the financial abilities of local communities. Consequently, we could expect the fiscal capacity building contributes to the efficiency gains of the total public sector as well as the total economy.

We can agree with the last assumptions as verify their practical confirmation. Hence, we must find whether the practice supports the theoretical predictions by the means of quantitative methods.

The purpose of this paper is to analyze the efficiency of the fiscal capacity of the local governments in the new members of the European Union. In the context, the purpose of research involves to be estimated the impact of the locally collected taxes on economic growth. The sample of interest includes the countries in Central and Eastern Europe as well as Cyprus and Malta. The criterion for selection of the countries is the admission to the European Union since 2004 and 2007.

The estimation of the efficiency of local fiscal capacity covers the years of the period from 2000 to 2010. Thus, the present analysis estimates the actual state of the reforms and their results immediately before and after the EU membership of the new member states. Moreover, there is a tendency among the EU members to achieve an approximately similar redistribution of GDP through state budget (Stoilova, 2010).

The defined goal requires an appropriate conceptual framework and empirical methodology. They are developed in following sections.

The next sections of the paper are focused on the research. Firstly, the place of the research is outlined through an overview of the existing evidence on the topic of fiscal decentralization. The conceptual framework adopted for empirical research is developed in the section three. The empirical methodology and the specifics of data are presented in the section four. The section five contains the regression results and their interpretation. At the final, the suggestions for further research are included in the section of conclusions.

2. Literature overview

Breuss and Eller (2004) note that the reasoning the influence of fiscal decentralization on economic growth started with the publications of Tiebout (1956), Musgrave (1959) and Oates (1972). They also emphasize that conceptual predictions and empirical analyses

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regarding the effects of economic growth on fiscal decentralization are aroused at the end of the 1970s. The studies of Kee (1977) and Pommerehne (1977) are considered in the comment of Breuss and Eller (2004). The significance of these fundamental studies is undoubtedly great. The conclusions from the primordial analyses have become a base for the further empirical work on this topic.

The empirical research on the matter of the direct impact of fiscal decentralization on economic growth is going on two directions. The first one is concentrated on the impact of the decentralization of government spending on economic growth. Thus, the results from the empirical studies show the efficiency of the public expenditure carried out at a subnational government level. Such kind of research has been done by Oates (1995), Devarajan, *et al.* (1996), Davoodi and Zou (1998), Woller and Phillips (1998). Next significant attempts for research have been made in the studies of Yilmaz (1999), Thießen (2000; 2003), Zhang and Zou (2001), Akai and Sakata (2002) as well as the elaborate approach applied in the study of Desai, *et al.*, (2003). The most recent analyses have been done by Malik, *et al.* (2006) on the provinces of Pakistan and Samimi, *et al.* (2010) on provinces of Iran.

The second part of empirical research concerns the effects of the revenue collected by local governments. The studies of Woller and Phillips (1998), Zhang and Zou, (2001), Akai and Sakata (2002), Thießen (2003), Desai, *et al.*, (2003), Malik, *et al.* (2006) and Samimi, *et al.* (2010) deal with the impact of subnational revenue on the economic growth. There are studies, which are completely concentrated on the revenue side of decentralization. An example for such kind of research is the study of Lin, and Liu (2000). The empirical work is further developed with the approach applied by Desai, *et al.* (2003), whose analysis is focused on the tax receipts collected by the governments in 80 regions of Russia.

Most of the investigations on relationship between the revenue decentralization and the economic growth do not use the term "fiscal capacity". In the literature regarding the fiscal capacity of local governments is emphasized the problem of its measuring. There are many measures, which are characterized with pros and cons regarding their appliance. Martinez-Vasquez and Boex (1997) compare the most widely accepted methods for measuring the fiscal capacity and develop the method of representative tax system. They introduce a multiple regression in the estimation procedure of the method of the representative tax system. The different measures are further compared by the authors collective as the fiscal capacity of the local governments in the Russian Federation is calculated through the each method (Martinez-Vasquez & Boex, 1997a).

Martinez-Vasquez and Boex (1997) note "the Russian Federation currently uses the level of revenue collections for a base year as its measure for fiscal capacity, which is then adjusted for legislative changes". The same approach for measuring the fiscal capacity of local governments in the new member states of the European Union will be applied in the present empirical analysis. Total revenue collections will be differentiated according the tax components. In this sense, the tax component is a group of taxes levied on a taxable resource.

Most of the studies use an empirical methodology based on regression analysis. The regression models are specified through a linkage of measures for fiscal decentralization and choosing appropriate variables from an endogenous model of economic growth. The

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most widely accepted endogenous models are the Barro's model of growth (Barro, 1990) and the model of Solow (1956). Most of the empirical studies on the topic use the first one.

3. Conceptual framework

According to the frame of the method of representative tax system, the second step in the process of computing fiscal capacity in the representative tax system is a classification of revenues into sources. That means arranging the revenue items into groups or tax components. (Martinez-Vasquez & Boex, 1997)

The same approach of the classification of the revenues into tax components is adopted in present research. Thus, the revenues spent by public authority to finance the total amount of government expenditure are aggregated into groups. The special emphasis in the classification is put on the revenues from the tax components collected by local governments. Therefore, the present research estimates whether the structure of tax revenues is consistent with the economic growth in the new member states. In other words, the efficiency of structure of financing the total government spending is a subject of interest. The regression results express the quantitative effect of the distribution of the tax powers among the levels of government.

The analytical framework for empirical research on the relationship between fiscal decentralization and economic growth has been developed by Devarajan, *et al.* (1996) and Davoodi and Zou (1998). The same frame is adopted in the present analysis.

These first attempts for research follow the endogenous growth model of Barro (1990). According to the growth model, the production function has two inputs: private capital and public spending. However, Davoodi and Zou (1998) depart from the Barro's model by assuming that public spending is carried out by three levels of government: federal, state, and local. Let k be private capital stock, g total government spending, f federal government spending, s state government spending, and l local government spending, all measured on a per capita basis:

$$g = f + s + l, \text{ (1)}$$

The production function is Cobb - Douglas:

$$y = k^\alpha f^\beta s^\gamma l^\omega, \text{ (2)}$$

where y is per capita output, $1 > \alpha > 0$; $1 > \beta > 0$; $1 > \gamma > 0$; $1 > \omega > 0$ and $\alpha + \beta + \gamma + \omega = 1$.

The allocation of consolidated or total government spending g among different levels of government takes the following form:

$$f = \theta_f g; \; s = \theta_s g; \; l = \theta_l g, \text{ (3)}$$

where $\theta_f + \theta_s + \theta_l = 1$ and $0 < \theta_i < 1$ for $i = f, s$ и l. Thus, if θ_f is the share of federal government in total spending, θ_s the share of state government and θ_l the share of local government. Consolidated government spending g is financed by a flat income tax at rate t:

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$$g = \tau y, \text{ (4)}$$

The representative agent's preferences are given by

$$U = \int_0^\infty \frac{c^{1-\sigma}-1}{1-\sigma} e^{-\rho t} dt \text{ , (5)}$$

where c is per capita private consumption and p is the positive time discount rate.
The dynamic budget constraint of the representative agent is

$$\frac{dk}{dt} = (1-\tau)y - c = (1-\tau)k^\alpha f^\beta s^\gamma l^\omega - c \text{ , (6)}$$

Davoodi and Zou (1998) further assume a constant tax rate along the balanced
growth path.

Given total government spending g, a constant tax rate t, and the shares of spending
by different levels of governments (θ_i's, $i = f, s, l$) the representative agent's choice
of consumption is determined by maximizing *(5)* subject to *(6)* and the government's
budget allocation. Along the balanced growth path, the solution for the per capita growth
rate of the economy is given by

$$\frac{dy/dt}{y} = \frac{1}{\sigma}\left[(1-\tau)\tau^{1-\alpha/\alpha}\alpha\theta_f^{\beta/\alpha}\theta_s^{\gamma/\alpha}\theta_l^{\omega/\alpha} - \rho\right] \text{ , (7)}$$

The equation (7) shows that the long-run growth rate of per capita output is a function
of the tax rate and the shares of spending by different levels of government. It forms
the basis for our empirical analysis of the relationship between fiscal decentralization
and growth. Following the literature on fiscal federalism, we regard a country as more
fiscally centralized if it has a higher value of the federal spending share θ_f.

It is important to note that, for a given share of total government spending in GDP,
a reallocation of public spending among different levels of governments can lead to higher
economic growth if the existing allocation is different from the growth-maximizing expenditure
shares. To show this point, we maximize the growth rate in *(7)* by choosing θ_f, θ_s, and θ_l subject
to the constraint $\theta_f + \theta_s + \theta_l = 1$. The growth-maximizing government budget shares are

$$\theta_f = \frac{\beta}{\beta + \gamma + \omega} \text{ , (8)}$$

$$\theta_s = \frac{\gamma}{\beta + \gamma + \omega} \text{ , (9)}$$

$$\theta_l = \frac{\omega}{\beta + \gamma + \omega} \text{ , (10)}$$

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Davoodi and Zou (1998) conclude that as long as the actual government budget shares are different from growth-maximizing shares, the growth rate can always be increased without altering the total budget's share in GDP. (See more Davoodi & Zou, 1998)

4. Empirical methodology and data

The effects of the decentralization of tax collection on economic growth are quantitatively estimated by the means of the estimation procedure. It is applied in accordance with the specification of the regression model. The model is specified through a combination of variables expressing the revenue collections of central government, the revenue collections of local governments, i.e. the instruments for fiscal capacity building, and total government spending. Thus, the equation estimating the efficiency of the structure of financing the total government spending is following:

$$y_{it} = b_1 + b_2\tau_{it} + b_3\theta_{it} + b_4\xi_{it} + \varepsilon_{it}, \text{ (11)}$$
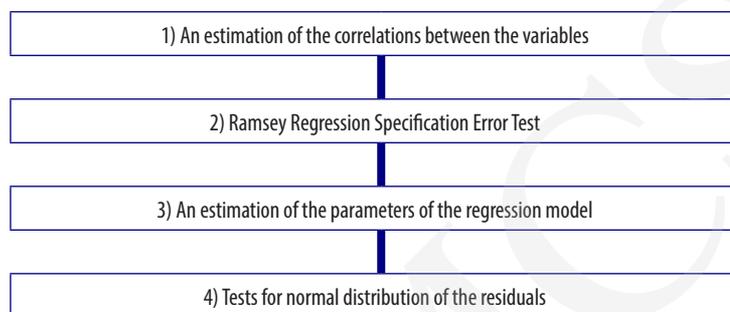
where y_{it} is the annual growth rate of the GDP for each country. The τ_{it} is the ratio of main revenue sources presented as a ratio to GDP for each country and year. This variable includes the revenues collected from value added taxes (VAT) and actual social contribution (ASC). This revenue is accumulated by central governments. The θ_{it} includes the revenues collected by local governments. These amounts are expensed by councils to finance their spending programs and include the locally collected revenues from: 1. corporate income taxes (CTR), 2. individual income taxes (ITR) and 3. taxes on land, buildings and other structures (TLBSR), which are presented as a ratio to GDP for each country and year. The variable ξ_{it} expresses the ratio of total budget expenditure to GDP for each country and year (TGS). The ε_{it} is the error term, i.e. the random (residual) component in the equation. The parameters of the regression equations are b_1, b_2, b_3, b_4.

The Ordinary Least Squares (OLS) method is adopted as an estimation procedure for the regression coefficients. Initially, it is useful to be calculated the correlations between the pairs of independent variables included in the model. Normally, the coefficients of correlation are estimated in order to be identified the phenomenon of multicollinearity. This phenomenon affects the results from t-test and increases the p-value. The textbooks in econometrics remind that regression results remain unaffected by correlations whose values are nearly 0.2 (Ramanathan, 1995).

The procedure of the Ramsey Regression Equation Specification Error Test (RESET) is applied to identify non-linear relationships between the dependent and the explanatory variables in the equation. The test is developed by Ramsey (1969) as a general specification test for the linear regression models. The procedure of the test facilitates to be identified whether non-linear combinations of the fitted values have any power in explaining the deviations of the dependent variable in the model.

The final step of calculations is the descriptive statistic to the residuals. These are deviations of dependent variable, which are not explained by the factors included in the regression equation. All the steps of the research are presented in Figure 1.

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The estimation procedure (OLS) is applied to a panel which enlists annual data for each variable for the new member states of the European Union. The period covered by the panel is 2000-2010. Hence, the present research uses a classic regression of cross-sectional data in terms of a balanced panel.

| 1) An estimation of the correlations between the variables |
| 2) Ramsey Regression Specification Error Test |
| 3) An estimation of the parameters of the regression model |
| 4) Tests for normal distribution of the residuals |

Figure 1:
Research Model

5. Regression results

Table 1 presents the coefficients of correlation between the independent variables included in the regression model. The complete version of specification includes factors whose correlations are higher than recommended by Ramanathan (1995). Thus, it is expectable a decrease in the empirical values of the t-test on some regression coefficients which are calculated in different variants of the model.

Variable	TGS	VAT	ASC	TLBSR	ITR	CTR
TGS	1.000	0.247	0.477	0.212	0.305	0.157
VAT	0.247	1.000	-0.243	0.420	-0.152	-0.366
ASC	0.477	-0.243	1.000	-0.278	0.695	0.459
TLBSR	0.212	0.420	-0.278	1.000	-0.153	-0.352
ITR	0.305	-0.152	0.695	-0.156	1.000	0.580
CTR	0.157	-0.366	0.459	-0.352	0.580	1.000

Table 1:
Correlations between
the Independent
Variables from
Regression Equation

Source: Eurostat, Author's calculations

The results from the Ramsey Regression Specification Error Test are presented in Table 2. The table shows very weak nonlinear relationships between the dependent variable and the factors included in the regression model. This fact could be explained by the macroeconomic specifics of the new member states.

The parameters of the regression model estimated via the procedure of Ordinary Least Squares method are presented in the Table 3. The estimation procedure is applied to annual data for the new member states of the European Union. The separate variants of specification are constructed by excluding of explanatory variables from the complete version of the regression equation. Models from 1 to 4 are constructed in this manner.

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Table 2:
Ramsey RESET Test

F-statistic	2.204 (0.093)
Log likelihood ratio	7.100 (0.069)

Source: Eurostat, Author's calculations
Note: p-value in parentheses

The specification of Model 1 is consisted of the complete variant of the regression equation. It is important to be noted, that the economic development of the new member states has a set of traits affecting the regression coefficients. The variables included in the regression model explain over 17 percent of the deviations of the dependent variable. These predictors are used not only in the present research, but also in most of empirical studies on this topic. The present analysis estimates the impact of the most widely accepted factors affecting the economic growth. The empirical value of the F-test confirms the hypothesis for the adequacy of Model 1, i.e. the relationship between the dependent variable and the total number of independent variables is statistically significant. Another feature of Model 1 is the presence of nonlinear links, whose hypothesis is confirmed by the Ramsey RESET-test (See Table 2).

A considerable share of total government spending is financed at subnational level through receipts from taxes. Such kinds of taxes are imposed on corporate and individual income, as well as on land, buildings and other structures, etc. According to the definition accepted for fiscal capacity, the transfer of powers to a lower government level to collect or accumulate receipts from the bases of different taxes could be understood as local fiscal capacity building.

There is no indication for very efficient financing of a share of total government spending at local government level through receipts from corporate taxes. The regression coefficient is positive, that means an economy of resource realized. The last fact accelerates the economic growth. As we noted, the economy of resource expressed via the value of the regression coefficient is not very high. The empirical value of t-test is less than the theoretical one. That means the coefficient is not statistically significant, which does not enable us for drawing out reliable conclusions. The weak influence of these revenues is a direct result of the limited appliance of the corporate income taxation as an instrument for local fiscal capacity building.

The receipts from individual income taxes coming in local budget exert a weak negative influence on the GDP growth rate. The weakness of the impact of this factor has been confirmed by the cubic form of the curve describing the relationship. The possible conclusion is that there is any positive economic effect as a result of more effective financing of public spending through revenues from income tax. The coefficient is statistically significant in terms of ten percent of p-value. The high level of the p-value and the low value of t-test are a direct result of multicollinearity in the model. The values of the correlation coefficients between the receipts from income taxes and other explanatory variables included in the specification vary from -0.156 to 0.695 (see Table 1). The unclear and ambiguous influence of the income taxation on the economic activity

Variable	Model 1	Model 2	Model 3	Model 4
(Constant)	12.600***	8.903**	16.712***	3.000***
	(3.810)	(2.593)	(6.033)	(3.720)
Receipts from corporate taxes	0.565	0.587		0.337
	(0.570)	(0.550)		(0.315)
Receipts from individual income taxes^3	-0.068*	-0.036		-0.038
	(-1.928)	(-0.963)		(-1.003)
Revenues from property taxes	2.818**	2.415*		1.608
	(1.992)	(1.687)		(1.172)
Revenues from value added taxes^2	0.045**			
	(1.980)			
Revenues from actual social contributions	0.650***			
	(4.027)			
Total government spending	-0.474***	-0.151*	-0.316***	
	(-4.342)	(-1.768)	(-4.742)	
R-squared	0.222	0.066	0.121	0.035
Adjusted R-squared	0.171	0.026	0.116	0.004
Durbin-Watson statistic	1.281	1.179	1.231	1.196
F-statistic	4.337	1.646	22.486	1.127
Probability (F-statistic)	0.001	0.169	0.000	0.342
Observations	98	98	165	98

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Table 3:
Regression Results for the New Member States for the period 2000–2010

Source: Eurostat, Author's calculations
Note: t-test in parentheses
*** significant at 1%; ** significant at 5%; * significant at 10%

is predicted by Zou (1996). According to his assumptions, "the direct impact of a rise in the local income tax is a reduction in private investment and an increase in local public investment". He adds "the rising public investment also stimulates private investment due to the fact that these two capital inputs are complementary in production". He thus concludes that "the net effect of a rise in the local income tax on output production is not clear". (Zou, 1996)

Another possible explanation of this result is in line with the limited appliance of the individual income taxation as an instrument for fiscal capacity building in the new member states. Another possible explanation is related to the inefficient taxation of the patent activities.

These results do not support the assumptions for effective income taxation at a local government level in the new member states of the EU. Hence, they are consistent with the results of most of the empirical studies on the topic of taxation. Kneller, *et al.* (1999) examine the experience of the OECD countries and find the impact of tax structure on economic growth. They use the terms "distortionary taxes" and "non-distortionary taxes". The first type of taxes includes these ones on income and property.

The consumption taxes are defined as non-distortionary. They found a depressing effect of direct taxes on the growth of economy. Such type of effect is not registered for consumption taxes. These relationships are also confirmed in the analysis of Gemmell, *et al.* (2006). Similar results are found by Widmalm (2001). According to her study, the revenues from income taxes negatively affect the economic growth in the developed OECD countries. More complex results about the impact of taxation on growth have been found by Arnold (2008). The results of his analysis suggest "that income taxes are generally associated with lower economic growth than taxes on consumption and property. Property taxes, and particularly recurrent taxes on immovable property, seem to be the most growthfriendly, followed immediately by consumption taxes. Personal income taxes seem to be significantly inferior, and corporate income taxes have the most negative effects on GDP per capita." (Arnold, 2008)

The present research on the new member states proves that when the local governments collect revenues from property taxes, the economy reaches the highest degree of efficiency. The form of relationship is linear that is a strong link. The coefficient is statistically significant at a five-percent level of probability for an error distribution. According to the sign, this factor positively affects the annual growth rate of the GDP.

All these facts show the revenues collected through wealth taxes have a clear positive impact on the economic growth in the new member states. The present result is a reliable empirical evidence for the efficient property taxation at a local government level. Some of the economists also emphasize the wealth taxes are the most reliable source of revenue for local governments (Brown & Jackson, 1998; Popova & Nenkova, 2000). They define the requirements to a tax to be a reliable revenue source of local budget. The specifics of property taxes are the most accordant with the requirements. However, other economists find that "the progress of market relations and scientific and technological progress make the wealth taxation to play a marginal role in the total amount of tax revenue" (Stoilova, 2011).

Since the property taxes are the main revenue source of the local budgets, the local citizens have the highest degree of control on the spending of the receipts from them. The managerial team of a typical company must know that paying the property taxes contributes to the improvement of local infrastructure and business environment. Normally, all that things exert a catalyzing effect on the economic development and growth. Moreover, the results remind that the local taxpayer compliance should be the highest with paying the property taxes.

These results are similar to the conclusions about the property taxes found by Arnold (2008). The specifics of present results are partly differing from the general result of the study of Kneller, *et al.* (1999) for the impact of the "distortionary taxes" on the economic growth.

The revenues from value added taxes weakly affect the GDP growth rate in the new member states. The regression coefficient is statistically significant at 5 percent of p-value. A hypothesis for a quadratic form of relationship is also confirmed.

The positive influence comes from the increase in the abilities of public authority to finance its spending. This kind of relationship also is due to intensifying the national production of goods as the imports are restrained because of taxes. The regression

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coefficient expressing the impact of tax revenues accumulated by value added type taxes (VAT) on economic growth is consistent with the results of other empirical analyses on the relationship between indirect taxes and economic growth finding positive signs. Such kind of result is shown by Kneller, *et al.* (1999). According to the study of Widmalm (2001), the revenues from consumption taxes exert a weak positive effect on the economic growth in developed countries.

According to the results presented in Table 3, the increase in the revenues from social contributions should exert a positive impact on the economic growth in the new member states. The coefficient is statistically significant at 1 percent of p-value that makes the result reliable empirical evidence.

Reliable empirical evidence is available for the negative impact of public spending on the economic growth in the new member states. Possible explanations of the result are in line with inefficiency or crowding out effect. This problem should be a subject of more comprehensive research.

Other economists have found similar to the present empirical results. The regressions of Andersen and Jordan (1968) indicate that an increase in government expenditures is mildly stimulative in the quarters in which spending is increased, but in the other quarters this increase in expenditures causes offsetting negative influences. They explain that the results are consistent with modern quantity theories which hold that government spending, taxing, and borrowing policies would have, through interest rate and wealth effects, different impacts on economic activity under varying circumstances (Andersen & Jordan, 1968).

The deviations of the dependent variable in the regression model explained by the factors included in the second variant of specification are not statistically significant. That makes impossible drawing out conclusions from the estimated parameters. Multicollinearity in the model contributes for this result.

The third specification the model analyses the relationship between public spending and economic growth in the new member states. The sources of revenue for financing of the spending programs are not taken into account. This factor explains 12 percent of the deviations of the economic growth. The empirical value of the F-test is very high and sufficient for zero percent of p-value. That means the model is adequate.

Variable	Model 1	Model 2	Model 3	Model 4
Mean	7.47e-16	-1.18e-15	9.41e-16	-4.85e-16
Median	0.483838	0.674094	1.138852	0.585359
Maximum	5.997155	6.475223	8.698658	7.481206
Minimum	-10.09902	-12.22929	-20.44102	-11.80094
Std. Dev.	3.107076	3.404903	4.375060	3.461675
Skewness	-1.232583	-1.407796	-1.925569	-1.280495
Kurtosis	4.714820	5.264627	8.114495	5.062860
Jarque-Bera	36.82207	53.31239	281.8017	44.15743
Probability	0.000000	0.000000	0.000000	0.000000

Table 4:
Tests for normal
residuals' distribution of
the specifications from
Table 4

Source: Eurostat, Author's calculations

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This variant of specification does not estimate the efficiency of the structure of financing of public expenditure. The effect of revenue collection at a local government level cannot be taken into account. The parameters of Model 3 do not differ from these ones estimated in both the first and the second model.

The fourth variant of specification does not provide reliable empirical results. The share of the dependent variable deviations explained by the factors is not statistically significant. The last fact is due to the multicollinearity in the model.

The results from the test for normal distribution of residuals in the four models are presented in Table 4. The hypothesis for normal distribution is not confirmed in terms of each model. The most possible reason for this result is the existence of many factors affecting economic growth, which are not included in the regression model. The values and the signs of skewness suggest there are any factors negatively affecting the growth in the new member states, which are not taken into account in the model.

6. Conclusions

The results from the present research confirm the assumptions of conventional wisdom for the new member states of the European Union. The highest degree of efficiency is achieved when the property taxes are collected by local governments. According to the results, the fiscal capacity equalization via shared taxes is not sufficiently effective. It is important to note that the potential of corporate income taxation is not completely used and the sharing of revenues from individual income taxes among the government levels is rather harmful for the economic growth in the countries of interest. Thus, it is necessary to be taken activities for the optimization of intergovernmental transfer mechanism.

The present empirical analysis is restricted to the effects of tax instruments for building fiscal capacity on economic growth. However, the effects of charges for services, provided by the local governments to people and business remain without estimation.

The question related to the negative impact of total government spending in the new members of the European Union remains a subject of further discussions.

Since there are many factors affecting the economic growth, a more complete explanation can be achieved in more comprehensive econometric analyses. The last ones must include a wide specter of macroeconomic variables.

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