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Quantitative tools of municipal financial resources assessment in the Slovak Republic

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ABSTRACT

In the Slovak Republic the system of assessment of a financial efficiency in the local self-government is complicated. This is due to the fact that the local self-government is not primarily supposed to provide the profit, but to guarantee services for inhabitants which will increase the quality of their lives. Despite the fact of this difficulty, some special methods are created for the analysis of the financial performance of the local self-government and the quantitative tools belong to the effective means of this process. The basis of the financial assessment is the calculation of the financial parameters, which allow to rate the effectiveness of the financing of the municipality. The main objective of this paper is the measuring of the financial performance of municipalities in the Slovak Republic via selected financial parameters. The data are evaluated in the time period 2000 – 2015 with the prediction for year 2016. The calculations and modeling outputs were carried out by tools of MS Excel. The graphical outputs illustrate corresponding trend lines with the changes in values and forecasts for a following period. Calculated indicators represent the exact tool for a rating of the financial efficiency of local municipalities.

KEYWORDS: municipality, self-government, financial parameters, modeling, trend lines

JEL CLASSIFICATION: C52, H72, R50

INTRODUCTION

In the Slovak Republic a “municipality” is an independent territorial and administrative unit which is defined as a legal entity managing its own assets and financial resources (own revenues as well as state subsidies) under the conditions laid down by the law [1]. In 1999, the Slovak Republic had one of the top priorities, the reform of public finance management. The fiscal consolidation is currently based on savings in public expenditures, but also on stimulating public budget revenues. The financial independence of the territories belongs to

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the important financial characteristics, which include the right to have sufficient resources and also the responsibility of local governments in formation and use territorial resources [3].

The reform of the public finance system also involved the fiscal decentralization with aim to strengthen the transparency of public finances, to promote the management approach and the responsibility for managing the each subjects of public administration in Slovakia. The prerequisite for successful management of local self-government is to take the right decisions that lead to the effectiveness, economy and efficiency of public funds. One of the major tools, which lead to the best decisions, is the financial analysis [12]. The financial department of the municipality is the competent authority to make financial analysis. The municipality can make financial analysis:

- “Ex post” – that assesses the current and previous financial situation. It discovers the causes of achieved results.
- “Ex ante” – that forecasts financial-economic results.

Fabbozi and Peterson [4] state that the financial analysis is the useful tool of financial management exploring of risks and expecting of returns. Kameníčková [7] considers the financial analysis as a standard tool of assessment the financial situation of any entity. It is a tool that provides a comprehensive and detailed look at the progress and on what assumptions are created for the future development. The basis of the financial analysis is the creation of indicators, which can be used for analyzing and modeling process [10]. The quantitative evaluation is based on analysis of indicators of income, expenses and debt [6]. If the credibility of the municipality is conceived in a wider content, then it enables to evaluate a complex situation of the municipality on the basis of its three components: financial credibility, property and development credibility [14]. It also confirms Liuta et al. [8] that the financial capacity of a local budget determines the competitiveness of a region and secures the effective implementation of its economic objectives. In the regional context, it shows the feasibility of financial security of regional development in its conformity with the national policy objectives, regional resources and interests.

The indicators of financial credibility of the municipality can greatly assist in the decision-making of the municipal/city council and mayor of the municipality/city [2]. These indicators could be also useful for the subjects with the financial resources if the municipality wants to provide for their development plans, for example for banks, financial funds or for projects financed by additional resources from the European Union. Fil'a and Schwarczová [5] state, that this trend has to be definitely followed by the state and public administration as well as by regional and local municipalities, since the identification and consequent accessibility of information is perceived by the citizens as the tool of public control and at the same time the way of permanent enhancement of the level of provided public services. The good financial condition of the municipalities is reflected in the successful development of the regions. The positive trend for the national economy is represented by small and medium-sized enterprises at the regional level, which are focused on innovation, productivity, economic growth, job creation [9] and also on the raising the living standards of the population [11].

MATERIAL AND METHODS

In the Slovak Republic the local self-governments are represented by municipalities. Modeling the creditworthiness of municipalities is based on quantitative and qualitative parameters, which are an important factor in the decision making of banks, investors and

business partners on the possibilities of future cooperation. The financial parameters inform about the development and condition of the municipal budget. In the paper [13] authors Vomočil, Hájek and Olej proposed financial parameters for evaluating the financial credibility of a municipality and the experimental data are collected directly from the municipal budget. We selected from the proposed parameters and applied in assessing the financial credibility of the Slovak municipalities the following ones:

$$P1 = \frac{\text{current incomes of municipalities}}{\text{current expenditures of municipalities}} \quad (1)$$

$$P2 = \frac{\text{non-tax revenues of municipalities}}{\text{total revenues of municipalities}} \quad (2)$$

$$P3 = \frac{\text{capital expenditures of municipalities}}{\text{total expenditures of municipalities}} \quad (3)$$

According to authors [13], the first parameter P1 expresses the quality of the financial management of the municipality. If the value of P1 is greater than 1, it means that the current budget is in surplus. The financial situation of municipality can be rated as good and the municipality can use the current budget surplus to financing its commitments. The second parameter P2 is an important indicator of the fiscal autonomy of the municipality, which is the basis of decision-making in addressing municipal financing through a debt financing tools. The value of this parameter is in the range of $\langle 0, 1 \rangle$. If the rate of P2 is increasing, then the municipality has the lower need to borrow financial resources. The third parameter P3 indicates the level of possible development of the municipality. Higher parameter value (range in interval $\langle 0, 1 \rangle$) means an investment activity and municipality development based on the correct financial management.

Analyzed data of mentioned parameters represent the time series. We applied tools of MS Excel for the modeling outputs via trend lines. The graphical presentation of the data is in the form of a trend line which illustrates the changes in input data or forecasts of future data.

Basic data sets for analysis have been obtained from the Ministry of Finance of the Slovak Republic from the state final account. In the contribution it was investigated the development of the financial credibility of all the municipalities in Slovakia in the form of the cumulative assessment.

RESULTS AND DISCUSSION

The main aim of this paper is to present quantitative tools for evaluation of the financial performance of local self-government and apply the selected indicators to the evaluation of the development of municipal financial conditions in the Slovak Republic. Financial indicators are evaluated in the time period 2000 – 2015 with the prediction for 2016.

In the Slovak Republic current incomes of municipalities are represented by tax incomes, non-tax incomes and grants, and transfers. The total current incomes of municipalities showed an increasing trend during the period 2001 – 2003 (Figure 1). The shares tax, which makes an average of 80% of the total tax incomes of the municipalities, has the most important impact

on the development of the total current incomes. In 2005 the fiscal decentralization took place in Slovakia, which presented a significant change in the financing of municipalities.

In response to the financial crisis (2009) the government introduced fiscal measures to revive aggregate demand by recapitalizing banks and adopting sizeable fiscal stimulus packages which were mostly based on higher government expenditures. On the basis of regulation No. 868 (dated from December 2, 2009) the municipalities got special subsidy from the state budget of the Slovak Republic in the total amount 100 mil. €. This subsidy covered the loss of tax on personal incomes and improved the financial situation in 2010. The subsidy was sent to all towns and municipalities during the December 2009 in the amount of uniformly 8.56% from the yield of the tax for the given municipality. Since 2011, total current incomes had increased every year. The results in Figure 1 confirm that municipalities planned a surplus current budget, which means that current incomes would exceed current expenditures.

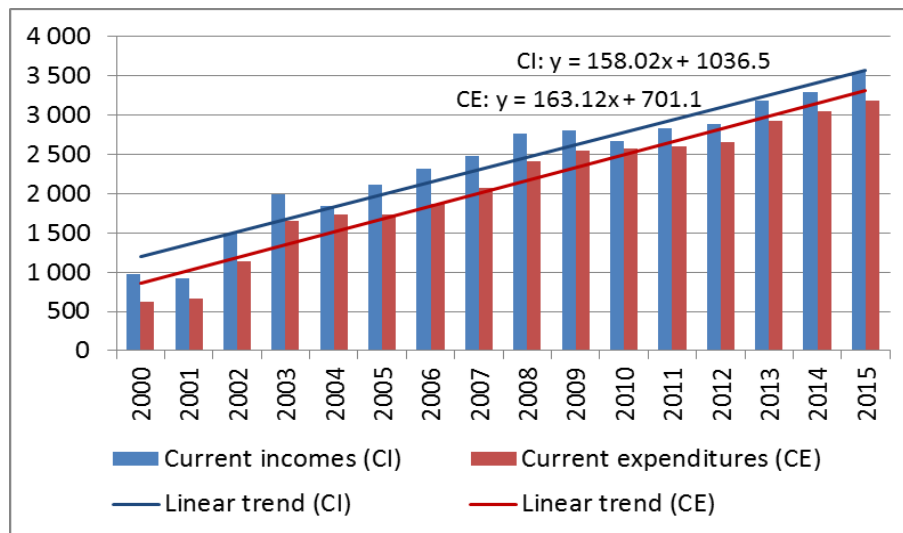


Figure 1 Development of total current incomes and total current expenditures of municipalities (in mil. €). Source: Ministry of Finance of the Slovak Republic, own processing

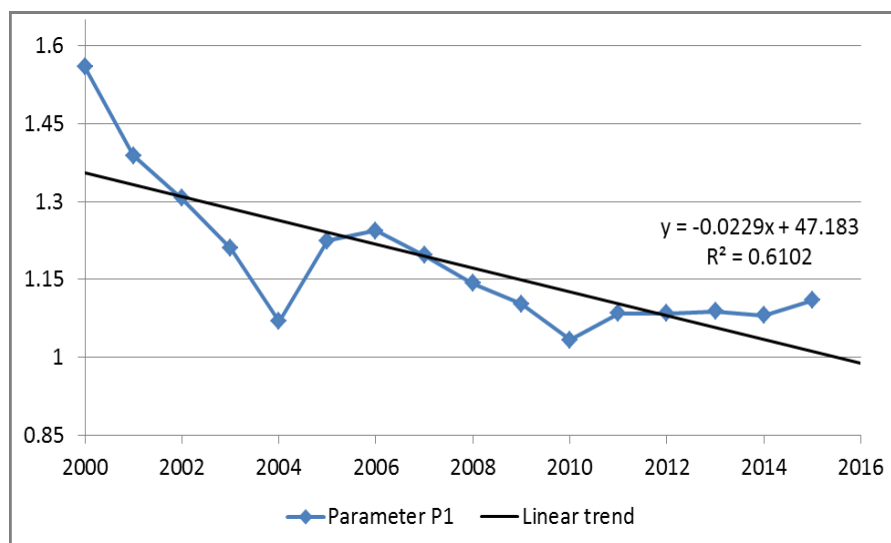


Figure 2 Trend line and prediction for parameter P1. Source: Ministry of Finance of the Slovak Republic, own processing

Based on current incomes and current expenditures of municipalities, we can evaluate the development of parameter P1. During the analyzed period from 2000 to 2015 the parameter P1 achieved the value greater than 1 (Figure 2). Thus, the financial situation of municipalities was good and they operated with the current budget surplus. It is evident that the linear trend for data was decreasing, so current expenditures (denominator of parameter) were increased in comparison to current incomes of municipalities.

The next financial parameter is based on non-tax revenues and total revenues. The non-tax revenues of the municipalities consist mainly of revenues from ownership and business with the property of municipalities. Municipalities receive funding primarily from rental property.

Although between 2000 and 2003 the non-tax revenues were increasing every year, the total revenues grew faster than non-tax revenues. The change has occurred in 2004, when the decrease of non-tax revenues for municipalities was 181 million € in the comparison with the previous year. In the following period 2005 to 2012 there are no significant changes of non-tax revenues. In the both cases the linear trends are increasing, so this model assumes the growing total current incomes of municipalities as well as non-tax revenues of municipalities (Figure 3).

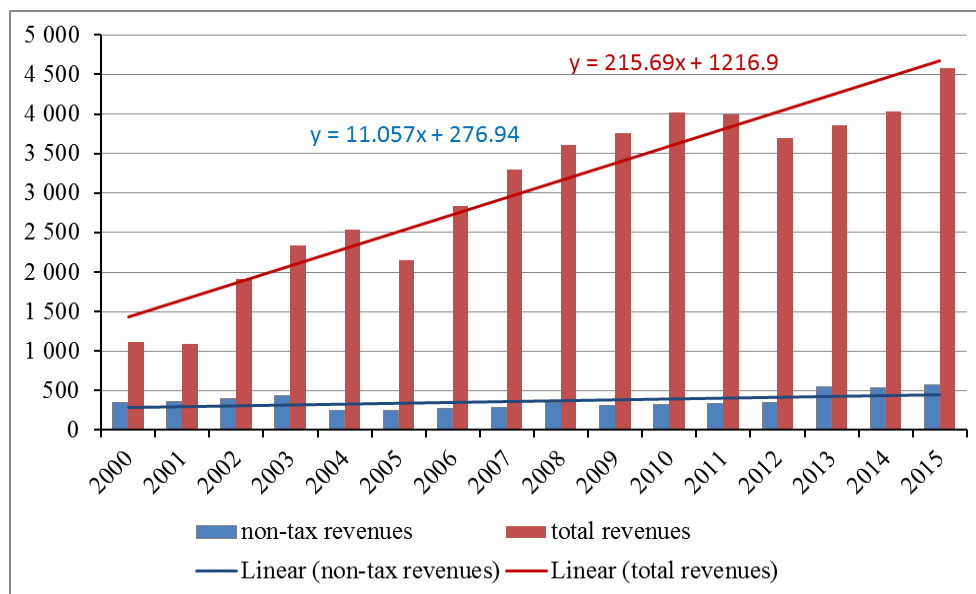


Figure 3 Development of non-tax revenues and total revenues of municipalities (in mil. €).

Source: Ministry of Finance of the Slovak Republic, own processing

We applied the tool of MS Excel to estimate the future value for the parameter P2. Based on results displayed on Figure 4 we can conclude that the linear trend of data was decreasing. We suppose that in the next period the value of the parameter P2 will decline.

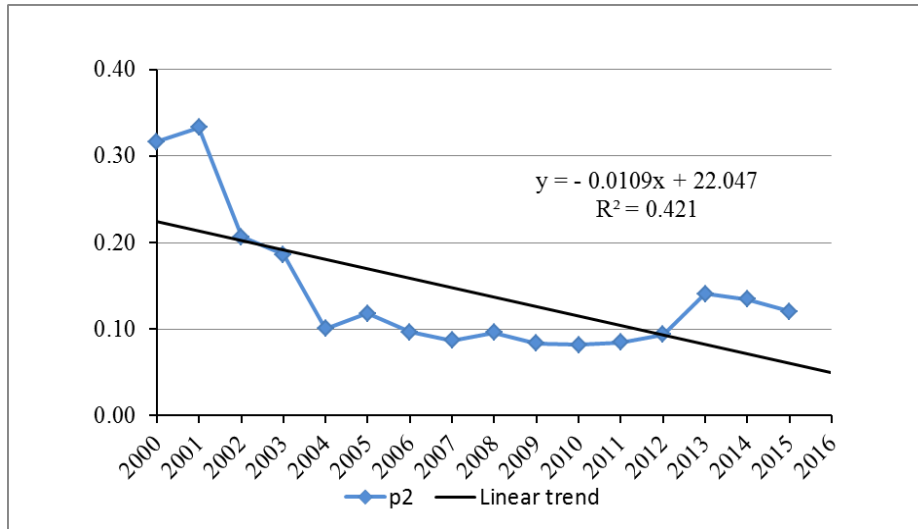


Figure 4 Trend line and prediction for parameter P2. Source: Ministry of Finance of the Slovak Republic, own processing

The municipalities are using the capital budget for its investment activities. They get capital incomes through capital transfers and subsidies, which they receive from the state budget or from the EU funds. The increasing of capital expenditures shows, that the municipalities develop and evaluate their property. The largest amount of capital expenditures was spent in 2010. In year 2010 the increase in the use of capital expenditures represented 245 million € in comparison with the previous year. The second largest amount of capital expenditures of municipalities was observed in 2015. The total expenditures showed an increasing trend except years 2001, 2005 and 2012 (Figure 5).

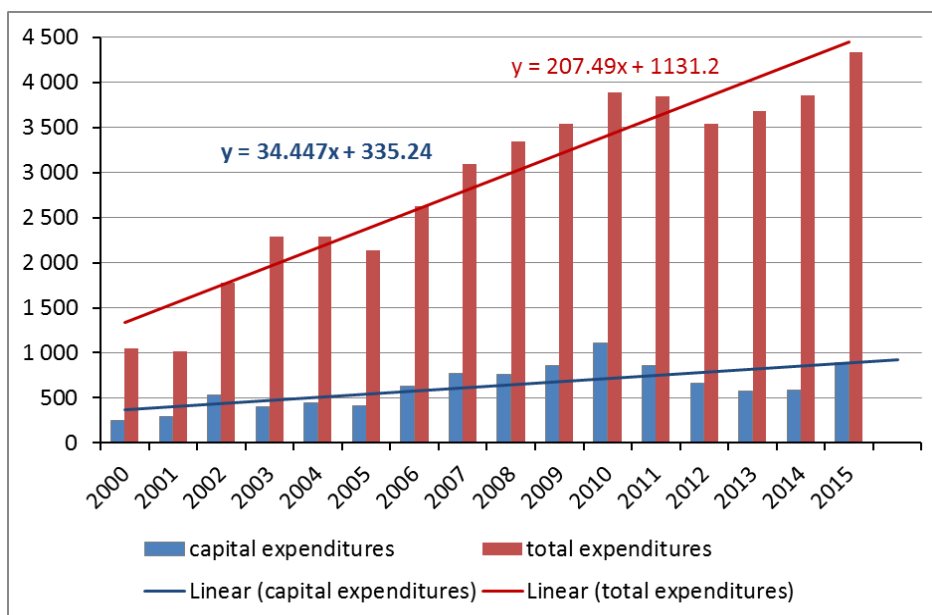


Figure 5 Development of capital expenditures and total expenditures of the municipalities (in mil. €). Source: Ministry of Finance of the Slovak Republic, own processing

The parameter P3 gives the ratio of capital expenditures and total expenditures of municipalities. During the analyzed period the values of this parameter had the fluctuating character (Figure 6).

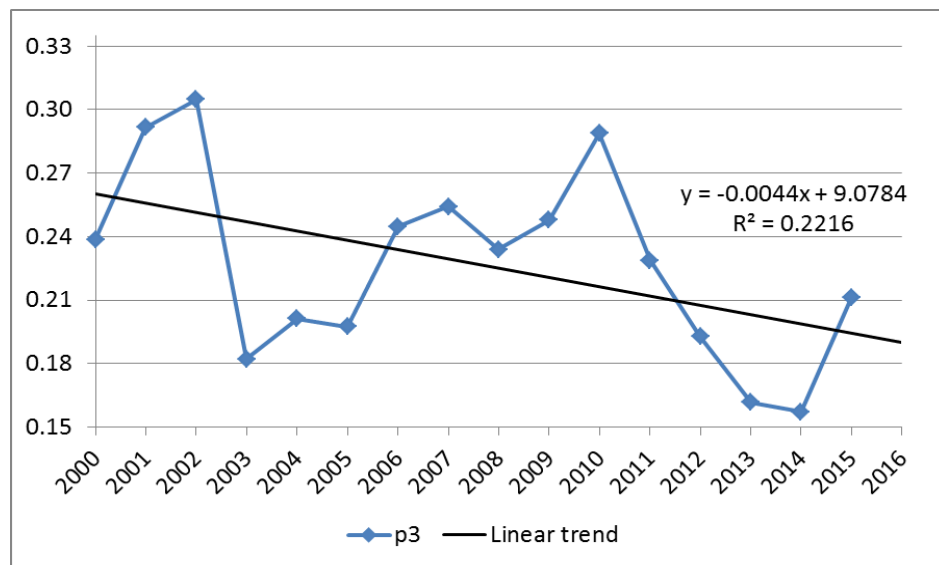


Figure 6 Trend line and prediction for parameter P3. Source: Ministry of Finance of the Slovak Republic, own processing

Based on the calculated values of individual indicators, it can be created a matrix [13] in which a given row represents vector of financial parameters of a particular municipality. This matrix is suitable as a tool for the assessment of the creditworthiness of municipalities via the neural network and the function of quick - propagation.

CONCLUSIONS

In the paper we presented the application of selected financial indicators to the assessment of the financial performance of the municipalities in the Slovak Republic. There were evaluated data about municipal financial resources in the period 2005 – 2015 with prediction for a short period. The calculated data can be included in the database and used in the process of assessment the creditworthiness of municipalities in the Slovak Republic. The usage of quantitative tools results in the classification of the municipality into the corresponding category. It gives to municipalities the opportunity to compare each other and provides a basis for rating of the financial efficiency of municipalities.

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