

## Evaluation of Tax Incomes of Municipalities in Conditions of the Slovak and Czech Republics

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**Abstract:** *The basis of neoclassical theory of fiscal policy is the significant rationality of economic subjects. Rationality results from the ability of these entities to optimize their decisions within a long time horizon, taking into account the activities of other entities, for example Government. An important economic entity is also municipalities and cities as representatives of local self-government. In most countries, fiscal decentralization has taken place in relation to local self-government which aim was reducing the local government's dependence on the state's financial management. Nevertheless, the state's incomes are still identifying as an important part of local budgets. The objective of the contribution is to evaluate the tax incomes of municipalities on the basis of selected indicators in the conditions of the Slovak Republic and the Czech Republic in the period 2009 - 2016. The basis for the analysis was cumulative data from municipalities in the Slovak Republic (2 890 municipalities) and cumulative data from municipalities in the Czech Republic (6 271 municipalities) processed in MS Excel. The analysis showed that incomes from tax of personal income represent on average over the analysed period 70% on tax incomes for municipalities in the Slovak Republic and 22% on tax incomes of municipalities in the Czech Republic. Within the structure of the current incomes of municipalities in the Slovak and Czech Republic, tax incomes represent an important component. At the level of municipalities in the Slovak Republic tax incomes represent on average over the analysed period 53% on total current incomes of municipalities and in municipalities in the Czech Republic tax incomes represent 52% on total current incomes of municipalities. Within the analysed period, we register a faster increase of the total current incomes in the municipalities in the Slovak Republic in comparison with the municipalities of the Czech Republic.*

**Keywords:** financial management, tax incomes, current incomes, self-government, municipality

**JEL classification:** H24, H71,

### 1 Introduction

Public administrations deal with a process of modernization and restructuring their management and control structures in order to better satisfy citizens' needs. It is important to greater efficiency in the management of the resources available for the efficient provision of public services within increased transparency in the activities carried out by public administrations to reduce possible cases of corruption in these institutions (Moreno – Enguix and Gras – Gil and Hernández – Fernández, 2017). The changes performed in the public administration in Europe, especially since the 1970s, have gradually brought the application of new management principles into the public administration. This process was accompanied by the more challenging conditions of economic development in the member states of the European Union. A

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well working public sector is considered to be a prerequisite for the economic and democratic performance of countries. Reforms of public sector which is realized in individual countries have a goal a better performing public sector (Wynen, 2014). Public administration provides social justice and influences citizen's quality of life, and it is considered as a major factor of a country's economic development and growth (Psomas and Vouzas and Bouranta and Tasion, 2016). The process of managing of public institutions, i.e. municipalities, first and foremost represents an economic rather than political challenge, referring to the fact that the leaders of local self - government units are elected to manage the relevant institutions in order to satisfy citizens' needs and requirements (Arifi and Ganiu, 2017). Hamalová et al. (2014) notes that the process of reforms of public administration in Central and Eastern European countries has had some specificities compared to other European countries and was due to the fact that it has been associated with fundamental changes in the social system and has long been isolated from European trends in the development of modern public administration.

Gradual decentralization of state functions and the restoration of local self - government created the municipal government as a representative entity of a local self - government, taking responsibility for generating development impulse and reaching community consensus on the future directions of development. In these conditions municipalities should develop their full potential, which will bring positive benefits to the whole local community (Ignacy and Kopyscianski, 2011). If is greater decentralization in government is also increases competition in the public sector, then greater decentralization may lead to relatively lower tax burdens. That is means, the greater the numbers of alternative fiscal jurisdictions, the greater the potential competition of the public sector (Marlow, 1988). Process of decentralization according to Žárska, Vámošová (2017) was and constantly is an immanent part of public administration reform. It signifies transfer of competences and responsibilities from central to lower (autonomous) level of government. Its critical point is autonomous unit size (municipality) to which the competences are transferred.

Fiscal decentralization according to Jílek (2008) creating a horizontal inequality. It allows for the creation of self-governing bodies with different capabilities to secure public goods for their citizens. Local governments either are not able to provide a comparable level of local public goods or are able to provide them but at varying rates of local taxation. Solution of the issue of fiscal autonomy of local self-government has several relevant reasons that are constantly up to date and very significant. Public finance flows at the local level represent a significant share of the total volume of public resources in developed countries. Local finances reflect for actual local priorities, as well as the limits and opportunities that local authorities are exposed to. Their analysis makes it possible to evaluate and compare the real position of the local self - government level in the country and also on internationally level (Sopkuliak, 2012).

## 2 Literature research

Strengthening the role of local self-government must be accompanied by a re-evaluation of the system of financing of towns and municipalities and with increasing of the financial self-sufficiency of towns and municipalities (Peková, 1993). Municipal finance is actually the important part of the financial decentralization. As far as efficiency gains and public sector performance concerned, in order to provide public goods and services, financial decentralization and shifting assignment of financial responsibilities to local level is assumed to be the better option also in the developing countries. At the state and local level, financial sustainability represent the long-term capability of a government to consistently fulfil its financial responsibilities (Hajilou and Mirehei and Amirian and Pilehvar, 2018). The basis of financial management is determined by legal regulations which thus define the scope of activities of local self - government and affect the state of financial resources at their disposal. The financial condition of Polish municipalities and districts is significant, because the local government is responsible for funding more than 30% of public tasks in Poland (Surowka, 2017). Studies indicate that public finance system is an important and integral part of the functioning of governments in different countries. It is organized in different ways in different countries and

is related the institutional arrangements and structure to manage the finances at each level in an inter-government system of political institutions (Hajilou and Mirehei and Amirian and Pilehvar, 2018).

Municipalities (basic territorial units of the State) carry out an important role in regional and micro-regional development. Municipality represent an independent self-governing territorial unit which unify citizens with permanent residence on its territory, it is actually the level of local self-government (Tej, 2011). Municipalities with their institutions to decide about their financing but the question is, under what conditions they deciding (Jenčová and Litavcová and Štefko and Maťovčíková, 2013). The effectiveness of decision taken by municipalities depends largely on the involvement, knowledge and competencies of local authorities, as well as the quality of strategic management (Ignacy and Kopyscianski, 2011).

The International City/County Management Association (ICMA) developed the Financial Trends Monitoring System that lists 36 indicators of fiscal health for local governments (Groves and Valente 1994). The first edition was published in 1980, and it appears to be among the most widely used indicator systems. The ICMA indicators are divided into seven categories: revenue, expenditure, operating position, debt, unfunded liability, capital plant, and community needs and resources (Kloha and Weissert and Kleine, 2005). Vavrek and Adamišin and Kotulič (2014) use the TOPSIS method as a one of the multi-criteria methods for evaluating the financial management of municipalities. Through selected indicators for example: return on assets, current income per capita, total revenues per capita they evaluate the financial management of municipalities. Multi-criteria decision-making methods help according to the authors to identify the appropriate variant that is closest to the ideal and basal variation. Their use is varied depending on the identified criteria (indicators), which together with the weights of the individual indicators determine the overall results. Toth et al. (2005) mention that one of the ways of evaluating the economic development of towns and municipalities in the Czech Republic is the FAMA system of indicators. These indicators are based on individual items of the municipal accounts and the aim is to provide information about the financial situation of the municipal sphere and to use them for better financial management of towns and municipalities. According to Staroňová and Sičáková - Beblavá (2006) at the present time is currently supported "effective management" of the municipal budget, it means to applicate modern methods of budgeting and new tools of the budgetary process aimed at fulfilling the set goals of local self-government under conditions of efficient, economical and effective using of public resources.

### **3 Objective and methodology**

The aim of the contribution is to evaluate the tax incomes of municipalities on the basis of selected indicators in the conditions of the Slovak Republic and the Czech Republic in the period 2009-2016. The reason for choosing the countries which we compared is the fact, that both countries were in the past part of one country, but they chose different models of public administration. For a more effective comparison of the financial indicators of both countries in one currency, we chose the time period in which the Slovak Republic became a member of the monetary union. The object of the paper were cumulative data of municipalities in Slovak republic (2 890 municipalities) and cumulative data of municipalities in Czech Republic (6 271 municipalities).

The Czech Republic is the Unitarian state, applying the so-called combined model of fiscal federalism. The Constitution specifies three vertical levels of government in the Czech Republic with budgets of their own. The top level is represented by the Central Government; the fourteen higher self-administrating units are called Regional Governments, and the lowest level is represented by Municipal Governments. Regions and municipalities are responsible for expenses within their "own" and "delegated" responsibility (Dvořáková, 2007).

In the Slovak Republic, the highest self-governing body is the Parliament of the Slovak Republic, at the regional level there are 8 the Higher Territorial Units and at the local level the self-governing units are

represented by cities and municipalities. Unlike the Czech Republic, in the Slovak Republic all municipalities, regardless of number of residents, they ensure the same number of competencies.

The data sources for the individual indicators were obtained from the Ministry of Finance of Slovak Republic and from the Czech Statistical Office. The conversion of CZK into € was made on the basis of the Czech National Bank's exchange rate in the appropriate year. Analysis and results were processed in MS Excel. We analyse following relationship:

$$PI_{GDP} = \frac{\text{tax of the personal income}}{GDP} \quad [\%] \quad (1)$$

$$PI_{TIM} = \frac{\text{incomes of municipalities from tax of the personal income}}{\text{tax incomes of municipalities}} \quad [\%] \quad (2)$$

$$TI_{TCIM} = \frac{\text{tax incomes of municipalities}}{\text{total current incomes of municipalities}} \quad [\%] \quad (3)$$

Within tools of MS Excel we can find trend functions; by using the least squares method this computation and graphic instrument provides the straight line of best fit for given data. The selected modeling function has to describe the modeled reality as much reliably as possible, and then the created model can be used as a hypothesis about the future development of the observed attribute. We will apply regression method to express linear modeling functions (linear trends) which describe the development of selected financial indicators.

Using simple linear regression, we can express the straight line equation  $y = ax + b$ , where  $a, b$  are coefficients of the regression line. The regression coefficient  $b$  represents the intersection of the regression line with the y-axis (also called the level constant). The regression coefficient  $a$  expresses the slope of the regression line to the x-axis (also called line direction).

If this coefficient  $a$  is positive, there is an increase in the values of the variable  $y$  (they will represent values of the monitored parameter). In this case we say that it is a positive (direct) dependence between the values  $x$  and  $y$ . On the contrary, if the regression coefficient  $a$  is negative then it occurs the decrease of the values of the dependent variable  $y$ . In this case the relation between  $x$  and  $y$  is called negative (indirect) dependence. Through the acquired trend lines and regression parameters we can estimate the future development of the monitored parameter.

The data from statistical sample were processed by mentioned computation and graphic tools of MS Excel. The figure with analyzed data parameter contains the equation of the trend line. In some graphs we modified the scale on the y-axis for better illustration.

In spite of the fiscal decentralization carried out in both countries, the incomes from the state budget are the important part of budget at local government level. In the conditions of the Slovak Republic, is the only income that is distributed from the state to local self-government. This income represents income from the tax of personal incomes. Until December 31, 2004, from the state budget have been distributed to the municipalities' budgets yield from three taxes - tax of the personal income, corporate income tax and road tax. Corporate income tax currently represents the highest percentage of the total state budget incomes (Hudáková and Andrejovská, 2016). Since January 1<sup>st</sup>, 2005 these three taxes replaced for one tax, namely the tax of personal income, which was distributed as follows: local self - government - 70.3 %, regional self-government - 23.5 %, state - 6.2 %. At the same time, there were created rules and individual criteria (including the coefficient of size) and their weighting, based on which these resources were redistributed among the individual municipalities (Figure 1).

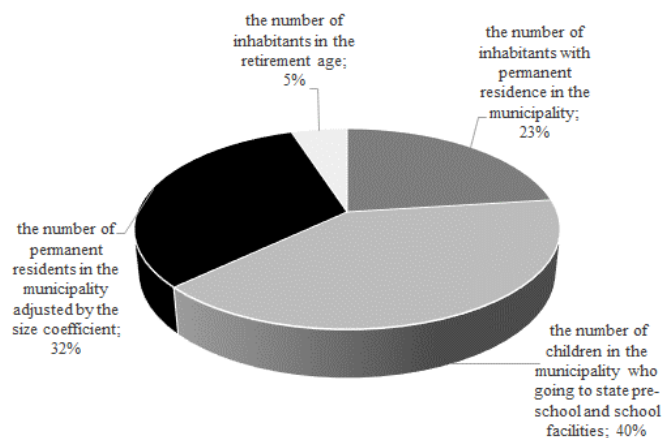


Fig. 1 Criteria for distribution of the tax of the personal income at municipal level in Slovakia

Source: Ministry of Finance, Slovak Republic, own processing

Municipalities were convinced that the share of redistribution of incomes from the tax of the personal income will not be changed. However, several changes have been made during the period 2005-2016. On the basis of the amendment to Government Regulation No. 668/2004 Coll., the tax of the personal income was distributed on January 1<sup>st</sup>, 2012 as follows: local self-government 65.4 %, regional self-government 21.9 %, state 12.7 %. From January 1, 2014, there was an increase in the share of the tax of the personal income for municipalities to 67 % (21.9 % for Higher Territorial Unit and 11.1 % for the state). Due to the fact that the Slovak economy was growing also in the next year, the result was a further increasing of the yield of tax of the personal income for municipalities to 68 % (for Higher Territorial Unit 21.9 % and for the state 10.1 %) from January 1<sup>st</sup>, 2015. The last change in the redistribution of the yield of the tax of the personal income occurred on January 1<sup>st</sup>, 2016, when 70 % was reallocated to municipalities, 23.1 % to HTU and 6.5 % to the state. Another situation is in the Czech Republic. Dvořák (2017) notes that according to Act No. 243/2000 Coll., on the budgetary determination of taxes are precisely specified incomes that are redistributed from the state to the local self – government. These are following incomes: 20.83% share of the tax on the added value, 22.78% share of the tax of the personal income from dependent activities and functional benefits, 23.58% share of the personal income tax deducted at a special rate, 23.58% of the tax on personal income from self-employment and 23.58% of the corporate income tax. Čermák and Gürtler (2014) note that in 2008, a new legislation was adopted in the framework of budgetary tax determination in Czech Republic which enlarged originally the only criterion of number of inhabitants in a municipality converted according to coefficients of particular size categories by other 2 new criteria – a simple number of inhabitants and a cadastral acreage of the municipality.

#### 4 Results

The development of local self-government is largely dependent on the overall development of the state's economy. Hudáková (2017) notes, that the growth of GDP per capita is a basic measure of the country's economic performance. Comparing the development of GDP in the period 2009-2016 in the conditions of the Czech Republic and the Slovak Republic we can see a different development (Fig. 2). We are seeing an annually growth of GDP in the Slovak Republic. In 2010, Slovak Republic mainly benefited from the revival of the German economy, which grew fastest in the last twenty years. This was reflected also in the structure of growth of the Slovak economy, which was covered by the export-oriented part of the industry (automotive, electrical and mechanical engineering). The year 2011 meant the continuation of the economic growth of the Slovak economy, although as a result of the fiscal consolidation the growth slowed slightly compared to the previous year. Despite the fact that in 2012 Slovak Republic recorded an increasing of GDP by 2.94%

compared to the previous year, on the economic growth has a negative effect the global debt crisis and lower investment activities, disposal of inventories and lower consumption of households. This trend continued in the following year, which resulted in an increase of GDP but significantly less than in 2012 (GDP growth in 2013 was 2.02%). In the next three years, the recovery of domestic demand, labor market improvements and higher household incomes have made that GDP grow more dynamically than in previous years. Compared to 2009, in 2016 the growth of GDP was 26.76%. Another situation is in the Czech Republic, where the trend of GDP in 2009 - 2016 shows a fluctuating trend. We are seeing an increasing of GDP in 2010 (6.47%), but we are seeing declining of GDP of 1.12% in 2011. This decline was mainly due to the impact of fiscal consolidation, which was mainly reflected in household consumption and also in the fall in investment activities. The improvement of the situation took place in 2012, when growth of GDP increased by 3.29% compared to the previous year. Despite the fact that the Czech Republic has slowly begun to recover from the second wave of recession, growth of GDP declined by 7.47% in 2013, mainly as a result of reduced domestic demand as well as a negative trend in foreign trade. However, since 2014, we are seeing annually growth of GDP also as a result of the gradual increase of domestic consumption and investment activities of the state, which has also been significantly influenced by the EU funds. Several authors (Výrostová, 2016, Petrášová and Beresecká, 2012) note that the basis idea of EU budget is the support various expenditure programs, aimed at the provision of public goods. Compared to 2009 growth of GDP in 2016 was 18.95%. In both countries, the tax of personal income is a shared tax, which means that the state shares it with the self-government. The share of the tax of the personal income on GDP ranged from 2.17% to 3.32% in the Slovak Republic and from 2.18% to 2.52% in the Czech Republic (Fig. 2).

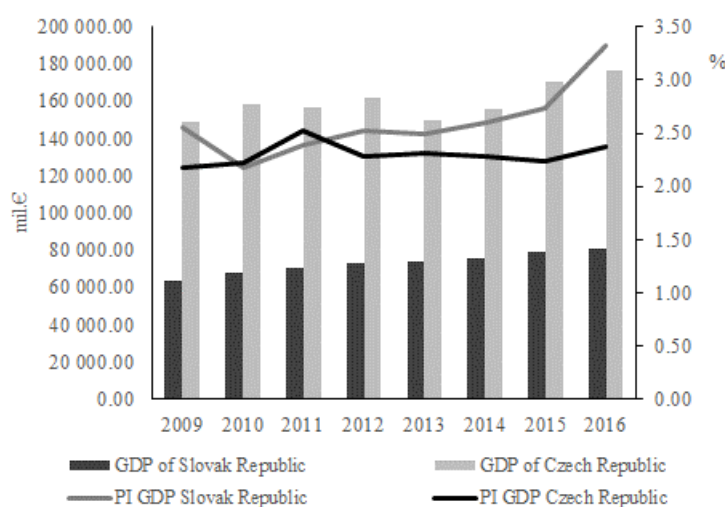


Fig. 2 Development of the GDP and the share of the tax of the personal income per GDP in the Slovak Republic and in the Czech Republic in the period 2009-2016

Source: Ministry of Finance of Slovak Republic, Czech Statistical Office, own processing

Galecka (2018) notes that the yield of tax of the personal income depends also on the value of the macro-economic indicators assumed in the draft state budget for a given financial year. These incomes are planned in the state budget on the basis of estimates and forecasts. Within the development of volume of the tax of personal income in both countries, we are seeing a fluctuating trend (Fig. 3). The amount of funds received from this tax is mainly affected by the amount of wages paid, the amount of business income, other self-employment or other incomes which are subject to withholding tax. The deteriorative development on labor market in the Slovak Republic led to a decrease of the tax of personal income of 10.47% in 2010 compared

from 2009. The arrival of new investors and the creation of new jobs, as well as the increase of the minimum wage, have led to an increase of incomes of the tax of the personal income from 2011 to 2016. The increasing of incomes from the tax of personal income in 2016 compared to 2009 was 64.37%. Within the Czech Republic, since 2008, the development of the tax of the personal income has been negatively affected by the provisions of Act No. 261/2007 Coll., on the stabilization of public budgets which have replaced the current progressive scale of the rate of the tax of the personal income of 12% to 32% by linear tax rate of 15%. On the contrary, the very negative impact on state budget implementation of this tax was the abolition of 50% of the state aid tax rate on building savings by the Constitutional Court of the Czech Republic. In 2013 there was a new amendment to Act No. 243/2000 Coll., on the budgeting of taxes, which from January 1<sup>st</sup>, 2013 strengthened municipal incomes at the expense of the state budget. This resulted in a decrease of incomes from the tax of the personal income in 2012 and 2013. The subsequent stability of the economic environment, financial stability, higher growth rates and the competitiveness of medium and large companies, which had a significant impact on the increase of gross wages of employees, resulted in a gradual increase of incomes from the tax of the personal income from 2014. In comparison with 2009 incomes from the tax of the personal income increased in 2016 by 29.16%. The trend of the tax of the personal income represents the regression coefficient of 79.086 in Czech Republic which is less than the coefficient of the tax of the personal income in the Slovak Republic (the slope 139.65), therefore, it is possible to predict a faster development of the tax of the personal income in the Slovak Republic (Fig. 3).

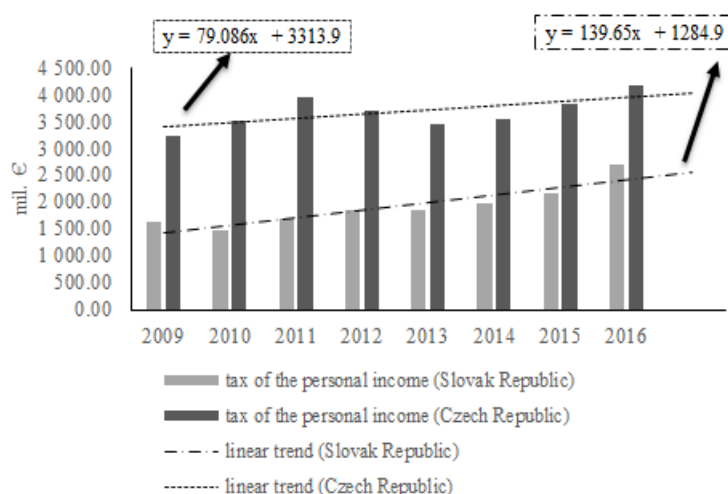


Fig. 3 Development and the trend of the tax of the personal income in the Slovak Republic and in the Czech Republic in the period 2009-2016

Source: Ministry of Finance of Slovak Republic, Czech Statistical Office, own processing

In both countries, incomes from the tax of the personal income are redistributed to the level of municipalities on the basis of approved legislation. The financial dependence of municipalities on the state budget, despite the process of fiscal decentralization, is still significant particularly pronounced in the Slovak Republic. This is confirmed by Fig. 4. The incomes from the tax of the personal income on the total tax incomes of municipalities in the conditions of Slovakia ranged from 70.37% to 76.14% (Fig. 4). As the Czech municipalities get also other incomes from the state budget than incomes from the tax of the personal income, the share of this tax on the tax incomes of municipalities in this case ranged from 22.17% to 23.48%.

The strong dependence of municipalities on the state budget creates an unstable environment for municipalities because any reduction in the volume of funds in this form causes financial problems for municipalities. This has also been demonstrated by the economic crisis, as Mrva (2009) notes that in 2010 the



Government of the Slovak Republic based on Regulation No. 868 dated on December 2<sup>nd</sup>, 2009, state approve the subsidy to the municipalities in the amount of 100 million € to cover the loss of the tax of the personal income and improve the starting situation in 2010. That is why in the condition of the Slovak Republic began to speak about "mix of taxes". In practice, this would mean that the state would allocate more different taxes for municipalities, just as it is in the Czech Republic, not just only the tax of the personal income.

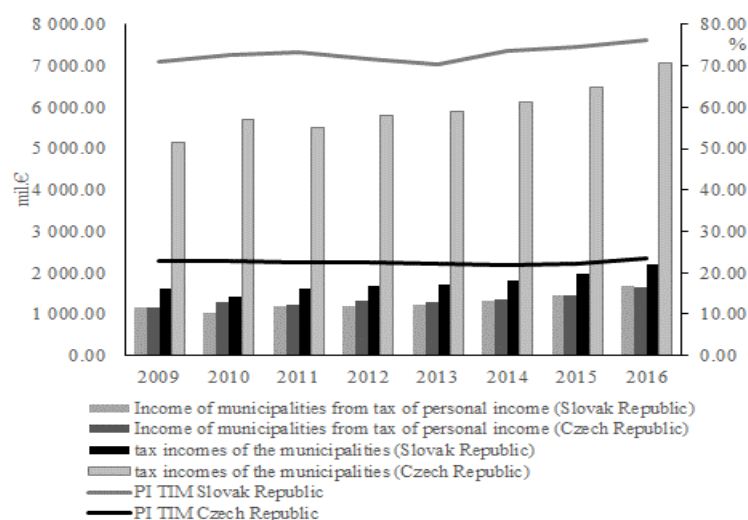


Fig. 4 Development of selected financial indicators of municipalities in the Slovak Republic and in the Czech Republic in the period 2009-2016

Source: Ministry of Finance of Slovak Republic, Czech Statistical Office, own processing

The importance of tax incomes and their share of the total incomes of municipalities' budgets influences the character of these incomes, their stability over a longer period of time. In addition, the size and distribution of the tax base in the territory as well as the construction of tax rates are an important aspect (Peková, 1993). It confirms also Toth et al. (2014) who say that tax incomes represents a category of own incomes. Municipalities' own financial incomes consist of incomes decided by the local self-government separately, independent of the will of other entities.

Municipal tax incomes are constituted by share taxes, but also by own taxes, which can be collect by municipalities in both countries on the basis of the applicable generally municipal regulations that are in line with the relevant legislation. In the Slovak Republic, this is Act. 582/2004 Coll. about the local taxes and local fee for solid communal waste and small construction waste; in the Czech Republic on the basis of Act. 565/1990 Coll. about local fees. In the Slovak Republic, with the exception of 2010, we see the annually increasing of the tax incomes of municipalities (Fig. 5). Compared to 2009, we see a 35.29% increase of municipal tax incomes in 2016. Similar development of tax incomes are also observed in the conditions of municipalities in the Czech Republic. With the exception of 2011, we see the annually increasing of tax incomes. Compared to 2009, the increase of the tax incomes in 2016 is 36.81%. The fact that the municipalities in the Czech Republic get incomes from multiple taxes from the state also the coefficient of the tax of incomes is higher (the slope 229.19) so the trend of tax incomes is faster than in the Slovak Republic (the slope 87.49).

Current budget of municipalities are included not only the tax incomes but also non-tax incomes. Non-tax incomes are primarily included incomes from business and ownership of municipal property.



## Evaluation of Tax Incomes of Municipalities in Conditions of the Slovak and Czech Republics

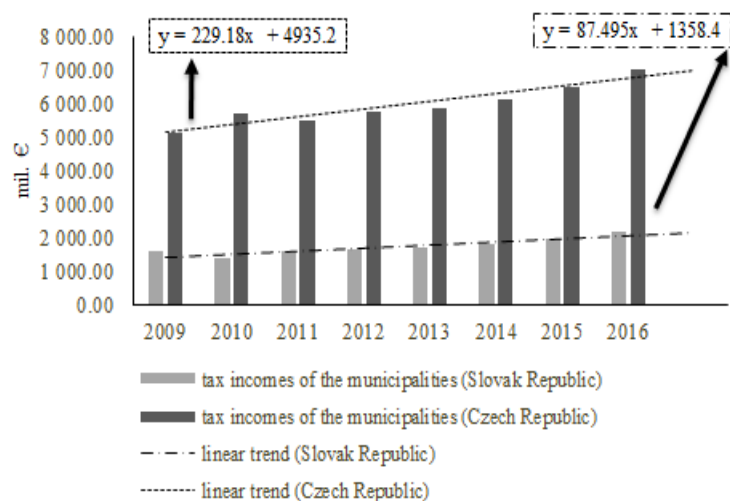


Fig. 5 Development and the trend of tax incomes of the municipalities in the Slovak Republic and in the Czech Republic in the period 2009-2016

Source: Ministry of Finance of Slovak Republic, Czech Statistical Office, own processing

Scorsone and Plerhoples (2010) note that many cities rely solely on property taxes as the main source of incomes, while others have more diversified incomes streams including local sales and income taxes. From the point of view of the structure of the total current incomes of the municipalities, the majority of current incomes create the tax incomes. It also follows from Fig. 6, when the tax incomes in the conditions of the Slovak municipalities moved from 53.34% to 58.49% and in the conditions of the Czech municipalities they moved from 52.75% to 70.35%.

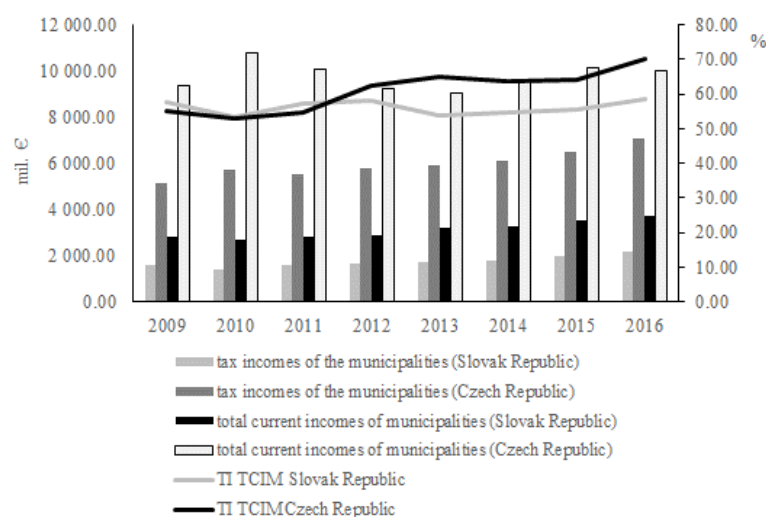


Fig. 6 Development of selected financial indicators of municipalities in the Slovak Republic and in the Czech Republic in the period 2009-2016

Source: Ministry of Finance of Slovak Republic, Czech Statistical Office, own processing

This relatively high dependence of municipalities on tax incomes also points to the fact that the municipalities do not use their property effectively, so that they can generate bigger incomes from its use into

the municipal budget. Most frequent the municipalities rent their property to legal or natural persons and also in rare cases the use it for business activities. Bumbalová and Balážová (2014) note, that the legal form of enterprises with the equity participation of municipalities is one of the major determinants which affects business with municipal property. In addition, the current budget includes also grants and transfers that municipalities getting from the state primarily for the performance of the transferred competencies. The total current incomes of municipalities in the Slovak Republic during the 2009-2016 with the exception of 2010, increased every year. The increase of the total current incomes in the condition of Slovak municipalities in 2016 was 33.55% compared to 2009. In the conditions of the Czech Republic we are seeing the fluctuating trend of the development of the total current incomes of municipalities. In the years 2011 to 2013, and even in 2016, the total current revenues of municipalities declined. However, compared to 2009 and 2016, the total current incomes of municipalities in the Czech Republic increased by 7.19%.

## 5 Conclusion

In both, the Slovak and the Czech Republics, the decentralization of public administration was realized, including fiscal decentralization. The aim of fiscal decentralization should be to increase the financial independence of municipalities. However, municipalities are still dependent on the state budget and on the development of the country's economy. This dependence is also confirmed by results of the financial management of municipalities through selected indicators. Based on the development of the indicator  $PI_{TIM}$  we can conclude that the incomes from the state budget are an important part of the current municipal budgets and any major change in the economy of the country affects the financial management of municipalities. Tax of the personal income represents an important part of the tax incomes of the municipalities, although municipalities have the option of collecting their local taxes and fees. Although municipalities in the Czech Republic are not bound to just one share tax as the Slovak municipalities, it would be advisable in the future for both countries to consider reducing the dependency of municipalities on the state, for example through more efficient use of municipal property. However, this should be preceded by a thorough comprehensive financial analysis based not only on the evaluation of sub-indicators (as in our article). Based on the results, changes in local government funding could be considered in order to preserve its fundamental role, namely to ensure the overall development of its territory as well as the needs of its citizens.

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