

Conference Paper

Local Fiscal Optimality in FYROM – the Case of Municipality of Tetovo

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Abstract

The aim of this paper is to provide detailed information about the Local Fiscal Optimality in FYROM and as study case in taken the municipality of Tetovo as one of the biggest municipality in the country.

Achieving local fiscal optimality in the municipalities of FYROM and especially in the municipality of Tetovo even today remains one of the most important challenges in fiscal and institutional management of the local governments. The harmonization of financial revenues and expenditures in the municipality of Tetovo and also in the other municipalities in FYROM remains one of the crucial issues in the processes of local government, due to the fact that FYROM is still a country in transition and has a very low rate of economic development and the high level of financial centralization prevents local sustainable development. This is the reason why most of the municipalities fail to meet even the basic needs of its citizens because they lack financial resources to meet many of the requirements for capital investments, investments in education, culture, sports, etc. This big imbalance between revenues and expenditures of local governments makes it impossible to achieve fiscal optimality point at which financial revenues would cover the expenditure.

Through our econometrical model we conclude that the revenues from VAT (Value Added Tax) which the municipalities receive in return from the total VAT revenue that is collected is only 4%, and it is at a very low level and increasing the VAT revenue return from 4% to 11.45%, will result with optimal level of revenues to cover the actual expenditures of local governments. This result can be useful for both central and local governments not only in FYROM but also in the region as a model for redefining the methodology of distribution of incomes and taking more steps toward fiscal decentralization.

Keywords: Local Fiscal Optimality, revenues, expenditures, VAT, local government, economic development

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1. Introduction

The process of managing public institutions, i.e. municipalities, first and foremost represents an economic rather than political challenge, referring to the fact that the leaders of local government units are elected to manage the relevant institutions in order to meet citizens' needs and requirements. Given that FYROM is a country in transition

with a low level of economic and social development, the requirements and needs of the citizens are versatile starting from the most basic needs for municipal infrastructure such as sufficient qualitative and quantitative drinking water, road infrastructure, management system of sewage (atmospheric and fecal), difficult conditions in educational institutions, kindergartens and not to mention the requirements for recreation, sport, culture, etc. Meeting these needs and requirements that are basics is very difficult due to the fact that financial resources that are accumulated in the budget of the municipality of Tetovo are limited and unstable, making almost impossible to cover local expenditures foreseen in the municipal budget. Thence referring to the above, we can conclude that the main problem in managing of the municipality of Tetovo is the lack of funds and sustainable financial resources, which would help to achieve coverage of local expenditures without any problem, and meeting the demands and needs of citizens for a better life.

Excluding the introduction part, the paper is structured as follow: the second section refers to the literature review, the third section is the research methodology where it is presented the data and the econometric model and in the last fourth section are the conclusions of the paper.

2. Review of Literature

The functioning of a country can not be imagined without the public and state revenues. Taxation is the main type of public revenue in modern countries and the main source of their regular income. Taxation is the most important instrument of public finances, where its importance is related to many political, economical and legal problems [4].

In any country of the world, the taxes are the most important revenues for the central governments but this also applies for the local government, that is municipalities. Its essence is that the governments demand financial funds so that can cover its expenditure (Hyman, 1990).

Regarding the fiscal decentralization process, in the scientific literature we can find different types of fiscal decentralization models, which are related to the level of independence in the decision-making process at the local governments. First of all, the deconcentration means distribution of responsibilities from central authorities to the local authorities. Secondly, the delegation process means that the local governments act as agents and are carrying specific functions on behalf of central government. And thirdly, the devolution is referring to the fact that local government not only is implementing but also is a decision making authority [3].

The process of fiscal decentralization transfers the taxation and the spending from the central authorities to the lower level of governance, that is the local governments or the municipalities (Local Governance and Decentralisation, 2009). This aspect involves determining the revenue resources, the level of taxes and expenditures.

Larson (2004) concludes that most of local government collection systems tries to achieve three goals and that is; 1) Accelerating the receipt of available funds; 2) Safeguarding the government's cash; 3) keeping banking costs to a

minimum.

According to Dziobek, Mangas & Kufa (2010), the developed countries are inclined to put forward a more decentralized finance system than countries in development process.

In some countries, intergovernmental transfers represent an important source for sustainability of local public finances, while in some other countries it represents the dominant part. In local governments of most of the OECD member countries, intergovernmental transfers constitute a significant percentage of its income. Some member countries (such as Germany) secure these transfers by sharing the so called stable taxes, while others allocate grants based on discrete sources of the central government (Smith, 1996).

The intergovernmental transfers participate with at least 30% in total revenues of local governments in many member countries of OECD, while in some of them (such as the case of UK, Netherlands, Ireland, Spain and Italy) participation rate is more than 70% (OECD, 1997).

In Belgium, Canada and Denmark, the rate of dependence on local governments on intergovernmental transfers is nearly 50%, while in Norway, Luxembourg and USA they participate with 30% of grants. In Australia, Austria, New Zealand and Iceland the participation rate is less than 20%.

Without having an appropriate fiscal empowerment, local government autonomy remains only on paper, and the full potential of decentralization is not achieved. Non-transparent local finances and overburdened central governments who are responsible for local service delivery are not good, either for fiscal policy or for decentralization overall (United Nation Development Programme, 2005).

2.1. Decentralisation Process in FYROM

According to the Law on Local Self-Government (Official Gazette of FYROM no. 61 dated 13 September 2004) fiscal decentralization is applied and implies the establishment of mechanisms for financing the municipalities, where the process is transparent and based on objective criteria and measures. Transfers from the budget of FYROM and budgets of other funds are carried out simultaneously with the transfer of competences to municipalities in accordance with the Law on Local Self-Government and other laws to the relevant field. The access in the stage of fiscal decentralization according to the law is based on the following principles:

- Gradual transfer of competences in accordance with the capacity of municipalities to obtain these competences.
- Ensuring adequate and equitable funds for performing in efficient and unhindered way.
- Reduction of funds in the budget of FYROM and other funds, for functions, which will be transformed into municipal competences.

In July 2004 FYROM adopted the Law on financing Local Self-Government Units, as a normative system that regulates public finances of local governments and aims to implement an efficient and functional fiscal decentralization, which would undergo in two phases:

1. The first phase of the process of fiscal decentralisation, which started on 01 July 2005, included the transfer of own income tax (share of personal income tax by income level) of municipalities and processing a methodology for the transfer of capital and earmarked grants, activities for which in charge was the government and the implementation of the plan for consolidation of accumulated loans of the municipalities until January 31, 2001, for which activity responsible were the local self-government units.
2. The second phase of fiscal decentralisation, which "normatively" started from 01 July 2007, only in those municipalities that passed the "transition exam". The terms defined in the "transition exam" mostly were regarding the staff, financial-fiscal and human resources capacity and also the financial capacity of municipal personnel (specified in the first phase), so it included the good results of financial and fiscal (financial liquidity, regular financial reports, etc) for the first two years of fiscal decentralization.

3. Research Methodology

The aim of this paper is to make assessment of fiscal optimality of municipality of Tetovo, which is determining the optimal point in which the expenditure or financial needs are in equilibrium with the ability to accumulate funds by municipal administration. Having in mind that municipality of Tetovo doesn't have sufficient fiscal capacity to timely and fully covers the planned budget expenditure, as traditionally the municipality spends only 72% of its budget.

In this context our main research question in this paper is: *Are the VAT revenues in their optimal level?*

Based on our main research question we set three hypotheses in this paper are, and they are:

H1: The incomes of local governments are not in optimal level.

H2: The transfer rate of central governments grants in the name of VAT toward local governments is very low.

H3: The increase return rate of VAT income towards local governments will secure financial optimality.

Through out or econometrical model we will try to give answer to our research question and our hypothesis.

| Total revenues | Base budget ¹ | Total expenditures | Base budget |
|--|--------------------------|---|------------------|
| Tax revenues | 414.892.000,00 | Salaries and contributions | 789.663.456,00 |
| Nontax revenues | 118.209.132,00 | Reserves and undefined expenditure | 7.500.000,00 |
| Capital revenues | 174.542.300,00 | Goods and services | 401.547.470,00 |
| Governmental grants revenues | 842.895.000,00 | Subsidies and Transfers | 20.770.000,00 |
| Transfers | 170.912.657,00 | Social benefits | 4.120.000,00 |
| Grant revenues | 274.650,00 | Capital expenditures | 498.124.813,00 |
| Total | 1.721.725.739,00 | Total | 1.721.725.739,00 |
| ¹ FYROM currency, 1 denar = 0.016 Euro | | | |

TABLE 1: Financial structure of municipality of Tetovo. Source: Municipal Budget, Calculations made by authors.

3.1. Empirical Data

The fiscal construction based on which are implemented the fiscal and all the other activities of the municipality of Tetovo represents the budget structure in which all the planned activities and projects will be implemented in the fiscal year and the financial resources which will enable to implement all these activities. In most of the cases the implementation of these activities marks stumbling due to lack of financial resources, which makes the municipality not having financial opportunity to demonstrate effectiveness and efficiency in implementation of their goals and planned programmes. Thence to compile an econometric model that will evaluate the optimal fiscal level we need the following information:

- Financial structure of revenues
- The rate of revenues from self-financing activities, transfers and grants;
- Financial resources of municipal activities;
- The structure of municipal expenditures
- The relationship between planned and implemented budget.

The following Table 1 shows the financial structure of the municipality specifying the data's such as financial resources and expenditure structure.

From the table we can see that the planned budget of municipality of Tetovo is around 1.7 billion denars, which includes revenues from self-financing activities, revenues from transfers and block grants for financing specific activity. The expenditure structure is constructed in general terms and contains synthetic budget data while not showing the analytical part of its distribution. To have a fair analysis we should classify public expenditures which identify's 54 expenditure programs spending in FYROM. Referring to the earlier studies in this regard, there is logic that this division should be made in eight categories according to their target clientele and their fiscal importance:

| Nr. | Expenditure category | Total needs of planned expenditure |
|-----|---|------------------------------------|
| 1 | General public services | 196.810.057,00 |
| 2 | Economic activities | 337.481.000,00 |
| 3 | Housing, municipal services in the community and public hygiene | 191.850.000,00 |
| 4 | Recreation and culture | 6.030.000,00 |
| 5 | Protection against fire | 33.912.900,00 |
| 6 | Primary Education | 379.740.040,00 |
| 7 | Secondary Education | 529.667.092,00 |
| 8 | Child care | 46.234.650,00 |
| 9 | Total | 1.721.725.739,00 |

TABLE 2: The expenditure structure in municipality of Tetovo. Source: Municipal Budget, Calculations made by authors.

3.2. The Methodology for Determining the Allocation of VAT for Municipalities

Referring to the methodology for revenue allocation of accumulated VAT throughout municipalities, the collection of total revenues from VAT, paid in the previous fiscal year in the municipalities of FYROM, municipalities of city of Skopje and the city of Skopje are distributed in two parts, constant which is the same for all municipalities and variable part. The constant part is 3.000.000,00 DENARS and it is for all municipalities, municipalities of city of Skopje and the city of Skopje and variable part of which 88% is distributed between the all municipalities excluding the city of Skopje and its municipalities, which receive the rest 12%. The variable part of the funds it is distributed according to these criterias:

- 65% based on their residents’ participation rate in the total number of inhabitants of FYROM, excluding the city of Skopje, according to datas on population census published by the State Statistical Office.
- 27% of their participation rate in the total territorial area of FYROM without the city of Skopje, in accordance with the municipal territorial division by the relevant authorities as cadastr?.
- 8% from participation of the municipalities settlements in the total number of settlements in FYROM excluding the city of Skopje, in accordance with Article 11 of the Law on Territorial Organization of Local Self-Government units in FYROM.

The formula by which the allocation of these funds is done is as follow:

$$D_i = \frac{0,65 * EFn}{BZn} * BZi + \frac{0,27 * EFn}{Pn} * Pi + \frac{0,08 * EFn}{BNMn} * BNMi$$

Wheres:

- D_i – represents the grant thas is given to the municipality
- Efn – represents the total sum of the variable fund dedicated for distribution through the municipalities;

| % | Description | Value in denars. |
|--------|---|-------------------|
| 39.27% | Value Added Tax | 38.472.527.231,75 |
| 28.33% | Contributions from pension and disability insurance | 27.754.690.513,77 |
| 17.14% | Health Insurance Contributions | 16.791.930.653,23 |
| 9.75% | Personal Tax | 9.552.002.559,45 |
| 3.73% | Profit Tax | 3.654.253.286,85 |
| 1.78% | Contributions for insurance in case of unemployment | 1.743.852.774,96 |

TABLE 3: The Total Revenues of FYROM. Source: Calculations made by authors based on central state budget and DVP reports.

- **Bzn** – represents the number the number of inhabitants of FYROM, excluding the city of Skopje, according to the latest census data about the population of FYROM, published by the State Statistical Office.
- **Bzi** – represents the numbers of inhabitants of the respective municipality for which the distribution of grants is made, in accordance with data of the last census of the population of FYROM, published by the State Statistical Office.
- **Pn** – represents the territorial area of FYROM, excluding the city of Skopje, in accordance with data of the last census of the population of FYROM, published by the State Statistical Office.
- **Pi** - represents the territorial area of the respective municipality for which the distribution of grants is made, in accordance with data of the last census of the population of FYROM, published by the State Statistical Office.
- **BNMn** – represents the number of settlements in FYROM excluding the City of Skopje, in accordance with Article 11 of the Law on Territorial Organization of Local Self-Government Units in FYROM statistics.
- **BNMi** - represents the number of settlements of the respective municipality for which the distribution of grants is made, in accordance with Article 11 of the Law on Territorial Organization of Local Self-Government Units in FYROM.

According to the data published by Directory of Public Revenues of FYROM, the amount of revenue collected as tax revenues, was valued in 97.969.257.020,00 denars and its structure is as follow:

Referring to these datas and methodology for allocation of revenues from VAT as government transfers from central to local level, only 4% from the total revenues accumulated by VAT will be distributed to the municipalities and the distribution is based on the methodology metioned above, from where we can find:

$$EFn = ?$$

$$EFn = \frac{4}{100} * Total\ of\ VAT$$

$$EFn = 0,04 * 38.472.527.231,75$$

$$EFn = 1.538.901.089,27$$

Referring to the methodology that the constant part is planned in the amount of 3.000.000,00 denars for each municipality, then for EFn we have:

The constant part for all municipalities is: 3.000.000,00 denars

$$K = 85 \times 3.000.000,00 = 255.000.000,00$$

$$EFn = 1.538.901.089,27 - 255.000.000,00$$

$$EFn = 1.283.901.089,27$$

for all FYROM and the city of Skopje, according to the proportion, 88% from these funds belong to all municipalities of FYROM, excluding the city of Skopje and its municipalities whose portion is 12%:

$$EFn = \frac{88}{100} \times 1.283.901.089,27 = 1.129.832.958,55$$

Referring to the datas for the municipality of Tetovo, we have:

$$EFn - 1.129.832.958,55$$

$$BZn - 1.515.621$$

$$Bzi - 86.580$$

$$Pn - 2.436.849$$

$$Pi - 26.185$$

$$BNMn - 1.715$$

$$BNMi - 20$$

Based on the above formula we have:

$$D_i = \frac{0,65 * EFn}{BZn} * BZi + \frac{0,27 * EFn}{Pn} * Pi + \frac{0,08 * EFn}{BNMn} * BNMi$$

$$D_i = \frac{0,65 * 1.129.832.958,55}{1.515.621} * 86.580 + \frac{0,27 * 1.129.832.958,55}{2.436.849} * 26.185$$

$$+ \frac{0,08 * 1.129.832.958,55}{1.715} * 20$$

$$D_i = 41.957.789,73 + 3.278.385,36 + 1.054.212,44 = 46.290.387,53$$

And when we add the constant - 3.000.000,00, we have:

$$D_i = 46.290.387,53 + 3.000.000,00 = 49.290.387,53 \text{ denars for one year}$$

The below table shows per capita revenues from VAT return in some municipalities in FYROM.

The average of grant revenue from VAT in country level is:

| No. | Municipality | Residents | Area | Settelments | VAT grants | Per capita revenues |
|-----|--------------|-----------|--------|-------------|-------------------|---------------------|
| 1 | Bitola | 95385 | 78716 | 66 | 62.542.338 | 655,68 |
| 2 | Novaci | 3549 | 75268 | 41 | 16.300.921 | 4.593,00 |
| 3 | Vrapçishte | 25399 | 15840 | 15 | 18.078.301 | 711,77 |
| 4 | Gostivar | 81042 | 51396 | 35 | 50.540.379 | 623,63 |
| 5 | Kumanovo | 105484 | 50922 | 48 | 63.007.689 | 597,32 |
| 6 | Prilep | 76768 | 119831 | 59 | 58.300.147 | 759,43 |
| 7 | Struga | 63376 | 48565 | 51 | 42.470.394 | 670,13 |
| 8 | Strumica | 54676 | 32149 | 25 | 34.830.628 | 637,04 |
| 9 | Studenica | 17246 | 27579 | 19 | 15.808.463 | 916,65 |
| 10 | Tetovo | 86580 | 26185 | 20 | 49.277.421 | 569,15 |
| 11 | Shtip | 47796 | 58285 | 44 | 35.769.980 | 748,39 |

TABLE 4: Per capita VAT revenue in some municipalities in FYROM. Source: Calculations made by authors based on central state budget and DVP reports.

$$\bar{X} = \frac{\sum X_i}{n} = \frac{101.968,62}{74} = 1.377,95 \text{ denars}$$

Based on the above mentioned table we see that we have disparity between income per capita in different municipalities, where the municipality of Tetovo is the municipality that receives less income per capita, only 569.15 denars per capita versus Novaci municipality which receives 4.593,00 denars per capita, which is 8 times more than what receives the municipality of Tetovo. This disparity in the distribution mostly refers to the formula and methodology of distributions in which municipalities that have more land area and number of settlements in ratio to residents, receive more revenue from the variable portion of VAT revenue.

If we refer to the data from the distribution of VAT in FYROM, and as well as establishing the ratio between income per municipality and the number of residents in the municipality, we can determine these variables:

- Maximum, minimum, average, variation coefficient, standard deviation.

And according to above mentioned data we can note that the maximum of VAT revenue per capita is as follows:

- Max – 4.593,10 denars (municipality of Novaci)
- Min – 569,15 denars (municipality of Tetovo)
- Mean – 1.377,95 denars (municipalities of Kratovo, Centar Zhupa etc).

Based on the data we can note that the municipality of Tetovo, compared to the mean revenue in central level collects:

$$\% - 569,15 + 569,15 \times \frac{X}{100} = Avg.$$

$$\% - 569,15 + \frac{569,15 X}{100} = 1.377,95$$

$$\% - \frac{569,15 X}{100} = 1.377,95 - 569,15$$

$$\% - 569,15X = 808,80$$

$$\% - X = \frac{808,80}{569,15}$$

$$\% - X = 1,420 \text{ or in percentage } (\%) 1,420 \times 100 = 142.00 \%$$

Based on these data the municipality of Tetovo receives 142% less income per capita than the mean of the income per capita in all municipalities in FYROM. And the municipality that receives more per capita income is Novaci, as follows:

$$\text{average} + \text{average} \times \frac{X}{100} = 4.593,10$$

$$1.377,95 + \frac{1.377,95X}{100} = 4,593.10$$

$$1.377,95X = (4.593,10 - 1.377,95) \times 100$$

$$X = \frac{321.515,00}{1.377,95}$$

$$X = 233,33 \%$$

We can conclude that the municipality of Novaci (which is a rural municipality) with a total number of 3,550 inhabitants, the level of revenue per capita as government grants in the form of VAT is 233,33% more than the per capita average income in the territory of FYROM, which makes this distribution discriminatory and not fair toward the municipalities that have a bigger number of inhabitants in ratio to territorial area and number of settlements such as the municipality of Tetovo, which receives 142% less than the average.

According to this situation of distribution of financial revenue in the name of VAT for the rest of the coefficient we have:

| | |
|-------------------------|-------------------|
| Arithmetic mean | 1,377.95 |
| Mean Deviation | 0.00437 |
| Variance | 657,690.75 |
| Standard deviation | 810.98 |
| Coefficient of variance | 0.59 |

Source: Calculations made by authors

3.3. Measuring the Optimal Level of Expenditure per Capita

If we refer to the structure of income and expenditures per capita then we have the structure where the local expenditures are classified into eight categories by specifying the nature and type of expenditure on the basis of balance sheet items foreseen in the budget and according to the resources of funding which covers the corresponding expenditures and according to this classification we have: expenditures for general public services, expenses related to the activities or the economic activity of the municipality, expenditures related to housing, community services and municipal hygiene, expenditures that characterize cultural activities, sport and recreation. These expenses are financed mostly by the aforementioned revenue accruing from own

| Expenditure categories | Total needs for expenditure | Evaluation about the number of habitants | The rate of expenditure |
|---|-----------------------------|--|-------------------------|
| General Public Services | 196.810.057,00 | 86.580 | 2.273,16 |
| Economic activities | 337.481.000,00 | 86.580 | 3.897,91 |
| Housing, municipal services in the community and public hygiene | 191.850.000,00 | 86.580 | 2.215,87 |
| Recreation and Culture | 6.030.000,00 | 86.580 | 69,65 |
| Protection against fire | 33.912.900,00 | 86.580 | 391,69 |
| Primary Education | 379.740.040,00 | 86.580 | 4.386,00 |
| Secondary Education | 529.667.092,00 | 86.580 | 6.117,66 |
| Child care | 46.234.650,00 | 86.580 | 534,01 |

TABLE 5: Categorization of Expenditure. Source: Calculations made by authors based on the budget of municipal of Tetovo.

activities. Whereas the second group itself includes expenditure dedicated to fire protection, spending on primary and secondary education as well as expenditures related to full-day child care. This category of expenditure partially is covered by government block grants that the municipality receives from the central level as a fund intended to cover the abovementioned activities.

Based on budget datas and expenditure categorization we have this situation shown in Table 5:

Referring to the table above, we see that the bulk of the necessary expenditure per capita is addressed to the spendings on secondary education and the lowest are the expenditures on recreation and culture. This indicator clearly shows the level of economic and social development, self-concentration of expenditure in the field of general public services and that the economic activity shows that we are still in the initial stage of economic and cultural development as society in general.

3.4. The Design of Econometric Model

To design an econometric model which will determine the need for income in the optimal level of local spending in municipality of Tetovo, primarily we need to make the assessment of expenditure covered from the self-financing activities of municipality of Tetovo, based on the categorization of local expenses above mentioned. Referring to the data of fiscal year, will have this structure of local expenditure:

To determine whether these expenditures are realized in the planned quotas and if the public needs are met is essential to determine which is the ratio between the total

| No. | Expenditure category | Budget Expenditure |
|-----|---|--------------------|
| 1 | General Public Services | 147.760.654,00 |
| 2 | Economic activities | 130.414.496,50 |
| 3 | Housing, municipal services in the community and public hygiene | 56.218.398,50 |
| 4 | Recreation and Culture | 4.311.365,00 |
| 5 | Protection against fire | 18.145.269,50 |
| 6 | Primary Education | 292.451,00 |
| 7 | Secondary Education | 7.925.547,00 |
| 8 | Child care | 2.248.789,00 |
| 9 | General Public Services | 367.316.970,50 |

TABLE 6: Expenditure structure of municipality of Tetovo. Source: Calculations made by authors based on the budget of municipal of Tetovo.

| | |
|------------------------|------------------|
| Planned Budget | 1.721.725.739,00 |
| Implemented Budget | 1.237.015.403,50 |
| Own funds | 367.316.970,50 |
| Block grants | 869.698.433,00 |
| Ration | 0,72 |
| Shortfalls | 28% |
| Adjustment coefficient | 1,28 |

TABLE 7: Comparison between planned and implemented budget in municipality of Tetovo. Source: Calculations made by authors based on the budget of municipal of Tetovo.

planned and implemented budget for the relevant fiscal year. Based on data from the budget and final account of the municipality we have:

The table shows that during fiscal year the municipality of Tetovo has planned to have financial receivables in the amount of 1.721.725.793,00 denars of whom it managed to collect only 1.237.015.403,50 denars. From self-financing activities has accumulated 367.316.970,50 denars and as government transfers on behalf of intended block grants has accumulated 869.698.433,00 denars. The ratio between what was planed and what is accomplished is:

$$R = \frac{1.237.015.403,50}{1.721.725.739,00} = 0,72 = 72\%$$

whereas 0,72 means that the municipality of Tetovo during the fiscal year has reached to accomplish the budget planning in the rate of 72%, where we can see a shortfalls of 28%, which means that the realized expenses have been under the optimal level for 28%. To achieve the optimal level of expenses within this ratio, we need to multiply all municipalities' expenses with the adjustment coefficient, which is:

$$K_p = 1 + (1 - \frac{R}{100}) = 1 + (1 - \frac{72}{100}) = 1 + (1 - 0,72) = 1 + 0,28$$

$$K_p = 1,28$$

| Expenditure category | Budget expenditure | Kp | The real need for expenditure |
|---|-----------------------|------|-------------------------------|
| General Public Services | 147.760.654,00 | 1,28 | 189.355.278,10 |
| Economic activities | 130.414.496,50 | 1,28 | 167.126.177,26 |
| Housing, municipal services in the community and public hygiene | 56.218.398,50 | 1,28 | 72.043.877,68 |
| Recreation and Culture | 4.311.365,00 | 1,28 | 5.525.014,25 |
| Protection against fire | 18.145.269,50 | 1,28 | 23.253.162,86 |
| Primary Education | 292.451,00 | 1,28 | 374.775,96 |
| Secondary Education | 7.925.547,00 | 1,28 | 10.156.588,48 |
| Child care | 2.248.789,00 | 1,28 | 2.881.823,10 |
| Totali | 367.316.970,50 | | 470.716.697,70 |

TABLE 8: The cost adjustment coefficient K_p . Source: Calculations made by authors based on the budget of municipal of Tetovo.

Based on the ratio of expenditure adjustment coefficient data from the table we see that we have a shortage of funds as the difference between the real need for expenditure and budgetary expenditure is 103.399.727,20 denars.

This lack of financial support from approximately 103,4 million denars represents real financial shortage in which expenditures and revenues of the municipality of Tetovo would be in optimal level, that is the point at which the municipality of Tetovo would be able to over its expenditures without any kind of difficulty. Referring to the datas and balance sheet items of which this difference might be financed, we can conclude that the only way of financing are the transfer of funds from the central government in the frame of VAT revenues, in form of increasing the coefficient of distribution of VAT revenues for the municipalities.

If we refer the VAT formula, in the case of municipality of Tetovo, D_i , the revenues should be increase for 103.399.727,20 and in total we would have:

$$D_i = 49.277.421,00 - \text{the current sum}$$

$$D_i = 49.277.421,00 + 103.399.727,00$$

$$D_i = 152.677.148,00 \text{ denars.}$$

3.5. Determination of VAT Return Rate to Municipalities from Central Level

If we return to the basic formula:

$$D_i = \frac{0,65 * EFn}{BZn} * BZi + \frac{0,27 * EFn}{Pn} * Pi + \frac{0,08 * EFn}{BNMn} * BNMi$$

and replace the variables we that we have, but bearing in mind tha D_i represents the income from VAT, on which are incorporated both of the component (the variable and constant portion), to find EF_n on which we will calculate total income, we have:

$$D_i = 152.677.148,00 - \text{the constant}$$

$$D_i = 152.677.148,00 - 3.000.000,00$$

$$D_i = 149.677.148,00 \text{ denars.}$$

$$149.677.148,00 = \frac{0,65 * EFn}{1.515.621} * 86.580 + \frac{0,27 * EFn}{2.436.849} * 26.185 + \frac{0,08 * EFn}{1.715} * 20$$

$$149.677.148,00 = \frac{56.277,00 EFn}{1.515.621} + \frac{7.069,95 EFn}{2.436.849} + \frac{1,60 EFn}{1.715}$$

$$149.677.148,00 = \frac{90.483,40 EFn + 7.069,95 EFn + 2.273,45 EFn}{2.436.849}$$

$$149.677.148,00 = \frac{99.826,80 EFn}{2.436.849}$$

$$99.826,80 Efn = 2.436.849 \times 149.677.148,00$$

$$EFn = \frac{372.051.155.426.652,00}{99.826,80}$$

$$EFn = 3.653.734.289,32 \text{ denars,}$$

This represents the total value of the variable component which is distributed in all the municipalities of FYROM, excluding the city of Skopje and its municipalities. Bearing in mind that the constant for the municipalities without the city of Skopje is:

$$K = 74 \times 3.000.000,00 = 222.000.000,00 \text{ denars}$$

The total value that is distributed to the municipalities as V_k is:

$$V_k = EF_n + K$$

$$V_k = 3.653.734.289,32 + 222.000.000,00 = 3.875.734.289,32 \text{ denars}$$

The total value that is distributed to the municipalities from the central authorities, referring to the methodology of VAT distribution represents 88% of V_k whereas the rest 12% is distributed to the city of Skopje and its municipalities as V_s .

Total value of VAT, V_p is presented as follow:

$$V_p = V_k + V_s \text{ where's:}$$

$$V_p = \frac{V_k}{\frac{88}{100}}$$

$$V_p = \frac{V_k}{0,88}$$

$$V_p = \frac{3.875.734.289,32}{0,88}$$

$$V_p = 4.404.243.510,59 \text{ denars}$$

To determine the rate of return or distribution rate of VAT from the central level as N_k from the total, where N_k represents the ratio between the determined total value and the accumulated value in the previous fiscal year:

$$N_k = \frac{V_p}{VAT} \times 100$$

$$N_k = \frac{4.404.243.510,59}{38,472,527,231.75} \times 100$$

$$N_k = 11.45 \%$$

So in these fiscal conditions, for the municipality of Tetovo to reach to cover its on expenses it is necessary that the government changes the return rate of VAT toward municipalities from 4% that is now, to at least 11,45%, a level in which the municipality will be able to cover its expenses without any difficulties.

In this situation where the government would decide to increase the return rate of VAT toward the municipalities from 4% to 11.45%, this would change the structure of income per habitant and all the coefficient that we computed above, and would change the coefficient as follow:

| | |
|-------------------------|--------------|
| Arthimetic mean | 3,627.00 |
| Deviation mena | 2.249.050,36 |
| Variance | 9.085.775,59 |
| Standard deviation | 3.014,26 |
| Coefficient of variance | 0,83 |

4. Conclutions

The aim of the paper was to provide a new approach or methodology of how achieve local fiscal optimality if the municipalities in FYROM, where as case study was take

the municipality of Tetovo. Achieving local fiscal optimality in municipality of Tetovo remains one of the most important challenges in fiscal management and institutional local government due to the fact that there is a big disbalance between local revenues and expenditure. In this paper throughout our economic model, we can conclude that all three hypotheses that were set in this paper can be accepted as:

1. The incomes of the local governments are not in optimal level as there is a need for additional grants from the central government so that the municipalities achieve fiscal optimality.
2. The rate of central governments grants in the name of VAT toward local government is very low and as pointed above, receiving only 4% for the total value of VAT income is not sufficient for the municipalities.
3. The increase of the rate of return on VAT income toward local governments will secure financial optimality and the rate of return on VAT income should be increased to at least 11.45% from the total amount so that the municipalities can achieve financial optimality.

To achieve optimal fiscal level it is necessary to implement these recommendations in the local management system:

- The growth and development of inter-institutional cooperation between the two levels of government, which would result with increasement of the rate of return on VAT income from 4% to 11.45%.
- Redefine the VAT distribution methodology, taking into account only the number of population.
- Development of fiscal decentralization through the allocation of sustainable financial resource locally.
- Redesigning the methodology of government transfers by allocating more financial revenue from central to local level.

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