



**THE DEVELOPMENT OF MASS ASSESSMENT AND  
TAXATION OF REAL ESTATE AS A BASIS FOR INCREASING  
THE SOURCE INCOME OF THE LOCAL SELF-  
GOVERNMENT UNITS OF THE REPUBLIC OF SRPSKA**

**Biljana Srdić Gojković**

*Faculty of Economics University of Banja Luka, Fiscal Council of the  
Republic of Srpska*

✉ [biljana.srdic-gojkovic@ef.unibl.org](mailto:biljana.srdic-gojkovic@ef.unibl.org)

**Dragan Stanković**

*Republic Administration for Geodetic and Property Law of the  
Republic of Srpska*

UDC  
336.22:347.25  
5(497.6)

Original  
scientific  
paper

Received:  
30.11.2023  
Accepted:  
30.03.2024

**Abstract:** Municipal budgets represent the basis of the development of an area with a certain number of inhabitants. The quality of life of the population will depend on the size of the budget and the potential for the development of the municipality. The budget system of the Republic of Srpska includes the budget of the Republic, the budgets of municipalities and cities, and the budgets of funds. The local self-government units form part of the overall public finances of the Republic of Srpska and they play an important role in maintaining the fiscal stability and responsibility in the Republic of Srpska as a whole, but also individually from the aspect of the quality of life. Public finances of the local self-government units make up 15% of the total public finances of the Republic of Srpska. Therefore, from the aspect of the stability of public finances, it is very important to establish a database that will contain the exact number of immovable properties on the basis of which the local self-government units of the Republic of Srpska would increase the income item from property tax, and therefore the total budgets, especially bearing in mind their financial problems. That is why it is necessary to analyze with special attention the possibility of increasing the income of the local self-government units of the Republic of Srpska.

**Keywords:** property tax, source income of LGUs, fiscal stability of LGUs

**JEL classification:** H70, H71, H72, F40

## **1. Introduction**

The municipal budget management policy represents the basis of fiscal stability in the local self-government units. Since the municipal budgets are a category that is mostly based on social benefits to the local population, it is therefore important to ensure the stability of the budget. Although the emphasis is always placed on the fiscal stability of the state, the fiscal stability of local self-government units is also very important.

There are numerous benefits of registering the real estate. From the aspect of the country's fiscal stability, it is very important to include all the real estate in the Republic of Srpska in the database. In this way, an adequate application of the Law on Property Tax would be ensured, and at the same time an adequate collection based on the increased real estate records in the Republic of Srpska. This would have an impact on the increase of budget revenues, but also on the consolidation of public finances of the local self-government units of the Republic of Srpska, which in recent years have been recording an increasing deficit and unpaid obligations. In addition, the problem of over-indebtedness of the local self-government units of the Republic of Srpska is becoming more and more present.

According to the Law on Fiscal Responsibility in the Republic of Srpska (Official Gazette of the Republic of Srpska 94/15, 62/18), the budget beneficiary, municipality, city and fund, is obliged to prepare a plan for the settlement of the outstanding obligations carried over from the previous period when such obligations existed and suggest a proposal measure for the settlement of the same. Therefore, increasing the income item based on real estate tax would represent a concrete measure for the consolidation of public finances of the local self-government units and ensure a fiscal stability. In the end, the increase in income from property tax represents a concrete measure for the implementation of the fiscal consolidation measures of the local self-government unit of the Republic of Srpska. The above gives a clear picture of the need for this project and the benefits of its implementation.

A higher income from the real estate tax would increase the source part of the taxes of the local self-government units of the Republika Srpska, which are necessary for their financing. In this way, the pressure of the local self-government units on the budget of the Ministry of Finance would be reduced through the allocation for the financing of certain local self-government units, which are in a very bad situation due to an inadequate management of the fiscal policy, a long-term deficit, a high level of outstanding obligations and an enormous debt. That is why some local self-government units of the Republic of Srpska have a problem with maintaining the liquidity. A large number of the local self-government units use the possibility of borrowing to ensure the liquidity of the budget, but also the financing of certain projects, which, due to the impossibility of the realization by the local self-government units, ultimately lead to blocked accounts.

Because of all this, there are multiple reasons for increasing the budget revenue of the local self-government units. One of them is a clearer picture of the payment of the social benefits. Listing the real estate will provide a clear picture of the social status of the population, necessary for the creation of a social map. In this way, the records of the existing properties whose owners have a certain type of income would be made, on the basis of which it would be possible to save funds for the social benefits and clearly categorize those who really need a social assistance from the budget of the institutions. An adequate listing of the immovable property and its inclusion in the database will enable a clearer tax collection and establish a more stable system of functioning of the local self-government units of the Republic of Srpska.

The budget system of the Republic of Srpska, according to the Law on the Budget System, includes the budget of the Republic, the budgets of municipalities and cities, and the budgets of funds. Because the local self-government units form part of the total public finances of the Republic of Srpska, they play an important role in maintaining the fiscal stability and responsibility in the Republic of Srpska as a whole.

In this regard, the following analyzes the public finances of the local self-government units from the aspect of the share of income from the property tax on the total revenues of the local self-government units of the Republic of Srpska.

In the last few years, the trend of increasing the debt in the local self-government units of the Republika Srpska, a high level of deficit and an accelerated growth of outstanding obligations carried over from the previous period is evident. That is why it is very important to identify the key problems of the occurrence of these phenomena, but at the same time and with the same goal to bring the market of the undeclared real estate under control.

The local self-government units in the Republic of Srpska differ according to demographic characteristics, a degree of urbanization, a level of employment, a possibility of generating public revenues and other indicators. Regardless of the differences in general indicators, the legislation does not distinguish between the local self-government units from the point of view of their competences.

An essential prerequisite for the efficient performance of the local self-government tasks within their competences is the availability of an adequate level of resources, i.e. income, and the efficiency of using available resources, i.e. efficient management of expenses. The expenditure management should ensure the efficient use of public funds, fiscal discipline and the implementation of strategic priorities necessary for the development of the local self-government units of the Republic of Srpska.

The local self-government units in Republika Srpska differ significantly according to general indicators, and therefore also according to a potential for

generating total public revenues. It can be reasonably expected that there are differences between the local self-government units in terms of the complete state of local public finances, the realization of the budget result, the amount of outstanding obligations, as well as the level of indebtedness. A clearer picture of the justification of the assessment and taxation of the real estate and its direct impact on the fiscal stability of the local self-government units in the Republic of Srpska will be clearer after the general indicators on the trend in the amount of income from the subject tax.

## **2. Literature review**

In order for the cities and towns to become the effective engines of economic growth, land has to be seen as a key factor in wealth creation and national development (Lawrence W., 2011). Because the everyday life of citizens takes place in the local self-government units, their adequate functioning is very important. That is why the fiscal stability of the local self-government units is very important, as well as responsible management and the adequate filling of the budget. The local amenity provision determines the property values which then determine the local tax revenues (Edvard L. Glaeser, 1994).

The territory of Republika Srpska consists of 64 local self-government units, of which 56 are the municipalities and 8 are the cities. The local self-government units are divided according to the level of development: developed, medium developed, underdeveloped and extremely underdeveloped. The possibility of developing municipalities is conditioned by the size of the budget. The municipal budget is a tool that significantly affects the long-term economic potential of the area (Papcunova, Hudáková, Štubňová & Urbaníková, 2020). For this reason, it is important to ensure the constant collection of the primary income. Therefore, it is important to emphasize that the purpose of taxation is to finance the government expenditures. One of the most important uses of taxes is to finance public goods and services. If there is a good collectability of taxes defined by law, it is clear that the authorities will have a greater opportunity to pay for the public goods and services.

According to research in OECD countries, the share of real estate taxes is on average 6% of the total tax revenues, while in developing countries it is less than 1% (OECD income statistics 1965-2015, November 30, 2016). Therefore, it is clear that 0.5% share of the real estate tax revenue in Republika Srpska is very small. That is why it is necessary to carry out a mass inventory of the real estate in the Republic of Srpska.

In theory, there are different opinions about state's reliance on property tax revenues. While economists tend to strongly favor the increased reliance on property taxes owing to their attractive economic properties, there is a widespread popular and hence political resistance to their increased use stemming in part from their

transparency and relatively limited scope for tax avoidance and evasion. (Norregaard J., 2013).

Such problems are often solved through certain reform processes in society. As with any reform, making the property tax work requires a visionary leadership, an appropriate policy framework, a strong administrative capacity, and appropriate incentives to mobilize the political, administrative and popular support needed to enhance property tax revenues, equity and efficiency (Kelly, R. 2013). This is especially important for the countries in transition and the countries such as the Republic of Srpska.

The experiences of a large number of countries show that the property tax is one of those good ideas that has not yet caught on. It has a great revenue potential, its burden rests with middle and upper income families, and it distorts business and consumer economic decisions less than other taxes do (Bahl, R., 2009).

What kind of reflection on the budget and on the life of the population in the local self-government units would be seen in the following analysis if the increase in the real estate tax collection in Republika Srpska would have?

### **3. Analysis of property tax income in the local self-government units of the Republic of Srpska**

Specific conclusions require a comprehensive analysis of property tax revenues in the local self-government units in the Republic of Srpska.

The analysis below covers the period from 2015 to 2021 by the local self-government units of the Republic of Srpska.

The data show that in a large part of the local self-government units there is stagnation and even a trend of falling income from property tax. Based on that, it can be concluded that there is a systemic problem in the collection of this part of income. It is also concluded that the trend of income growth does not follow the growth trend of newly built real estate, especially in the local self-government units, where in the last few years there has been an evident increase in the number of real estate (Banja Luka). If the problem of collection of source revenues, such as income from property tax, is not systematically solved, there is a possibility of disrupting the balance between the collection of revenues between different types of taxes, which will have many negative effects on the fiscal stability of the local self-government units of the Republika Srpska.

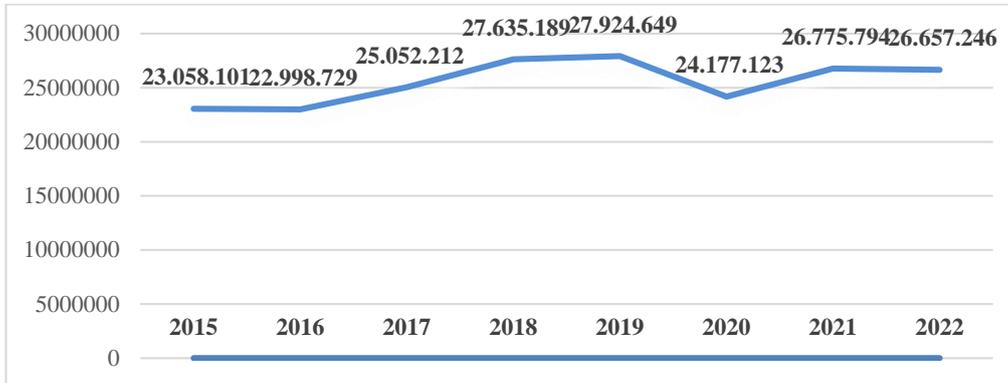
The following chart 1 shows the trend of property tax revenue by the local self-government units of the Republic of Srpska from 2015 to 2022.

**Table 1: Income from property tax of the local self-government units from 2015-2022. year, KM**

Municipalities	Property Tax							
	2015	2016	2017	2018	2019	2020	2021	2022
Jezero	2.058	3.106	2.504	3.397	6.807	4.403	5.688	5.742
Berkovići	16.119	18.111	62.016	31.668	31.729	31.667	30.707	29.859
Bileća	61.852	58.850	77.500	45.031	51.326	38.497	59.671	66.679
Bratunac	260.460	202.885	258.323	205.620	226.535	189.531	291.587	244.930
Brod	447.775	305.120	363.631	344.832	440.132	412.969	438.218	449.478
Višegrad	197.446	187.635	206.055	191.568	206.006	167.260	37.337	180.313
Vlasenica	127.156	106.262	111.767	122.491	136.411	100.639	115.680	102.180
Vukosavlje	22.770	38.273	35.258	34.275	31.654	37.194	51.132	52.459
Gacko	227.786	332.670	308.190	336.770	352.018	183.341	467.365	327.914
Banja Luka	5.465.172	6.917.675	7.878.188	9.659.457	8.970.298	7.750.606	6.192.701	5.292.435
Bijeljina	2.743.272	2.697.825	2.818.744	2.841.768	2.958.193	2.771.050	3.648.865	3.559.323
Gradiška	753.732	235.538	806.008	872.900	912.418	820.252	988.182	1.049.719
Doboj	1.303.106	981.618	1.110.991	1.083.736	1.147.817	1.017.932	1.164.554	1.462.331
Zornik	848.492	678.165	678.694	725.370	816.796	653.518	833.469	865.718
Prijedor	1.756.930	1.758.249	1.580.937	1.622.816	1.812.594	1.560.102	1.763.811	1.891.822
Trebinje	584.710	455.449	469.312	564.999	700.354	609.968	795.343	806.166
Derвента	356.829	403.737	460.958	696.983	753.097	690.688	711.475	580.363
Donji Žabar	11.086	20.251	17.019	20.849	18.229	17.735	19.832	20.378
Istočna Lidža	307.825	348.881	352.612	411.626	414.998	274.855	554.550	713.993
Istočni Drvar	69	38	699	197	160	125	244	121
Istočni Mostar	1.680	1.187	1.008	510	1.238	698	768	790
Istočni stari Grad	14.462	12.745	12.412	11.327	16.083	11.790	12.390	14.854
Istočno Novo Sarajevo	311.972	271.794	281.251	337.292	299.631	575.151	521.022	501.936
Kalinovik	40.188	38.453	39.719	37.769	45.552	33.879	66.171	64.475
Knežev	39.537	25.277	25.352	54.592	48.402	34.242	41.038	47.106
Kozarska Dubica	330.010	449.133	407.666	394.282	369.439	317.542	383.177	463.801
Kostajnica	51.434	73.270	57.788	52.588	56.957	50.496	58.861	59.896
Kotor Varoš	100.086	100.356	201.478	161.269	178.003	138.532	170.333	169.661
Krupa na Uni	45.974	39.396	40.154	39.610	38.394	37.757	36.431	34.824
Jupres	433	502	631	615	621	148	537	212
Laktaši	1.011.793	853.537	986.191	965.022	1.065.171	829.938	1.107.342	1.266.418
Lopare	178.185	146.423	162.588	190.997	185.704	164.273	226.400	188.085
Ljubinje	54.676	46.263	57.505	43.850	48.322	39.078	44.407	41.342
Milići	172.097	170.539	185.192	170.677	180.527	150.214	185.868	173.087
Modriča	556.882	556.229	585.586	562.505	603.118	507.406	601.504	605.769
Mrkonjić Grad	335.097	332.417	357.583	340.401	349.376	328.224	407.520	352.444
Nevesinje	238.964	193.590	188.912	203.910	201.170	169.443	248.488	193.219
Novi Grad	532.102	541.388	506.929	515.255	543.856	453.979	523.619	553.177
Novo Goražde	19.674	31.698	52.404	48.222	50.828	41.729	42.485	43.269
Osinci	63.270	37.500	31.927	32.132	42.957	33.153	42.814	34.682
Oštra Luka	24.428	27.425	21.754	21.855	25.349	20.268	23.609	23.569
Pale	464.468	359.356	386.258	600.231	520.418	468.936	613.189	645.085
Pelagićevo	62.850	66.414	66.672	70.827	71.409	58.072	69.636	72.549
Petrovac	1.924	3.112	4.913	4.830	4.348	2.574	2.991	2.554
Petrovo	79.049	51.644	60.609	49.245	61.747	66.472	63.084	76.207
Prnjavor	586.943	547.552	322.114	335.986	251.192	199.007	249.738	242.243
Ribnik	40.183	40.147	39.056	50.282	53.307	32.295	34.757	35.959
Rogatica	78.076	75.847	98.954	93.374	106.847	94.173	103.653	112.725
Rudp	78.743	73.381	75.803	79.333	80.556	61.096	86.674	68.782
Sokolac	78.012	107.639	100.072	128.592	180.268	136.344	160.986	176.229
Srbač	79.947	36.707	205.105	187.068	189.354	161.865	234.326	236.400
Srebrenica	146.350	162.908	150.486	133.419	141.307	113.869	160.154	150.953
Stanari	19.886	36.358	45.403	48.037	54.497	58.264	57.365	56.092
Teslić	364.034	322.266	349.639	362.557	385.170	271.163	301.493	376.950
Trnovo	69.334	34.428	77.704	107.880	95.121	72.439	109.263	129.993
Ugljevik	455.089	448.603	432.247	502.052	502.988	365.850	685.720	625.423
Foča	230.578	321.294	282.251	276.486	248.716	213.331	255.235	270.979
Han Pijesak	58.604	45.759	56.600	54.701	67.445	51.273	75.362	78.684
Čajniče	92.023	70.946	68.456	70.466	75.437	57.474	69.586	77.175
Čelinač	70.560	71.112	81.964	79.862	81.668	72.288	88.573	114.041
Šamac	312.130	341.779	271.358	329.196	323.386	272.391	326.236	436.692
Šekovići	42.591	52.524	42.118	38.300	64.484	55.488	75.299	104.996
Šipovo	29.138	29.493	30.994	31.432	26.714	22.187	37.279	31.996
<b>Total</b>	<b>23.058.101</b>	<b>22.998.729</b>	<b>25.052.212</b>	<b>27.635.189</b>	<b>27.924.649</b>	<b>24.177.123</b>	<b>26.775.794</b>	<b>26.657.246</b>

Source: Ministry of Finance of the Republic of Srpska

**Chart 1: Income from property tax in the local self-government units in the Republic of Srpska from 2015-2022. years, in millions**

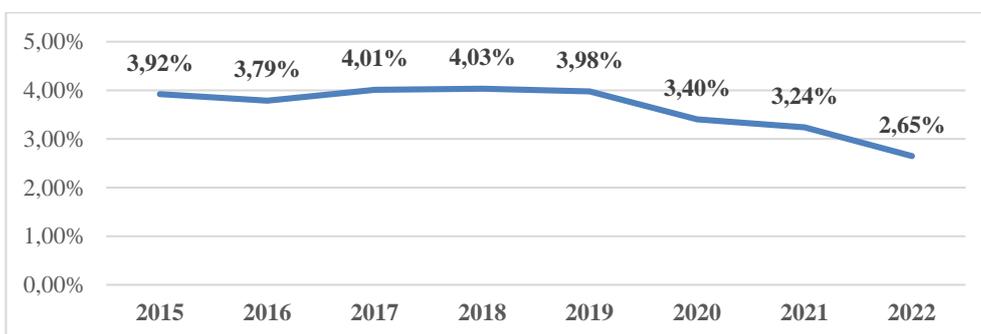


Source: Author's analysis based on periodic reports of the local self-government units of the Republic of Srpska on budget execution from 2015-2022. years

Compared to 2015, in 2016, in the local self-government units of the Republic of Srpska, there was a decrease in income from property tax. After that, in 2017, there was an increase in income, the growth trend of which occurred until 2019. In the observed period, the highest income from property tax was recorded in 2019. After that, there was a drop in income in both 2020 and 2021 compared to 2019. However, in comparison to 2020, a higher realized income in 2021 was evident, after which there would be another decrease in income in 2022. The following graph also shows the same trend of income from property tax, i.e. its share in the total budget income of the local self-government units of the Republic of Srpska.

Based on that, it is evident that in the observed period, the income from property tax comprised a maximum of 4.03% of the total budget income of the local self-government units in 2019, as can be seen in the following graph.

**Chart 2: % share of property tax revenue in the total budget revenue of the local self-government units of the Republic of Srpska from 2015-2021. years**



Source: Author's analysis based on periodic reports of the local self-government units of the Republic of Srpska on budget execution from 2015-2022. years

For clearer results, it is necessary to analyze the local self-government units according to the level of development. Therefore, the following table shows the municipalities/cities according to the previously mentioned criteria.

**Table 2: Classification of the local self-government units of the Republic of Srpska according to the level of development**

Degree of development	Local self-government units of the Republic of Srpska
<b>Developed</b>	Banja Luka, Bijeljina, Gacko, Gradiška, Derventa, Doboj, Zvornik, Istočna Ilidža, Istočno Novo Sarajevo, Laktaši, Mrkonjić Grad, Pale, Prijedor, Prnjavor, Stanari, Teslić, Trebinje i Ugljevik.
<b>Medium developed</b>	Bileća, Brod, Kozarska Dubica, Kotor Varoš, Milići, Modriča, Sokolac, Srbac, Foča i Čelinac.
<b>Undeveloped</b>	Bratunac, Višegrad, Vlasenica, Donji Žabar, Kostajnica, Ljubinje, Nevesinje, Novi Grad, Petrovac, Petrovo, Ribnik, Rogatica, Han Pijesak, Šamac i Šipovo.
<b>Extremely underdeveloped</b>	Berkovići, Vukosavlje, Istočni Drvar, Istočni Mostar, Istočni Stari Grad, Jezero, Kalinovik, Kneževo, Krupa na Uni, Kupres, Lopare, Novo Goražde, Osmaci, Oštra Luka, Pelagićevo, Rudo, Srebrenica, Trnovo, Čajniče i Šekovići.

*Source:* Official Gazette of the Republic of Srpska 99/22

Before determining the amount of income from property tax according to the level of development of the local self-government units, it is important to take into account the income of local self-government units in 2022 per capita.

#### **4. Analysis of property tax income in the local government units in the Republic of Srpska per capita**

The analysis of the impact of the increase in property tax revenue includes an analysis of property tax revenue per capita. The following table shows the number of inhabitants, total income from property tax in 2021 and income per capita.

The analysis shows that the income from property tax per capita is higher in developed local self-government units than in other units, which is to be expected. However, what can be interesting is that even in less developed and even underdeveloped municipalities there is a high level of per capita income from this tax item. Also, there are the local self-government units that are classified as developed, but do not have the expected level of income from property tax. It is concluded that there is no proportion in the amount of income and the degree of

development by the local self-government units from the mentioned item of income. That is why it is very important to establish a database that will contain the exact number of immovable properties on the basis of which the local self-government units of the Republika Srpska would increase the property tax revenue item. The increase in income from property tax would serve as a kind of measure for the fiscal consolidation of the local self-government units of the Republika Srpska, which have a high level of outstanding obligations.

**Table 3: Property tax revenue per capita in 2022**

LGU	Number of inhabitants	Property tax income for 2022	Property tax income per capita for 2022
Gacko	8.311	327.914	39,46
Ugljevik	14.139	625.423	44,23
Istočno Novo Sarajevo	11.990	501.936	41,86
Istočna Ilidža	14.215	713.993	50,23
Kalinovik	1.711	64.475	37,68
Grad Bijeljina	103.783	3.559.323	34,30
Grad Banja Luka	185.094	5.292.435	28,59
Laktaši	34.916	1.266.418	36,27
Pale	20.020	645.085	32,22
Brod	15.024	449.478	29,92
Derвента	24.990	580.363	23,22
Grad Trebinje	28.407	806.166	28,38
Mrkonjić Grad	14.662	352.444	24,04
Krupa na Uni	1.343	34.824	25,93
Modriča	23.416	605.769	25,87
Han Pijesak	3.207	78.684	24,54
Grad Prijedor	77.761	1.891.822	24,33
Novi Grad	23.118	553.177	23,93
Šamac	14.908	436.692	29,29
Nevesinje	11.762	193.219	16,43
Grad Gradiška	47.165	1.049.719	22,26
Kozarska Dubica	18.942	463.801	24,49
Grad Doboj	59.306	1.462.331	24,66
Milići	10.101	173.087	17,14
Pelagićevo	3.801	72.549	19,09
Lopare	13.154	188.085	14,30
Novo Goražde	2.526	43.269	17,13
Berkovići	1.857	29.859	16,08
Bratunac	17.932	244.930	13,66
Čajniče	4.330	77.175	17,82
Grad Zvornik	53.022	865.718	16,33
Foča	16.622	270.979	16,30

Sokolac	10.972	176.229	16,06
Srbac	16.032	236.400	14,75
Srebrenica	11.018	150.953	13,70
Ljubinje	3.094	41.342	13,36
Šekovići	5.767	104.996	18,21
Rudo	7.068	68.782	9,73
Istočni Stari Grad	1.018	14.854	14,59
Vukosavlje	4.261	52.459	12,31
Vlasenica	10.027	102.180	10,19
Petrovo	5.727	76.207	13,31
Oštra Luka	2.146	23.569	10,98
Kostajnica	5.369	59.896	11,16
Rogatica	9.705	112.725	11,62
Trnovo	10.972	129.993	11,85
Kotor Varoš	17.912	169.661	9,47
Teslić	35.814	376.950	10,53
Stanari	6.931	56.092	8,09
Osmaci	5.324	34.682	6,51
Prnjavor	32.650	242.243	7,42
Ribnik	5.175	35.959	6,95
Donji Žabari	3.295	20.378	6,18
Čelinac	14.755	114.041	7,73
Bileća	10.052	66.679	6,63
Jezero	970	5.742	5,92
Petrovac	561	2.554	4,55
Kneževo	8.202	47.106	5,74
Višegrad	9.148	180.313	19,71
Šipovo	9.212	31.996	3,47
Istočni Mostar	247	790	3,20
Istočni Drvar	88	121	1,38
Kupres	249	212	0,85

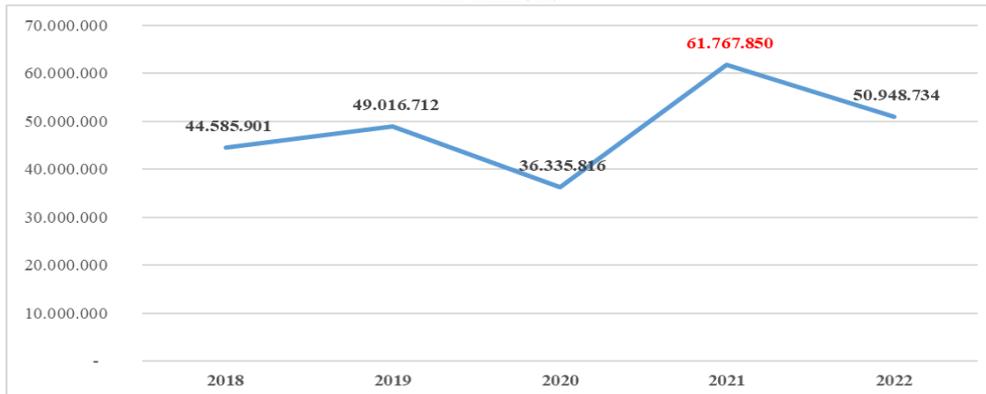
*Source:* Data from the Ministry of Finance of the Republic of Srpska and author's analysis

#### **4. The influence of property tax revenue on the settlement of outstanding obligations carried over from the previous period**

The analysis of outstanding obligations carried over from the previous period of the local self-government units is very significant due to the high level of outstanding obligations. A high level of outstanding obligations can threaten the fiscal stability of the local self-government units. Also, the high level of unpaid obligations carried over from the previous period of the local self-government units can be a threat to maintaining the fiscal stability of the overall budget system of the Republika Srpska. At the end of 2022, the total outstanding liabilities transferred from the previous

period of the local self-government units of the Republic of Srpska amounted to 50,734,584 KM. The trend of total outstanding obligations carried over from the previous period is shown in the following graph.

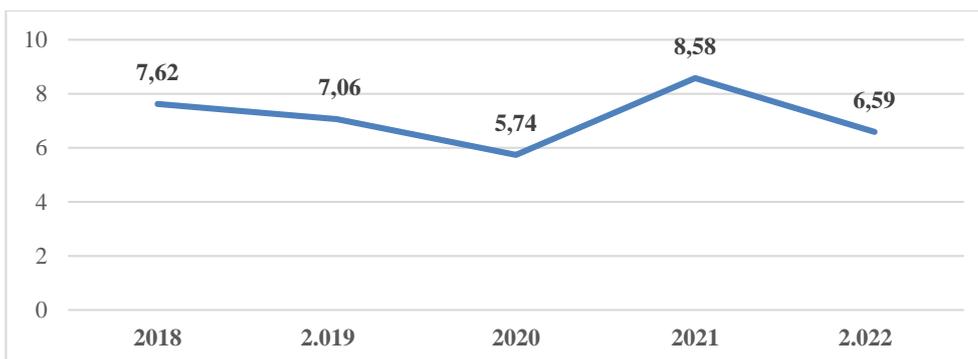
**Chart 3: Outstanding liabilities carried over from the previous period from 2018-2022 in millions**



*Source:* Data from the local self-government units of the Republic of Srpska and author's analysis

The following graph shows the share of unpaid obligations transferred from the previous period of the local self-government units in the total revenues of the local self-government units of the Republic of Srpska in the period from 2018-2021 (%).

**Chart 4: Share of unpaid obligations in the budget of the local self-government units of the Republic of Srpska from 2015-2022, % of the total budget of the local self-government units**



*Source:* Data from the local self-government units of the Republic of Srpska and author's analysis

The need to increase the source revenues is also reflected in the amount of outstanding obligations, since in certain periods, the amount of outstanding obligations is evident in relation to the budget of individual local self-government units. More careful projections of income and expenditure, regular settlement of due obligations and increase of individual items of income would avoid the creation of obligations for which the funds are not provided by the budget. Raising the quality of budget decisions and responsibility for the achieved results in the sphere of budget spending is a prerequisite for preserving the fiscal stability of the local self-government units, but also a real possibility of increasing income. Conducting a responsible budget policy represents a basic segment of the functioning of the local self-government units and eliminates the need to assume the obligations without previously secured real sources of funding. However, creating opportunities to increase the budget through the increased source revenues is also very important. Therefore, it is clear that only outstanding obligations carried over from the previous period comprise on average about 7% of the revenue of the local self-government units of the Republika Srpska. This is an alarm call for the budgets of the local self-government units, especially when it is determined that their high level is due to fiscally irresponsible policies. The same is applied for the need to increase revenues to settle outstanding obligations carried over from the previous period, especially the original revenues of local self-government units.

The quantitative impact of the increase in income from property tax on the reduction of outstanding obligations is also shown by the following analysis in which the econometric program Eviews 9 was used, applying the method of least squares. It is precisely the impact of the development of mass assessment and real estate taxation on the fiscal stability of the local self-government units in the Republic of Srpska that can be measured through the analysis carried out in the aforementioned program. This method is simple and reliable because it mutually excludes positive and negative errors. The analysis also includes the standard deviation, mean, maximum and minimum values, skewness of the distribution, and a measure of the tendency of the serial distribution.

The regression analysis provides an estimate of the significance of the following variables: probability (p), t-statistics, standard error of estimate and coefficient of determination  $r^2$ . The statistical basis consists of data from the Ministry of Finance in the period from 2015-2022. The relatively short time series of data in the regression model is conditioned by the limited availability of the necessary data. However, based on the following analysis, it is possible to understand the need to increase the mentioned revenues for local self-government units. The following table shows the results of the regression analysis.

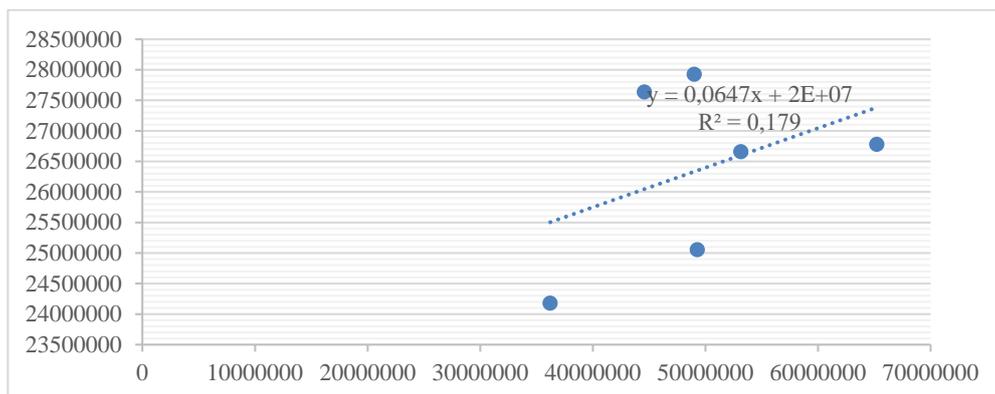
**Table 4: Results of regression analysis, period 2015-2022. year**

Dependent Variable: OO				
Method: Least Squares				
Date: 09/21/23 Time: 14:01				
Sample: 2017 2022				
Included observations: 6				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-23321407	78177087	-0.298315	0.7803
PTR	2.764.560	2.960.748	0.933737	0.4033
R-squared	0.178959	Mean dependent var		49581070
Adjusted R-squared	-0.026301	S.D. dependent var		9609010.
S.E. of regression	9734553.	Akaike info criterion		3.528.146
Sum squared resid	3.79E+14	Schwarz criterion		3.521.205
Log likelihood	-1.038.444	Hannan-Quinn criter.		3.500.360
F-statistic	0.871865	Durbin-Watson stat		2.041.118
Prob(F-statistic)	0.403299			

Source: Author's analysis using Eviews software

Despite the fact that a larger number of observations are used for this type of research, the results still show a positive impact of the realization of income from property tax on the outstanding obligations of the local self-government units of the Republic of Srpska.

Based on the obtained results, it is concluded that the increase in income from property tax affects the reduction of outstanding obligations by approximately 18%. This decline is also shown in the following graph.

**Chart 5: Chart of the regression equation of property tax revenue and outstanding liabilities**

Source: Author's calculation

This conclusion points to a clear need to increase this type of income, because in the last few years the local self-government units of the Republika Srpska have recorded the significant amounts of unpaid obligations transferred from the previous period, for which the funds were not provided in the budget. The analysis shows that a higher amount of property tax revenue would significantly reduce the creation of outstanding obligations. In this way, almost a fifth of the outstanding obligations would be serviced from at least one source of income of the local self-government units, namely property tax income. A balanced budget is the basis for the fiscal stability of the local self-government units. In a situation where there is a high level of deficit, the question arises as to what measures and instruments are necessary to correct the excessive deficit. The process of fiscal consolidation in the local self-government units, where a high level of deficit is evident, implies the rehabilitation through an increase in income or possibly a decrease in expenditure. The process of mass listing of real estate is aimed at increasing the source income of the local self-government units. An increase in income would ensure the reduction of the excessive deficit and the fiscal stability of the local self-government units of the Republika Srpska. In support of this, see an analysis of the impact of the increasing property tax revenue on deficit reduction.

The following graph shows the trend of the deficit. This trend indicates the need for higher source revenues in the budgets of the local self-government units. How important the aforementioned is, the budget result, that is, the level of the realized deficit by year in the following graph, also speaks for itself.

**Chart 6: Budget result of the local self-government units of the Republic of Srpska from 2015-202. year, in millions of KM**



Source: Author's calculation

The analysis of the budget results of the local self-government units of the Republic of Srpska shows that the fiscal results of these units in the period 2015-

2022 vary significantly. They generated the largest amount of deficit in 2020. This is a consequence of the decline in economic activity, which caused a decrease in collected revenues and an increase in public spending. In 2020, 64% of the total number of the local self-government units realized a deficit. In 2021, as a consequence of the implementation of fiscal consolidation, the budgets of around 80% of the local self-government units achieved a surplus. This shows that any type of consolidation, through an increase in income or a decrease in expenditure, leads to the stabilization of public finances of the local self-government units. The ones that face a deficit as a long-term problem have a reduced capacity to finance the regular activities, which is why the outstanding obligations are created. Also, the negative budget result of the local self-government unit potentially leads to a greater indebtedness, which ultimately affects the increase of the public debt of the Republika Srpska. Finally, the debt of local self-government units increases by accumulating their deficit. Compared to the previous one, the units with a high level of outstanding liabilities carried over from the previous period in relation to the level of income have a problem with the orderly servicing of current liabilities, which affects the accumulation of outstanding liabilities and in the long term represents a threat in terms of increasing debt if the outstanding liabilities are serviced through credit facilities. The following analysis shows how the increase in property tax revenue affects the reduction of the deficit of the local self-government units of the Republic of Srpska.

**Table 5: Results of regression analysis, period 2015-2022**

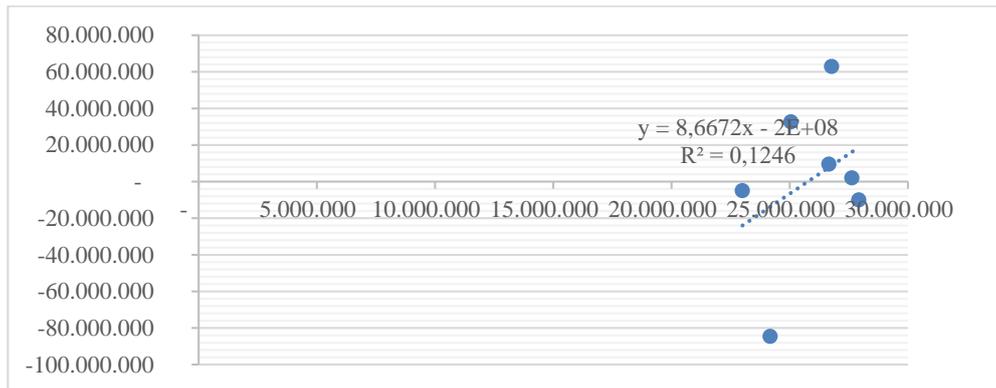
Dependent Variable: DEF				
Method: Least Squares				
Date: 09/21/23 Time: 14:07				
Sample: 2015 2022				
Included observations: 8				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
BR	-57845303	2.35E+08	-0.246459	0.8135
PTR	2522214	9167388	0.275129	0.7924
R-squared	0.012459	Mean dependent var		6559120.
Adjusted R-squared	-0.152131	S.D. dependent var		44840694
S.E. of regression	48130828	Akaike info criterion		3842906
Sum squared resid	1.39E+16	Schwarz criterion		3844892
Log likelihood	-1517162	Hannan-Quinn criter.		3829511
F-statistic	0.075696	Durbin-Watson stat		2302528
Prob(F-statistic)	0.792446			

*Source:* Author's analysis using Eviews software

The results of the regression equation show that the increase in property tax revenue affects the reduction of the deficit by about 12%. Although it is important to emphasize here that this type of research requires a larger number of observations,

the results also show that a dependence exists. The aforementioned conclusion is clearly seen in the following graph:

**Graph 7: Graph of the regression equation of property tax revenue and budget result**



*Source:* Author's calculation

It is clear that in the total budget, the income from the property tax in the budgets of the local self-government units does not take up a large percentage in the structure compared to e.g. the income from the indirect taxes. However, the influence can be sought in the fact that this type of tax is a permanent category in local self-government units, i.e. 100% of their income, and as such has a great impact on the implementation, but also the stability of the budget. On the basis of this, it is concluded that an accelerated inventory of the real estate in Republika Srpska would significantly lead to the repair of certain local self-government units and would significantly affect the provision of the fiscal stability.

We also see the benefits of the increased income from property taxes in the tendency to reduce debt. Some units of the local self-government record a high level of debt in relation to their fiscal capacities. As with the reduction of outstanding liabilities carried over from the previous period and the deficit, it is also possible to reduce the debt reduction with the help of an increase in property tax revenue. The following analysis shows in what percentage and how.

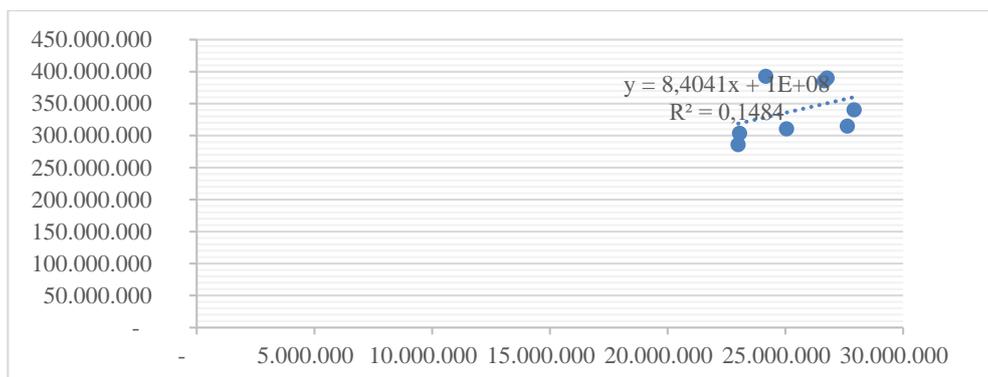
**Table 6: Results of regression analysis, period 2015-2021**

Dependent Variable: DEBT				
Method: Least Squares				
Date: 09/21/23 Time: 14:19				
Sample: 2015 2022				
Included observations: 8				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.26E+08	2.10E+08	0.596969	0.5724
PTR	8.404.087	8.217.978	1.022.647	0.3459
R-squared	0.148430	Mean dependent var		3.40E+08
Adjusted R-squared	0.006501	S.D. dependent var		43287149
S.E. of regression	43146211	Akaike info criterion		3.821.041
Sum squared resid	1.12E+16	Schwarz criterion		3.823.027
Log likelihood	-1.508.416	Hannan-Quinn criter.		3.807.646
F-statistic	1.045.806	Durbin-Watson stat		0.789862
Prob(F-statistic)	0.345925			

Source: Author's analysis using Eviews software

The results of the regression analysis show that the increase in income from property tax affects the reduction of debt by about 15%. It is concluded that a constant source revenue such as property tax revenue has a significant impact on the borrowing trend. Due to the fact that income from the property tax is the original income of the local self-government unit, a constant liquidity of the budget is ensured. That is why it is important to increase its collection through, above all, the inventory of newly built real estate. Analysis of the impact of property tax revenue on the debt of the local self-government units shows a significant impact on the decision to borrow, especially if the state of current indebtedness is observed, but above all the purpose (financing of deficits, outstanding obligations, rescheduling of loans, ensuring liquidity...). The trend of debt reduction with an increase in property tax revenue is shown in the following graph:

**Chart 8: Chart of the regression equation of property tax revenue and debt**



Source: Author's calculation

Finally, the analysis shows that the influence of the increase in property tax revenue is a very important source in order to reduce the debt of local self-government units. This is especially important if you look at the indebtedness trend in the following graph:

**Chart 9: Debt trend of the local self-government units of the Republic of Srpska from 2015-2022, in millions**



Source: Author's calculation

## Conclusion

The increase in source revenues of the budget of local self-government units reduces the need to increase debt, encourages the realization of investments, reduces the creation of outstanding obligations that are carried over from year to year and affect the fiscal stability, but also to ensure the ongoing liquidity of the budget of the local self-government units.

Because the income from indirect taxes, which in some units makes up 90% of income, serves to finance mandatory expenditures, it is necessary to direct the increase in income from property tax to increase the investments.

Ultimately, the investments represent a condition for ensuring the economic growth of individual local self-government units and the Republic of Srpska as a whole.

Although the income from property tax currently does not occupy a large part of the total budget income, it is important to know that the tendency, through the listing of a larger number of immovable properties, means higher source income in the budget, the possibility of less creation of outstanding obligations, reduction of deficit and debt in the following budget years.

Any increase in income is the basis for a stable budget and stable public finances of the local self-government units of the Republic of Srpska and those for development.

The conclusions that emerged from these analyses point to the need to increase the source revenues of the local self-government units of the Republic, in this case increasing the income from property taxes.

The results of the analysis show the clear justification of the mass assessment and taxation of the real estate in the Republic of Srpska with the exact reasons.

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## **RAZVOJ MASOVNE PROCENE I OPOREZIVANJA NEPOKRETNOSTI KAO OSNOVA POVEĆANJA IZVORNIH PRIHODA JEDINICA LOKALNE SAMOUPRAVE REPUBLIKE SRPSKE**

**Rezime:** Budžeti opština predstavljaju osnovu razvoja jednog područja na kome egzistira određeni broj stanovništva. Zavisno od visine budžeta i potencijala za razvoj opštine zavisiće i kvalitet života stanovništva. Budžetski sistem Republike Srpske obuhvata budžet Republike, budžete opština i gradova i budžete fondova. S obzirom da jedinice lokalne samouprave čine deo ukupnih javnih finansija Republike Srpske, može se reći da iste imaju važnu ulogu u održavanju fiskalne stabilnosti i odgovornosti u Republici Srpskoj u celini, ali i pojedinačno sa aspekta kvaliteta života na određenoj teritoriji. Javne finansije jedinica lokalne samouprave čine 15% ukupnih javnih finansija Republike Srpske. Zbog toga je, sa aspekta stabilnosti javnih finansija, veoma važno uspostaviti bazu koja će sadržavati tačan broj nepokretnosti po osnovu kojih bi jedinice lokalne samouprave Republike Srpske povećale stavku prihoda od poreza na imovinu, a samim tim i ukupne budžete, posebno imajući u vidu finansijske probleme sa kojima se iste susreću. Zbog prethodno navedenog neophodno je sa posebnom pažnjom analizirati mogućnost povećanja prihoda jedinica lokalne samouprave Republike Srpske, sa posebnim naglaskom na očuvanje fiskalne stabilnosti.

**Ključne reči:** porez na imovinu, izvorni prihod JLS, fiskalna stabilnost JLS.

### **Authors biographies**

**Biljana Srdić Gojković**, PhD assistant professor, Faculty of Economics, University of Banja Luka - Department of Economic Theory, Analysis and Policy. She teaches a group of subjects in the field of Economic Policy and Fiscal Economics. Since 2022, she has been a member of the Fiscal Council of the Republic of Serbia.

**Dragan Stanković** is currently a director of the Republic Administration for Geodetic and Property Legal Affairs of the Republic of Srpska. Completed his master's studies at the Faculty of Economics of the University of Banja Luka.