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CHANGES IN OWN REVENUES OF POZNAN AGGLOMERATION COMMUNES VS. SUBURBANISATION PROCESS

The socioeconomic changes observed in Poland after the 1990s (e.g., free land trade, ownership relations) increased the pace of functional and spatial transformation both in cities, and in their suburbs. The aim of the paper is to identify the consequences of suburbanisation processes (e.g., residents' migrations, diversification of business activity, housing construction intensity in communes bordering Poznan city) for communes' revenues within Poznan agglomeration. The author focuses on selected own revenues, particularly on the resources gained from property tax, agricultural tax, shares in revenue from personal and corporate income tax. The conducted analysis enabled identification of the range and intensity of changes in the communes of Poznan county.

Keywords: property tax, agricultural tax, quotas in the revenues from personal and corporate income tax.

Марія Троянек

ЗМІНИ В ДОХОДАХ ГРОМАД ПОЗНАНСЬКОЇ АГЛОМЕРАЦІЇ НА ФОНІ ПРОЦЕСУ СУБУРБАНІЗАЦІЇ

У статті показано, що соціально-економічні зміни в Польщі після 1990-х років (наприклад, вільна торгівля землею, відносини власності) збільшили темп функціональних і просторових перетворень як у містах, так і в передмістях. Описано наслідки процесів субурбанізації – міграція жителів, диверсифікація господарської діяльності, інтенсивність житлового будівництва – у громадах агломерації Познань. Акцент зроблено на отримуваних доходах, зокрема, від податку на майно, сільськогосподарського податку, індивідуального та корпоративного прибуткового податку. Аналіз дозволив вивчити діапазон і інтенсивність змін у громадах Познанського округу.

Ключові слова: податок на майно, сільськогосподарський податок, квоти на доходи від індивідуального та корпоративного податку на прибуток.

Рис. 1. Табл. 6. Літ. 10.

Марія Троянек

ИЗМЕНЕНИЯ В ДОХОДАХ ОБЩИН ПОЗНАНЬСКОЙ АГГЛОМЕРАЦИИ НА ФОНЕ ПРОЦЕССА СУБУРБАНИЗАЦИИ

В статье показано, что социально-экономические изменения в Польше после 1990-х годов (например, свободная торговля землей, отношения собственности) увеличили темп функциональных и пространственных преобразований как в городах, так и в пригородах. Описаны последствия процессов субурбанизации – миграция жителей, диверсификация хозяйственной деятельности, интенсивность жилищного строительства – в коммунах агломерации Познань. Акцент сделан на получаемых доходах, в частности, от налога на имущество, сельскохозяйственного налога, индивидуального и корпоративного подоходного налога. Анализ позволил изучить диапазон и интенсивность изменений в общинах Познаньского округа.

Ключевые слова: налог на имущество, сельскохозяйственный налог, квоты на доходы от индивидуального и корпоративного подоходного налога.

Introduction. Since the end of the 1990s we have been observing the increasing diversification and intensity of socioeconomic changes outside cities and in com-

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munes bordering them (Tanas, 2013; Trojanek, M., Trojanek, R., 2012; Trojanek, R., 2012). The changes concern:

- inflow of people from cities,
- intensive development of housing construction, above all single-family housing, but also multi-family housing in rural areas,
- multifunctionality – serving not only agricultural purposes leads to diversification of land use structure,
- decrease in land prices,
- development of settlement and transportation networks.

Diversity and intensity of the processes are spatially heterogeneous – the further from the city, the weaker they become (Lubinska, Franek, Bedziaszak, 2007).

The socioeconomic phenomena mentioned above result in a number of consequences for spatial development and financial sphere (Miszczuk, 2009; Szewczuk, 2005). The aim of the paper is to identify the influence of the changes on communes' revenues, especially own ones. The author studied the changes in the level, range and structure of communes' own revenues in the selected years.

1. Characteristics of Poznan agglomeration. Poznan agglomeration encompasses the city of Poznan and the communes within Poznan county (17 communes, of which 2 are urban: Lubon and Puszczykowo, 8 are urban-rural: Buk, Kostrzyn, Kornik, Mosina, Murowana Goslina, Pobiedziska, Steszew, Swarzedz, and 7 are rural: Czerwonak, Dopiero, Kleszczewo, Komorniki, Rokitnica, Suchy Las, Tarnowo Podgorne). It is among 7 most developed areas in Poland (Warsaw, Cracow, Lodz, Wroclaw agglomerations and the conurbations of Upper Silesia and Tri-City).

Population. Boasting approx. 900 ths inhabitants (in 2011), it forms one of the most important element of the contemporary settlement system. The European Spatial Planning Observation Network (ESPON) classifies Poznan agglomeration as one of 76 metropolitan areas on European continent².

The number of Poznan agglomeration inhabitants equals 2,5% of the country's total population and 28% of Wielkopolska region. The majority live in Poznan (over 58%), however, it is worth notifying that this number has been decreasing since the 1990s, while the number of people living in the entire county has been growing steadily.

The population and migration dynamics of Poznan agglomeration are shown in Table 1 and Figure 1.

Table 1. Population dynamics in Poznan agglomeration (in ths)

	Poznan city	Poznan county	Agglomeration
1990	590,1	224,8	814,9
2000	574,9	255,1	828,3
2001	571,9	259,2	831,1
2006	565,0	285,0	860,0
2010	551,6	327,1	878,7
Area (km ²)	262	1899	2161

Source: www.poznan.pl.

In the period analysed, population density in Poznan city and other communes varied considerably.

² The Green Paper of Poznan Agglomeration www.zielonaksiega.poznan.pl.



Source: www.poznan.pl.

Figure 1. Population dynamics in Poznan agglomeration (in ths)

Table 2. Population per 1 km² in Poznan agglomeration in the selected years

Change 1995: 100%	Communes	Years						
		1995	2000	change	2005	change	2010	change
142,34	Lubon	1535	1745	+210	1972	+227	2185	+213
121,30	Puszczykowo	495	540	+47	555	+15	598	+43
105,51	Buk	127	129	+2	131	+2	134	+3
132,49	Czerwonak	237	262	+25	286	+4	314	+28
198,81	Dopiero	84	99	+15	125	+26	167	+42
151,78	Kleszczewo	56	63	+7	71	+8	85	+14
185,54	Komorniki	158	175	+23	210	+35	293	+83
114,46	Kostrzyn	96	98	+2	100	+2	107	+7
146,05	Kornik	76	80	+4	92	+12	111	+19
117,16	Mosina	134	138	+4	146	+12	157	+11
118,75	Murowana Goslina	86	88	+2	91	+3	95	+4
126,67	Pobiedziska	75	79	+4	86	+7	95	+9
179,31	Rokietnica	87	97	+10	16	+19	156	+40
112,16	Steszew	74	77	+3	79	+2	83	+4
185,71	Suchy Las	70	87	+17	111	+24	130	+21
125,88	Swarzedz	340	358	+18	394	+36	428	+34
161,65	Tarnowo Podgorne	133	159	+26	182	+23	215	+33
94,74	Poznan	2224	2228	+4	2173	-55	2107	-66

Source: own study.

The most extensive changes in population density were observed in the following communes:

- Dopiewo (increase of 98,81%),
- Suchy Las (increase of 85,71%),
- Komorniki (increase of 85,54%),
- Rokietnica (increase of 79,31%),

while the least extensive were observed in:

- Buk (increase of 5,51%),
- Steszew (increase of 12,16%),
- Kostrzyn (increase of 14,46%),
- Mosina (increase of 17,16%),
- Murowana Goslina (increase of 18,75%).

In Poznan city, a reverse tendency could be observed (decrease in population density per 1 km² by nearly 65).

Economy. Nearly 50% of GDP the county (in 2010) was produced in Poznan agglomeration.

The city's economy is based on service sector enterprises (creating more than 70% value added), such as: trade, financial and educational services, property market services.

In 2010, the gross domestic product amounted to 72,7 ths PLN, giving Poznan the second position (right after Warsaw) among the biggest Polish cities by the GDP ranking.

GDP per 1 inhabitant in the biggest Polish cities and agglomerations is depicted in Table 3.

Table 3. Gross domestic product per 1 citizen (in ths PLN)

City / subregion	GDP / 1 citizen in 2008	Poland = 100
Warsaw city	98 854	295
Poznan city	67 045	200
Cracow city	51 896	155
Wroclaw city	51 407	154
Katowice subregion	48 115	144
Tri-city subregion	45 208	135
Szczecin city	43 115	129
Lodz city	41 452	124

Source: www.poznan.pl.

More than 145 ths of business enterprises were registered in Poznan agglomeration in 2010. The number of business enterprises per 1000 inhabitants ranged from 96,80 (Kleszczewo rural commune) to 177,82 (Poznan city). Compared with 1995, the rates amounted to 32,82 and 107,52 respectively. It should be noted that the numbers given refer to the minimum and maximum values. Observing the rate for other communes, it is noticeable that in certain communes it increased considerably:

- Kornik (increase from 43 to over 146 enterprises per 1000 inhabitants);
- Suchy Las (increase from 90 to over 193 enterprises per 1000 inhabitants);
- Dopiewo (from 48 to over 170 enterprises);
- Rokietnica (from 45 to over 136 enterprises per).

3 out of 4 listed communes are rural (except for Kornik commune). Such a significant growth of the rate in 2010 as compared to 1995 indicates growing business activity and a wide-spread departure from agriculture.

In Poznan agglomeration (2010) 222 foreign-owned companies were active employing over 49 ths people. The increase in number of such enterprises was more rapid in Poznan county than in the city itself. Relatively biggest share (approx. 100) of foreign-owned companies was located in Tarnowo Podgorne (36), Kornik (11), Swarzedz (9), and Komorniki (8).

Among the foreign-owned companies, those with German, Dutch and French capital prevail. The volume of foreign direct investment per 1 inhabitant increased from EUR 2700 in 1990–2000 to EUR 9400 in 2001–2011. The resources were used on the investments related to:

- industrial production (63%),

- trade (12%),
- properties (10%).

Standard of living, housing construction. According to the Ministry of Finance, 92,1% of taxpayers in Poland fell into tax bracket 1, 6,5% into tax bracket 2, and 1,4% into tax bracket 3. Average yearly income from natural persons amounted to PLN 20 800.

Average incomes in Poznan agglomeration were ca. 40% higher than the country's average and amounted to PLN 28 000. Furthermore, the share of people earning more than PLN 85 000 is double the number for the country. Affluence level of the agglomeration's inhabitants is confirmed by the fact that in 2009 only 4,4% of the inhabitants needed social assistance (half the number — in Wielkopolska region).

The share of employed in the total population increased from 56% in 2000 to 69% in 2009. The unemployment rate in 2010 may be described as low (3,4%), as it was 2,5 times lower than in Wielkopolska region and 3 times smaller than in the country's average.

Changes in the agglomeration's population were accompanied by rapid housing construction growth, particularly single-family housing. New housing, production, warehouse and infrastructural investments are carried out on land that has been used for agricultural purposes so far. Such activity leads to decreasing agricultural function of this area, especially in the immediate vicinity of the city. Investment activity results in change of urban area of the communes within the agglomeration (increase of 45%). The least extensive changes occurred in Kostrzyn rural commune (increase of 10%), the most extensive ones in Tarnowo Podgorne (increase of 140%).

The tendencies presented above describe the background (conditions) of socioeconomic changes occurring in Poznan agglomeration.

Poznan agglomeration is differentiated from other Polish agglomerations by such features as:

- concentration of all communes and cities within a single county's borders (other Polish cities border communes belonging to various counties);
- intensive suburbanisation process (in the period 2000–2010 the number of Poznan inhabitants decreased by 33 ths, while the population of the county increased by 70 ths; young families are the group that migrates most often to neighbouring communes (66,4%), they usually boast secondary or college education (23%), university education (ca. 40%), and are high-income households (monthly income from PLN 3001–5000 (33%) to PLN 5000 and more (ca. 26%));
- furthermore, there was a considerable increase in the number of enterprises in 2000–2010 (from 135 to 182%) in the following communes: Dopiewo, Kleszczewo, and Komorniki. The growth was not so extensive, yet still important, in other communes, e.g. the number of companies in Poznan increased by 25% in the analysed period;
- high economic development. GDP per capita in Poznan in 2010 amounted to PLN 72 700 (ranked second after Warsaw), while in the county it was ca. PLN 40 000 (ranked twelfth in the country). The number of foreign-owned companies is constantly growing, yet the increase is more rapid in Poznan county than in the city itself. Among the companies that boasted highest income in 2009, 23 were located in Poznan, further 12 had premises in the county, out of which 6 operated in Tarnowo Podgorne commune);

- high living standards and affluence (low unemployment rate, incomes above the national average, lower number of social assistance beneficiaries, large number of car owners – 517 of cars per 1000 inhabitants);

- rapid housing construction growth, particularly single-family housing in the suburban communes. Multifamily housing supplied by developers prevails in Poznan (65% of dwellings), while 21% of dwellings are single-family. The proportions are reverse in other communes – 28% and 64% respectively;

- development of the so-called "pendulum migration" related to commuting between workplaces, homes and service centres, from neighbouring communes to Poznan or in the opposite direction. According to Poznan Statistical Office³, the relation between the number of commuters to Poznan from other location is 4 times bigger than the number of those commuting from Poznan to other communes;

- disproportion related to the places where inhabitants work, use services, and pay taxes. It is connected to e.g. loss of revenues from personal and corporate income tax in the main city, which has to finance supralocal services of benefit to all the agglomeration's inhabitants.

The occurrence of processes mentioned above is spatially diverse and determined by environmental factors, attractiveness of location, investment opportunities, accessibility, as well as external (system) conditions.

Taking into consideration the topic of the paper, further considerations will concern communes' own revenues and their diversification in the light of suburbanisation processes.

2. Property, agricultural, and forest taxes and quotas in the incomes from PIT (personal income tax) and CIT (corporate income tax) as local governments' own revenues. In the system of local finances, a particular role is played by own resources, especially local taxes and fees. Income to communes' budget from local taxes – according to binding regulations – differs depending on the type of commune, economic base, local tax policy and other circumstances (Swianiewicz, 2011). Commune councils have the right, in the area defined by appropriate regulations, decide upon the level of local taxes and fees or introduce tax reliefs and exemptions.

Detailed regulation on the sources of income for territorial self-government is in the Local Government Finance Act. According to the article 3 of the Act⁴, revenues of territorial self-government units comprise:

- own resources,
- general subsidies,
- closed-end grant from the state budget.

Besides, own resources, according to the article, are the shares in revenue from personal income tax and corporate income tax. Own resources of territorial self-government is also:

- non-refundable appropriations from foreign sources,
- the EU funds,
- other appropriations defined in other regulations.

³ Sytuacja społeczno-gospodarcza Poznan 2012, Wydawnictwo Miejskie Poznania, Poznan 2012, p. 10.

⁴ The Local Government Finance Act of 13 Nov 2003 (Dz. U. of 2010, no. 90, item 526).

Commune's own resources, according to the bill are:

- 1) revenue from:
 - property tax,
 - agricultural tax,
 - forest tax,
 - transport means tax,
 - personal income tax, paid in the form of tax card,
 - dog tax,
 - inheritance and endowment tax,
 - civil transaction tax;
- 2) revenue from:
 - revenue duty,
 - marketplace fee,
 - administrative fee,
 - exploitation fee – in the part defined in the Act of 4th February 1994 – Geological and Mining Law (Dz. U. No. 27, item 96, with further amendments);
 - other types of commune revenue, paid according to other regulations;
- 3) income obtained by commune budget units and fees from commune budgetary unit, communal auxiliary enterprises;
- 4) revenue from communal property;
- 5) inheritance, legacies and donations for commune;
- 6) revenue from penalties and fines defined in other regulations;
- 7) 5,0 % of revenue to the state budget in connection with realization of state administration tasks and other tasks defined by regulations, unless other regulations state differently;
- 8) interest on loans given by commune, unless otherwise stipulated;
- 9) interest on late receivables which are part of commune income;
- 10) interest on financial resources on commune bank accounts, unless otherwise stipulated;
- 11) subsidies from the budgets of other territorial self-government units;
- 12) 39,34% share in personal tax income revenue, from tax payers;
- 13) 6,71% share in corporate income tax revenue from tax payers located on the area of the commune;
- 14) other due revenue, according to other regulations.

Among the local taxes, from the point of view of the analysed problem, the focus of further discussion will be property taxes and commune shares in personal and corporate income tax (PIT and CIT). The size of revenue from these tax sources is partly dependent on the changes which are the result of the suburbanisation process (relocation of city inhabitants to neighbouring communes, development of flat building and location of investments of production, warehouse-storage, sports and recreational, trading characters in the areas of the communes).

In binding legal conditions, property taxes include:

- property tax,
- agricultural tax,
- forest tax.

Property tax. In most countries the tax base is most often capital value (market value of the property or its part) or rent value. In Poland, the basis of the property tax was defined in the Act on local taxes and fees⁵. Tax base is land area and utility area of buildings. The following property or structure is subject to property tax:

- land,
- buildings and their parts,
- structures or their parts connected with conducting business activity,
- land classified in land and buildings records as cultivable land, forest land on cultivable land where business activity is conducted.

The subjects of this tax are owners, possessors, perpetual users of property and its owners without legal title.

The level of rates is defined by commune council, however, their level cannot exceed maximum levels determined by the Minister of Finance in the form of announcement. What is more, commune council may impose lower than maximum rates and introduce other rates than it is defined in the regulations. Statutory tax exemption applies to some property. For example, property or its parts seized for self-government administration, public roads buildings and land seized for public roads, land under flowing water and navigable channels, buildings and land used directly for production and transmission of electrical energy.

Most of the communes use maximum or close to the upper range rates. Therefore, regardless of location, standard of property, technical condition and other important features of property, tax burdens are the same in the whole commune. It is also not important whether it is a new object in an attractive location or a building in bad technical condition in province.

Although with binding regulation commune councils have the possibility to use different tax rates, however they use it very rarely. It is difficult to create a system which would differentiate tax rates fairly.

Agricultural tax⁶ was introduced under this name in Poland in 1984. Until 1991 agricultural tax consisted of two parts: agricultural tax on land and agricultural tax on revenues from special sections.

The subjects of agricultural taxation are owners and possessors of farms. The tax is imposed on individual people, organizational entities which are not legal entities. The objects of taxation are — according to the act — farming land of the total area exceeding 1 ha or with the arable land exceeding 1 ha. The base for taxation is the number of conversion hectares. The number of conversion hectares depends on:

- type of arable land,
- tax districts,
- class of arable land.

Generally, it is assumed that the better quality of arable land, the higher conversion. Conversions for the area of arable land are presented Table 4.

The tax rate is expressed in equivalent of 2,5 quintals of rye for the 3 first year quarters of the year preceding the tax year used for conversion hectares of a farm.

⁵ Act on local taxes and fees as of 12th January 1991 (Dz. U. of 1991, No. 9, item 84 with further amendments).

⁶ The Act on agricultural tax, (Dz. U. of 1984, no. 52 with further amendments).

Table 4. Conversions for the area of arable land

Type of arable land	Arable land				Meadows and pastures			
Tax districts	I	H	II	IV	I	II	III	IV
Classes of arable land	Conversions							
I	1,95	1,80	1,65	1,45	1,75	1,60	1,45	1,35
II	1,80	1,65	1,50	1,35	1,45	1,35	1,25	1,10
II Ia	1,65	1,50	1,40	1,25				
III					1,25	1,15	1,05	0,95
III b	1,35	1,25	1,15	1,00				
IV a	1,10	1,00	0,90	0,80				
IV					0,75	0,70	0,60	0,55
IV b	0,80	0,75	0,65	0,60				
V	0,35	0,30	0,25	0,20	0,20	0,20	0,15	0,15
VI	0,20	0,15	0,10	0,05	0,15	0,15	0,10	0,05

Source: Art. 4 point 5, the Act on agricultural tax

In this case are used entity-related tax exemptions, related to e.g.: arable land of class V, VI, VTz, land located in the area of border strip, arable land, meadows and pastures in the melioration process, other lands created from wasteland. Besides, tax payer is entitled to reliefs related to the following situations:

- location of a farm in mountainous and near to mountains,
- natural disasters,
- purchase of land in order to create or develop an agricultural holding,
- investments connected with environment recultivation, with purchase and instalment of sprinkling machine.

Forest tax⁷ was introduced in 1992 by the Forest Act. According to the binding Act of 20th October 2002 on forest tax, the subject of taxation are individual people and legal entities, and organizational units without legal entity, which are the owners of possessors of forests or the possessors of forest which are owned by the State Treasury or territorial self-government units.

The object of taxation are all forests, as stipulated in art.3 of the Forest Act, except for those which are not connected with forest management, areas used for leisure facilities, building and recreational lots and forests changed by administrative decision from forest management to other type of activities. Forest tax base is the number of conversion hectares in forest stand and stand quality classification for the main tree species. Tax rate is equivalent of 0,220 m3 of sawmill coniferous wood, calculated according to the average price of wood sales, obtained by the forest district for 3 first quarters of the year preceding the tax year.

The share of revenue from the above mentioned sources is differentiated, since it depends on the type of commune (urban, rural, or urban-rural commune), source and type of property and scale and specifics of activity. In most communes, agricultural tax is of bigger importance as a source of revenue in rural communes than e.g. property tax. Property tax is a significant source of revenue in the communes where there is a large number of business entities.

Share in income taxes. Commune share (and self-governments on the county and regional level) in personal (PIT) and corporate (CIT) income tax is a form of self-government participation in tax revenues of the state budget.

⁷ Forest Act as of 28th September 1991 (Dz. U. z 1991 r., nr 101).

The aim of the increase of communes' revenue share in income tax is to connect financial situation of a commune with the overall economic situation and take actions stimulating the development of a commune.

Share in revenue from personal income tax is 39,34% (in 1999–2003 the share was 27,6%) and it is transferred from the state budget to commune budget account, up to 10 days after the tax entered the account of Tax Office. Share in revenue from corporate income tax is transferred from bank accounts of tax offices within 14 days of receipt to tax office bank account (in 1999–2003 the share was 5%, now it is 6,71%).

The base for calculation of the share in personal income tax is the amount of this tax for people residing in the commune, whereas the commune share in corporate income tax is calculated from the revenue from tax payers who have location of their business on the area of the commune.

Therefore, the importance of the revenues from the analysed taxes (shares received by the commune) is differentiated, depending on the number of working inhabitants of the commune, their income and the number of businesses on the area of the commune.

Large business activity of areas close to cities, migration of city dwellers to neighbouring communes, development of flat building – these are only some of the examples of the suburbanisation process.

Further in the paper, the selected results of the above mentioned phenomena and their influence on own resources of the communes will be discussed.

3. Spatial changes in own resources of the communes in Poznan agglomeration in 1995–2012. The base for defining changes in the level and structure of own resources of the communes being part of Poznan agglomeration are the data from the Central Statistical Office, as well as from the Architecture and Construction Administration Department of Poznan District.

Total revenue and own resources. In the years discussed, in all types of communes there was an increase both of total revenue and own resources, converted per 1 inhabitant, in total numbers the biggest increase (3149,25 zł) per capita was in rural communes. Also in the same type of communes, similar indicator but related to own resources had the same trend. Average own resources in conversion per one inhabitant increased from 425,27 zł (1995) to 2851,08 zł (2010), e.g. by 2425,81 zł. More detailed analysis of total revenue per capita (Tables 8–9) shows that the indicators in particular types of communes are as follows:

- in 1995 – from 291,04 zł (Murowana Goslina – urban-rural commune – to 861,27 zł (Suchy Las – urban commune);
- in 2000 – from 989,80 zł (Lubon – urban commune) to 3351,41 zł (Tarnowo Podgorne – rural commune);
- in 2005 – from 1476,36 zł (Lubon – urban commune) to 4138,03 zł (Suchy Las – rural commune).

Own resources converted per 1 inhabitant are as follows:

- 1995 – from 294,53 zł (Swarzedz – urban-rural commune) to 656,84 zł (Suchy Las – rural commune);
- 2000 – from 463,09 zł (Kleszczewo – rural commune) to 1993,73 zł (Tarnowo Podgorne – rural commune);

- 2005 – from 710,21 zł (Kostrzyn – urban-rural commune) to 3436,69 zł (Suchy Las – rural commune);
- 2010 – from 1191,52 (Kostrzyn – urban-rural commune) to 5242,22 zł (Suchy Las – rural commune).

Therefore, in the discussed years in Poznan agglomeration communes we could observe:

- the increase in total revenue and own resources per capita,
- higher average total revenue and own resources were achieved by rural communes,
- in particular types of communes, in which the indicators were above the average level were as follows (see Table 5).

Table 5. Above-average revenues in Poznan agglomeration

Revenue above the average level		Communes		
		urban	urban-rural	rural
Total revenue per capita	1995	Puszczykowo	Kornik Mosina Buk Swarzedz	Suchy Las Tarnowo Podgorne Czerwonak
	2000	Puszczykowo	Buk Kornik Swarzedz	Tarnowo Podgorne Suchy Las
	2005	Puszczykowo	Kornik Buk Swarzedz Steszew Pobiedziska	Tarnowo Podgorne Suchy Las
	2010	Puszczykowo	Kornik Pobiedziska Buk Swarzedz	Suchy Las Tarnowo Podgorne
Own revenue per capita	1995	Puszczykowo	Kornik Buk Mosina Swarzedz	Suchy Las Tarnowo Podgorne
	2000	Puszczykowo	Kornik Buk Swarzedz Mosina	Tarnowo Podgorne Suchy Las
	2005	Puszczykowo	Swarzedz Kornik Buk	Suchy Las Tarnowo Podgorne
	2010	Puszczykowo	Kornik Swarzedz Buk	Suchy Las Tarnowo Podgorne

Source: own study based on the data in Tables 7–9.

From the data we can conclude that the number of communes in which the indicators were above the average is relatively small (maximum 5 communes as far as the total revenue per capita is concerned and 2 communes (except 1995) as far as own resources per capita are concerned).

Revenue from agricultural and property taxes converted per 1 inhabitant.

Agricultural tax per 1 inhabitant in the analysed years was differentiated, depending on the type of commune; generally it was higher in rural communes. The

average amount of this indicators ranged from 0,56 zł (urban communes – 2005) to 40,54 zł (rural communes - 2005). From the analysis of the indicators (Table 4) we may conclude that:

- revenue from this tax, calculated per 1 inhabitant is decreasing in urban communes (1,56 zł in 1995 to 0,78 zł in 2010),
- the indicator, in rural communes (except 2005) slightly increased (from 30,41% in 1995 to 31,25% in 2010),
- more significant changes in the level of this indicator were noted in urban-rural communes (increase from 25,12% in 1995 to 31,09% in 2010).

Property tax. In all types of communes in the analysed years there was a significant increase of the revenue from this tax, converted per 1 inhabitant. The indicator increased from 62,85 zł (urban communes – 1995) to 814,27 zł (rural communes – 2010). In total numbers, the biggest changes took place in rural communes (increase from 81,66 zł to 814,27 zł) and urban-rural communes (increase from 67,60 zł to 548,81 zł). It is worth mentioning that the share in property tax revenue in own resources of communes (in all types of communes) has a downward trend, although the biggest changes (decrease from 33,46% in 1995 to 21,77% in 2010) took place in urban communes.

Share in personal income tax per one inhabitant. The amount of revenue from shares in personal income tax, converted per 1 inhabitant in 1995 was in the analysed communes on the similar level (from 125,78 zł in Suchy Las commune, to 133,59 zł in Puszczykowo commune). In the following years, there was noted an increase in the level of this indicator and its significant differentiation in particular communes. In 2000 the average amount of revenue from shares in personal income tax to communes increased (from 127,72 zł in 1995 to 228,15 zł in 2010). The biggest increases took place in the following communes:

- Tarnowo Podgorne (increase from 121,46 zł to 370,53 zł),
- Puszczykowo (increase from 133,59 zł to 340,33 zł),
- Suchy Las (increase from 125,78 zł to 295,54 zł),
- Czerwonak (increase from 126,36 zł to 282,65 zł).

In the following year (2005) changes of the indicator were even bigger. The average amount for communes was on the level of 429,03 zł (increase from 228,15 zł) and in 6 communes the amounts from revenues in personal income tax shares significantly exceeded its amount. Besides, the range between minimum (237,89 zł) and maximum (889,01 zł) amount of this indicator significantly increased.

In 2010 was noted a further increase of revenues from the personal income tax share per 1 inhabitant (from 1321,58 zł in Puszczykowo commune to 453,16 zł in Kostrzyn commune).

From the analysis we may conclude that in the researched years there was:

- a significant increase of revenues from the personal income tax share, converted per 1 inhabitant (from 129,68 zł to 759,67 zł),
- significant differentiation of the discussed indicator in the researched communes:
 - 1995 – from 125,77 zł to 133,59 zł,
 - 2000 – from 164,18 zł to 370,53 zł,
 - 2005 – from 237,89 zł to 889,01 zł,
 - 2010 – from 453,16 zł to 1321,58 zł.

– The indicator reached higher levels in urban communes (126,92 zł to 1010,57 zł), rural (126,92 zł to 881,30 zł) and in urban-rural communes (127,54 zł to 590,52 zł). Such significant increase of the analysed indicator in rural communes (level comparable in 1995 with urban-rural communes) proves changes in social and professional structure of rural area inhabitants.

Share in corporate income tax per 1 inhabitant. Important changes of the indicator showing the amount of the revenue from the corporate income tax, converted per 1 inhabitant occur in the researched years and rural communes.

Minimum amount of this indicator was 4,01 zł (1995) and maximum one was 144,62 zł. From the analysis of the data in Tables 7–9 we may conclude the following:

– the average amount of this indicator has an upward trend in particular types of communes;

– the biggest changes occur in rural communes (increase from 6,13 zł in 1995 to 144,62 zł in 2010). In other types of communes the scale of changes is definitely smaller (from 4,01 zł to 19,65 zł in urban communes, and 8,50 zł to 33,99 zł in urban-rural communes);

– in rural communes, the revenue from corporate income tax share per 1 inhabitant is significantly differentiated. For example: from 0,01 zł (Kleszczewo commune, 1995) to 23,20 zł (Tarnowo Podgorne commune, 1995), and in 2010 the relation was 7,73 zł (Rokietnica commune) to 563,9 zł (Tarnowo Podgorne commune).

In the researched years there was a significant increase of revenue from the corporate income tax share, converted per 1 inhabitant. The biggest changes were noted in rural communes.

It appears that for this particular study, it is essential to evaluate the scale of differentiation of the discussed indicators. It will be done by comparing the minimum value of the discussed indicators in the researched years (Table 6).

Table 6. Minimum values of the indicators in communes (maximum value = 100%)

Types of indicators (per 1 inhabitant)		years			
		1995	2000	2005	2010
own resources	1	78,32	69,18	79,40	62,34
	2	58,12	49,39	54,51	43,20
	3	47,19	83,23	31,43	31,25
agricultural tax	1	47,87	82,26	67,82	47,17
	2	13,09	11,70	11,92	11,72
	3	4,55	4,48	4,97	5,48
property tax	1	62,49	87,90	71,54	78,73
	2	36,86	38,44	37,05	31,83
	3	29,81	11,59	9,67	15,70
personal income tax share	1	96,44	75,69	54,29	52,93
	2	97,07	66,28	48,21	54,24
	3	97,80	32,07	29,11	46,03
corporate income tax share	1	25,12	14,42	67,15	78,07
	2	2,04	3,83	7,62	10,29
	3	2,50	0,27	1,94	1,37
the number of business entities in the commune	1	79,22	90,23	77,87	76,80
	2	45,55	58,47	62,83	69,93
	3	28,75	34,23	41,20	49,96

Source: authors' own calculations on the basis of Tables 7–9.

Explanation: 1 – urban communes; 2 – urban-rural communes; 3 – rural communes

Conclusion from the research:

- in the researched years the biggest increase in differentiation of own resources per capita was in rural communes;
- in urban communes the relation of minimum value of rural tax indicator, converted per 1 inhabitant, to its maximum levels increased; besides in the researched years are large differences in its level which means that it is not a stable source of revenue. Then, in rural communes in 2010 was a slight increase of the discussed indicator, its level shows big differentiation of the revenue from rural tax in rural communes;
- the relation of minimum values of the property tax indicator per capita to the maximum values proves differing situation in communes, however, larger differences in the level of this indicator are in urban and rural communes. The change of the level of this indicator in 2010 shows the narrowing of the range between minimum and maximum amount of property tax per capita in rural communes;
- the level of minimum values of the indicators of personal income tax share per capita in all types of communes changed significantly as compared to 1995 (in this year the amounts of personal income tax were quite similar). The biggest changes took place in rural communes;
- minimum level of corporate income tax share per capita indicators in the researched years shows the highest differentiation in rural and urban-rural communes, and definitely lower in urban communes. The relation of minimum value of the discussed indicator to the maximum one in rural communes in 2010 was on the level of 1,37% which proves large difference between the lowest and the highest amounts of the discussed tax;
- the level of minimum value of the number of business entities per 1000 inhabitants indicator in the analysed years was growing in all types of communes (the exception was 2000, urban communes), however, the scale of the changes is bigger in rural communes than in urban-rural ones.

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