

AGRICULTURAL TAX FISCAL EFFICIENCY IN POLAND

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The article is aimed at the verification of research hypothesis according to which the current construction of agricultural tax in Poland is inefficient in terms of taxation. It has been possible thanks to the analysis of fiscal efficiency of this tax. Therefore, it focuses on the tax revenue as well as the tax assessment and collection related costs. In order to accomplish the aim it was necessary to define the idea of agricultural tax fiscal efficiency and to indicate its determinants. The discussion, due to the specific nature of agricultural tax, is based primarily on the Polish literature. In order to verify the formulated hypothesis, the descriptive analysis method was applied, the literature research conducted and the Act on Agricultural Tax analysed. The content of the article indicates that the present Polish system is contrary to the current solutions in the majority of EU countries. It is being implemented on the basis of an outdated structure of property tax. And agricultural tax performs a limited income function. In this connection, its fiscal efficiency is low.

Key words: agricultural tax, tax fiscal efficiency.

JEL Codes: H21, H71; K34; Q18.

1. Introduction

The present tax systems in the world, including agriculture taxation, are not uniform (Andersen, 2002). Developed economies apply primarily a model based on taxing wealth (agricultural land) and incomes from agricultural production. Generally, farmers' incomes in the EU countries are treated like any other incomes and are subject to the regulations on personal or corporate income tax, depending on the organisational and legal form. However, there are systems in which (Dziemianowicz, 2007):

- special rules of agricultural tax calculation are applied, or
- incomes from agriculture are not a separate category.

Farmers in Poland do not pay income tax as incomes gained from agricultural production are tax-exempt. Income tax is levied only on special types of agricultural production. Agricultural tax plays the most important role in the Polish system of agricultural taxation. The remaining wealth taxes are: property tax and forestry tax. They do not burden farms much due to a number of tax exemptions and exclusions.

The overall evaluation of the agricultural taxation system in a country should focus on the efficiency of all the taxes levied on agriculture, and also the system fairness (redistributive function) as well as the assessment of legitimacy of application of tax constructions to stimulate changes in economic structure of agriculture (stimulative function). The article discusses problems connected with the current agricultural taxation system in Poland.

Thus, the article is aimed at the evaluation of the macroeconomic fiscal efficiency of agricultural tax in Poland, i.e. the implementation of its fiscal function. In order to accomplish this aim, the author analysed the legal construction of agricultural tax, as well as other factors affecting its efficiency, i. e. the level of rye prices as a measure of the tax level, tax policy conducted by communes (the scale of the application of the tax authority at their disposal), and also the readiness of tax payers to bear the taxation burden. An attempt was made to verify the research hypothesis according to which the current construction of agricultural tax is not efficient and therefore it should be changed. It is necessary to radically reform the agricultural taxation system not only with regard to the issues connected with real property taxation but also the problem of the inclusion incomes earned by farmers in the general income tax system, which is not discussed in this article.

2. Research methods

The study applies a few research methods, primarily descriptive statistics (indicators of structure and dynamics). The sources of statistical data on agricultural tax are derived from the annual information published the Councils of Ministers concerning the implementation of budgets by local governments. Some data come from the Ministry of Finance and the Central Statistical Office (GUS). The literature research has been conducted and descriptive and comparative analyses made. A legal act which was analysed was the Act of 15 November 1984 on Agricultural Tax.

In order to accomplish the research aim, it was necessary to make certain assumptions with regard to the idea of tax efficiency. The literature concentrates on the economic and fiscal efficiency (Dziemianowicz, 2007). The article discusses efficiency from the latter perspective, i.e. the fiscal function performed by taxes. Fiscal tax efficiency requires, however, obeying not only the rule of productivity but also the cheapness of taxes. Hence, both the revenue and cost sides constitute the basis of evaluation of the fiscal efficiency of a given tax (Małecka-Ziemińska, 2012). To conclude, the idea of fiscal efficiency used in this article reflects not only the volume of agricultural tax revenue but also the requirement of its low cost incurred both by tax payers and tax administration. There are two basic types of tax costs: tax collection related costs (operational costs) and substitution costs resulting from disruptions caused by taxes in allocations of assets. Collection costs include those incurred by the public finance sector (administrative costs) and those connected with adjustment incurred by tax payers when fulfilling their tax obligations (Tran-Nam, 2000). Due to the difficulties and limitations in estimation of their volume, it is legitimate to make a

qualitative analysis, which is based on the evaluation of systemic solutions to agricultural tax.

3. Research results

The basic tax paid by farmers in Poland is agricultural tax, which constitutes the revenue of communes. Until the end of 2002 the object of taxation was determined by the farm area¹, i.e. agricultural tax was levied only on farms, and the land classified as agricultural but, according to the Act, not regarded as farms was subject to property tax. Since 1 January 2003 taxation has been determined by the land register entry. Thus, farmers have been paying tax on all agricultural areas irrespective of the size. The areas used for other kinds of business activity than agriculture are exempt from tax. In such a situation a farmer possessing land classified as agricultural, in the case of conducting there other business activity, pays property tax on it. At present the regulation defining a minimum area of a farm is important from the point of view of the way the tax basis is assessed as well the volume of tax.

The tax basis in the case of a farm is the number of conversion hectares and in the remaining cases (for areas not treated farmland) the area expressed in physical hectares resulting from the register of land and buildings. The number of conversion hectares in a farm is determined on the basis of the area, kinds and grades of agricultural land and inclusion in one of four tax regions. It was assumed that the aforementioned factors determine the potential production capacities of farms managed by farmers and therefore they affect the level of incomes generated by them.

The literature assesses this solution differently because it does not allow for the explicit classification of agricultural tax as either wealth tax or income tax. R. Mastalski (1996) claims that the relation between the normative and real income may constitute the basis for classification of agricultural tax. Thus, if the estimated value varies significantly from the real income values, agricultural tax loses the features of income tax and becomes wealth tax. M. Podstawka (2000) includes this tax in the group of wealth taxes assuming that the tax basis is the functional value of land determined on account of a substitute, i. e. the conversion hectare. It seems that convincing arguments are provided by L. Etel (2003), who claims that the connection of two elements (wealth – the taxation object and number of conversion hectares as a peculiar measure of profitability – tax basis) is not appropriate because income and wealth are completely different taxation objects and must not be joined within the single tax construction. Therefore, R. I. Dziemianowicz (2007) suggests that the construction of tax basis in agricultural tax should be reconstructed and adjusted to the taxation object.

Farmland is subject to tax amounting to the value of 2.5 quintals of rye from 1 conversion hectare. The land which is not included in a farm is levied with the rate amounting to the value of 5 quintals of rye from 1 hectare. In both cases the rate is calculated on the basis of an average rye purchase price set according to the announ-

¹ According to the content of the Act on Agricultural Tax an agricultural farm is an area of agricultural land, ponds and buildings connected with farmland activities of total area exceeding 1 conversion hectare, owned or in possession of physical and legal persons as well as organisation without the status of a legal entity.

cement made by the President of the Central Statistical Office. Until 2013 it was the price in the first three quarters of the year preceding the fiscal year, and since 2014 agricultural tax has been calculated on the basis of the average rye purchase price in 11 quarters preceding the fiscal year. It seems that the extension of the period from 3 to 11 quarters will cause smaller fluctuations of agricultural tax. It will stabilise the price level, which will be positive for the communes as they will be able to plan their revenues better.

With regard to local taxes, the local governments' scope of tax authority is defined by the Act. The local tax authority includes the right of communes to collect taxes in favour of local budgets (passive tax authority), and also to affect their assessment through setting tax rates (equal to or lower than maximum statutory rates) and to introduce reliefs and exemptions (active tax authority). In the case of the latter scope of tax authority, communes may affect the size of public funds to accomplish certain tasks through the participation in the construction of certain elements of local taxes. Thus, it is this part of local incomes which depends to the largest extent on the activity of the local authority.

In the case of agricultural tax, communes indirectly affect the size of tax burden as the legislator defined the tax rate in the legally binding way. It is impossible to use a different quota indicator to assess tax. Commune councils are only authorised to reduce the average rye purchase price assumed as the tax calculation base and in this way to reduce the statutory rate effective in the commune area.

Agricultural tax fiscal efficiency was measured as a share of this revenue in the Gross Domestic Product, in commune revenues total as well as wealth taxes which as a whole fund commune budgets. Tables 1 and 2 indicate that the fiscal weight of agricultural tax is not great, its share in local taxes amounts on the average to about 7%. Other indicators like the share of agricultural tax in communes' budgetary revenues (1% share) and in GDP (0.1% share), leave no doubt that the analysed construction has a really marginal fiscal significance. Interestingly, the greatest changes in local taxes were those with regard to agricultural tax. Tax revenue, due to the applied method of tax rates calculation, depends on the price of rye. Attaching tax to a price of an agricultural produce which is not dominating in many farms led to the possibility of setting tax rates depending on for example atmospheric conditions, situation on the world agricultural markets at an either exceptionally high or low level. The example to be quoted may be, on the one hand very high incomes in the years 2008–2009 and 2012–2013, and on the other much lower in the years 2006–2007 and 2010. Anyway, cyclical variations in rye prices are responsible for diversified dynamics in the analysed period, and consequently a nearly 38% rise in fixed prices in communes' revenues on account of agricultural tax (Table 3).

Table 1. Income of communes from local taxes in the years 2004–2013

Specification	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
in million zlotys										
Local taxes total	12610.5	13434.1	13841.5	14603.7	15677.6	16451.7	17133.7	18387.7	20292.0	21563.4
Property tax	10953.5	11668.7	12156.8	12702.5	13447.5	14190.0	15122.2	16253.1	17602.6	18729.4
Agricultural tax	921.8	966.8	809.1	931.5	1228.0	1238.5	989.4	1062.3	1545.9	1665.2
Forestry tax	118.8	136.8	151.6	157.1	175.0	182.7	165.2	187.9	226.7	227.8
Tax on means of transport	616.4	661.8	724.0	812.6	827.1	840.5	856.9	884.4	916.8	941.0
in %										
Local taxes total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Property tax	86.9	86.9	87.8	87.0	85.8	86.3	88.2	88.4	86.8	86.9
Agricultural tax	7.3	7.2	5.9	6.4	7.8	7.5	5.8	5.8	7.6	7.7
Forestry tax	0.9	1.0	1.1	1.1	1.1	1.1	1.0	1.0	1.1	1.0

Source: author's own material on the basis of: (Report on the implementation ... 2005–2014).

Table 2. Revenues of communes from agricultural tax; their share in communes' budgetary income and in the GDP as well as the rate of growth

Specification	2006	2007	2008	2009	2010	2011	2012	2013
Revenues from agricultural tax in million zlotys	809.1	931.5	1228.0	1238.5	989.4	1062.3	1545.9	1665.2
Share of revenues from agricultural tax in communes' budgetary incomes in %	0.9	0.9	1.1	1.1	0.8	0.8	1.1	1.2
Share of revenues from agricultural tax in GDP in %	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Share of communes budgetary incomes in GDP in %	8.7	8.8	8.7	8.5	8.8	8.5	8.6	8.7
Rate of growth of agricultural tax payments in %	82.9	112.3	126.5	97.4	77.9	102.9	140.0	106.8
Rate of growth of communes' budgetary incomes in %	111.8	109.3	103.3	99.6	106.7	100.8	101.4	102.4
DGP rate of growth in %	106.2	107.2	103.9	102.6	103.7	104.8	101.8	101.7

Source: author's own material based on the data in Table 1 and (Poland..., 2014).

Table 3. Revenues of communes from agricultural tax in fixed prices

Specification	2005	2006	2007	2008	2009	2010	2011	2012	2013
Agricultural tax in fixed prices in million zlotys	1208.6	1001.5	1124.8	1423.1	1386.7	1079.8	1111.5	1559.8	1665.2
Dynamics in % (2005 = 100)	100.0	82.9	93.1	117.7	114.7	89.3	92.0	129.1	137.9
Dynamics in % (previous year = 100)	100.0	82.9	112.3	126.5	97.4	77.9	102.9	140.3	106.8

Source: see Table 2.

Table 4 presents average rye purchase prices as well as the dynamics of inflation and average rye purchase prices.

In the analysed period the average annual inflation was characterised by cyclical fluctuations. At first it declined from 4.2% in 2008 down to 2.6% in 2010, and then rose to 4.3% in 2011 in order to decline again to 0.9% in 2013. The same cannot be said rye price in these periods, which either surged or plummeted, irrespective of the price

growth indicator. As a result, there is a growing significance of rye price variability causing obvious consequences in the area of tax incidence. If rye market prices violently rise, the real tax burden falls. It is caused not only by a positive relation to the price which is used for tax calculation but also by advantages obtained by farms on account of high prices paid to farmers for rye (the effect of connection of agricultural tax burden with the economic situation of tax payers). On the other hand, in the period of decline in rye market prices the tax burden may grow as the incomes generated by farms decline. Certainly, the presented conclusions are true if we assume that the share of rye in total production is significant. However, in real terms the situation is different: the share of rye in the global agricultural production is marginal. There is no doubt that sticking to this solution, which is based on only one product which is also not the most important product, cannot be positively evaluated. It was previously observed by A. Hanusz (1996), who stated that the tax rate should be based on average purchase prices of a few agricultural products, and not just one product of marginal significance.

Table 4. Dynamics of inflation and average rye purchase prices

Year	Price per 1 q (zlotys)	Annual indicators of prices of consumption goods and services (previous year = 100)	Indicators of average rye purchase prices (previous year = 100)
2008	55.80	104.2	95.7
2009	34.10	103.5	61.1
2010	37.64	102.6	110.4
2011	74.18	104.3	197.1
2012	75.86	103.7	102.3
2013	69.28	100.9	91.3

Source: on the basis of: (Poland..., 2014).

The rates in the years 2008–2013 confirm the statement above. They either plummeted or surged depending on the atmospheric conditions, and consequently on the surplus or shortage of rye on the world markets (Table 5).

The next section of the article analyses the scale of application of statutory entitlements to reduce top tax rates. Figure 1 indicates that the discrepancy between the average rye price announced by the GUS president and the average rye price assumed by communes results primarily from the level of the former. When the average rye purchase price was at a relatively high level, more communes (71.1%) decided to reduce it; and when the average rye purchase price declined, fewer communes (39.3%) decided to reduce, see Table 6. Such activities allow for the mitigation of the impact of considerable price fluctuations on the tax burden of farmers.

Table 5. Agricultural tax rates (zlotys)

Year	Farmland rates	Non-farmland rates
2008	145.73	291.46
2009	139.5	279.0
2010	85.25	170.50
2011	94.10	188.20
2012	185.45	370.90
2013	189.65	379.30

Source: calculation on the basis of data in Table 4

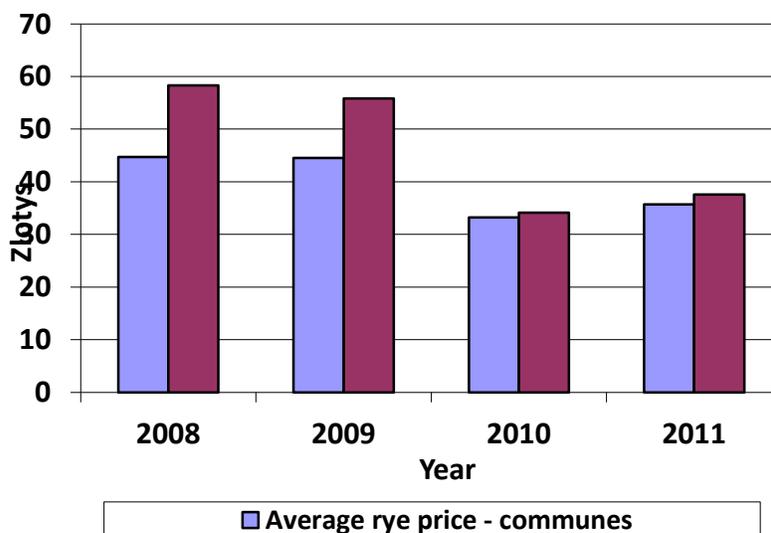
Simultaneously, the level of maximum average rye purchase price affects the size of this price reduction applied by communes, and consequently the amount of lost incomes due to it. It is worth focusing on the scope of the applied tax authority in different types of communes.

The comparison of the percentage of communes applying a reduced rye price clearly indicates a great difference between the two periods. In the case of rural communes, for which agricultural tax is important, the inclination to make use of their right to reduce the average rye purchase price is correlated with the level of this price, on the basis of which the level of agricultural tax is calculated in a given year.

Table 6. Reduction in rye purchase price and agricultural tax rate with regard to the type of commune in 2009 and 2011 (in %)

Specification	Communes total	Urban communes	Urban-rural communes	Rural communes
2009	71.1	25.0	76.0	78.0
2011	39.3	41.4	43.6	13.4

Source: on the basis of: (Tax..., 2012).



Source: on the basis of (Tax..., 2012).

Figure 1. Average rye purchase price set by GUS and average rye price applied by communes

Table 7 includes budgetary effects of reduction in the average rye purchase price. They were very unstable (from 4% in 2010 up to nearly 45% in 2012). When rye prices were low or very low, the preferences to reduce rates were applied to a very limited extent. They were applied in a wider scope due to the aforementioned rise in rye purchase prices in the years 2008–2009 and 2012–2013, which led to lower tax revenue. Such a considerable reduction in tax could suggest that the commune authorities, able to afford such a considerable loss of income from this source, indirectly confirm its marginal financial weight.

Table 7. Amounts of lost revenues from agricultural tax due to the reduction in the average rye purchase price

Specification	2008	2009	2010	2011	2012	2013
Amounts of lost revenues from agricultural tax due to the reduction in average rye purchase price (million zlotys)	497.2	432.9	39.6	77.9	692.0	651.7
Share of lost revenues from agricultural tax due to the reduction in average rye purchase price in total revenues from agricultural tax (in %)	40.5	35.0	4.0	7.3	44.8	39.1

Source: see Table 1

In its present shape, agricultural tax is assessed as an uncomplicated solution, decisively simpler than other taxes, for example income tax, which has its advantages, especially from the perspective of costs generated on different planes.

The present level of administrative costs, first of all those connected with the adjustment of farmers, is not excessive. Under the conditions of a developed system of agricultural property taxation, there are no real difficulties with regard to accomplishment of tasks like the delegation of fiscal quota control to communes, or time consumption (the time needed to prepare complete and submit appropriate forms to tax administration offices, the number of tax returns filed annually by tax-payers and the amount of necessary information on agricultural property conveyed) and cost intensity (an alternative cost of the assumed time unit designed to fulfil the tax duty, costs incurred for tax consultancy).

The analysis of the agricultural taxation model in Poland proves that the agricultural tax does not belong to these that play a dominating and growing role in funding public expenditure and affecting entrepreneurs' conduct. To simplify, it may be stated that in the case of its accepted legitimization, additional losses in prosperity, reflected in microeconomics through the so-called substitution effects of price change as a result of taxation, will not constitute a significant element of the cost estimation of the fiscal process. As already suggested, the cost side connected with the collection of taxes is just as important as their revenue effects. Due to the aforementioned problems connected with the empirical verification of costs generated by agricultural tax, certain

elements of qualitative analysis have been used, and this analysis leaves no doubt: their scale does not lead to a major change in the assessment of agricultural tax fiscal efficiency.

4. Conclusions

1. Agricultural taxation in Poland is conducted through an old construction of agricultural tax, unadjusted to the present economic conditions. Agricultural farms as the only group of business entities, except for special sectors of agricultural production of insignificant proportion within agricultural activity, are not subject to income tax.

2. Agricultural tax fiscal efficiency depends, among other things, on its construction, first of all a specific tax rate set as monetary equivalent to 2.5 quintals of rye if the agricultural land is classified as an agricultural farm or 5 quintals of rye elsewhere.

3. Agricultural tax performs its fiscal function to a limited degree. Admittedly, it is the second largest source of local taxes, but its share is decisively smaller in comparison with property tax. It is especially important for those rural communes which are affected by changes connected with the functioning of this tax.

4. The amount of agricultural tax in the analysed period resulted primarily from the changes in a specific tax rate depending on the rye purchase price. This price was not correlated with inflation and it was subject to frequent fluctuations leading to substantial changes in the tax burden level. Communes responded to the fluctuations, making use of their right to reduce the official rye purchase price for the purpose of agricultural tax calculation. Polish literature negatively assesses the solution in which the tax rate is set on the basis of the price of one product (for years an inappropriate reference point to estimate the real income from agricultural activity).

5. An undeniable advantage of the present agricultural tax is its simplicity; thus its elements do not raise the cost of tax assessment and collection and consequently they do not limit the possibility of rise in revenue from this tax.

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ŽEMĖS ŪKIO FISKALINIS MOKESČIŲ EFEKTYVUMAS LENKIJOJE

Paweł Felis

Varšuvos ekonomikos mokykla

Įteikta 2015 02 09; priimta 2015 02 15

Santrauka

Šio tyrimo tikslas – patvirtinti hipotezę teigiančią, kad žemės ūkio mokesčiai, jo surinkimo prasmė, yra neefektyvus. Buvo ištirtas mokesčio efektyvumas, atsižvelgiant ne tik į įplaukas, bet ir į išlaidas mokesčiui apskaičiuoti ir surinkti. Darbe naudojami šie tyrimo metodai: statistinių duomenų, literatūros, žemės ūkio mokesčių įstatymo analizė. Tyrimai rodo, kad Lenkijos žemės ūkio mokesčiai skiriasi nuo daugumos ES valstybių. Apmokestinimui naudojama pasenusi turto mokesčio metodika, šis mokesčiai mažai prisideda prie pajamų surinkimo, todėl galima teigti, kad jo fiskalinis efektyvumas yra žemas.

Reikšminiai žodžiai: žemės ūkis, mokesčiai, efektyvumas.

JEL kodai: H21, H71; K34; Q18.