Income taxation in agriculture vs. competitiveness. International perspective and evidence from Poland

Einkommensbesteuerung in der Landwirtschaft versus Wettbewerbsfähigkeit. Internationale Perspektive und Evidenz aus Polen

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Summary

Competitiveness of agricultural production depends on a set of several factors, including tax policy. Various taxation tools can affect farmers' decision on production and socio-economic mobility in rural areas. The objective of the article was an attempt to assess the role of income taxation in agriculture from the perspective of competitiveness of this sector (with a particular focus on Polish agriculture). Determining taxable base, and, consequently, preferences, may significantly affect competitive advantages of agricultural sector in an international perspective.
Keywords: taxation, agricultural finance, income tax, competitiveness.

Zusammenfassung

Die Wettbewerbsfähigkeit der landwirtschaftlichen Produktion ist abhängig von einer Reihe von verschiedenen Faktoren, unter anderem von der Steuerpolitik. Verschiedene Steuerregime können Entscheidungen von Landwirten hinsichtlich Produktion und sozioökonomischer Mobilität in ländlichen Gebieten beeinflussen. Das Ziel des Artikels war ein Versuch der Bewertung der Rolle der Einkommensbesteuerung in der Landwirtschaft aus der Sicht der Wettbewerbsfähigkeit dieses Sektors (mit einem besonderen Fokus auf die polnische Landwirtschaft). Dabei wurde der Einfluss der

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verschiedenen Elemente der Einkommensbesteuerung auf die Wettbewerbsfähigkeit des Agrarsektors beurteilt.
Schlagworte: Steuern, landwirtschaftliche Finanzen, Einkommens-steuer, Wettbewerbsfähigkeit.

1. Introduction

Competitiveness is treated as basic feature of a modern market economy (DELGADO et al., 2012, 1ff) and economic development (ORĘZIAK, 2007, 70). Competitiveness of agricultural production depends on a set of various factors, both at macro and micro level (OECD, 2011, 20; BERGIN and CORSETTI, 2013, 1). Numerous studies indicate, inter alia, monetary and fiscal policy tools (HAJKOVA et al., 2006, 7-10), agricultural EU and state subsidies (MOSER et al., 2015, 1; SINABELL et al., 2011, 33ff; MANEVSKA-TASEVSKA and RABINOWICZ 2013), social security systems at the macro level. Being competitive under more volatile business outlook seems to be a fundamental condition for survival of farms (PAUSTIAN et al., 2015, 147). Various taxation solutions can affect farmers' decisions on production and socio-economic mobility in rural areas (GLAUBEN et al., 2012, 784ff). In contrast, at the micro level, organisational factors and socio-demographic characteristics may be significant. In many countries there are special tax policy tools, that may create favorable conditions for its development.

The objective of the article is an attempt to assess the role of income taxation in agriculture from the perspective of competitiveness of this sector, with a particular focus on Polish agriculture. The remainder of this paper is as follows. In the next section we discuss associations between definitions of *tax competitiveness* and *competitiveness of the agricultural sector*. Then we evaluate various income taxation systems in agriculture of selected EU countries. We present opinions of panel experts on the impact of various elements of income taxation on competitiveness of the agricultural sector. Next we discuss a linkage between income taxation and the aforesaid competitiveness. Our article concludes with some recommendations for policy makers.

2. An overview of approaches to tax competitiveness and competitiveness of agriculture

The ability of economic entities to survive and be competive depends on economic enviroment, including (OECD, 2011, 20): (1) *superior technology*, (2) *local resource endowments'* (e.g. land human, capital), (3) *infrastructure (e.g. transportation, communications),* (4) *supportive institutions*. The so-called „tax system" (based on a complex set of various taxes and levies, including detailed solutions) may affect competitiveness at the level of individual entities (including farm households), sectors (therein agriculture) and states.

The architecture of the tax system may determine the competitive position of the country. On the other hand, a diversity of national tax systems contributes to tax competition, which involves, in general, setting various fiscal measures (incl. lowering tax rates, temporary exemptions, see: KRAJEWSKA, 2010) that would attract both foreign investors as well as creating favorable conditions for development of domestic enterprises. WILSON (1999, 269ff) defines 'tax competition' as a noncooperative determination of tax rates by independent rulers, aiming to allocate workers, businesses and capital across the regions.

The tax competition base on implementing various types of tax relief and tax preferences oriented to stimulation of an economic activity. Hence, in the EU countries tax competition can take various forms (KIEKEBELD, 2004). Tax competition may take various forms, both formal and non-formal (CORDES et al. 2005). The tax competition at the national level may create conditions favoring, and thus strengthen, selected sectors (for example agriculture). This refers to the situation in some EU countries, where a variety of tools to support and undue privileges including tax systems in agriculture exists. This type of tax competition may lead to excessive lowering the tax burden on the public authorities, which may result in insufficient opportunities for financing of functions performed by the state. However, tax competition can support the development of the national economy and the increase in wealth of the society, causing an increase in the attractiveness of the country as the whole.

LATRUFFE (2010, 1f) noted that measurement of competitiveness of agriculture may base on two approaches: (1) at macro level, referring to competitive advantages, (2) at micro level, with such categories as

productivity, profitability and efficiency. The role of public policies refers to relations between output prices and input costs related to the agricultural production (OECD, 2011, 20). Preferential systems of agricultural taxation as tax expenditures (TEs) may be treated a special form of subsidization of farms (PAWŁOWSKA-TYSZKO and SOLIWODA, 2013). Moreover, ANDERSEN et al. (2002, 17) underlined redistributional functions of tax systems in the context of tax competitveness.
To conclude, there is some interdependence between competititveness of tax system and competitiveness of agriculture. In general, the form of this dependency may be described as a slightly positive relationship. This means that a wide range of tax tools may enhance competitiveness of the agricultural sector through a slight improvement in efficiency.

3. Selected income taxation systems in Europe

The presented analysis of taxation systems in selected EU countries indicates that in most of these countries tax preferences are directed only to the farmers operating on a small scale (table 1). The exception is Poland, where a special tax scheme refers to almost all farmers regardless of the scale of production and farm size. Although special solutions directed to agriculture exist in Germany, Austria and France, farmers may be included in the general taxation system. Additionally, they may benefit from receiving additional tax allowances and exemptions. The particular case seems to be Poland, where the tax system on agricultural production (with the exception of special branches) is treated on different principles than the rest of economic activity. The in-depth analysis of selected agricultural tax systems indicates that preferential techniques of income taxation may be treated as a kind of hidden, indirect support to agriculture. As a result, this leads to a significant reduction in budget revenues. For example, according to estimates of the Ministry of Finance in Poland using special preferences for farmers (farmers' income exclusions from income tax on individuals - PIT) budget revenues from personal income taxes in 2012 decreased by 1.7 billion of PLN, which accounted for nearly 9% of the total relief of PIT. In addition, it should be noted that agriculture was supported by some preferences referring to local taxes by exemption from "agricultural tax".

Tab. 1: Income taxation in agriculure - selected countries in Europe

Description	**Germany**	**Austria**	**France**	**Poland (from special branches)***
Category of taxable income	Very broad; agricultural income as the element	Very broad	Very broad: 7 categories	(1) By estimation norm or (2) by diifference
Possibilites of estimation	Criteria: (1) area < 20 ha, (2) < 50 LU, (3) economic value of agr. land <DM 2000	The criterion of the assessed value (AV) – income < EUR 150,000	Lump sum taxation or simplified based on accounting records	Critera (limits; difference: tax revenues – incurred costs)
Evidence and reporting - duties	(1) By decisions of tax administration, (2) estimation by DM	Not keeping accounting records: (1) partially standardised rate, (2) standarised rate	Simpliefie d taxation	Keeping accounting books presenting tax revenues
Other preferences oriented to agriculture	Method of unit valuation (DM)	Business losses from agricultural production can be carried forward; possibility of use of accounting year different than a normal calendar year	Deducting costs of tax advisory, if accounting record are kept	„Agricultural tax" (*podatek rolny*) * instead of typical income taxation

Note: in Poland "agricultural tax" (podatek rolny) is the common tax burden on agricultural production, the amount of tax paid is calculated as the number of hectares of agricultural land, multiplied by the price of rye.
Source: OWN STUDIES based on OECD data and national legal acts.

Amongst EU Member States Austria, Belgium, France, Germany, Italy, Poland and Spain have developed privilaging taxation systems. In these systems, there are all types of special solutions only for farms, relating to the method of calculating taxes from agricultural activities. As part of the special schemes there is a limited possibility of calculating estimated amounts of income. Moreover, farmers can benefit from the additional privileges in the form of tax reductions and exemptions, etc. In countries where agriculture is an important sector

for the country's development different types of tax preference are used in order to strengthen the market position of this sector.

4. How may income taxation tools affect competitiveness of agriculture? Empirical evidence

Table 2 presents results of a short survey directed to the panel of 20 experts. All of them specialised in agriculture economics/finance as researchers (min. PhD in Economics) from universities or institutes. This survey was carried out between March and May, 2015. All panel experts were asked to answer the following question: *What is your assessment of the impact of the following potential elements of income tax to improve the competitiveness of the agricultural sector in Poland?* Morever, all respondents were requested to asses to scale the impact (from 1 – the weakest, to 5 – the strongest) of the specified elements from the list. The value of modes (3) indicates that both subjective and individual exemptions were lowest rated tax tools. It should be noted that 55% of experts stated that the importance of the tax rate from the perspective as the factor determining competitiveness of agriculture was high (4) or highest. Moreover, a particular attention was paid on the bundle of possible deductions from income (including investment relief), where only 15% of panel experts assessed as „very low" (1) or „low". It is not suprising that possibility of the accellarated depreciation may be treated as an important tax tool (65% of responses for „high" and „highest" strength of the impact of this instrument). This results from the significant important of tangible fixed assets for agricultural production.

Tab. 2: The impact of selected tax tools on competitiveness of agriculture - opinions of panel experts (N=20)

No.	Tax tool	Mode	Rate of structure [%]				
			1	2	3	4	5
1.	The tax rate	4	10	15	20	40	15
2.	The subjective exemption, taking into account the nature of agricultural production	4	10	10	25	30	25
3.	The individual exemption	3	5	20	25	25	25

4.	The type of tax scale	3	10	15	45	30	0
5.	The possibility of deductions from income	4	0	5	10	50	35
6.	The possibility of using higher deductibles	4	5	10	20	50	15
7.	The tax-free allowance	4	20	10	25	30	15
8.	The accelerated depreciation	4	10	20	5	45	20
9.	The possibility of loss deductions in subsequent years	4	5	15	20	50	10

Source: OWN STUDIES

Figure 1 presents linkage between tax tools and competitiveness of agriculture. Tax reliefs (e.g. investments reliefs), exemptions and other tax concessions (implemented and applied by many EU Member States) constitute a specific form of support to agriculture through the tax system. Some measures affect not only the level of disposable income of farmers (after taxation) and economic efficiency, but primarily on the competitiveness of agriculture both at the farm (micro competitiveness), national (sectoral competitiveness) and supranational levels. Maintaining competitiveness at the level of individual farms allows for a much more effective implementation of sustainable development policies at the level of the entire sector. It should be noted that non-tax determinants play a significant role for maintaining a good financial performance of farms.

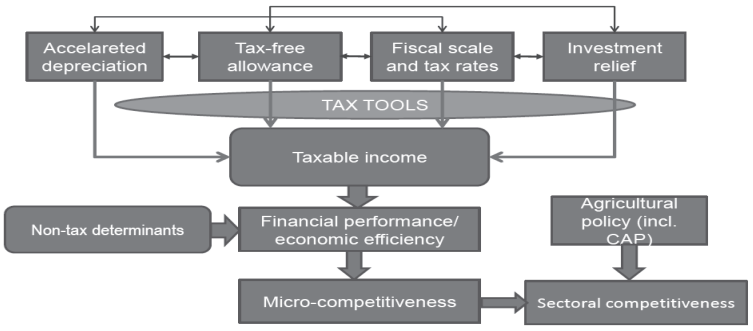

Fig. 1: Linkage between tax tools affect competitiveness of agriculture
Source: adapted from (PAWŁOWSKA-TYSZKO and SOLIWODA, 2014).

5. Concluding remarks

Types of tax deductions and exemptions, the type of method used for income estimation may decide on competitiveness of the sector. A particular attention should be paid to countries with preferences in farm income estimation (e.g. flat-rate methods, coefficients). In Poland implementing a new approach to income taxation in agriculture may lead to greater opportunities concerning tax optimization. Determining taxable base, and, consequently, preferences, may significantly decide on competitive advantages of agricultural sector in international perspective. However, Polish policymakers should reasonably develop the concept of determining the estimated income in agriculture, taking into account the structural changes and the sustainability of public finances. In many major EU countries (Austria, Belgium, France, Germany, Italy, Poland and Spain) revenues arising from individual farms are taxed under separate/special tax regimes. The presence of these systems may be justified by a complex set of historical and socio-economic conditions. Preferential methods for estimating taxable income (in particular, the so-called lump-sum method, employing coefficients/weights) that allows significantly reducing the tax burden on agriculture that determines competitiveness of tax systems. Saving independence in the area of taxation on agricultural activity seems to be important in sectors that do not take advantage of labor productivity, innovation or transfer of new technologies. Hence, preferential tools of agricultural taxation in some selected EU countries may be seen as an attempt to increase competitiveness of this sector through solutions of a fiscal nature. Nevertheless, this may partially distort sectoral competitiveness at the level of EU countries.

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