

## **Partial influence from the profits tax on agricultural land prices - A comparison between the Austrian and German profits tax**

Partieller Einfluss des Ertragsteuerrechts auf die Preise für landwirtschaftliche Nutzflächen - Eine Synopse anhand des österreichischen und deutschen Ertragsteuerrechts

Enno BAHRS

### **Zusammenfassung**

Bodenpreissteigerungen aufgrund des Steuerrechts könnten unerwünscht sein, da die Produktionskosten steigen und sich damit die Wettbewerbsfähigkeit der Landwirte verschlechtert. Die Analysen zeigen, dass sich eben diese Preiseffekte insbesondere durch Regelungen der Einmalbesteuerung ergeben können. Dagegen führt die laufende Ertragbesteuerung der Landwirtschaft in der Regel lediglich zu Wettbewerbsverzerrungen zwischen Landwirten, die unterschiedlichen Methoden der Gewinnermittlung unterliegen. Je nach Ausgestaltung nationaler Ertragsteuerrechte können die Wirkungen auf die landwirtschaftlichen Bodenpreise sehr unterschiedlich sein. Dies wird anhand einer ertragsteuerlichen Synopse zwischen Österreich und Deutschland veranschaulicht. Während in Österreich der Einfluss des Ertragsteuerrechts auf die Bodenpreise in der Landwirtschaft sehr begrenzt ist, führt das Ertragsteuerrecht in Deutschland zu Preissteigerungen auf Bodenteilmärkten bis zu 50%. Aus betriebs- und volkswirtschaftlicher Sicht könnte insoweit die österreichische Ertragsbesteuerung von Vorteil sein. Allerdings wäre das österreichische Modell insbesondere aufgrund verfassungsrechtlicher Restriktionen in Deutschland nicht umsetzbar. Hier zeigen sich die Grenzen der Übertragbarkeit internationaler Steuermodelle, die nicht mit nationalen Rechtssystemen konvergieren.

**Schlagnorte:** Einmalbesteuerung, Wettbewerbsfähigkeit, ertragsteuerlich induzierte Bodenpreissteigerungen

### Summary

Prices for agricultural land can be significantly influenced by the profits tax. If the tax law leads to growing prices, this effect could be undesirable because of the growing costs for production, which leads to a decreasing competitiveness of farmers. Furthermore, the state has to pay higher land prices for their improvements of infrastructure like building new motorways. The following analysis shows that price effects could especially arise from the regulation of single-taxation, for example because of profits from selling assets. In contrast to this, the regular taxation of profits in agriculture usually leads only to distortions between farmers who are liable to different methods of determining profits. Depending on the specific national taxation of profits, the effect on agricultural land prices can vary a lot. This will be shown by the comparison between Austria and Germany. In Austria, the influence of profits tax on agricultural land prices is rather limited. In Germany, the profits tax causes growing prices of up to 50 % on the land market. Therefore, from an economical point of view, the Austrian profits tax is advantageous. Yet, due to constitutional restrictions the Austrian model cannot be realized in Germany, thus setting a limit to the transfer of international models of taxation.

**Keywords:** Once profits taxation, competitiveness, increasing land prices by profits tax

### 1. Introduction

Land is one of the most important production factors in agriculture. The demand for land is usually high. The price for land is based on various influence factors; to these belong the profits tax. Because of the national differences between profits taxes, the national effect on land prices differs very much as well. The paper presents the probable effects on the willingness to pay for agricultural land.

### 2. Willingness to pay or the price for agricultural land

During the last decades, many scientific publications have shown that land prices depend on various factors (look also at KÖHNE, 2000, p. 58 ff.; KLARE, 1999, p. 33 ff. or SCHEPER/REICHENBACH, 1974).<sup>1</sup> Here, pa-

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1 In an international context a lot of further publications can be mentioned, such as Shi et al., 1997; Palmquist/Danielson, 1989; Phipps, 1984 or Pook, 1971.

rameters like land-quality, farm-attributes, and traditional or future characteristics of usage are named. DUNFORD et al. (1985) also mention taxation. But they neither put in concrete form which types of taxation influence land prices nor in which way taxation effects land prices. So far there has been only little analysis of the influence of the profits tax on agricultural land as well as on the willingness of farmers to pay. Therefore, this aspect will be further analysed below.

For active farmers and those who are interested in economic growth the price results particularly from the expected yields. Thus, in case of cultivation, the capitalised ground rent is a decisive factor for the willingness to pay.<sup>2</sup>

$$\text{with: (1) } PB = \frac{G}{R}$$

The price (value of turnover) for land (PB) is equivalent to the quotient of the annual ground rent (G), which is supposed to be constant, and the expected minimum return on capital of the land (R). Therefore, with a given minimum return on capital (e.g. 4 %), the ground rent has to be calculated in order to determine the price. PB does not change, if the farmers' income tax is also taken into consideration. According to (2) the quotient stays unchanged because the income tax is considered by both - ground rent as well as the return on capital (interest).

$$(2) \frac{G}{R} = \frac{G^*ES_t}{R^*ES_t}$$

DOLL (p. 7, 2002) also refers to aspects of taxation of profits when he deals with the reasons for increasing prices. Accordingly, the profits tax privileges the reinvestigation of profits from land sales into land, thereby supporting the increase of land prices. DOLL thus indicates that certain aspects of the profits tax influence the growing demand for land. In the context of international competition this development would be disadvantageous.<sup>3</sup>

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2 If land is leased, the net return on capital would be the relevant aspect for the willingness to pay.

3 To have a look at European land prices (buying and renting) see EUROSTAT, 1997.

But DOLL does not answer the quantitative influence from taxes on land prices as well. Below, the mode of action of specific methods to calculate profits will be presented by an Austrian-German-synopsis.

### **3. Potentials of influence of the profits tax on the land prices in Austria and Germany**

Basically we have to distinguish between two ways in which the profits tax can influence land prices:

1. Taxation of current profits
2. Taxation of capital gains

#### **3.1 Taxation of current profits**

Although (2) has shown that the regular income tax has no direct influence on land prices, nevertheless, there are cases where the profits tax (and also other kinds of taxes or rates) can have an influence.

According to tax law, agricultural production without land is hardly possible. For example, animal production without farming agriculturally productive land cannot be classified as agricultural business but is regarded as industrial business. This applies to both Austria and Germany and is liable to a different (and more severe) fiscal framework.<sup>4</sup> From this point of view, the regular profits tax always influences the land prices as well. The fiscal disadvantage of industrial animal production can lead to a higher value of turnover per land unit within agricultural animal production (according to (4)). In regions with a high density of animal production, the demand for land is often high<sup>5</sup> as the manure needs to be spread. In these regions land prices are influenced by the profits tax or the whole tax law – for example the trade tax in Germany. But more important are often regulations of local property tax, inheritance tax, or VAT.<sup>6</sup> The capitalisation of the fiscal advantage

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4 Compare the fencing of industrial agriculture e.g. § 30 öBewG, Abs. 11 öEStR or § 13 dt. EStG, § 51 dt. BewG.

5 Rents have been influenced, too.

6 In individual cases the classification as industrial business according to profits tax law is of importance to Austrian farmers as well: if at the same time land profits (capital gains) are included in the profits taxation. From the point of view of capital assets and business/trade taxation (property, inheritance, and sales

of animal production leads to an increasing willingness to pay for land (according to (4)). The additionally bought land enables the farmer to avoid further fiscal and non-fiscal burden.

$$(3) \frac{G^* S_{Ldw}}{R^* S_{Ldw}} > \frac{G^* S_{Gew1}}{R^* S_{Gew2}}$$

SLdw: Profits tax or the whole tax tariff for a farm, in %

SGew: Profits tax or the whole tax tariff for a comparable industrial farm, in %. Here, the ground rent is liable to a higher taxation (Gew-1) than the return on capital (or interest).

Hence it follows:

$$(4) PB(Ldw) - PB(Gew) = ZB$$

ZB: additional willingness to pay for land, resulting from the privilege to be classified as a normal farmer and not as an industrial farmer from the point of view of tax law.

Moreover, in most of the EU member states – like in Austria and Germany – special fiscal privileges do exist. But they influence land prices only marginally, the influence being which farmer will farm the land from a fiscal point of view c.p. These privileges contain special regulations to calculate profits up to special agricultural tax allowances. The following synopsis (survey 1) gives a survey of single regulations and their effects in comparison to the usual profits tax.

The synopsis makes clear that there exist different ways of fiscal taxation on returns in different countries. Moreover, there are considerable differences between the individual classes of farms within each country. Whereas German farms with more than 20 ha have to comply with regulations to calculate profits like businesses of other sectors, Austrian farmers who manage even bigger farms can still lay claim to lump sum taxation. In doing so the profit can be determined with a lump sum. The average rateable value/ha amounts to about 1.000 Euro.<sup>7</sup> Depending on the farm size (rateable value), the lump sum lies between 37 – 45% of the rateable value. Therefore even farms with more than 50 ha are able to claim this advantage. But it is only an actual advantage,

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tax), the classification as industrial business affects both German and Austrian farmers. ZB could be increased by non-tax charges like environmental charges.

7 Verbal information from MR. MAG. ADAMETZ, Austrian Ministry of Finance, 12.8.2003.

if the taxable profit is bigger than the taxable rateable value. In this respect successful farmers mostly profit from this kind of taxation. Otherwise they would have to pay higher tax rates due to a higher basis for calculation. In Austria, the fiscal burden nearly remains constant with the lump sum, because the rateable value depends on the constant "BODENKLIMAZAHL" and not on profits, which are always fluctuating. This influences the individual price structuring of land by farmers, i.e. the willingness of farmers to pay. After profits tax successful farmers show a higher value of turnover or a higher ground rent and therefore possess a higher purchasing power for land than farmers who are liable to the normal commercial accounting. Moreover, the lump sum taxation strengthens the discrepancy of the value of turnover after tax within the group of lump sum farmers. Those farmers who realize only average or even less than average yields have to pay the lump sum tax rate. Although it is possible for such farmers to use other means of profit calculation, they do not use this possibility. The ascertainment of profits in farming is deficient; therefore farmers do not possess a successful system of controlling. Thus they often do not know whether they gain profits or suffer from loss. Additionally to lump sum taxation, a lot of Austrian farmers use the partly lump sum taxation. Here, the expenditures are assessed with a flat rate of 70% of the revenues. The resulting profits are liable to the usual progressive tax rate. Nevertheless, successful farmers – those who work with lower costs than supposed within the determined expenditures – are privileged here as well. But the overall profit is lower than within the lump sum taxation.

*Survey 1: Synopsis of calculating profits and the profits tax of land for agriculture and forestry in Austria and Germany and their influence on land prices\**

<b>Regular fiscal taxation of returns</b>	<b>Austria</b>	<b>Germany</b>	<b>Effects</b>
Lump sum taxation	Up to 65,5 T€ unit value (Einheitsw.) lump sum taxation between 37-45% of the unit value	Up to 20 ha, 50 livestock units <sup>8</sup> , peculiarities w. special crops	Especially farmers with a high profitability profit from the lump sum taxation. In Austria, it is possible with special regard to taxation that "lump sum farmers" might offer higher prices for land than other farmers.
Partly lump sum taxation	If the rateable value > 65,5 T€ but < 150 T€ flat rate of expenditures with 70% of the operating revenue		Is less effective than the total lump sum taxation because of the operation revenue determined by reality. Only the expenditure is estimated. This method could be more advantageous for farmers with high profitability than the German income and expenditure accounting.
Income and expenditure accounting		Only a few farms	Advantages with liquidity and progressive tax tariffs in comparison with accounting.
Accounting	Only a few farms	Most of the big farmers do accounting	Taxation with regard to competitiveness. Farmers with high incomes have to pay a higher proportion of their income in tax than farmers with a low income. Nevertheless they enjoy advantages because of a few privileges in comparison with other sectors due to the valuation of assets.
<b>Once profits taxation of land in agriculture or forestry</b>			
	exempt	Tax benefits – especially reserve of reinvestment	In Germany, considerable influence on land prices of up to a 100% higher willingness to pay (chapter 3.2). In Austria, the fencing to commercial law is very important

\* Tax allowances which can be used during the regular taxation or within the scope of profits by giving up are not stated separately because of their low relevance within this analysis.

Source: Own representation

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<sup>8</sup> One livestock-unit corresponds with one cow or 3 sows e.g..

### 3.2 Taxation of capital gains

With regard to the taxation of capital gains of fixed assets, the German tax law can partly lead to considerable increase of prices. In contrast to Austria where these profits are usually exempted from taxation - with the exception of profits from speculation or if the profits have to be ascertained according to bookkeeping by commercial law - in Germany, these profits are liable to profits taxation in Germany. But the German tax law - additionally to a few taxational relieves which are of little importance though - allows the possibility to transfer capital gains of fixed assets from reinvestigation to other economic goods without immediately paying tax.<sup>9</sup>

Despite the above mentioned circumstance in German tax law, such capital gains are not exempted from taxes but only enjoy a postponing of the time when profits are realised.<sup>10</sup> Nevertheless, the attraction seems to be high because of the actual advantages for rates and liquidity. § 6b EStG is often used in practice (look at KANZLER, 1997, p. 256).

#### 3.2.1 Economic Effect of transferred capital gains of fixed assets on depreciable assets

With a transfer of capital gains of fixed assets, the costs of acquisition or production costs of the newly acquired assets are reduced. If these goods are liable to depreciation, the in this way stipulated amounts of depreciation lead to higher profits in the following years. For land, which is usually not depreciable, the future capital gains of fixed assets would increase due to the low book value. For this reason, a complete taxation occurs at the moment when the assets are transferred, depreciated or sold. Therefore depreciable economic goods have only a time-limited advantage in taxes or rates. Due to the reduced volume of depreciation, the taxation of capital gains of fixed assets is shifted into the near future (look at (5) and survey 1).

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9 This option can be very important for the purchaser (for example the state) as well as for the seller of land. Otherwise the high profits tax could lead to the situation that the seller is not willing to sell with the effect that his land is not available for infrastructure measures.

10 This possibility exists in Austria, too (according to § 12 öEStG). But usually this is not used for agricultural land, because capital gains are usually tax-exempt (but gains from speculation have to be taken into consideration).



The tax-advantage from deferment of payment (StV) with depreciable assets (buildings e.g.):

$$(5) \quad \text{StV} = \text{VGw} * S - 1/\text{ND} * \text{VGw} * S * \frac{q^{\text{ND}} - 1}{q - 1} * \frac{1}{q^{\text{ND}}}$$

VGw = transferable capital gains

S = tariff of profits tax in per cent.<sup>11</sup>

ND = time of depreciation of the depreciable assets on which capital gains of fixed assets have been transferred.

q = 1 + i (interest rate)

(5) Shows the difference between immediate taxation of capital gains of fixed assets (VGw \* S) and the discounted tax burden that results from a lower basis of calculation for the depreciation of the economic goods

$(1/\text{ND} * \text{VGw} * S * \frac{q^{\text{ND}} - 1}{q - 1} * \frac{1}{q^{\text{ND}}})$ . Hence results the tax advantage as

the taxation is transferred into the future. The higher tax burden from depreciation of assets (AfA)  $(1/\text{ND} * \text{VGw} * S)$  corresponds with a rent that must be capitalised subsequently - on the assumption that the rate of taxation (S) is

constant  $(\frac{q^{\text{ND}} - 1}{(q - 1) * q^{\text{ND}}})$ . This is necessary in order to grant the compa-

rability of the immediate taxation of capital gains.

Therefore, the advantage of the „6b-regulation“ is first of all a result of depreciation (ND), but also of the rate of taxation S and the interest rate i. The longer the life of depreciable assets, the bigger is the actual advantage in terms of taxes or rates.<sup>12</sup> This can also be seen in survey 2. Here, on the given assumptions, an interest benefit of 36% up to 68 % in comparison to the immediate taxation can be calculated.

Furthermore, an additional interest benefit is possible: from a reserve for reinvestment according to § 6b III EStG. Here, capital gains of fixed assets are going to be transferred to another fixed asset not before 4 to 6 years (maximum). In this case the interest benefit from survey 2 would be even higher.

11 S is assumed as constant (in most cases with the highest possible rate of taxation).

12 It shows that the transfer to movable assets (machines e.g.) with a usually shorter life is less advantageous.

### 3.2.2 Economic effect of transferred capital gains of fixed assets on normally not depreciable assets

If capital gains of fixed assets are transferred on not depreciable fixed assets, the advantage of § 6b EStG is higher than with normally not depreciable assets.

The taxation of capital gains of fixed assets can be postponed till closure or liquidation of the business (i.e. the farm). The period of validity of the tax credit without interest is virtually without end. The deferment of tax payment works like a tax exemption, if it is used permanently with the farm assets.

$$(6) \quad \text{StV} = \text{VGw} * S$$

(6) makes clear that in contrast to depreciable assets, land is a very desirable object for reinvestigation because the second part of equation (5) is not subtracted from  $\text{VGw} * S$ . Survey 2 shows this by a quantitative example.

*Survey 2: Advantage by transferring capital gains of one fixed asset (1 Mio. Euro) on other fixed assets (land or buildings) depending on the assets life, the individual rate of taxation and the interest rate in comparison to an immediate taxation*

		Tax advantage					
		Infinite using time time (land)*		Using time 25 years (stable e. g.)**		Using time 50 years (residential building e. g.)	
Tax rate in per cent	Interest rate in per cent	in 1.000 €	in per cent of the immediate taxation	in €	in per cent of the immediate taxation	in €	in per cent of the immediate taxation
40	4	400	100	150.047	38	228.143	57
	6			195.466	49	273.905	68
50	4	500	100	187.558	38	285.178	57
	6			244.333	49	342.181	68

\* An endless life is assumed. This means that the fixed assets stay over generations in the farm's assets.

\*\* According to § 7 IV S. 2 EStG the life of working quarters amounts to 33 years, as far as not shorter using time can be proved.

Source: Own calculations.

On the one hand, these rules' benefit, especially with regard to farm management, becomes particularly evident with high capital gains of land and high rates of taxation. But on the other hand, a farmer suffers from disadvantage, which does not reinvest such profits into land (look at FILTER, 1983, p. 47). These connections explain the higher demand of agricultural land and the willingness to pay higher prices – depending on the rate of taxation and the regions up to 100% (BAHRS, 2003, p. 234). It is possible to infer that the current regulations in Germany – especially § 6b EStG – are not efficient from the point of view of business management and political economy. Farmers have to pay a lot for land and thus raise their production costs. The exchequer loses tax revenues and the state or other investors have to invest more money for infrastructure measures (e.g. motorways, railways). The Austrian system of not taxing capital gains of land is therefore more advantageous for both farmers and the state. But it is not possible to transfer the Austrian system to Germany. The decision of the German Federal Constitutional Court in 1970 (BUNDESSTEUERBLATT 1970 II, 579) established that the exemption of capital gains of land for agricultural and forestry businesses is not compatible with the equality principle according to Art. 3 of the German Constitution. The result has been that capital gains have to be taken into consideration for taxation since 1970. The German legislator therefore has only the possibility either to abolish the regulation of reinvestment or to introduce a special flat tax (BAHRS, 2003, p. 244).

#### 4. Conclusions

In contrast to Germany, profits tax regulations in Austria do not have such a high influence on prices for agricultural land. One factor for high prices is the delimitation (fencing) to industrial production in agriculture because of the different taxation. Furthermore, shiftings in competitiveness have to be expected due to different methods of fiscal taxation of returns within the scope of lump sum taxation. Then, successful farmers are liable to a non-proportional profits taxation. With this they can gain a higher value of turnover after tax than “normally” taxed farmers because of a different tax basis. In contrast to this, the effects of taxed capital gains of land are different in Germany. They can lead to massively increasing prices for land. But, from a constitutional point of view, Germany can not take over the Austrian framework and regulations where capital gains are exempted from taxation.

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## Affiliation

*StB Prof. Dr. Enno Bahrs*  
*Tax consultant and Junior Professor at the Institute of Agricultural Economics*  
*University of Göttingen*  
*D-37073 Germany, Platz der Göttinger Sieben 5*  
*phone: +49-551/39-4843*  
*e-mail: ebahrs@gwdg.de*