

Possibilities of using profits tax systems to subsidize organic farming

Möglichkeiten des Ertragsteuerrechts für eine gezielte Förderung des ökologischen Landbaus

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Zusammenfassung

Die derzeitige Förderung des ökologischen Landbaus in der EU zeichnet sich insbesondere mit der starken einheitlichen Flächenförderung durch z.T. erhebliche Mitnahmeeffekte aus. Einzelne Betriebe mit geringen Umstellungskosten auf den ökologischen Landbau profitieren von den pauschal festgelegten Einheitsprämien über die Fläche. Sie würden auch mit geringeren Förderungen bei gleich bleibender Qualität ökologischen Landbau betreiben. In Zukunft kann bei weiter ansteigenden Umstellungsflächen das Budget zur Förderung des ökologischen Landbaus evtl. nicht mehr ausreichen. Insoweit sind die Mitnahmeeffekte zu reduzieren ohne die bisherigen Anreize massiv einzuschränken. An dieser Stelle ist das Ertragsteuerrecht ein geeignetes Instrument der Ko-Finanzierung. Instrumente wie Freibeträge oder Tarifmodifikationen können für eine speziell abgestimmte und leistungsgerechte Förderung sorgen. Der Vorteil des Steuerrechts liegt dabei nicht allein in der Förderung gemäß der Leistungsfähigkeit und somit geringerer Mitnahmeeffekte sondern auch bei den geringen Transaktionskosten des Steuerrechts. Allerdings können die einsetzbaren Instrumente insgesamt nur ein Ko-Instrument der Förderung darstellen kann. Die bisherigen Fördermaßnahmen können nur flankiert, jedoch nicht vollständig substituiert werden.

Schlagworte: Effiziente Förderung, geringere Mitnahmeeffekte, Freibeträge, Tarifiereduktion, Gewinnausgleich

Summary

The current subsidization of organic farming in the EU through heavily standardized land area subsidies is notable for often creating considerable windfall profit effects. Individual businesses with low costs of conversion to organic farming profit from flat-rate standard premiums based on land area. They would also practice organic farming with the same level of quality if they received lower subsidies. In the future, if the area of land converted increases further, the budget for subsidizing organic farming may not be sufficient. Therefore it is necessary to reduce the windfall profit effect without greatly detracting from the current incentive. In this connection, changes to profit-based tax systems can be used as an effective instrument for co-financing. Tax-free allowances, reductions in tax rates or offsetting of profits during time periods could be used to provide a selective subsidy method. The ability to relate subsidies to performance, thereby reducing windfall profits, is not the only advantage of using the tax system for this purpose. Another advantage is the low transaction costs. Using the example of the offsetting of profits between time periods, it will be shown here that the tax system can only be used as an additional instrument for subsidization. The existing methods of subsidy can only be supported in this way, not completely substituted.

Keywords: subsidy, windfall profits, performance principle, tax-free allowance, reduction in tax rates

1. Introduction

Organic farmers of the EU could claim some supporting subsidies. There are for example subsidized monitoring costs, investment subsidies for individual enterprises and support for training and consultancy. The most significant in terms of volume, however, are the current land area premiums, paid according to regulation (EC) No. 1257/99. Different premiums per hectare are paid according to the country concerned and the type of agriculture practiced (grazing, arable, market gardening or long-term crop). If you ignore the time period for changing over to organic farming, the premiums generally have a constant level which is unrelated to the success of the business. In this way there is no support related to individual breakeven performance or marginal costs. Thus the potential of this kind of subsidy to create windfall profits can be very high (see NIEBERG and STROHM-LÖMPCKE 2001, p. 416).

This is not an efficient use of the funds available for subsidies. Despite the probable scarcity of money for subsidies in the future there is a strong political desire to increase the levels of organic farming. With this in mind a higher level of efficiency in the use of subsidies is clearly an important aim. The system of subsidies based on land area which has been preferred up to now will soon reach the limits of its effectiveness if organic farming increases. Therefore, windfall effects should be reduced through an appropriate variation in premiums in which an individual subsidy is paid according to costs and performance. In this way the converted land area could be increased using the same subsidy budget, or the current area of subsidized land could be maintained with a lower budget.

Variable subsidies require, however, knowledge of the individual marginal costs of the farmer in question (see NIEBERG and STROHM-LÖMPCKE 2001, p. 416f.). Because these marginal costs can only be determined with methods resulting in high administration costs, which more than outweigh the advantages of variable subsidies, this option has not yet been put into practice. This is where the tax system could be very helpful. Because the determination of tax is largely based on the performance of the taxpayer, the tax system could be suitable as a supporting method for subsidizing organic farming.

2. Suitability of the tax system as an instrument of subsidies

The financial support of organic farming from the specific perspective of the tax system has seldom been discussed up to now. The tax system, especially the profit-based taxes (income tax and corporation tax), offer ideal starting points to reflect the individual performance of the enterprise manager or the potential profitability of the business and thus to subsidize or make charges. In addition, the tax system offers many instruments whereby businesses with low or fluctuating profits can be supported, either long-term or temporarily. These include freedom from taxation, adjustment of taxable income or profits, tax-free allowances, or tariff variations. Measures with risk reducing effects are also possible, as is achieved with the land area premium.

The tax system is especially suitable as a subsidization instrument for agriculture, and therefore also for organic farming. One reason for this is the special position of agriculture in European (global) tax systems

(see also MENNEL, FÖRSTER, 2003). Agriculture is, in many cases, the only sector of the economy with its own special regulations for calculating profit and its taxation (e. g. § 21 öEStG), calculating assets, taxation on business capital (e.g. inheritance tax and land tax), and also transport and consumption taxes (sales tax and fuel tax). These characteristics enable the specific subsidization of agriculture using the tax system, without causing problems due to overlap with other sectors. Because the tax system has a high level of computerization, organic farming is suitable for specific support within the agricultural tax sphere, as long as a high degree of separation from situations not qualifying for subsidies can be achieved. Organic farming can easily be defined on the basis of EU regulations (see also, for example: regulation (EC) No. 2092/91). For this reason it can be expected that transaction costs for the administration or payment of tax subsidies will not be high. This is an important advantage of the tax system in comparison, for example, to the tendering procedure also in discussion for environmental subsidies, which is seen theoretically as an efficient instrument for subsidization but can cause high transaction costs (see also PLANKL 1998, p. 44 ff.).

An extension or modification of subsidies for organic farming using the tax system is compatible in many ways, also from a political perspective, with the concept of the ecological tax reforms currently being forced into law by many governments in the EU. In most EU countries the tax system does not serve only a fiscal purpose. On the contrary, it is often used as an instrument for steering the economy. Thus, the various profit-based tax systems include many forms of economic concession. There are general concessions in income tax systems, for example the transfer of profits on disposals to other capital assets. An example of a special concession in the taxation of agriculture is the lumping together of income from various agricultural activities when calculating taxable profits.

The legal basis for subsidizing organic farming via the tax system is not currently disputed. There are two main reasons for this. Firstly, the subsidy is already in place and being distributed via the land area premium. This, among other reasons, can be justified in terms of the favourable production of collective goods (see also DABBERT et al. 2002, p. 74 ff.). Subsidization using the tax system only substitutes the exist-

ing system. Secondly, using the tax system as a method of distributing subsidies is legitimate if it is more efficient than the current system. At this point it is of interest to look at which preconditions must exist for using the tax system to distribute subsidies, which effects can thus be achieved and which factors the effects depend on. These questions will be discussed in the following examples.

3. Examples of instruments from the tax system

3.1. Tax-free allowances

A tax-free allowance for organic farming would reduce the taxable income on which the tax calculation is based. The amount of subsidy would depend on the level of the tax-free allowance and the individual marginal tax rate. There would also be the possibility to stagger the allowance according to income. This means that with increased income the tax-free allowance could be reduced. In this case smaller enterprises or those with low incomes would be subsidized more heavily. From the perspective of a sustainable subsidization of enterprises with good growth prospects this would probably not make sense. It would be a better policy to have a tax-free allowance which is granted up to a certain income level and then reduced successively with increasing income, or reduced when a particular level is exceeded. The farmers who would gain most from this instrument (in the case of progressive income tax tariffs) would be those with incomes just below the maximum level for receiving the tax-free allowance, because they would have the highest marginal tax rates and would therefore save the most tax.

This instrument has the advantages of very low transaction costs and suitability for use with corporations, sole traders and partnerships. Because natural influences cause greater fluctuations of income and profits in organic farming than in conventional farming, the actual ability of the enterprise to perform successfully cannot be measured exactly. In years with low profits, or even losses, for example due to the effects of the weather, pests or diseases, the tax-free allowance will have no effect. In this case there is a possible option to allow the saving of allowances for use in future years with higher profits.

3.2. Reduced tariff rates

The tax tariff is used to calculate the tax payable based on the taxable income. A lower tariff results in a lower tax burden on a given level of taxable income. Up to now, most governments have preferred to stick to a standard tariff, tending instead to modify the calculation of taxable income for particular groups. It would be possible to have a lower tax tariff for income from organic farming by introducing either a lower progressive tax tariff or even a flat-rate tax, i.e. a low, constant tax rate without any progression. The effects would be quite different. With a reduced progressive tariff all taxpayers in the target group (organic farmers) could profit from the measure, whereas a flat-rate tax would be of most benefit to those taxpayers with high incomes. As with tax-free allowances, the tariff reduction could be limited to enterprises with incomes up to a certain income limit. Similarly, the farmers who would gain most from this measure would be those with incomes just below the income limit.

3.3. The offsetting of profits between time periods

The offsetting of profits between time periods is a way of influencing the calculation of taxable profits. Using this method, the income from agriculture and forestry is not determined on a calendar year basis, but using an average value over a number of calendar years. Offsetting of profits between time periods functions like a simultaneous loss compensation and loss carry-over (with past periods).¹ The current profit is offset by past results. The effect, however, is determined by the arithmetic averaging of the profit over multiple years.²

The effect of this instrument results firstly from its weakening of the progressive effect of the tax tariff as used in most European countries.³

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- 1 In many countries losses may only be carried forward, not offset against past losses.
 - 2 Where the tax system of individual countries allows losses to be offset against previous years there is generally a limit of one year (see, for example, in Germany § 10d EStG).
 - 3 With a progressive tariff the average tax burden increases as the taxable income increases. In some countries (e.g. Austria) a staggered progressive tariff is used, with which the tariff increases in large steps when certain income limits are reached, whereas in Germany, for ex-

Secondly, the commonly provided tax-free allowance can be used more efficiently. In years without profit, or with low profit, the tax-free allowance would otherwise be left partly or completely unclaimed. The offsetting of profits between time periods as a subsidizing tax instrument is thus especially geared towards businesses with widely fluctuating profits. Farmers are normally averse to risk. They would be likely to place a high value on the offsetting of profits between time periods in connection with organic farming, a production method normally associated with higher risks.

The effects of the offsetting of profits between time periods in the context of Austrian income tax tariffs can be demonstrated using a simulation. The expected value of the annual tax savings can be calculated by simulating annual fluctuations and the corresponding income levels. The tax due with and without offsetting of profits between time periods can be calculated on the basis of normally distributed annual incomes from agriculture and forestry with the help of a risk analysis tool in the form of an Excel add-in.⁴ The two results can then be compared.⁵ The difference is the tax saving potential. In the course of the simulation the expected value (μ), the standard deviation and the time span over which the offsetting of profits is permitted can be varied so that the effect becomes clear. The following results can be derived, as shown in table 1:

Table 1: Expected values of the annual tax savings in Euros through the offsetting of profits between time periods for varying, normally distributed, annual agricultural incomes (expected value = 30,000 €), using the standard deviation in annual incomes and the duration of the period of profit offsetting. Calculation

ample a linear-progressive tariff is used, which increases continuously (or in very small increments).

- 4 Examples of such risk analysis tools are @risk (© Palisade) or Simetar (Simulation with Excel to analyze risk, © TAMU Texas, USA). The basis for the simulation in each case is 1,000 iterations using the Latin Hypercube Method (see DANDEKAR et al., 2002). Thus the level of iterations compared with the Monte Carlo Simulation can be significantly reduced.
- 5 The starting point is a total taxable income derived entirely from agriculture and forestry. If other income sources are included the basic procedure remains the same. The effect, however will be somewhat damped.

based on the Austrian income tax tariff 2003.

Duration of the period of profit offsetting	Standard deviation in €	
	20.000	40.000
3 years	602	1.765
5 years	657	1.991

Source: Own description and calculation

Table 1 shows that the expected value of tax savings increases when the standard variation of the annual income increases, and also when the period over which the profits are offset increases. With a three-year profit offsetting period, an expected annual income of €30,000 p.a. and a standard deviation of 20,000 € the expected annual tax saving potential is only €602. If the standard deviation is €40,000 with a five-year profit offsetting period are assumed then the tax saving potential, i.e. the subsidy, increases to nearly €2,000 annually.⁶

4. Discussion

From the above example it is clear that the level of subsidy depends not only on the level of income, but also on the extent of the fluctuations in annual income and on the length of the period in which the offsetting of profits is allowed (e.g. three or five years). In organic farming greater fluctuations in income and profit can be expected than in conventional farming, so that offsetting of profits between time periods is of particular use in subsidizing organic enterprises. An evaluation of the Agri-food Policy Report (BMVEL, various years) in relation to the price and yield fluctuations in organic and conventionally managed farm enterprises makes this clear. These price and yield fluctuations in the two farming systems can be compared with each other using the coefficient of variation (σ/μ) as a standard of comparison. It can be shown that organic farming often has a coefficient of variation two to six times higher than that of conventional farming.

⁶ According to the test farm survey of the organic farms the organic farmers reached in 2001 a profit of nearly €25,000 (see BMVEL, 2001). In other years the profit could be lower.

In organic farming there are even some years with complete crop failures, which must be included in the calculation. The resulting very small or negative income leads to tax rebates where offsetting of profits between time periods is in use, so that in times of low profits, or losses, the tax system provides help in making the organic system viable and, depending on the administrative speed of the tax system, provides a boost to cash flow.

A further advantage of the tax system is that a subsidy based on tax which can be influenced by individual performance reduces the potential of land premiums being passed on to the landowner (see also FUCHS, 2002, p. 396ff.). A partial passing on of land premiums can otherwise be reckoned with in the future if organic farming becomes well established in individual regions and markets for certain land become dominant. In addition, subsidization via the tax system has the advantage that it is not directly related to production. Therefore higher production efficiency in comparison to the use of price or land area subsidies is likely.

5. Conclusion

The examples show the potential of the tax system for a more efficient method of subsidizing organic farming. The subsidy amounts shown in table 1, however, make it clear that tax subsidies cannot completely replace the existing system based on land area. Subsidies of, for example €1,000 – €2,000 annually, or even less are in many cases too little, so that tax subsidies can only be used to support the current land area subsidy and thus function as a co-instrument for the land area subsidy or other subsidy instruments. Even if the level of subsidies for individual enterprises were to be reduced in the future, subsidy levels achievable using tax instruments would be too low in the EU to provide convincing motivation for the use of organic farming methods.

On the topic of co-subsidizing organic farming using the tax system there are also, however, further legal factors to consider. The co-financing of the EU and its member countries according to regulation (EC) No. 2092/91 would be more difficult. Up to now the subsidy on the basis of the land area premium has been easy to predict and has had little fluctuation. With tax subsidies this would be rather different. Incomes fluctuate annually, causing a similar fluctuation in the budget required for subsidies. This would have to be agreed within the EU

and appropriate legislation would have to be introduced. Secondly, the finance ministers in the individual countries would have to cope with fluctuating subsidy volumes in their budget calculations. The generally preferred budget stability, which makes for easier planning, would be negatively affected. Nevertheless, the subsidy budget is so small in relation to the total household that this factor should be of minor importance.

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