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Possibilities and contradictions in the calculation of the flat rate of the Value Added Tax Special Scheme for farmers in the European Union based on the Estonian example

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Abstract. The current article deals with the application of the optional flat rate value added tax (hereinafter referred as *VAT*) scheme for farmers (VAT special scheme, special scheme, special flat-rate) in the member states of the European Union. In the flat rate VAT scheme, farmers are not registered as taxable persons liable for VAT; therefore it is not possible for the farmers to deduct the VAT paid on their inputs from the VAT payable on the supply of agricultural products. To compensate the VAT paid on inputs, the farmer adds the flat rate VAT to the taxable amount of his supply.

The research results suggest that it is not currently justified to apply the special flat rate VAT scheme in Estonia. In the case of the continuation of subsidies payable to farmers it is necessary, based on the Estonian example, to make an amendment to the directive which would also allow the subsidies to be included in the amount of income in the calculations of the special flat rate. By applying the current provisions of the directive, the calculation of the special flat rate would result in a flat rate that would give rise to over-compensation in the agricultural business sector.

Key words: farmer, value added tax, flat rate scheme, methods of calculation

INTRODUCTION

The provisions of the Directive 2006/112/EC (replaced Sixth Council Directive 77/388/EEC from 1/01/2007) regulate the general principles for the application of the special VAT scheme. One aim of the research was to determine which databases could be used for macroeconomic analysis to calculate the flat rate for the application of the VAT special scheme for Estonian farmers. The second aim was to ascertain which group of farmers could apply the special flat-rate VAT scheme (known as the flat-rate scheme). The third aim of the research was to calculate the flat rate based on the received macroeconomic data. The obtained flat rate could form a basis for the application of the flat rate scheme in Estonia.

Table 1. Basic criteria for research analysis

No	Basic criteria	Description of the basic criteria
1.	Business activity	Agriculture – incl. fishery, forestry.
2.	Legal form of ownership	Sole proprietor (SP), private limited company (PLC), general partnership (GP), limited partnership (LP)
3.	Farmer Income Group I	Annual sales income without VAT up to 15978 euros
4.	Farmer Income Group II	Annual sales income without VAT from 15979 to 31956 euros
5.	Farmer Income Group III	Annual sales income without VAT over 31957 euros
6.	Sales income	Total amount of final production (goods and services, excl. subsidies), in 2002 – 2004.

The research was further complicated by the fact that there was no published research available on the subject. To conduct the research the authors have set the basic criteria for the farmers to be covered by the research. They are presented in Table 1.

MATERIALS AND METHODS

Sources and description of macroeconomic data

Databases composed by the state institutions were used as sources of macroeconomic data, including the statistical report of entrepreneurs and their business activities compiled by the Centre of Registers and Infosystems of Estonia (Merkulova 2006), for 2002-2004. This report is based on the data records of annual balance sheets and profit-and-loss statements submitted by entrepreneurs. As a second source, the database of the Estonian Tax and Customs Board (TCB) was used, as it contained more precisely consolidated data on the VAT returns of the entrepreneurs and their business activities in 2002–2004 (Kruusmaa, 2006).

Database of the Centre of Registers and Infosystems

The database of the Centre of Registers and Infosystems (CRI) is composed of data from the annual economic statements submitted by persons required to keep accounts (Accounting Act, 2002). For the purpose of current research the CRI composed a summary report based on the data from the annual accounting statements submitted by the entrepreneurs. This summary report contains encoded data on entrepreneurs as of the beginning and end of the year. Every statement (balance sheet and profit-and-loss statement) as well as every data record of the statement has its code, which makes it is possible to get information about the assets and obligations and different types of earnings and costs. It is also possible to distinguish between the entrepreneurs by their legal form, business activity and income group. The number of entrepreneurs distinguished by their legal form and the descriptions of the codes are added to the database.

The analysis of the CRI database revealed significant flaws which make the calculation of the compensation rate on the basis of these data unobjective for the following reasons:

1. The CRI database contains data of legal persons (incl. partnerships), but does not contain data of sole proprietors (SP);

2. The CRI database also contains data of businesses that may not be registered as VAT-liable persons. For example, the CRI database for 2002 contained data on 825 businesses, whereas, according to the TCB database, only 750 businesses had submitted their VAT returns as VAT-liable persons. In 2003 the relevant numbers were 1040 and 822, and in 2004, 1167 and 873;

3. The data from the CRI database does not allow distinguishing to what extent the amount of costs includes VAT and to what extent it does not;

4. Capital assets acquisition costs, used for the calculation of input VAT, give inaccurate results. The cost of capital assets acquired during the economic year can be found only as a difference between the amounts of capital assets recorded in the balance sheet as of the beginning and the end of the economic year. That result, however, does not reflect the sale of capital assets and the depreciation of assets during the economic year and cannot, therefore, be objective.

If the CRI database contained distinguishable data on businesses registered as VAT-liable persons, the formula for the calculation of the input VAT would be following:

$$\sum Ip_{VAT} = \sum Ip_{wo} \times VAT_{st} \qquad (1)$$

where

$\sum Ip_{VAT}$ – amount of input VAT, currency
$\sum Ip_{wo}$ – amount of inputs without VAT, currency
VAT_{st} – standard VAT rate, percentage

After calculating the input VAT, it is possible to calculate the compensation rate by the following formula:

$$VAT_{sp} = \frac{\sum IpVAT}{\sum Ic_{wo}} \times 100 \qquad (2)$$

where

VAT_{sp} – flat rate of the special scheme, percentage
$\sum IpVAT$ – amount of input VAT, currency
$\sum Ic_{wo}$ – sales income without VAT, currency

However, as the CRI database does not allow any distinction between the costs and earnings of businesses registered for VAT purposes and not registered for VAT purposes, the above-mentioned formula is not applicable.

Database of the Tax and Customs Board

The Database of the Tax and Customs Board (TCB) has been composed on the basis of the VAT returns submitted by entrepreneurs. The TCB database draws together the consolidated data of sales income and declared input VAT of all businesses registered as VAT-liable persons. The TCB database also differentiates between the legal forms, business activities and income groups of the entrepreneurs, as described in Table I above.

The significant difference of the TCB database from the CRI database is that the TCB database also contains data on sole proprietors registered as VAT-liable persons. This is an important factor in the comparison and selection of databases. As the TCB database contains distinguishable data on the sales income and the input VAT of farmers registered as VAT-liable persons, the flat rate of the VAT special scheme can be calculated by using formula 2 as above.

According to the elaboration and departmentalization of data in CRI and TCB databases, the authors of the present research find it practical and justifiable to use the TCB database to calculate the flat rate of the special VAT scheme in Estonia. The main reason is that based on the CRI data, it is possible to derive the amount of input VAT only from the cost of inputs and capital assets. In the TCB database, however, the amount of input VAT is presented separately according to the VAT returns submitted by the entrepreneurs.

Target group for the VAT special scheme

In defining the target group for the special scheme, it would be rational to select those farmers for whom the application of the general VAT system is too uncomfortable. That refers mostly to the farmer Income Groups I and II; due to the small volume of their economic activities, the application of the general VAT system is proportionally the most complicated and burdensome precisely to them. It is not financially burdensome for the farmer of Group III to hire an accountant and conform to the general VAT accounting rules. For Group III farmers, the application of general VAT accounting rules would also be justified from the perspective of cash flow, as the right to deduct input VAT from the VAT payable on supply has a positive impact on the cash flow of a farmer (Lehtsaar & Zeiger, 2005).

As the directive does not contain harmonised provisions determining which farmers should belong to Income Groups I and II, the determination can be made by the member state applying the special scheme. The authors of the present paper suggest that the threshold for the registration of VAT-liable persons in every particular member state could be taken as a criterion for determining the Farmer Income Groups I and II. At the same time, it is not prohibited for a state to decide that farmers with a higher annual income threshold be considered as farmers of Groups I or II. For example, Ireland does not apply any supply threshold and in Belgium the legal form is used for targeting (Irish VAT Act, 1972; Belgian VAT Code and Royal Decree no 22, 1970).

The authors are of the opinion that in the current context the amount of annual supply cannot be the sole criterion for the determination of farmer income groups. The application of the general VAT system depends in particular on the human resources available.

Table 2. The number of farmers in 2002 – 2004.

		VAT-liable persons, annual sales income up to EUR 31956		SP-s from economic activity statements
		Companies	SP-s	
002	Agriculture – fishery	468	1218	11333
	Forestry	282	166	2166
	TOTAL	750	1384	13499
003	Agriculture-fishery	533	1336	11475
	Forestry	289	197	2123
	TOTAL	822	1533	13598
004	Agriculture-fishery	562	1369	11981
	Forestry	311	209	1938
	TOTAL	873	1578	13919

Therefore a family business without hired employees could also qualify as a farmer of Group I or II, notwithstanding of the fact that their annual sales income exceeds the threshold of registration as VAT-liable person, as their agricultural activity does not require extensive human resources (e.g. grain production). The authors have considered such a possibility and the farmers of I and II Income Groups, covered by the research, are regarded as all farmers in Estonia whose annual sales income without VAT is up to 31956 euros.

Table 3. Macroeconomic data on farmers and predicted special flat rate, Income Group I, in 2002–2004.

		SP	PLC	GP	LP	TOTAL
Income Group I agriculture - fishery	Sales income thousand EUR	16336	4355	5	86	20782
	Input VAT thousand EUR	3307	1281	1	10	4599
	Predicted flat rate					22%
Income Group I forestry	Sales income thousand EUR	1795	2567		10	4371
	Input VAT thousand EUR	296	548		2	846
	Predicted flat rate					19%
Income Group I, total of agriculture - fishery, forestry	Sales income thousand EUR	18131	6922	5	96	25153
	Input VAT thousand EUR	3604	1829	1	12	5445
	Predicted flat rate					22%

To determine the target group of the special VAT scheme, the consolidated data of the TCB database has been inserted into the comparison table (Table 2). The table contains the number of VAT registered businesses with annual sales income of up to 39156 euros, as well as sole proprietors (SP), who have submitted their economic activity forms on the income tax return, distinguished by the type of business activity.

On determining the target group for the special scheme, aside from the VAT registered entrepreneurs included in the table, significant attention should be paid to those entrepreneurs who are not registered for VAT purposes. As seen in Table 2, in 2002–2004 there was an annual average of 13800 SP's in the business sector of agriculture-fishery and forestry in Estonia. The authors think the application of the special VAT scheme would be important, first and foremost, in the interests of these entrepreneurs.

The determination of the flat rate scheme in Estonia, based on the macroeconomic data and calculation method presented

In making the selection of entrepreneurs for the macroeconomic analysis, the authors of the current research studied the sales income of the respective main economic activities and the amount of input VAT with respect to the entrepreneurs, active in agricultural, fishery and forestry sectors, whose annual sales income without VAT amounted to 31956 euros. The determination of the flat rate of the special scheme on the basis of data of all entrepreneurs active in agricultural, fishery and forestry sectors would be in conflict with the provisions of the directive. Italy has calculated the flat rate of the farmer's special scheme in the described way, but the European Court of Justice (ECJ) found it to be in conflict with the directive (ECJ judgment in case C-3/86).

Table 4. Macroeconomic data of farmers and the predicted flat rate, Income Group II, in 2002–2004.

		SP	PLC	GP	TOTAL
Income Group II agriculture - fishery	Sales income thousand EUR	28640	6906	63	35609
	Input VAT thousand EUR	5078	1447	11	6535
	Predicted flat rate				18%
Income Group II forestry	Sales income thousand EUR	2571	4137		6708
	Input VAT thousand EUR	280	552		832
	Predicted flat rate				12%
Income Group II total of agriculture - fishery, forestry	Sales income thousand EUR	31211	11043	63	42318
	Input VAT thousand EUR	5357	1999	11	7367
	Predicted flat rate				17%

The database of the Tax and Customs Board was used for the determination of the consolidated macroeconomic data of farmer Income Groups I and II, presented in Tables 3, 4 and 5. The predicted flat rate was calculated by the formula 2 as above.

Table 5. Macroeconomic data of farmers and the predicted special flat rate, total of Income Groups I and II in agriculture-fishery and forestry, in 2002 – 2004.

		SP	PLC	GP	LP	TOTAL
Total of Income Group I and II and all activity sectors	Sales income thousand EUR	49342	17965	68	96	67471
	Input VAT thousand EUR	8961	3828	12	12	12812
	Predicted flat rate					19%

As seen in Tables 3 and 4, the ratio between the amount of input VAT and sales income in agriculture is significantly different from that in forestry. Therefore, in case a common flat rate is applied, certain production sectors may be over-compensated. The authors find that different flat rates should be determined for agriculture-fishery and forestry. However, the determination of separate flat rates is not mandatory (directive 2006/112/EC). The determination of separate flat rates would also complicate tax administration and therefore, based on the consolidated data (Table 5), a common flat rate is calculated.

RESULTS AND DISCUSSION

At the time of conducting the research, the standard VAT rate in force in Estonia was 18% (Value Added Tax Act, 2003). The method of indirect deduction was applied in the calculation of the VAT payable (Zeiger, 2005). The research showed that as a result of the consolidated macroeconomic data analysis of Income Group I, the predicted special flat rate would be 22% for the farmers in agriculture-fishery, 19% for the farmers in forestry and 22% as a common flat rate (Table 3). In the case of Income Group II, the respective rates were 18% for the farmers in agriculture-fishery, 12% for the farmers in forestry and 17% as a common flat rate (Table 4).

The research showed that the special flat rate for Income Group I in both agriculture-fishery and forestry sectors would be higher than the standard VAT rate. For Income Group II the flat rate in the agriculture-fishery sector would be equal to the standard VAT rate. The flat rate of Group II in the forestry sector will be one-third lower than the standard VAT (12%), as the result of which the common flat rate for farmers of Income Group II of agriculture-fishery and forestry sectors would be 17%. The common flat rate for farmers of both income groups of agriculture-fishery and forestry sectors would turn out to be 19% (Table 5), which is higher than the standard VAT rate in force.

Based on the information from the current research, the authors have analysed the circumstances leading to a situation in which the special flat rate, calculated on the

basis of the amount of VAT paid on inputs, would be higher than the standard VAT rate. The circumstances are the following:

a) Farmers of income Groups I and II under survey have a relatively low business income; only the support in form of different subsidies enables them to invest and maintain a positive financial outcome. This opinion is further supported and confirmed by the extensive research conducted in years 2005-2006 by the scientists of the Estonian University of Life Sciences (Research 2006);

b) A VAT registered taxable person can deduct the VAT calculated from the cost of the capital assets acquired from the VAT payable on his supply 100% of input by the aid of subsidies, however the farmer actually pays himself only part of the price of the capital assets and subsidies are not taken into account in VAT calculations;

c) Some subsidies paid to the farmers are not included in the amount of income on which the calculation of the special flat rate is based. Therefore the income is lower by the amount of subsidies (Table 1). However, the amount of VAT calculated on the inputs acquired by means of subsidies is included in the amount of input VAT on which the calculation of the flat rate of the special scheme is based (formula 2).

The authors think that the special flat rate calculated on the basis of macroeconomic data and the respective provisions of the directive (Directive 2006/112/EC), which is higher than the standard VAT rate, is precisely influenced by the circumstances listed above. Accordingly, the authors do not consider it justified to apply the special flat rate scheme in Estonia.

The authors also conclude that the Estonian state refunds more VAT by the refund of input VAT to the VAT registered farmers than the amount of VAT calculated from the taxable supply of farmers.

With the continuation of various subsidies payable to farmers, which is very important from the point of sustainability of the farmers in Estonia, it is necessary to make an amendment to the directive which would allow the subsidies to be included in the amount of income in the calculations of the special flat rate. However, when the calculation of the flat rate of the special VAT scheme is based only on the sales income from the supply of agricultural products and services and on the full amount of VAT paid on the acquisition of all inputs, the result would be a flat rate, which would give rise to the over-compensation in the agricultural business sector.

CONCLUSIONS

The goal of the current research was to determine the following, on the basis of the Directive 2006/112/EC:

(1) what are the possibilities in Estonia for the calculation of the special flat-rate VAT scheme for farmers;

(2) which databases can be used as a source of macroeconomic data;

(3) what would be the predicted flat rate of the special scheme, and

(4) for which target group among farmers would the application of the flat rate be justified.

The authors believe that the objectives set for the research have been achieved. It is rational and justified to use the database of the Estonian Tax and Customs Board for the analysis of the macroeconomic data. Farmers acting as sole proprietors, with annual sales income of up to 31956 euros, are the target group for which the special flat rate of the VAT scheme would be applied.

Based on our research, the authors find that currently it is not justified to apply the flat rate of the VAT special scheme in Estonia. The relatively large proportion of subsidies in the income of farmers has created a situation in which application of the conditions of the directive in the calculation of the special flat rate would result with flat rate of 19% (Table 5), which is higher than the standard VAT rate in Estonia (18%).

If the various subsidies payable to farmers are continued, it is necessary, in the calculation of the special flat rate, taking into account the results of the research based on the Estonian example, to make an amendment to the directive which would allow the subsidies to be included in the amount of income. By applying the current provisions of the directive, the calculations of the flat rate of the special scheme would result in a flat rate, which would give rise to the over-compensation in the agricultural business sector.

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