

# **THESES OF DOCTORAL (Ph.D) DISSERTATION**

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**THE METHODOLOGICAL EXAMINATION OF THE PROFITABILITY  
OF THE HUNGARIAN AGRICULTURAL PRODUCTION WITH FOCUS  
ON THE SUBSIDISATION SYSTEM**

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KAPOSVÁR

2009

## 1. RESEARCH BACKGROUND AND AIMS

Based on previous studies, work experience, tax counselling and auditing jobs there is no doubt that the only possible way to evaluate and assess the operation of an enterprise is by means of generating income. When an enterprise or industry is analysed or possibilities of development are examined profit and profitability as well as their contribution to GDP are in focus because the income of the participants in the market economy depends on these factors and this income can cover social and private needs.

The profit analysis and the Profit and Loss Account as part of the financial statements based on various valuation aspects reflect the time changes and show the profit or loss making performance on the other hand factors affecting this performance and their effects should be analysed in order to make deductions and benefit from them.

In this study attention is focused on two major factors affecting the income: internal and external factors. (Internal factors include the size of the business, the rate of the agricultural activities, the production structure and its creation, the reinvestment of the generated profit. External factors include the economic regulation system, mainly the subsidisation system.)

The aim of the study is to show the characteristics of the agricultural industry and the impacts of factors different from other industries besides general business operation issues.

It is not possible to judge the performance of an agricultural enterprise on its own. Databases are necessary which can be compared and they can help to assess the relative situation as well as to give reasons for and evaluate the discrepancies.

Therefore, one of the research aims is to study the income information systems of agriculture and to introduce their implementations and possibilities of using them in practice.

By this it can be decided which system suits the best to analyse the various economic processes. (Which system can/may suit to examine the liabilities and assets of an enterprise, to judge the total output of agriculture and to determine the volume changes of the operation as well as the tendencies of the income development.)

One of the main aims is to show the impact of the subsidisation system on this.

Before the research there are some terms to consider such as subsidisation, state source and preferred enterprise.

As the economic events in a transition period are analysed, it is also presented how the subsidisation policy of the EU has affected the subsidisation policies of the member states, including Hungary. It is shown in what way national „measure packages” were allowed, what were their aims, in what way new member states were treated differently.

An opinion is formed concerning SPS (Single Payment Scheme) to be introduced in 2009 and its expected benefits concerning Hungary.

One of the main aims is to demonstrate the relation between agricultural income and subsidies and to show the necessity of the existence of the subsidisation system considering the fact that the industry has several special characteristics different from other industries.

To sum up, the aim is to show how the agricultural workers can meet the profit expectation of the owners investing their capital from the profit after tax of the enterprise. It is also shown what are the possibilities for the participants in agriculture to get income covering their social and private needs.

## 2. MATERIAL AND METHODOLOGY

In this study the author is faced with the aspects necessary to select from the special literature of the topic with the intention to compare the different opinions about the profitability as well as the subsidisation system and also to disclose the connections between the two areas.

Right in the beginning it had to be considered that the area examined shows an excessively changing structure and similarly to the common agricultural policy of the EU it needs to be revised.

The CAP was revised in 2008 and it is expected to find a solution for several issues. Hungary needs to switch over to the SPS, which will result in a better position for the Hungarian agriculture. Besides environmental protection food safety measures are becoming more and more important. Maintaining the market security is of importance, too.

These processes have also convinced the author of the fact that agriculture cannot be without agricultural subsidies after 2013.

It has also been considered that the structure of agriculture will be transformed significantly in 2013 and plant cultivation will have better chances in the long term than animal live-stock farming.

By selecting the most suitable method it had to be considered at what rate micro- and macroeconomic conditions should be examined, how microeconomic conditions fit into the macroeconomic circumstances and which external factors play a role, what are their effects.

The author has also been faced with the issue that independently of the period to be chosen the (domestic and EU) circumstances differ each year to a great extent and they are difficult to compare.

It has also been an issue that basic questions and terms are not determined clearly, not even the term subsidisation.

Correspondences and discrepancies of the information systems which are used to make comparisons and analyses have been presented.

The main purpose of it was to make the use and usability of the systems better and clear.

During the research the Hungarian and the international accounting standards have been studied as these standards have been made at EU level (IFRS) and they determine and set the financial statements and methods of the Hungarian enterprises.

### 3. RESULTS

The information systems concerning the income and the differences among them help to understand the conclusions made from the results based on the systems, to manage the differences and to determine the profitability with greater certainty and fewer errors.

The study presents two reasons for income and output discrepancies in databases. One reason is the difference of data included in databases. Databases cover different groups of agricultural farmers therefore, they show different output and incomes.

The other reason is the difference of methodology as databases involve different economic activities, incomes, expenditures and they account economic activities differently.

Concerning data correspondence it is relatively easy to compare the four systems (the database of the Hungarian Tax Authority, the Test-Farm System based on the domestic methodology, the Test-Farm System based on the international methodology and the Agricultural System of Accounts). Each enterprise (which is bigger than 2 EUME) filing a tax return is listed in the Test-Farm System. Though the enterprises that are smaller than 2 EUME are listed in the database of the Hungarian Tax Authority but are not listed in the Test-Farm System, their performance (due to their size) can be ignored.

All enterprises represented by the Test-Farm System are also part of the farmers listed in the Agricultural System of Accounts.

The methodological differences of the income information systems are examined regarding output and expenditure.

The domestic and international methodology show significant differences in the Test-Farm System.

The domestic methodology is based on the profit and loss account and can correspond to the database of the Hungarian Tax Authority. The international methodology is built up similarly to the Agricultural System of Accounts and it is made on the basis of the part of the Test-Farm System survey containing product balances.

Though the database of the Hungarian Tax Authority, the Test-Farm System and the Agricultural System of Accounts are based on different methodologies they have different results, a „way through” can be established among the systems and the income statements.

The analysis of the income information systems can also help to decide which system suits the best to analyse the processes.

## **The database of the Hungarian Tax Authority**

Is the most appropriate to examine the liabilities and assets of business entities, the Agricultural System of Accounts suits the best to determine the total output of agriculture, the volume changes of the basic activities and the tendency of the income development.

The Test-Farm System is best used for showing the division of agricultural output among the sectors, the expenditure and income of sole proprietorships and business entities, the relation of cost and income.

Researching the term subsidisation it can be stated that the judgement of the term, its definition, its role and assessment in economic processes and the analysis of its effect is done differently.

The characteristics of agricultural subsidies need to get a closer look at them.

After examining the state subsidies it can be emphasized that the accounting method determines the effect mechanism of the subsidisation.

The accounting method based on the capital concept means that the subsidy is directly accounted for in relation to the stakes, whereas the accounting method based on the income concept means the subsidy is accounted for as revenue over several periods.

Both solutions can be considered acceptable as both ways meet the basic need to analyse and assess the effect of the subsidisation.

Though there are no results available about the operation of the SPS it is necessary to mention the expected effects, its effect mechanism and its expected advantages.

Under SPS farmers will be entitled to direct subsidies depending on their property and the direct subsidy will be negotiable.

Most of the direct agricultural subsidies will be available without production requirements. The subsidies independent of the production can be drawn with the so called legal titles, which are negotiable properties of title. It is the user of the land who is entitled to the subsidies and not the owner of the land. There are two requirements to be able to get access to the subsidy: the amount can only be drawn if the owner of the legal title -at a given time – cultivates the land entitled to him and he keeps the regulations of mutual correspondence.

As previously mentioned the system will be introduced in 2009 therefore, practical experience cannot be reported.

Considering the elements of the system and analysing its connections the question about its advantages is raised. It supports the existing economic order, the subsidies can be accounted for in the mid-term, its operation is relatively simple, it increases competitiveness, it secures safe food supply and helps to produce cheaper Hungarian food. It is also expected to affect speculation.

The difference in the conditions is expected to decrease between the Hungarian farmers and those of the older member states. The new system will enable the plant cultivators to make decisions quicker by eliminating the constraints, to conform more flexibly and it gives the industries of animal husbandry more chance to protect their interests.

By presenting the relation between the subsidies and the tax system it is intended to assess and to take into consideration these two opposite effects as well as to consider the fact that providing the subsidies and determining the method, system and deadline of the tax payment concerns both finance and liquidity issues.

Analysing the the costs, sales, production value and subsidies of market leader products has shown that it is indispensable to deal with the economic, financial and profitability relevance of product profitability and subsidisation system besides macroeconomic aspects when the production structure, investment and credit application of an enterprice are determined.

## 4. DEDUCTIONS AND SUGGESTIONS

Agriculture has always had – and should have – a distinctive role in a national economy. At the same time it should and may not be ignored that the nature of production, market position, international competitiveness, efficiency and profitability conditions are significantly different from other industries.

After the EU accession these factors have become even more complicated and processes have turned to be even more unpredictable.

There are/were attempts to introduce a single regulation system (e.g. subsidisation system) but national characteristics – mainly in the new member states – still influence the income and profitability conditions of domestic enterprises and agricultural producers and the going concern accounting principle.

While examining and analysing processes it has to be considered that EU decision making can depend on some other aspects (political, social, etc.) as well.

The income position of agricultural producers can not be judged without being aware of and understanding the economic background (The EU, country, region) as it is this background where it is necessary to find short- and long-term guarantees for the operation.

The possibilities of examining the profitability have grown. While before 2000 it was only the balance sheet that gave information about the financial processes there were financial and income information systems created which were new and common elements of the agricultural information system after the EU accession and harmonisation.

It is necessary to recognize and disclose the relations among the systems in order to be able to use the information systems and to make adequate deductions. In this way it can be decided which system suits the best to analyse the relevant economic process.

Studying the information system it has been found that the three most appropriate information systems, the database of the Hungarian Tax Authority, the Agricultural System of Accounts and the Test –Farm System as well as the data correspondence and differences are to be examined.

It can be ascertained that apart from statistics errors and differences from data providers there are two reasons for income and output differences in databases.

One reason is the difference in the data correspondence among databases. Databases contain different groups of agricultural producers, therefore they show different output and income.

The other reason is the methodological difference. Databases contain different economic activities, incomes and expenditures and they account economic activities in different ways.



Another important result of examining the income information systems has been to find that it is possible to decide which system suits the best to judge and analyse the appropriate process.

It can be stated that the database of the Hungarian Tax Authority is the most suitable to state the liabilities and assets of business entities, the total output of agriculture, the volume change of basic activity, the tendency of the income change (concerning the whole agricultural industry). The Test-Farm System is best used for showing the division of the agricultural output among the sectors, the income and expenditure of sole proprietorships and other business entities and the relation of cost and income.

Researching the term subsidisation it can be stated that the judgement of the term, its definition, its role and assessment in economic processes and the analysis of its effect are done in different ways.

At the beginning of the research it was necessary to define basic categories such as state source, preferred enterprise or selectivity. The effects of subsidies distorting competition had to be dealt with, too.

It was also necessary to assign subsidies to assets and income.

It can be concluded that both solutions are judged to be acceptable because both solutions are able to meet the need to analyse and assess the effects of subsidies. (The first solution can be more preferable because it follows the gross accounting principle better.)

This study covers the consolidated subsidisation system though it is expected to be introduced in Hungary in 2009.

Although there is no practical experience about the operation of the system conclusions about the prospected effects of its elements can be made based on the internal logics of the system.

The advantages of the system are among others its predictability, its relatively simple operation, the provision of safe food supply, quicker decisions and more flexible adaptability.

An important issue is the analysis of the efficiency and effectiveness of subsidies.

It is a feasible method to carry out research at project level and to determine the produced added value after the subsidy.

Research has clearly shown that the increase of competitiveness can only be achieved by a specified amount of subsidy.

Analysing the effect mechanism of agricultural subsidies it has to be taken into consideration that expenditure on subsidies does not bring about the same increase of the income of farmers.

A part of the subsidy does not even reach the farmers because it is spent on the preparation for subsidisation measures, on necessary administrative costs and implementation.

It can also be stated that the participants of the vertical section following agriculture as well as consumers obtain subsidy, too.

Considering all these effects it can be stated that different „efficiency loss” is assigned to each subsidisation type if the income of agricultural producers and its assessment are examined.

It was intended to present the effect mechanism of two important elements of the financial control system by showing the subsidisation system and the tax system.

Comparing the agricultural incomes with the subsidisation system has proven to be a good chance to present the analysis systems.

Analysing the the costs, sales, production value and subsidies of market leader products has shown that it is indispensable to deal with the economic, financial and profitability relevance of product profitability and subsidisation system besides macroeconomic aspects when the production structure, investment and credit application of an enterprise are determined.

It has also been shown that the production of the market leader products would generate loss without subsidies.

## 5. NEW RESEARCH RESULTS

By doing research on the profitability of the agricultural production with close relation to the subsidisation system the intention was to present the macroeconomic circumstances (domestic and European Union), their effect mechanism in a homogeneous structure with attention to the microeconomic conditions (determining the profitability of enterprises).

It was intended to show the criteria system and methodology of what challenges (national and global economic) enterprises have to face, of what factors they have to consider when they make their mid- and long-term business plans, of how their produce and services can be assessed, of how all these aspects are affected by the subsidisation system.

In order to examine and analyse it a reliable and easily understandable income information system is needed which enables to make judgements, comparisons and to judge tendencies.

When the income information systems were used and the possibilities of their implementation was determined the difference between the Hungarian farm and land ownership structure and that of the major EU member states was always taken into account.

The average plant size, the differences in the land size of the farms, the division of activities sometimes show significant deviations.

This can be applied to the organisation characteristics and the concentration dynamics.

Therefore the assessment of the results and the disclosure of real connections often need correction and explanation.

In general it can be stated that there are characteristics in each income information system which bring about different results among the different farm structures and in some cases the implementation of the results can prove to be uncertain.

In order to eliminate this and to realise comprehension and more efficient implementation the connection between the Agricultural System of Accounts, the Test-Farm System and the database of the Hungarian Tax Authority has been presented referring to data correspondence, output and expenditure. As a consequence, there is a clearer judgement and assessment of the results and the errors in the results and deductions are decreasing as well.

Research has also pointed out the database of the Hungarian Tax Authority is the most suitable to state the liabilities and assets of business entities, whereas the Agricultural System of Accounts is best used for stating the total output of agriculture, the volume changes of the basic activity and the tendency of the income changes. The Test-Farm System is best used for showing the division of the agricultural output among the sectors, the income and expenditure of sole proprietorships and other business entities and the relation of cost and income.

The presentation of the content correspondence in the income information systems and their „common elements” has enabled research and assessment to create a new approach and unambiguous aspect.

In the study the examination possibilities of the efficiency and effectiveness of EU subsidisation as well as the circumstances of the utilization are analysed.

During the research it has been made clear that the effectivity examinations can only be done a project level. Research has also proved that by determining the conditions of adjudging and winning a particular subsidy special attention should be devoted to the fact that a significant increase in competitiveness cannot be expected when lower amounts are adjudged and the subsidisation system is too diversified.

Analysing the the costs, sales, production value and subsidies of market leader products has shown that it is indispensable to deal with the economic, financial and profitability relevance of product profitability and subsidisation system besides macroeconomic aspects when the production structure, investment and credit application of an enterprice are determined.

The presentation of the relation between the subsidies and the tax system has shown connections which give useful and new approach suggestions when the domestic tax system is regulated and modified as well as when the tax liability of a farm is analysed.

Several chapters of the study refers to the accounting anomalies of the subsidies. The Hungarian Law on Accounting and the international accounting standards would allow a more complex accounting system which would consider the agricultural characteristics better. This would enable to present a clearer income situation.

This would also help to satisfy the information need of potential investors, creditors and owners.

## 6. SUGGESTIONS

The profit analysis and the Profit and Loss Account as part of the financial statements based on various valuation aspects reflect the time changes and show the profit or loss making performance on the other hand factors affecting this performance and their effects should be analysed in order to make deductions and possibilities of implementing them.

Taking these aspects into consideration there is a need to supplement the Law on Accounting (Act C year 2000) and its regulations concerning the Notes to the Accounts with special attention to the characteristics of agricultural industry because it would serve the interests of creditors, investors and owners as well.

It is the „internal business” of agricultural enterprises to make the business reports but creating a system involving the methodology issues, the topics to be covered, their content and analysis methods could help to make judgements and to create a relevant basis for measures to be taken and last but not least it could help to prepare the business plans for the coming periods.

By elaborating the methodology it should also be considered how the financial regulators of agriculture have affected the profitability, separating its effect from the development of efficiency and profitability rising from the internal sources of the enterprise.

Based on the examination of the income information systems it can be suggested that the database of the Hungarian Tax Authority should be used to examine the liabilities and assets of business entities, whereas the Agricultural System of Accounts should be used for examining the volume changes of the basic activity and the tendency of the income changes.

State subsidies can be classified as subsidies assigned to assets and subsidies assigned to income. Subsidies assigned to assets have two alternatives: it should be entered as deferred income in the balance sheet or the book value of the asset has to be decreased by the subsidy. Both accounting methods are acceptable alternatives. Subsidies assigned to the income can be accounted for in two ways: they are entered into the profit and loss account as income or among „other incomes”. The other solution is that they are deducted from the relevant expenditures.

The advanced area also proves that the accounting and the position in the report have different effects therefore, they can result in different deductions. A standardization is suggested, the same accounting method should be prescribed.

The examination of the subsidisation and the tax system is suggested not only because of the need to examine the effects of the elements but also to look at their impacts on each other.

## 7. PUBLICATION LIST

### Publications written in Hungarian:

1. **Burján** - Szebellédi – Sztanóné - Tóth József: Adók és támogatások alapjai  
Bp. : Saldo Kiadó Kft, 2007. (7. fejezet 211-256 oldal)
2. **Dr. Tóth József** (társ szerzőkkel) Pénzügypolitikai stratégiák  
Bp. : Akadémiai Kiadó, 2006.
3. **Dr. Csanádi Ágnes** – Dr. Tóth József: Az önkormányzatok pénzügyei (Perfekt 2002.)
4. **PSZF** Mérlegképes távoktatás keretében Pénzügyi ismeretek I-II. (PSZF 1998.)
5. **Dr. Tóth József**: Illetékek (PSZF 1997.)
6. **Dr. Tóth József**- Dr. Váczi Mária: A non profit szervezetek pénzügyei és számvitele I.  
(PSZF jegyzet 1995.)
7. **Koháriné dr. Papp Edit** – Dr. Tóth József - Dr. Váczi Mária – Dr. Sugár Katalin – Németh Gyula: Segédlet az államháztartás gazdaságtana tantárgyhoz (Perfekt 1994.)
8. **A privatizáció** magyarországi gyakorlata (PSZF 1994.)
9. **Önkormányzatok** pénzügyei (PSZF 1991.)
10. **Doktori értekezés** Tanácsi szabályozórendszer hatékonyságának vizsgálata

### Publications written in foreign language:

#### 1. Dr Jozsef Toth

Kaposvar University

**A Methodological Analysis** of the Profitability Conditions of the Hungarian Agricultural Production, with Special Regard to Microfarms and the Course of their Subsidisation System