

Effects of a EU Investment Subsidization Scheme on the Hungarian Agri-Food Sector

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EFFECTS OF A EU INVESTMENT SUBSIDISATION SCHEME ON THE HUNGARIAN AGRI-FOOD SECTOR

For the EAAE Xth Congress

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Abstract:

The change of the political Hungarian regime in 1990 affected deeply the economy of the country. This change made effects in each national branch, thus in the agriculture, as well. A lot of new companies dealing with agricultural production and trading has also been established in these years.

Since the early '90s a lot of EU support programmes were available targeting these enterprises and providing them to strengthen their competitiveness. One of these programmes was the PHARE IPP Project for the subsidisation of the agricultural investments (between 1996-1998). The University of Debrecen was involved in the implementation, monitoring and assessment process of this project.

Based on the results and suggestions of the university, new supporting elements have been built into the subsidisation programme of the Ministry of Agriculture and Rural Development in the recent years, further enhancing the position of Hungarian farms before joining to the EU.

Keywords:

EU subsidisation, agriculture, investment, effectiveness, Hungary, food sector

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Introduction

Over the past 15 years, privatisation programmes have transformed the economic landscape in countries around the globe, transferring close to \$ 1 trillion in assets from government controlled enterprises to private hands (**A. Dyck, 2001**).

The change of the political Hungarian regime in 1990 affected deeply the economy of the country. This economics crisis – which started earlier – made effects in each national branch, thus in the agriculture, as well.

During the transition legal forms of the former co-operatives and state farms have been changed. About 2/3 of the former co-operatives are operating as new type co-operatives. The former state farms changed entirely into share companies or several individual limited liability companies. Of course new companies – mostly micro and small size enterprises, dealing with agricultural production and trading - has also been established in the early '90s.

As regards the Hungarian private sector, there is a huge number of micro and small size enterprises. Among the 750.000 enterprises the ratio of micro enterprises is 97.1 %, the ratio of small size companies is 2.3 %. They provide half of the total Hungarian GDP. 2/3 of people in the labour market are employed by these enterprises (**source: Report of the Industrial Committee of the Hungarian Government for the European Committee, 11/1999**).

In the Eastern part of Hungary the agricultural production plays important role in the economy. The production and trading activities of companies in the Eastern part of Hungary are strongly related to agriculture. So the development of economic and trading connections both in domestic and international markets are very important, because this part of the country is less developed economically than the others.

They are in less favourable position regarding trading possibilities too, in comparison with the other parts of the country as well as large scale enterprises.

Since the early '90s a lot of EU support programmes are available targeting these enterprises. Through the support programmes these enterprises can strengthen their competitiveness. Although no major reform took place in the agricultural policies in 2000, however a multi-year programme impacting agricultural subsidies was introduced by the EU namely: Agenda 2000 (**source: Research and Informatics Institute for Agricultural Economics, 2001,a**).

This programme is in line with general trends in world market, that EU agricultural policy do continue in direction of reducing market imbalances and increasing the potential for unsubsidised exports, due to the lower support prices. This is especially important, while world agricultural markets have been going through a difficult period of adjustment. Market prices of many agricultural products fell sharply in the second half of the '90s and

have been at depressed levels for the last three years, due to a number of supply and demand factors (**G. Viatte, 2000**).

The European Union has been granting subsidisation since the political change within the framework of different support programmes for various sectors of the economy (among others for the agricultural sector) to modify, stabilise and making it more competitive.

The IPP Programme

The Phare Support Programme Office of the Ministry of Agriculture (MoA) and the European Union Committee signed a financial agreement in 1994 for the subsidisation of the agricultural investments (IPP Project). The programme started in 1996.

For the implementation of the project the EU Delegation and the MoA involved three former agricultural universities. The main tasks of the universities were to monitor and access the investments, to be realised within the framework of the project, as independent experts. According to the regional situation of the three universities, the University of Debrecen, Centre of Agricultural Sciences (former Debrecen Agricultural University) controlled the Eastern region, the Szent István University, Gödöllő (former Gödöllő Agricultural University) controlled the Central region, the Veszprém University, Faculty of Agricultural Sciences (former Pannon University of Agricultural Sciences, Keszthely) controlled the Western part of the country. This programme was finished in 1998, but within the framework of an another project the evaluation process had been continued until 2001.

According to the IPP project three regions were separated. The 1st region represented the Western part of Hungary, the 2nd region the Central and Eastern part Hungary and the 3rd region the North-East part of Hungary. (The economic development was the highest in the 1st region and the lowest in the 3rd region, so the IPP regions show also the economic development of the country.) The number of submitted, as well as the accepted applications was the highest in the 2nd region. Altogether 147 applications were submitted and 127 accepted.

In the call for proposal in August, 1996, the agricultural activities to be supported were determined. The main areas were the following:

- animal husbandry and crop production
- processing and storage as well as marketing
- intensive cultures
- building of refrigerating houses

The accepted applications belonged to one of these areas. The number of applications according to the main types of enterprises can be seen in **Table 1**.

Table 1 Number of applications regarding the main activities (types)

| Type of enterprise | submitted | accepted | refused | utilised | given back |
|---------------------|------------|------------|-----------|------------|------------|
| animal husbandry | 31 | 23 | 8 | 22 | 1 |
| food processing | 27 | 17 | 10 | 16 | 1 |
| trading - marketing | 11 | 6 | 5 | 6 | 0 |
| horticulture | 10 | 10 | 0 | 10 | 0 |
| crop production | 39 | 36 | 3 | 32 | 4 |
| mixed | 29 | 26 | 3 | 23 | 3 |
| total | 147 | 118 | 29 | 109 | 9 |

Source: own research, Karpati (editor), 1998

The requested investment subsidy was the highest in the case of enterprises dealing with animal husbandry or crop production. The number of applications was less in the case of enterprises dealing with horticulture and trading - marketing.

The number of applications was the highest in the case of enterprises dealing with crop production and mixed profile enterprises, from among the 109 realised investments. Within the framework of IPP programme only six investments dealing with trading - marketing were realised.

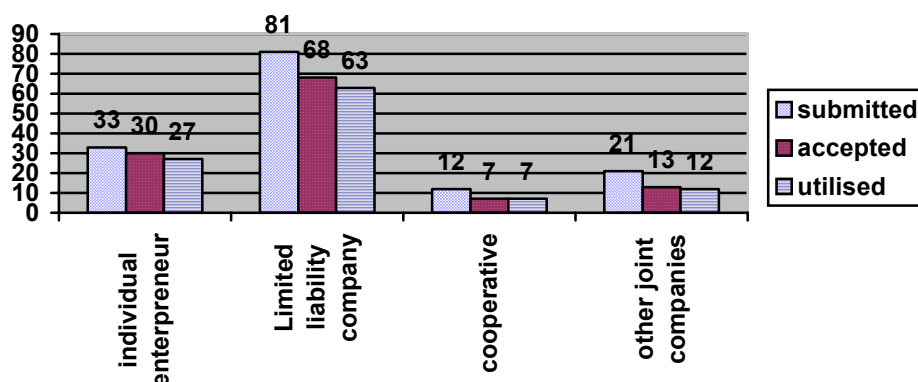
Studying the legal form of investors, since the programme was closed for companies with large land, high production value or more labour. Higher number of individual entrepreneurs and small enterprises was expected therefore to apply for the programme, although the smallest ones should not join the IPP due to the financial requirements. Companies/entrepreneurs involved in the programme can see in **Table 2**, illustrated by **Figure 1**.

Table 2 Number of IPP applications according to legal forms of enterprise

| Legal form of enterprise | submitted | accepted | refused | utilised | given back |
|---------------------------|------------|------------|-----------|------------|------------|
| individual entrepreneur | 33 | 30 | 3 | 27 | 3 |
| limited liability company | 81 | 68 | 13 | 63 | 5 |
| co-operative | 12 | 7 | 5 | 7 | 0 |
| other joint companies | 21 | 13 | 8 | 12 | 1 |
| total | 147 | 118 | 29 | 109 | 9 |

Source: own research, Karpati (editor), 1998

Figure 1 Legal form of applicants



As it can be seen, there were many individual entrepreneurs among the applicants. The number of Limited Liability Companies was, however, the highest, 60 % of the total number of applicants. The number of co-operatives was the lowest among the investors.

It can be established, that middle-sized organisations, such as Limited Liability Companies and individual entrepreneurs with bigger production size were favoured by this programme, and their interest was also the highest.

The form of IPP support was widely determined by the call for proposal. In spite of this, the submitted and accepted applications can be divided into 6 main areas:

- storage
- processing
- investments in the field of animal - husbandry
- intensive cultures
- refrigerating - plants
- modernisation of technology

The exact figures are shown by **Table 3**. It can be seen that most of the investments are connected to animal husbandry and storage, that is in line with the set aims of the project.

Table 3 Number of IPP supported applications according to the type of investment

| Subject of the investment | submitted | accepted | refused | utilised | given back |
|--------------------------------|------------|------------|-----------|------------|------------|
| crop-, product storage | 33 | 26 | 7 | 22 | 4 |
| animal husbandry establishment | 36 | 28 | 8 | 26 | 2 |
| food processing | 27 | 19 | 8 | 18 | 1 |
| intensive plantation | 13 | 12 | 1 | 12 | 0 |
| modernisation | 26 | 24 | 2 | 23 | 1 |
| refrigerating plants | 10 | 9 | 1 | 8 | 1 |
| other | 2 | 0 | 2 | 0 | 0 |
| total | 147 | 118 | 29 | 109 | 9 |

Source: own research, Karpati (editor), 1998

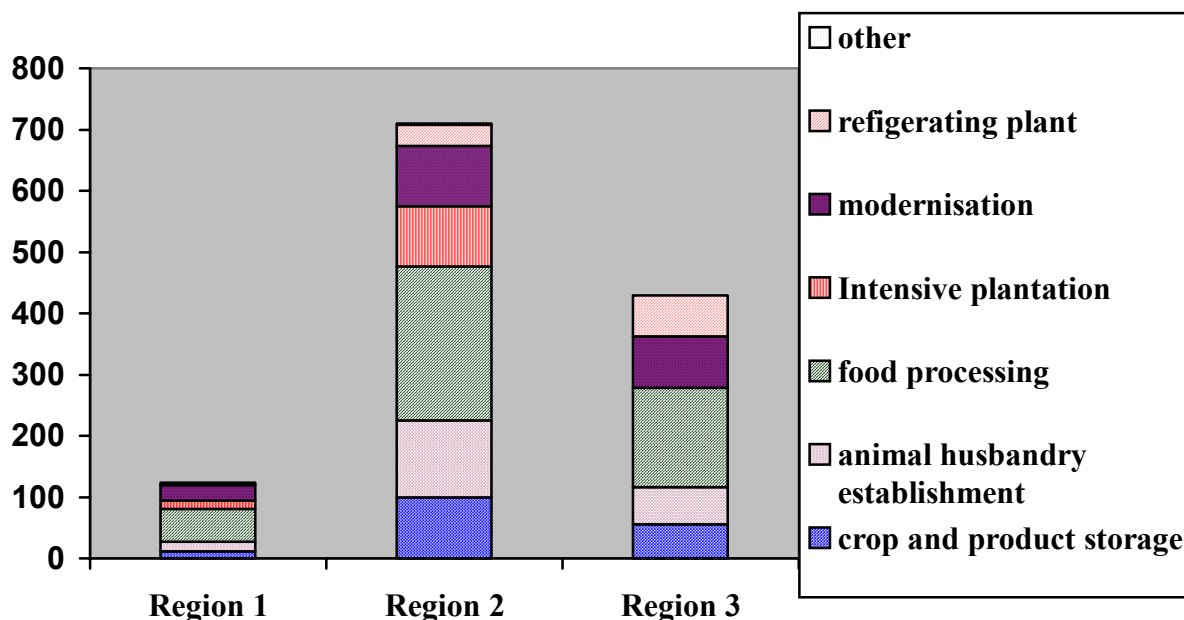
One of the most important objectives of IPP project was to increase the number of labour by establishing new places of work. High points were given to applications targeting this objective. The situation can be seen in **Table 4**, illustrated by **Figure 2**.

Table 4 Number of job creation according to the type of investment and regions

| Type of investment | Region 1 | Region 2 | Region 3 | total |
|--------------------------------|------------|------------|------------|-------------|
| crop-, product storage | 11 | 99 | 56 | 166 |
| animal husbandry establishment | 16 | 126 | 60 | 202 |
| food processing | 54 | 251 | 163 | 468 |
| intensive plantation | 13 | 99 | 0 | 112 |
| modernisation | 25 | 98 | 83 | 206 |
| refrigerating plants | 5 | 35 | 67 | 109 |
| other | 0 | 2 | 0 | 0 |
| total | 124 | 710 | 429 | 1263 |

Source: own research, Karpati (editor), 1998

Figure 2 Planned job creation



As it can be seen, 1 236 new jobs was planned in the investments. Most of them (40 %) were planned to employ labour by food processing investments.

The applications received complementary scores based on the IPP application announcement according to the next aspects:

- if the age of the entrepreneur is under 40,
- if the entrepreneur increases the product scale (diversification) by of the investment,
- if the entrepreneur increases the environment protection and energy saving,
- if the entrepreneur achieves bigger land-concentration under one management, and finally,
- if the entrepreneur creates risk reduction investment.

The results of the applications in this aspect are in the **Table 5**.

Table 5 The number of the applications, which received IPP complementary points by regions, number of applications

| Reasons of the complemetary points | Region 1 | Region 2 | Region 3 | total |
|------------------------------------|-----------|-----------|-----------|------------|
| the age under 40 | 2 | 11 | 4 | 17 |
| product diversification | 3 | 14 | 12 | 29 |
| environment protection | 5 | 8 | 4 | 17 |
| energy-saving | 4 | 13 | 7 | 24 |
| land concentration | 0 | 4 | 0 | 4 |
| risk reduction | 20 | 70 | 33 | 123 |
| total | 23 | 83 | 41 | 147 |

Source: own research, Karpati (editor), 1998

Studying all kinds of supports together (IPP and others) important differences can not be seen in the monitored regions.

These new elements have also been built into the Széchenyi-plan (the main aim of it to support the small and medium size companies in their development process) of Hungarian Government. The Széchenyi Plan started in 2001 and is going on even further in the next years, with an increased support from the budget. Further information about the plan is available on the web-site of the Hungarian Minnistry of Economy (**www.gm.hu**).

Allocation of different financial resources according to the type of investment can be seen in **Table 6**.

As it can be seen, the proportion of own financial sources and IPP support were the highest in the case of food processing investments, but important differences can not be seen among the different types. The importance of other supports (more than 10 %) should be mentioned in the case of crop production and horticulture.

Table 6

Allocation of different sources according to the type of enterprises

| <i>Item</i> | <i>Own source</i> | | <i>IPP support</i> | | <i>Other support</i> | | <i>Credit</i> | | <i>Total</i> | |
|------------------|----------------------------|-----------------|----------------------------|-----------------|----------------------------|-----------------|----------------------------|-----------------|----------------------------|-----------------|
| | average, thousand Ft | proportion % | average, thousand Ft | proportion % | average, thousand Ft | proportion % | average, thousand Ft | proportion % | average, thousand Ft | proportion % |
| | Crop production | 10607 | 37,1 | 5828 | 20,4 | 2929 | 10,3 | 9190 | 32,2 | 28554 |
| Animal husbandry | 8877 | 35,6 | 5299 | 21,2 | 1846 | 7,4 | 8925 | 35,8 | 24947 | 100,0 |
| Horticulture | 11415 | 31,1 | 7741 | 21,1 | 4260 | 11,6 | 13269 | 36,2 | 36685 | 100,0 |
| Food-processing | 19070 | 41,0 | 10990 | 23,6 | 2609 | 5,6 | 13866 | 29,8 | 46535 | 100,0 |
| Trading | 15989 | 39,7 | 9250 | 23,0 | 1588 | 4,0 | 13439 | 33,3 | 40266 | 100,0 |
| Mixed | 14577 | 369,9 | 8320 | 21,0 | 3728 | 9,4 | 12939 | 32,7 | 39564 | 100,0 |
| Total | 12709 | 37,2 | 7369 | 21,6 | 2880 | 8,4 | 11222 | 32,8 | 341180 | 100,0 |

Source: own research, Karpati (editor), 1998

Applying for credit doesn't cause considerable differences in the support of different investments. Remarkable differences can be found only in choosing different forms of subsidisation. Some entrepreneurs do not find the trade credits (1 year) favourable, they wish to apply for the more advantageous supports of MoA. This could incite the authorities to improve the conditions of IPP program (if it were prolonged).

Long term finance play important role in the investment process. A World Bank study looked at whether a long term credit had an impact on investment, productivity and growth. The analysis concluded that long term finance tends to be associated with higher productivity. Although government-subsidised credit markets have increased the long term indebtedness of firms, there is no evidence that these subsidies are associated with the ability of firms to grow faster. The study also found that developing countries use less long term debt than industrial countries (**G. Caprio, Jr – A. D. Kunt, 1998**).

The universities studied the efficiency of production and the investments realised through the IPP Support Programme. The study of this question was extremely important, since the support programme can be successful only in the case if the extra profit coming from the higher quantity and quality of production is proportional to the investment costs. Unfortunately, the time period of the monitoring activity - which was carried out by the universities - was limited, which caused a situation that the economic efficiency of the investment can not be fully analysed. In those cases, where the investments were activated in the first years, figures regarding the operation of the investments were available. In the other cases, because of the delay of the investment process or the biological conditions of the production, there were not any possibilities to collect data for the evaluation of the economic efficiency of some investments.

There were some efforts to estimate the effects that can be expected regarding the profitability of investments through studying the business plan, the preliminary economic indices of the investments and consulting with the entrepreneurs. These results obtained are mainly estimations. Based on the above mentioned facts, the universities have decided not to provide joint results regarding the economic efficiency of the investment.

The University of Debrecen made a substitutional effort to explore the economic effectiveness of the investments, however, in the Eastern part of Hungary. The main findings are, as below:

The internal rate of return belongs to the more often used indices of the dynamic investment efficiency figures and it is a standardised index of the business science. Its calculation is based on the earlier mentioned cash-flow values, as the sum of the income (which is expected from the investment) and the depreciation cost of the investment. The sum of 10 years' discounted values of cash-flow are compared with the costs of the investment at the activation, based on a given interest rate. Changing this rate we can reach the zone-net present value. This rate is the so-called internal rate of return. The internal rate of return means an interest rate for a concrete period (in our case 10 years) which is the yield of a bond with equal financial conditions with the investment. The higher the internal rate of return, the bigger the economic result of the investment. The critical values can be evaluated, if we compare the obtained internal rate of return with the expected discount rate of the market. If the internal rate of return is higher, the investment is qualified as positive and realisable.

In **Table 7 and 8**, the internal rate of return, calculated with the above mentioned method can be seen. In **Table 7** the figures can be seen according to the legal forms of companies, while in **Table 8** they can be seen according to the type of investment.

Table 7 Internal rate of return according to the legal form of enterprises

| Legal form | Internal rate of return, IRR % | | | | | |
|---------------------------|--------------------------------|---------|---------|---------------|---------|---------|
| | National level | | | Company level | | |
| | Minimum | Average | Maximum | Minimum | Average | Maximum |
| Individual enterprise | 1 | 14 | 32 | 11 | 25 | 42 |
| Limited Liability Company | 3 | 23 | 48 | 11 | 35 | 68 |
| Co-operative | 6 | 12 | 19 | 12 | 26 | 40 |
| Average | 20 | | | 33 | | |

Source: own research, Karpati (editor), 1998

Table 8 Internal rate of return according to the type of investment

| Type of investment | Internal rate of return, IRR % | | | | | |
|--------------------|--------------------------------|---------|---------|---------------|---------|---------|
| | National level | | | Company level | | |
| | Minimum | Average | Maximum | Minimum | Average | Maximum |
| Crop production | 1 | 15 | 27 | 11 | 27 | 43 |
| Animal husbandry | 5 | 15 | 33 | 11 | 27 | 51 |
| Food processing | 3 | 19 | 40 | 12 | 32 | 68 |
| Average | 20 | | | 33 | | |

Source: own research, Karpati (editor), 1998

As it can be seen in Table 7, the internal rates of return at national and company levels are shown and their minimum, average and maximum values are also disclosed, where calculating at national level the total value of investment is considered, while at company level the total value of investments are reduced by the subsidy. In this case, the internal rates of return are higher at company, their average is 20 % at national level and 33 % at company level. At present the internal rate of return of about 20 % is a relatively good value. Mostly the Limited Liability Companies are at this level, at an average 23 % national level, but at company level all the legal forms of enterprises surpass this level. There are considerable differences among the values within the groups, for example the 35 % average value of Limited Liability Companies is between 11 and 68 %, so the difference is 57 %. Summarising the result, the internal rates of return are acceptable in each legal form of the enterprises.

The situation is the same in the case of the type of enterprises, where the IRR is 27 % both in crop production and animal husbandry, while in the case of food processing its

value is higher, 32 %. The indices, calculated at national level are - of course - less favourable, but basically they can be considered acceptable.

At the same time there are considerable differences between the minimum and maximum values within each category, for example in the case of food processing, the difference is 56 %.

The entrepreneurs evaluate the efficiency of their investments optimistically considering not only the submitted Business Plans, but the upheld positive opinions during the consultations, as well. Considering that the relatively smaller- and medium-sized companies were the characteristic "subjects" of the IPP project, where the owners are also managers, this optimism is not exceptional. Of course, it is just a supposed situation, because the estimated relation to the income and cash-flow values couldn't be validated by reliable data.

Based on the results and suggestions of the universities involved in the programme the supporting elements have been built into the subsidisation programme of the Ministry of Agriculture and Rural Development in the recent years. New elements are as follows **(source: 102/2001.(XII.16) MoA Order)**:

- supporting investments in agro-food industry
- supporting investments in agricultural production
- supporting young entrepreneurs
- rural development
- supporting investments for protecting environment

Further information available on the web-site of the Hungarian Ministry of Agriculture and Rural Development (www.fvm.hu).

Recent development of the agricultural support scheme must take into consideration EU regulations as well as the challenges of globalisation. It follows that establishing stable conditions for efficiency in agricultural production and improvement of competitiveness on the world market enjoy priority. Intensive and environmentally sound production should be regulated in accordance with its significance and the available government subsidies. Such subsidies should be focused on farms viable on the long term, while in the case of subsidy policy objectives it is suggested that financing of development and grants which are in compliance with the WTO agreement be preferred over subsidies earmarked for market penetration and exports **(source: Research and Informatics Institute for Agricultural Economics, 2001,b)**.

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