PROFITABILITY OF SOME CERTAIN SENSITIVE SECTORS – EXAMINATIONS CONSIDERING THE SPECIALTIES OF AGRICULTURAL POLICY AFTER 2015

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ABSTRACT

The Common Agricultural Policy (CAP) entering into force in 2015 includes several new components. In the case of direct payments, member states have the opportunity to choose from more voluntary supports, increasing the member states' freedom of choice and providing flexibility. Taking into account the interest of farmers and the particularities of farming, besides the mandatory components, such as the „greening" and the payment for young farmers, there are more optional components at farmers' disposal. One such is coupled support. The current payment system also contains such a support, but with limited application and budget. Regarding the next programming period, the current share of 3.5 percent of coupled support is going to increase significantly. Coupled support granted to certain sectors can make up 13 percent of the national ceiling, and member states are allowed to use another 2 percent to foster the production of protein crops. Coupled support can be used in certain sectors and for certain products. In order to use the budget effectively, it is necessary to determine the exact amount of support, considering profitability of the sectors. This paper attempts to sum up the efficiency and profitability of some relevant sectors.

Keywords: common agricultural policy, agricultural support, coupled support, profitability

INTRODUCTION

After years of negotiations the approval of the reform of the common agricultural policy has come to its final phase. The political decision of the CAP reform package was made by the agricultural ministers of the European Union in June 2013, and was ratified by the European Parliament 20 November 2013. The basis of the new CAP is defined by the four base acts (direct payments, common market organizations, rural development, horizontal regulation) finalized at the meeting of Agricultural and Fishery Council 16-17 December 2013. Among direct payments laid down by Regulation EU No 1307/2013 there are several new measures, such as the greening or the young farmer payment scheme. Although it is not a new component, the structure of coupled support has significantly been changed. The field of sectors entitled to be granted support from this scheme has been broadened compared to the previous system. Besides rice, milk and dairy products, sheep and goat meat, cattle and calf, sugar-beet as well as fruit and vegetable are also included. Moreover, the amount Hungary is entitled to use for coupled support grew from 3.5 percent to 13 percent of its financial envelope set by the EU, and another 2 percent can be granted to support the production of protein crops. It amounts to 15 percent together, meaning approximately 190 million euro a year. The decision of the EU of authorizing member states to use a growing proportion of their total direct payments for coupled support might contradict the outcomes of previous reforms, but it is crucial for the sensitive sectors.

MATERIAL AND METHOD

To determine the reasonable level of the financial sources that can be allocated to some certain sectors it is necessary to examine the cost-to-income ratio of the given sectors. The Data we used stem from the database of Research Institute of Agricultural Economics (RIAE). Three different sensitive sectors were examined, namely the sugar-beet, the milk and the bovine. The analysis does not mean that these sectors are surely going to be supported within the frame of coupled support, but it stresses the importance of analyses of this kind when deciding about the allocation of subsidies. In addition, it is important to note that this paper is not to determine the amount of subsidy either. The studied sectors received direct supports earlier, too, though it was coupled only in the case of milk. As milk sector is of a great importance and the cessation of milk quota in the EU in 2015 might have an adverse impact of the sector, it would seem justified to fund the sector. As for sugar-beet, the newly introduction of coupled supports in the sector makes it worthy to be dealt with. In the case of bovine, it is originally among sensitive sectors and it has never been given EU subsidy in Hungary. We focused on the examination of the efficiency, gross margin, efficacy of the sectors as well as the effects of direct payment on these indicators. National average data covering the time period 2004-2012 were used for the analysis. Data of private units and agricultural enterprises were weighted based on their share of cost and income; consequently, they depict the real cost and income items. Time series enabled us to assess the changes occurred in the efficiency and efficacy of the sectors. In order for us to be able to scrutinize the given sectors the following indicators were used (SZŰCS ET AL., 2008):

- result of the sector = total sectoral revenue–total production cost;
- gross margin of the sector = result of the sector – total production cost;
- expected result of the sector = (average selling price * yield) – (productions cost of main product * yield), the indicator shows the difference of the expected revenue and the total production cost of the main product;
- the efficiency of the sector = result of the sector / expected result of the sector, it is the difference of the revenue (from the database) and the production cost divided by expected result of the main product;
- real efficiency of the sector = gross margin of the sector/expected result of the sector.

RESULTS

According to data coming from the RIAE the average size of agricultural units in the sugar-beet sector was between 27 and 57 hectares with a relative high ("golden crown") value. The output reached its highest (65 tons) in 2008, while its lowest (45 tons) was in 2007. Selling prices, similarly to the output, was volatile. In the year of accession to the EU, sugar-beet was sold for 11 thousand HUF per ton, but prices saw a significant decrease in the following years, to 2 thousand HUF. The nadir was in 2007, when sugar-beet price was as low as 800 HUF per ton. A rise began only in 2011, with prices going up to 11 thousand HUF and it continued (13 thousand HUF) in 2012, too, increasing the profitability of the sector. Revenues from sugar-beet production dropped after the accession to the EU and hit its lowest point (387 thousand HUF per ton) in 2007. The market then was characterized by low buying prices, which were attributed to depressed demand caused by duty free sugar import and to drop in revenues generated by low output. (POPP ET AL., 2007). Owing to favorable output and the rise in prices the trend turned in

2011. Seed, fertilizers and pesticides account for the majority of the expenses of sugar-beet sector. These direct variable costs increased significantly in the examined period. The price of seed grew by 24 percent, the price of fertilizers by 110 percent and the price of pesticides by 47 percent. Production is greatly affected by the cost of machinery and agricultural services, too, of which the price of the latter doubled between 2004 and 2012. Production cost of the sector increased from 317 thousand HUF per to 506 thousand HUF. It is apparent that despite the rise of the expenses result of the sector was positive in the whole period. It was the lowest (36 888 HUF) in 2010, and the highest in 2011 (*Figure 1*).
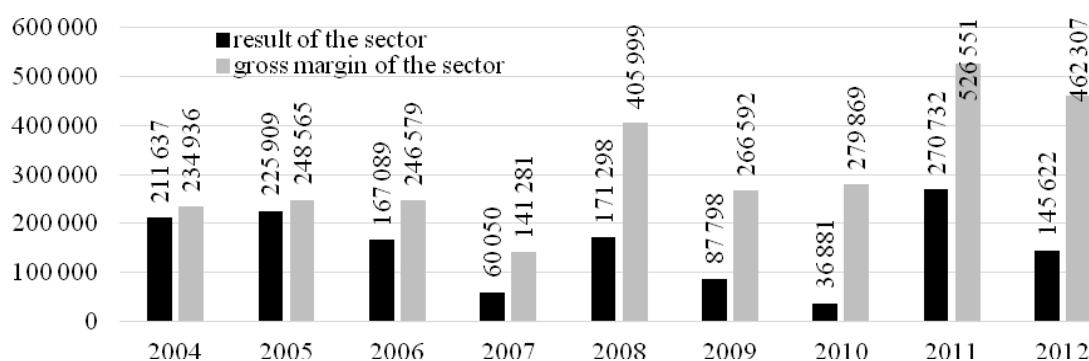
Figure 1. The result and the gross margin of the sugar-beet production (2004-2012, HUF)

Source: own calculation on the basis of RIAE database, 2013

Gross margin of the sector shows the result augmented by the subsidy. It is clear that the revenues of the producers covered their expense, and subsidies increased the efficiency further. The amount of subsidy provided to the producers, with the exception of 2009, increased steadily from 23 thousand HUF per hectare in 2004 to 316 thousand HUF in 2012. Growing subsidies biased the efficiency of the sector. With respect to efficiency the year with the lowest result was 2010, but with respect to gross margin 2004 and 2007 were the most unfavorable. Higher subsidies are ascribed to the rise in the amount of single are payments scheme (SAPS) payment, separate sugar payment and national additional sugar payment. The database enabled us to examine the efficiency of the sector, as it contained data both on average production prices and costs. Contrasting the difference with the result it is conspicuous that sugar-beet production was efficient in the 2011 and 2012. If the indicator is below 1, it means that the production is inefficient, while an indicator with a value above 1 reflects efficiency. In the examined period the production was inefficient in three years, namely in 2004, 2006 and 2010. It is an interesting phenomenon that despite poor result caused by low prices and output in 2007 the efficiency of the sector reached its highest (1.5) (*Figure 2*).
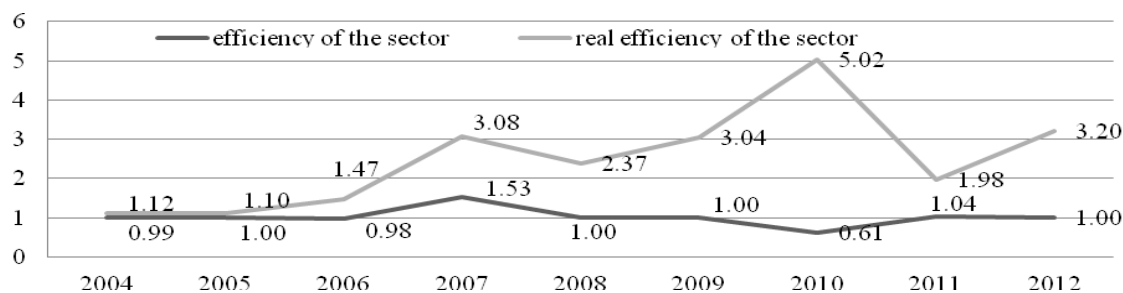

Figure 2. Sector efficiency of the sugar-beet production (2004-2012)

Source: own calculation on the basis of RIAE database, 2013

The lowest efficiency was seen in 2010, when the favorable output was offset by low selling prices and high production costs, resulting in low efficiency (0.61). In case if we focus on the real efficiency of the sector (ratio of gross margin to expected results of the sector) it can be stated that direct payments multiple the efficiency in many cases. In years characterized by low efficiency direct payments significantly improved the indicator even in years with low direct payments, such as in 2004 and 2005.

Milk producers in Hungary kept on average 18 to 36 cows in the examined period, with a yield moving between 6100 and 6900 liters per cow. At business unit level it meant 140 to 233 liters milk produced. Selling price of milk increased by 43 percent between 2004 and 2012 then it decreased by 20 HUF per liter to 63 HUF. Forage cost accounts for approximately 70 percent of variable costs of milk production. Although animal health costs compared to forage costs are negligible, it is still the second highest expenditure item. Owing to rising forage costs, total costs of milk production grew by 52 percent to 421 thousand HUF per liter between 2004 and 2012. In the year of accession to the EU direct payment per cow was 23 thousand HUF, and it increased, with a greater rise occurring in 2006, until 2011, reaching 93 thousand HUF. In 2012 it was 75 thousand HUF per cow. In the examined period result fluctuated significantly. In 2004 it was only 8 thousand HUF per head, while in 2008 it exceeded 100 thousand HUF. The crisis the milk market saw in 2009 had an adverse effect on the result of the sector, reducing prices to the former level of 8 thousand HUF, which then rose to 100 thousand HUF by 2011 again. Looking at the gross margin of the sector, it can be asserted that direct payments increased the value of result per cow leading to the sector being able to cover production cost even in the worst year (*Figure 3*).
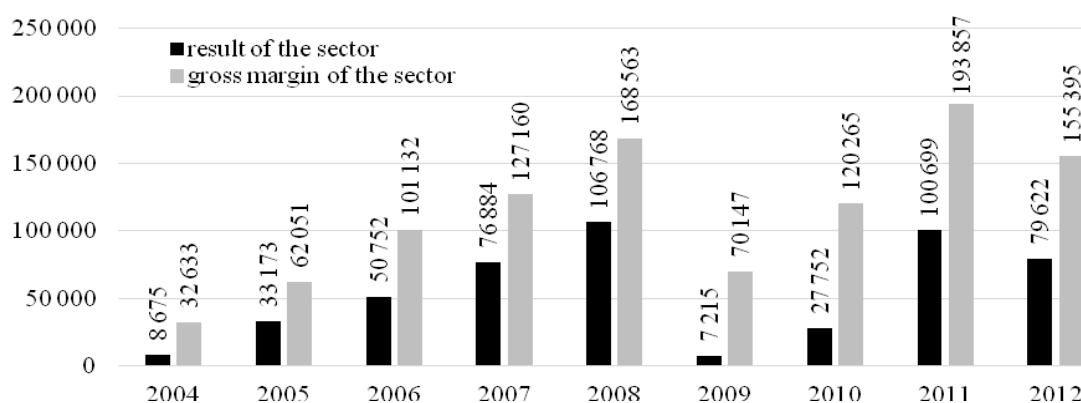

Figure 3. The result and the gross margin of the milk production (2004-2012, HUF)
Source: own calculation on the basis of RIAE database, 2013

As for the efficiency of the sector it is apparent that low result does not necessarily entail weak efficiency. Selling prices and production costs of the main product resulted in a deficit in 2004 and 2009 (*Figure 4*). In contrast, total revenue of the production and production costs led to a low, though positive result. The indicator of sector efficiency, that is a quotient of sector result and expected sector result, was below 1 in 2006, 2008, 2010 and 2012. However, in years with unfavorable sector results, the efficiency was above 1. It is put down to the fact, that the low result of the sector exceeded the expected sector result, giving a high quotient. It is conspicuous that the subsidy significantly increased the sector efficiency, especially in years with low sector results, namely in 2004 and 2009. In these years the direct payment multiplied the sector efficiency. Bovine in Hungary is classified as a sensitive sector. In the examined period farmers kept on average 7 to11 bulls,

amounting to an output of 5 to 9 tons a year. Bulls were sold with a weight of 650 to 720 kilograms.
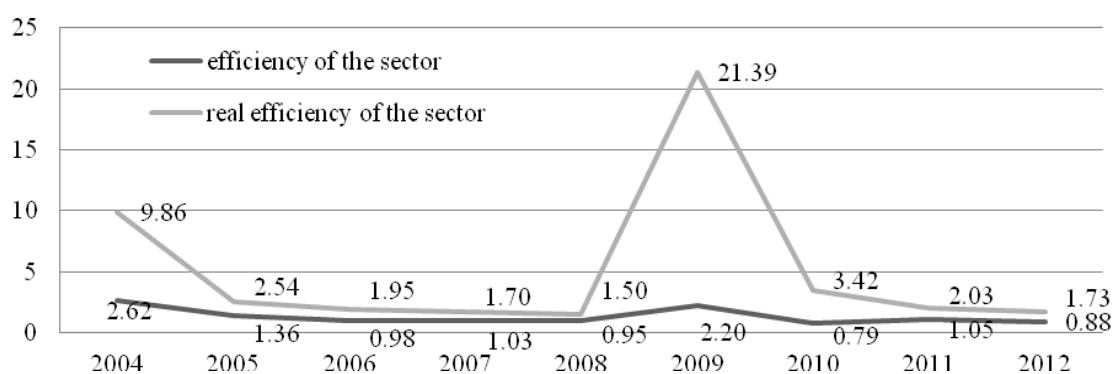
Figure 4. Sector efficiency of the milk producers (2004-2012)
Source: own calculation on the basis of RIAE database, 2013

Due to the high European demand, the output was outstanding in 2008 and 2009, in these years farmers had more than 10 animals. Selling prices also grew between 2004 and 2012. In the year of accession it was below 300 HUF per kilogram, it exceeded 400 HUF in 2009 and reached 621 HUF in 2012. Similarly to selling prices, direct payments also increased. In 2004 it was 10 HUF per kilogram; it went up to 64 HUF in 2010, and then dropped back to 30 HUF in 2011. Forage costs account for 36 percent of total cost, raw material costs make up 41 percent. Animal health cost, labor cost and the general expenses are also significant. Expenses in the examined period increased in this sector, too. Total production cost grew from 347 HUF per kilogram to 537 HUF, with a huge rise occurring in 2006 and 2007, when the production of 1 kilogram meat increased by 100 HUF (*Figure 5*).
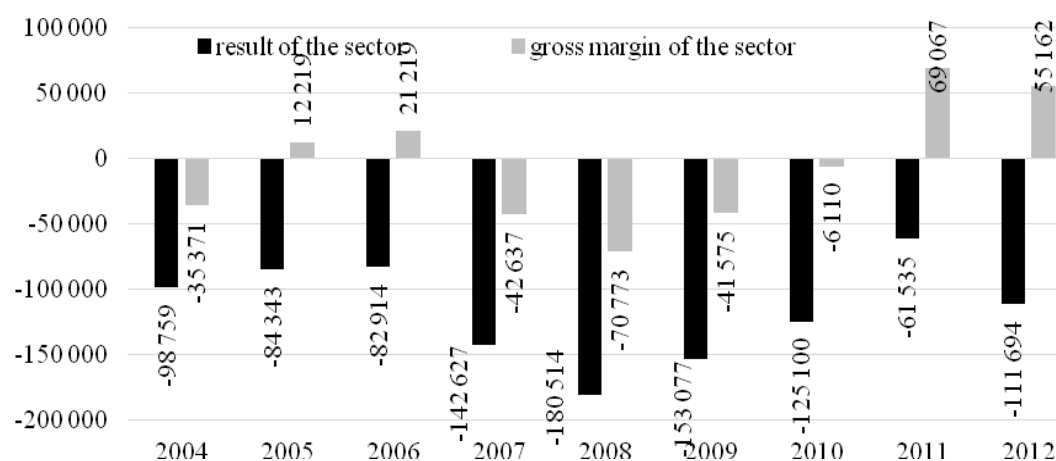

Figure 5. The result and the gross margin of the bovine sector (2004-2012, HUF)
Source: own calculation on the basis of RIAE database, 2013

Although the rise in the total revenue of the sector exceeded that of total cost, sector result was negative in every year. However, direct payments were sufficient to offset the result, leading to positive values in several years (2005, 2006, 2011 and 2012). In the last two years of the examination growing demand in our export markets had favorable effects on the results, with selling prices increasing, too. It can be stated that the result of the sector is highly dependent on the extent of direct payments. In the case of the indicator of the efficiency of the sector and of real efficiency of the sector, corrections had to be made. When multiplying selling prices by the yields, bony meat was taken instead of the output

of the main product. This way the values of the indicator improved, but they are still far from favorable efficiency. It was the highest in 2011 with a value of 0.77, and the lowest in 2010 with a value of 0.03 (*Figure 6*). Examining the real efficiency of the sector, that show the value increased by the direct payments, it is apparent that direct payments manifolded the efficiency, resulting in outstanding values even in years (2005 and 2010) with the lowest efficiency. The significant rise in the value of the indicator in these years is caused by low value of the expected result being in the denominator as well as by the large amount of direct payments.
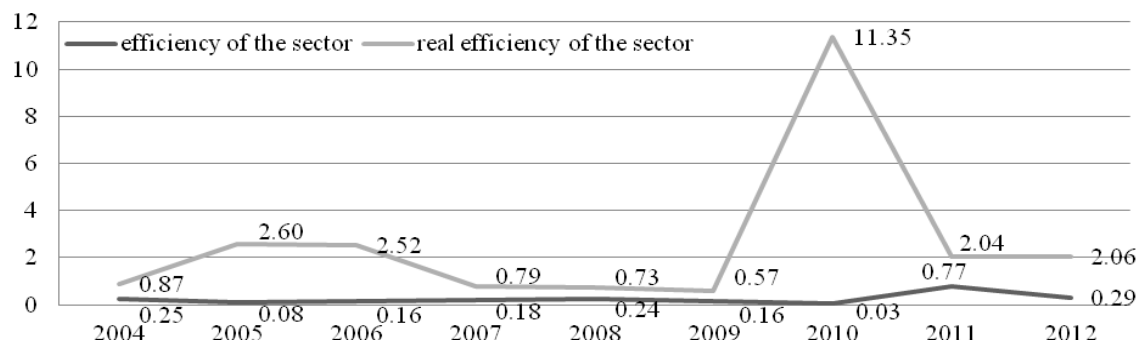
Figure 6. Efficiency of the bovine sector (2004-2012)
Source: own calculation on the basis of RIAE database, 2013

CONCLUSIONS

Based on the results of our examination, it can be asserted that even in years characterized by low output and selling prices, direct payments are able to increase efficiency significantly. The lower the result is in the denominator, the bigger the real efficiency is. In the case of sugar-beet, the sector has been operating effectively and efficiently. In the case of milk, the sector has seen some drop in the result and efficiency as well. In the case of bovine, direct payments are decisive.

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