

Some impacts of the EU accession on the new member states' agriculture

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Abstract

The main aim of the paper is to analyse the impact of the EU accession on the New Member States' agriculture with special regard to production, employment, farmers' income and intra-EU trade in agricultural goods on the basis of the latest statistical data of Eurostat. According to our findings, accession has provided incentives to agricultural production and to utilize natural endowments (mainly agricultural land); however, agricultural employment decrease could not be halted. Nevertheless, the economic situation of the farmers improved due to increasing incomes. Though the enlarged EU provided markets for the NMS agricultural products, the competition on their domestic markets increased significantly, resulting in massive import penetration. Consequently, most of the NMS agricultural trade balance deteriorated considerably. Concerning future prospects, it highly depends on the reformulation of the Common Agricultural Policy, the new budget of the EU and the domestic economic and agricultural situation of the NMS.

Keywords: EU accession, NMS agriculture, farmers' income, intra-EU agricultural trade

JEL Classification: Q10, Q18

1. Introduction

Though, in historical terms, only some years have passed since the first Eastern enlargement of 2004, let alone the second one in 2007, it might be instructive to draw the preliminary balance of accession. Especially in the case of agriculture which was one of the most hotly debated and negotiated part of the accession. The main aim of this article is to reveal the impact of the EU accession on the 12 new member states' (hereinafter NMS-12) agriculture with due regard to production, farmers' income and external trade in agricultural

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goods. The topic is all the more current as the Common Agricultural Policy of the EU is going to be reformed in the coming years. In the course of reformulating the CAP the interests and concerns of the NMS should also be taken into consideration.

2. The agriculture of the NMS in the EU

As in most of the NMS, agriculture is an important sector of the economy and therefore agricultural accession was a great challenge both for the EU and the acceding countries. At the moment of accession the NMS' agricultural land equalled 55 million hectares and consequently, accession increased the EU's total agricultural land by 40%. As the agricultural potential of the newly acceded countries have not been fully utilised and their productivity is much lower than the EU-15 average, their joining increased the EU's agricultural production by only 10-20% for most products. However, the greatest burden of accession derived from the high number of farmers in the newly acceded countries: "...a further 7 million farmers have been added to the EU's existing farming population of 6 million of the former 15 Member States."¹ Not to speak of the fact that most of the NMS are less urbanised than the old member states, 34% of the NMS' population lives in rural areas where unemployment rates are generally higher, job opportunities and incomes are lower.

It derives from the above mentioned facts that the NMS had high expectations concerning EU accession. They expected:

- free and unlimited access to the enlarged EU single market of 500 million,
- reliance on relatively stable and high agricultural prices,
- benefit from the intervention and the export refund systems of the Common Agricultural Policy,
- access to direct payments and various rural development measures.

However, they were aware that the old member states would also like to benefit from accession mainly in the form of the further opening up NMS' markets. As the NMS could not enjoy totally the benefits of the Common Agricultural Policy from the very first day of accession, especially in the case of direct payments, a significant difference remained between the old and the new member states' agricultural subsidy level. As this gap was accompanied by the high productivity difference, the competitive edge of the old member states has been reserved.

¹New Member States, new challenges..., <http://ec.europa.eu/agriculture/capexplained/challenge/index>, accessed on 30/08/2011.

3. Agricultural production performance

The first issue to be analysed is whether agricultural production has increased after accession. As the NBS' agricultural production is dominated by **crop production** to a degree of 58.5% of total agricultural goods output² due to the high (almost 70% share) percent of arable land, we start our analysis with crop production (See Table 1).

Table 1. Crop output

Production value at basic price (million EUR)

| geo/time | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| EU-27 | 168855.0 | 174359.7 | 173798.7 | 176310.7 | 189092.6 | 169479.3 | 168625.3 | 192177.7 | 201163.8 | 173473.5 | 187428.5 |
| Bulgaria | 1304.7 | 1515.4 | 1667.6 | 1628.8 | 1762.7 | 1627.5 | 1757.8 | 1565.8 | 2489.5 | 2012.6 | 2039.8 |
| Czech Republic | 1397.9 | 1623.9 | 1653.1 | 1379.4 | 1975.8 | 1677.6 | 1746.0 | 2391.5 | 2505.8 | 1931.1 | 2162.4 |
| Estonia | 150.0 | 156.7 | 182.8 | 165.5 | 167.3 | 204.5 | 211.0 | 336.2 | 249.7 | 226.5 | 255.0 |
| Cyprus | 0.0 | 0.0 | 0.0 | 288.0 | 312.7 | 326.0 | 320.6 | 327.4 | 304.5 | 312.0 | 331.1 |
| Latvia | 198.7 | 226.6 | 257.5 | 264.7 | 308.2 | 346.0 | 384.8 | 525.3 | 529.7 | 434.9 | 470.4 |
| Lithuania | 634.4 | 572.0 | 625.3 | 676.9 | 681.8 | 792.1 | 703.3 | 1147.0 | 1238.4 | 1004.7 | 1017.2 |
| Hungary | 2404.1 | 2679.4 | 2827.7 | 2772.5 | 3804.5 | 3315.9 | 3333.0 | 3896.1 | 4655.5 | 3232.7 | 3799.5 |
| Malta | 48.8 | 52.0 | 50.5 | 43.2 | 44.5 | 43.6 | 45.3 | 48.0 | 52.7 | 51.3 | 50.1 |
| Poland | 6059.3 | 7163.7 | 6394.7 | 5758.0 | 7399.7 | 6973.7 | 7810.7 | 10399.2 | 11539.0 | 8643.8 | 9800.7 |
| Romania | 4974.7 | 6722.7 | 5783.2 | 6902.4 | 9404.4 | 7721.6 | 8885.1 | 8612.0 | 12421.2 | 8428.4 | 10154.6 |
| Slovenia | 464.0 | 431.1 | 534.4 | 431.4 | 572.2 | 530.8 | 517.1 | 598.9 | 600.1 | 547.2 | 576.2 |
| Slovakia | 462.2 | 665.3 | 660.0 | 629.7 | 954.3 | 752.7 | 792.9 | 951.3 | 1108.5 | 850.6 | 929.7 |
| NBS-12 | 16700.9 | 21808.8 | 20636.8 | 20940.4 | 27388.1 | 24311.9 | 26507.9 | 30798.5 | 37694.6 | 27675.9 | 31586.6 |
| Per cent | 9.9 | 12.5 | 11.9 | 11.9 | 14.5 | 14.3 | 15.7 | 16.0 | 18.7 | 16.0 | 16.9 |

Source: own composition and calculations based on Eurostat data

As it can be seen from the above data the value of crop production has a tendency to grow in the NMS. There was a significant increase in each New Member States in the first year of accession (2004, and 2007 respectively), followed by some fluctuations afterwards. As a consequence, the share of the NMS in the EU-27 crop production increased from around 10% in 2000 to almost 17% in 2010, meaning that crop production in the NMS increased at a higher speed in value terms than crop production in the EU-15. The main factors behind the increasing tendency are the price rises (see Table 2), and, in some cases the volume increase due to higher yields³ and productivity. At the same time, the utilised agricultural area in the NMS has decreased by 3%, from 54.3

² See: Farming structure and accounts at regional level – Statistics explained ...http://epp.eurostat.ec.europa.eu/statistics_explained/index.php?title=Farming_structure, accessed on 30 August 2011.

³ In the case of cereals the Polish and Hungarian yields increased by 8% and 35%, respectively from 2000-2003 to 2004-2007 (Csáki-Jámbor, 2009).

million hectares in 2003 to 52.8 million hectares in 2007, while the share of arable land has increased by 2 percentage points, from 67% in 2003 to 69% in 2007.⁴ Not only land input decreased in the NMS, but labour input as well (see below) leading to increasing per hectare and per worker output.

As both land and labour inputs decreased and value of production increased, consequently the per hectare and the per worker agricultural output increased, meaning a slight productivity growth. However, the difference between the EU-15 and NMS-12 productivity level remained significant: in 2007 the agricultural gross value added per annual work unit (AWU) in the EU-15 was 4-4.5 times higher than in the NMS (Csáki-Jámbor, 2009).

Table 2. Producer price indices, crop products (2000 = 100)

| geo\time | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| EU-27 | 101.8 | 98.9 | 100.0 | 105.7 | 106.7 | 114.7 | 113.0 | 107.7 | 116.6 | 133.1 | 136.1 |
| Bulgaria | 94.4 | 90.6 | 100.0 | 103.7 | 92.5 | 107.8 | 112.2 | 93.0 | 103.8 | 148.3 | 153.3 |
| Czech Republic | 104.5 | 88.7 | 100.0 | 115.6 | 107.1 | 106.2 | 115.4 | 92.6 | 99.1 | 131.6 | 147.2 |
| Estonia | : | : | 100.0 | : | : | : | 125.0 | 121.2 | 133.7 | 163.7 | 176.4 |
| Cyprus | : | : | 100.0 | : | : | : | 112.8 | 113.0 | 138.5 | 146.5 | 171.0 |
| Latvia | 106.6 | 104.8 | 100.0 | 102.1 | 111.6 | 106.4 | 122.8 | 133.4 | 143.6 | 197.6 | 199.2 |
| Lithuania | 102.1 | 105.1 | 100.0 | 113.3 | 127.5 | 114.8 | 106.8 | 120.5 | 157.8 | 197.6 | 187.2 |
| Hungary | 69.9 | 76.5 | 100.0 | 91.3 | 94.6 | 113.7 | 98.0 | 97.4 | 114.9 | 161.4 | 137.3 |
| Malta | : | : | 100.0 | 121.8 | 125.2 | 119.1 | 96.9 | 98.7 | 99.3 | 115.0 | 111.3 |
| Poland | 95.4 | 92.2 | 100.0 | 97.1 | 96.5 | 103.6 | 102.3 | 99.5 | 117.5 | 141.9 | 131.1 |
| Romania | 49.6 | 66.3 | 100.0 | 119.7 | 154.9 | 182.8 | 232.9 | 188.4 | 233.9 | 309.4 | 334.5 |
| Slovenia | 100.3 | 94.9 | 100.0 | 109.6 | 114.5 | 126.2 | 114.1 | 115.6 | 127.0 | 150.4 | 169.5 |
| Slovakia | 96.5 | 93.3 | 100.0 | 111.7 | 109.8 | 108.8 | 115.1 | 102.7 | 103.8 | 128.7 | 130.7 |

Source: own compilation based on Eurostat data

As far as **animal output** is concerned, its value varied significantly (see Table 3). Generally there was an increase in the year of accession and a trend to decline starting in 2008. As a consequence, the share of the NMS in the EU-27 animal output increased slightly, by 3 percentage point only from 12% in 2000 to around 15% in 2010. The best position has been gained by Poland with a relatively steady animal output value growth, while the worst situation has occurred in Hungary. In the case of Poland, the animal output value increased by 16% in 2004 compared to the previous year, and by almost 42% between 2004 and 2010. In contrast, in the case of Hungary, animal output value decreased by almost 6% in the first year of accession and the value in 2010 was lower than in the years prior to accession (2001, 2002, 2003). The main factors behind the

⁴ See Csáki-Jámbor, 2009.

above changes are price increases (see table 4) and the changes in animal output volume due to livestock and productivity changes.

Table 3. Animal output

Production value at basic price (million EUR)

| geo\time | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| EU-27 | 132809.1 | 142587.1 | 135364.5 | 132138.8 | 135733.3 | 135797.7 | 135515.7 | 142277.0 | 151453.5 | 134996.9 | 140677.9 |
| Bulgaria | 1448.2 | 1530.5 | 1186.9 | 1018.7 | 1087.9 | 1129.5 | 1109.4 | 1246.5 | 1375.2 | 1131.6 | 1184.1 |
| Czech Republic | 1420.0 | 1579.6 | 1568.6 | 1456.3 | 1532.4 | 1601.6 | 1686.4 | 1770.2 | 2101.2 | 1598.2 | 1643.1 |
| Estonia | 189.1 | 242.7 | 216.7 | 211.0 | 268.7 | 278.0 | 295.8 | 300.9 | 342.4 | 280.7 | 318.1 |
| Cyprus | 0.0 | 0.0 | 0.0 | 292.5 | 306.1 | 301.2 | 284.0 | 279.4 | 297.8 | 321.5 | 331.7 |
| Latvia | 227.9 | 286.6 | 260.9 | 228.0 | 275.2 | 301.7 | 350.0 | 396.2 | 404.0 | 346.1 | 369.2 |
| Lithuania | 486.5 | 563.8 | 532.8 | 515.0 | 641.3 | 750.1 | 803.6 | 820.0 | 901.5 | 687.7 | 806.2 |
| Hungary | 2089.7 | 2571.8 | 2711.2 | 2302.1 | 2169.0 | 2233.0 | 2151.1 | 2260.3 | 2563.8 | 2136.8 | 2241.5 |
| Malta | 76.6 | 79.9 | 80.7 | 76.3 | 72.7 | 71.6 | 70.5 | 71.5 | 77.7 | 72.0 | 71.0 |
| Poland | 5885.9 | 7136.8 | 6399.2 | 5499.6 | 6383.2 | 7586.1 | 7773.3 | 8965.9 | 9639.0 | 8297.6 | 9029.1 |
| Romania | 2992.7 | 3863.0 | 4201.8 | 3759.6 | 3465.4 | 4202.4 | 4207.5 | 4374.6 | 4262.0 | 4229.6 | 3855.6 |
| Slovenia | 501.6 | 535.3 | 522.9 | 512.8 | 504.7 | 515.8 | 529.6 | 509.2 | 563.8 | 484.0 | 495.3 |
| Slovakia | 772.9 | 732.9 | 808.7 | 798.7 | 763.9 | 765.5 | 780.9 | 889.5 | 1038.1 | 813.4 | 780.0 |
| NBS-12 | 16091.2 | 19123.0 | 18490.3 | 16670.4 | 17470.5 | 19736.5 | 20042.1 | 21884.0 | 23566.5 | 20399.0 | 21124.9 |
| Per cent | 12.1 | 13.4 | 13.7 | 12.6 | 12.9 | 14.5 | 14.8 | 15.4 | 15.6 | 15.1 | 15.0 |

Source: own compilation and calculation based on Eurostat data

Table 4. Producer price indices, animals and animal products (2000=100)

| geo\time | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| EU-27 | 97.1 | 92.0 | 100.0 | 107.4 | 101.5 | 101.2 | 104.1 | 105.3 | 107.7 | 111.9 | 122.2 |
| Bulgaria | 111.3 | 83.9 | 100.0 | 124.0 | 109.0 | 102.8 | 119.2 | 105.0 | 104.2 | 110.5 | 125.9 |
| Czech Republic | 103.4 | 92.7 | 100.0 | 108.5 | 96.4 | 91.4 | 96.4 | 98.2 | 94.4 | 96.0 | 100.9 |
| Estonia | : | : | 100.0 | : | : | : | 127.9 | 132.8 | 133.5 | 141.5 | 159.9 |
| Cyprus | : | : | 100.0 | : | : | : | 129.8 | 131.7 | 118.2 | 121.9 | 142.0 |
| Latvia | 107.4 | 92.5 | 100.0 | 112.6 | 103.6 | 103.6 | 124.9 | 144.5 | 149.3 | 161.7 | 178.3 |
| Lithuania | 117.9 | 105.4 | 100.0 | 116.3 | 99.3 | 87.4 | 98.5 | 111.7 | 114.2 | 127.5 | 141.4 |
| Hungary | 93.3 | 89.0 | 100.0 | 121.2 | 114.4 | 107.1 | 111.3 | 113.3 | 117.8 | 122.0 | 138.6 |
| Malta | : | : | 100.0 | 101.2 | 100.5 | 98.2 | 99.5 | 97.4 | 96.4 | 99.1 | 106.7 |
| Poland | 88.5 | 83.1 | 100.0 | 106.2 | 93.0 | 89.4 | 109.1 | 108.0 | 105.5 | 113.4 | 117.2 |
| Romania | : | : | 100.0 | 173.7 | 207.2 | 201.6 | 228.1 | 252.3 | 239.0 | 248.1 | 287.3 |
| Slovenia | 95.0 | 93.8 | 100.0 | 108.8 | 107.9 | 107.9 | 111.3 | 112.8 | 115.3 | 118.9 | 134.2 |
| Slovakia | 94.5 | 93.4 | 100.0 | 106.6 | 106.0 | 99.1 | 99.4 | 100.8 | 100.1 | 98.1 | 103.3 |

Source: own compilation based on Eurostat data

4. Agricultural employment and income

Prior to accession, one of main concerns was related to the **social consequences** of accession: whether accession would lead to decreasing rural (agricultural) **employment** and/or the better off of the farmers. Both expectations came true. According to the latest statistics of the EU (see Table 5) agricultural employment measured in annual work unit (AWU)⁵ decreased by more than one third to 5.8 million in the NMS-12 between 2000 and 2009,⁶ while real agricultural income increased by more than 60% between 2000 and 2009. In 2009, agricultural labour input represented 12.2% of the NMS active population, while the share was 17.3% in 2000. (*Agricultural labour input...*, 2011).⁷

Table 5. Agricultural employment and real agricultural income

| | Agricultural employment | | Real agricultural income per worker (%) | |
|----------------|-------------------------------|---------------|---|-----------|
| | AWU ¹⁾ (1000) 2009 | 2009/2000 (%) | 2009/2008 | 2009/2000 |
| EU-27 | 11 223 | -24,9 | -11,6 | 5,3 |
| EU-15 | 5 424 | -16,7 | -11,6 | -9,6 |
| NMS-12 | 5 799 | -31,2 | -12,5 | 61,2 |
| Bulgaria | 400 | -48,1 | -10,0 | 35,4 |
| Czech Republic | 134 | -19,0 | -17,0 | 54,4 |
| Estonia | 29 | -55,0 | -17,6 | 131,4 |
| Cyprus | 26 | -15,6 | 0,9 | -7,9 |
| Latvia | 92 | -38,2 | -14,8 | 139,6 |
| Lithuania | 147 | -21,1 | -16,4 | 69,8 |
| Hungary | 441 | -34,8 | -32,2 | 33,5 |
| Malta | 4 | -10,6 | 7,8 | 1,5 |
| Poland | 2 214 | -11,3 | -0,7 | 107,3 |
| Romania | 2 148 | -41,1 | -18,3 | 37,2 |
| Slovenia | 82 | -21,1 | -15,2 | 16,6 |
| Slovakia | 82 | -42,5 | -12,8 | 51,7 |

¹⁾ In order to take into account the part-time and seasonal work, agricultural labour is measured in annual work unit (AWU), which is the equivalent of a full-time worker engaged in agricultural activities over an entire year.

Source: Employment in the agriculture sector down by 25% between 2000 and 2009, *Eurostat, News Release*, 66/2010 – 7 May 2010, p. 3.

⁵ In order to take into account the part-time and seasonal work, agricultural labour is measured in AWU, which is the equivalent of a full-time worker engaged in agricultural activities over an entire year.

⁶ The actual number of farmers working in agriculture is higher due to the high number of self-employed and part-timers.

⁷ The respective figures for the EU-15 are 2.8, and 3.8%, respectively.

The highest agricultural employment decrease occurred in Estonia, Bulgaria, Romania and Slovakia, while the lowest occurred in Poland. It has something to do with the restructuring and/or the consolidation of farm structure. In 11 out of the 12 NMS, the number of agricultural holdings decreased significantly between 2000 and 2007⁸ due to the concentration of the holdings, while in the case of Poland their number increased by 10% between 2003 and 2007 (see Table 6) due to the consolidation of the small farm structure.⁹ Despite some structural changes, the farm structure of the NMS is still characterized by the high share of small farms: in 2007, 58% of the holdings cultivated less than 2 hectares, and 34% between 2 and 10 hectares, that is 92% of the farms are still relatively small.

Table 6. Number of agricultural holdings (1000)

| geo\time | 2000 | 2003 | 2005 | 2007 |
|----------------|-------|---------|---------|---------|
| EU-27 | : | 15021.0 | 14482.0 | 13700.4 |
| Bulgaria | : | 665.6 | 534.6 | 493.1 |
| Czech Republic | : | 45.8 | 42.3 | 39.4 |
| Estonia | : | 36.9 | 27.8 | 23.3 |
| Cyprus | : | 45.2 | 45.2 | 40.1 |
| Latvia | 140.8 | 126.6 | 128.7 | 107.8 |
| Lithuania | : | 272.1 | 253.0 | 230.3 |
| Hungary | 966.9 | 773.4 | 714.8 | 626.3 |
| Malta | : | 11.0 | 11.1 | 11.0 |
| Poland | : | 2172.2 | 2476.5 | 2391.0 |
| Romania | : | 4484.9 | 4256.2 | 3931.4 |
| Slovenia | 86.5 | 77.2 | 77.2 | 75.3 |
| Slovakia | 71.0 | 71.7 | 68.5 | 69.0 |
| NMS-12 | | 25806.6 | 25122.9 | 23745.4 |

Source: Eurostat

As far as income growth is concerned, in the case of the NBS-12 it has increased by more than 60% between 2000 and 2009 (see table 5), and by 7.2% between 2009 and 2010 (see Table 7) followed by a decrease of 12.5% in 2009 compared to 2008. The per worker income increase is due to:

- the decreasing agricultural labour input,
- the increasing output values of both crop and animal production due to production volume increase and price adjustment, and

⁸ In Hungary by 35%.

⁹ In Poland in 2007 only 0.3% of the farms cultivated more than 100 hectares, while 44% cultivated less than 2 hectares.

- EU subsidies,¹⁰ mainly direct payments and national support (top-up).

Between 2004 and 2007, the total direct payments to the 10 countries having acceded in 2004 increased from EUR 1.4 billion to EUR 1.9 billion. The highest per hectare amount was paid in the Czech Republic, Hungary and Slovenia (EUR 52-84), while the lowest in the Baltic countries (EUR 17-44).

Despite the relatively lower subsidies, the highest income growth occurred in the Baltic countries and Poland. It is interesting to note that Poland managed to reach an optimum result: the lowest agricultural employment decrease was accompanied by one of the highest income increase. This double success is due to the relatively high amount of EU support (in the form of direct payments and rural development measures) plus the consolidated structure of agricultural holdings (less out-migration from rural areas).

Table 7. Indices of Indicator A of agricultural income in the NMS-12 (2005 = 100)

| geo\time | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| EU-27 | 94.9 | 104.3 | 105.8 | 101.6 | 110.2 | 100.0 | 104.0 | 114.8 | 109.9 | 98.9 | 111.1 |
| Bulgaria | 105.1 | 118.0 | 94.7 | 88.6 | 87.4 | 100.0 | 97.5 | 98.8 | 161.2 | 125.3 | 158.7 |
| Czech Republic | 66.4 | 85.0 | 68.8 | 59.2 | 93.2 | 100.0 | 102.7 | 118.6 | 125.1 | 98.5 | 113.9 |
| Estonia | 40.5 | 53.2 | 51.6 | 57.6 | 94.8 | 100.0 | 100.4 | 142.1 | 112.1 | 94.5 | 138.2 |
| Cyprus | 95.0 | 105.9 | 107.3 | 98.7 | 96.6 | 100.0 | 90.4 | 90.2 | 85.7 | 92.3 | 92.0 |
| Latvia | 41.1 | 53.4 | 52.5 | 57.6 | 96.0 | 100.0 | 131.8 | 137.8 | 117.2 | 102.4 | 127.8 |
| Lithuania | 60.8 | 56.4 | 52.3 | 58.7 | 92.5 | 100.0 | 89.0 | 133.4 | 123.4 | 106.6 | 121.8 |
| Hungary | 75.1 | 79.3 | 62.7 | 65.4 | 99.1 | 100.0 | 106.6 | 114.3 | 153.4 | 107.2 | 123.3 |
| Malta | 78.7 | 91.2 | 90.7 | 85.9 | 82.6 | 100.0 | 97.5 | 94.5 | 90.3 | 101.0 | 114.4 |
| Poland | 61.0 | 70.2 | 63.4 | 58.5 | 110.3 | 100.0 | 110.5 | 134.9 | 108.9 | 134.7 | 145.2 |
| Romania | 66.9 | 114.2 | 106.8 | 121.2 | 175.2 | 100.0 | 99.3 | 76.8 | 114.4 | 92.4 | 89.1 |
| Slovenia | 71.5 | 62.1 | 81.9 | 64.6 | 99.5 | 100.0 | 97.4 | 109.6 | 99.1 | 86.7 | 92.8 |
| Slovakia | 82.4 | 93.7 | 88.6 | 82.9 | 107.3 | 100.0 | 122.1 | 128.9 | 143.5 | 110.5 | 115.2 |

Note: Indicator A = combines the development in net value added at factor costs (factor income) and the development in agricultural labour input.

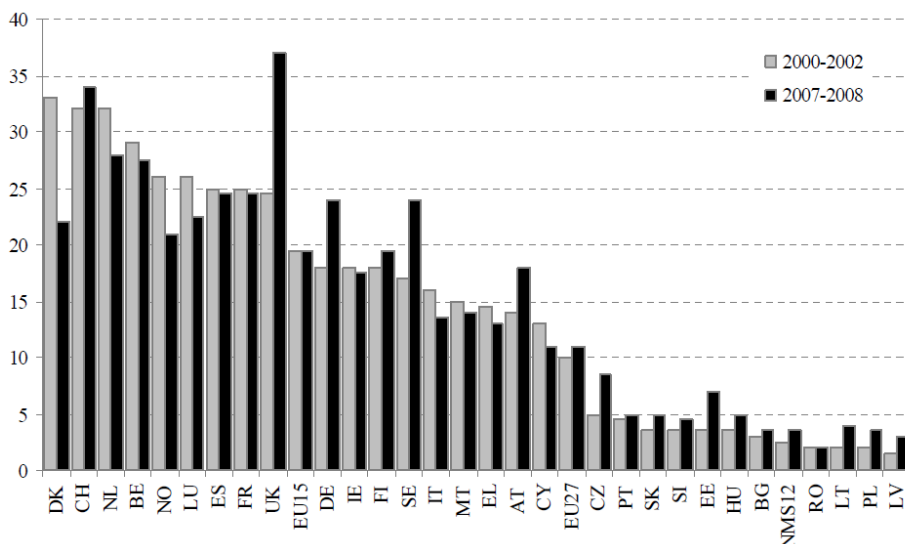
Source: own composition based on Eurostat

While the agricultural income has increased considerably in the NMS and the real factor income per annual work unit (AWU) also increased from around EUR 2000 in 2000-2002 to around EUR 3000 in 2007-2008, there is still a significant though decreasing difference between the old and new member states (see Figure 1). While the difference was 9.5 times in 2000-2002, it has decreased

¹⁰ In 2010 at the level of EU-27 EU subsidies of 55 billion euro represented 42% of the factor income.

to 6.4 times by 2007-2009 (*Agricultural labour input...*, 2011) which was to a large extent due to the decrease in labour input.

Figure 1. Factor income over labour input



Source: http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Agricultural_labour_input

5. Foreign trade in agricultural products

As it was expected, the NMS agricultural exports (SITC 0+1) to the EU market increased significantly by more than 70% between 2005 and 2009 (see table 8). However, the share of NMS in the EU-27 intra-trade has increased only slightly, by 3 percentage point, from 6.8% in 2005 to almost 10% in 2009. The biggest agricultural exporter is Poland, followed by Hungary and the Czech Republic. However, one should note that the figures in Table 8 include the agricultural exports of the NMS not only to the old member states (EU-15), but to the acceded countries as well. For instance, in the case of Hungary intra-EU27 agricultural exports increased significantly (by almost 50%) in 2007 as a consequence of Romania's joining the EU. Furthermore, the structure of agricultural exports should also be taken into consideration as, according to some sources (Csáki-Jámbor, 2009, Jámbor, 2010), it has changed towards an unfavourable direction: the share of raw materials has increased *vis-à-vis* processed goods.¹¹

¹¹ The performance in the two markets needs further research.

Table 8. NMS intra-EU agricultural trade (Dispatches/Export)

| | Value (Mio ECU/Euro) | | | | | Share of EU total by SITC (%) | | | | |
|----------------|----------------------|---------|---------|---------|---------|-------------------------------|-------|-------|-------|-------|
| | 2005 | 2006 | 2007 | 2008 | 2009 | 2005 | 2006 | 2007 | 2008 | 2009 |
| EU-27 | 187 995 | 201 229 | 223 178 | 240 825 | 227 101 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Bulgaria | 436 | 492 | 629 | 912 | 1130 | 0.2 | 0.2 | 0.3 | 0.4 | 0.5 |
| Czech Republic | 2081 | 2308 | 2835 | 3487 | 3134 | 1.1 | 1.1 | 1.3 | 1.4 | 1.4 |
| Estonia | 296 | 328 | 394 | 461 | 405 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Cyprus | 117 | 121 | 137 | 133 | 127 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Latvia | 314 | 383 | 525 | 602 | 539 | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 |
| Lithuania | 828 | 966 | 1307 | 1337 | 1327 | 0.4 | 0.5 | 0.6 | 0.6 | 0.6 |
| Hungary | 2109 | 2353 | 3462 | 3850 | 3476 | 1.1 | 1.2 | 1.6 | 1.6 | 1.5 |
| Malta | 21 | 18 | 20 | 26 | 17 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Poland | 5139 | 6347 | 7608 | 8847 | 8716 | 2.7 | 3.2 | 3.4 | 3.7 | 3.8 |
| Romania | 383 | 403 | 646 | 944 | 1332 | 0.2 | 0.2 | 0.3 | 0.4 | 0.6 |
| Slovenia | 273 | 448 | 591 | 640 | 705 | 0.1 | 0.2 | 0.3 | 0.3 | 0.3 |
| Slovakia | 983 | 1249 | 1480 | 1540 | 1520 | 0.5 | 0.6 | 0.7 | 0.6 | 0.7 |
| NMS-12 total | 12980 | 15416 | 19634 | 22779 | 22428 | 6.8 | 7.7 | 9.0 | 9.6 | 9.9 |

Source: own composition and calculations based on Eurostat data

As far as agricultural **imports** from the EU are concerned, they increased by more than 70% between 2005 and 2009 (see Table 9) and the share of the NMS in the intra-EU trade increased by 3.5 percentage point, from almost 8% to 11.4%. Consequently, the NMS are more important as markets for the EU than exporters. The main markets are Poland, Czech Republic, Hungary, Romania and Slovakia.

Table 9. NMS intra-EU agricultural trade (Arrivals/Imports)

| | Value (Mio ECU/Euro) | | | | | Share of EU total by SITC (%) | | | | |
|----------------|----------------------|---------|---------|---------|---------|-------------------------------|-------|-------|-------|-------|
| | 2005 | 2006 | 2007 | 2008 | 2009 | 2005 | 2006 | 2007 | 2008 | 2009 |
| EU-27 | 184 335 | 198 797 | 219 424 | 235 516 | 225 296 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Bulgaria | 330 | 413 | 889 | 1221 | 1190 | 0.2 | 0.2 | 0.4 | 0.5 | 0.5 |
| Czech Republic | 2796 | 3317 | 3970 | 4393 | 4273 | 1.5 | 1.7 | 1.8 | 1.9 | 1.9 |
| Estonia | 585 | 667 | 910 | 948 | 794 | 0.3 | 0.3 | 0.4 | 0.4 | 0.4 |
| Cyprus | 447 | 504 | 587 | 646 | 634 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 |
| Latvia | 646 | 812 | 1003 | 1188 | 1059 | 0.4 | 0.4 | 0.5 | 0.5 | 0.5 |
| Lithuania | 734 | 1006 | 1311 | 1762 | 1462 | 0.4 | 0.5 | 0.6 | 0.7 | 0.6 |
| Hungary | 1891 | 2172 | 2562 | 3081 | 2767 | 1.0 | 1.1 | 1.2 | 1.3 | 1.2 |
| Malta | 307 | 326 | 389 | 404 | 388 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Poland | 3695 | 4276 | 5544 | 7222 | 6665 | 2.0 | 2.2 | 2.5 | 3.1 | 3.0 |
| Romania | 991 | 1212 | 2216 | 3052 | 2722 | 0.5 | 0.6 | 1.0 | 1.3 | 1.2 |
| Slovenia | 772 | 874 | 1040 | 1211 | 1175 | 0.4 | 0.4 | 0.5 | 0.5 | 0.5 |
| Slovakia | 1492 | 1624 | 2143 | 2451 | 2482 | 0.8 | 0.8 | 1.0 | 1.0 | 1.1 |
| NMS-12 total | 14686 | 17203 | 22564 | 27579 | 25611 | 7.9 | 8.7 | 10.4 | 11.7 | 11.4 |

Source: own composition and calculations based on Eurostat

If we compare the NMS agricultural export and import performance in the case of the intra-EU 27 trade, it turns out that the agricultural trade balance of the NMS deteriorated significantly between 2005 and 2009 (see table 10), the deficit increased from 1710 million euro to 3184 million euro and only two countries, Poland and Hungary managed to reserve and slightly increase its positive agricultural trade balance. It is all the more shocking as the NMS - as a whole – have a positive agricultural trade balance in their extra-EU 27 agricultural trade.

Table 10. NMS extra – and intra-EU agricultural trade balances (Mio ECDU/Euro)

| | Extra – EU27 | | | | | Intra – EU27 | | | | |
|----------------|--------------|--------|--------|--------|--------|--------------|-------|-------|-------|-------|
| | 2005 | 2006 | 2007 | 2008 | 2009 | 2005 | 2006 | 2007 | 2008 | 2009 |
| EU-27 | -11012 | -10067 | -13581 | -12446 | -11061 | | | | | |
| Bulgaria | 92 | 0 | 85 | 252 | 43 | 105 | 76 | -260 | -309 | -60 |
| Czech Republic | -12 | 10 | -30 | -36 | -8 | -718 | -1009 | -1136 | -907 | -1139 |
| Estonia | 40 | 109 | 191 | 161 | 128 | -289 | -339 | -516 | -487 | -390 |
| Cyprus | -58 | -72 | -100 | -167 | -107 | -330 | -383 | -450 | -513 | -507 |
| Latvia | 52 | 89 | 129 | 276 | 271 | -332 | -429 | -479 | -585 | -519 |
| Lithuania | 982 | 724 | 147 | 17 | 534 | 94 | -40 | -4 | -425 | -135 |
| Hungary | 469 | 593 | 501 | 634 | 483 | 217 | 182 | 900 | 769 | 709 |
| Malta | 47 | 71 | 78 | 56 | 12 | -286 | -308 | -370 | -378 | -372 |
| Poland | 550 | 431 | 295 | 499 | 671 | 1443 | 2071 | 2064 | 1624 | 2051 |
| Romania | -709 | -778 | -551 | -74 | -211 | -607 | -809 | -1570 | -2108 | -1390 |
| Slovenia | -21 | -122 | -222 | -164 | -278 | -498 | -427 | -449 | -571 | -470 |
| Slovakia | -23 | -16 | -13 | 3 | -10 | -509 | -375 | -664 | -910 | -962 |
| NMS-12 total | 1409 | 1039 | 510 | 1457 | 1528 | -1710 | -1790 | -2934 | -4800 | -3184 |

Source: own composition and calculations based on Eurostat

6. Conclusions

As it is emphasised by the latest statistical data, the NMS accession to the EU had a diverse impact on their agriculture. Accession provided incentives to agricultural production and to utilize natural endowments (mainly agricultural land); however, agricultural employment decrease could not be halted. Nevertheless, the economic situation of the farmers improved due to increasing incomes. Though the extended EU provided markets for the NMS agricultural products, the competition on their domestic markets increased significantly, resulting in massive import penetration. Consequently, most of the NMS agricultural trade balance deteriorated considerably. In order to get a deeper

insight into the enlisted consequences of agricultural accession, further and more detailed research is needed.

As far as future prospects are concerned, it highly depends on the reformulation of the Common Agricultural Policy, the new budget of the EU and the domestic economic and agricultural situation of the NMS. (New member states ..., 2011)

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