THE PERSPECTIVES OF AGRICULTURE IN THE EUROPEAN UNION

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KEYWORDS: role of agriculture, increasing food prices, rural development policy

RUNNING HEAD: Agricultural perspectives in the EU

ABSTRACT

We have started to carry out series of investigations on the relationship between agricultural and regional development in order to see whether in those countries – where agriculture plays important role in the economy at the moment – this tendency must be maintained or not. How can agriculture contribute efficiently to the GDP growth and to the increase of the standard of living? Can/should we recommend any other development alternatives in those countries or agriculture must be further developed? We wanted to overview what tendencies can be observed in the case of agricultural product prices and whether those tendencies, i.e. the increasing prices, endanger the food supply and whether they have close relation with the appearance of alternative energy sources. We also intended to find out how we can link and harmonize the regional and rural development measures of the EU and the objectives of the CAP especially in those regions which are lagging behind. In this study we tried to summarize the major facts and conclusions of the first phase of these researches, focusing on primarily the agricultural tendencies in the world and in the EU, which can serve as a good basis for further analyses to set such aims which serve both regional and rural development.

INTRODUCTION

After 30 years of falling farm prices, recent months have seen a **sudden and steep rise in world agricultural commodity prices**. In Europe, prices for **wheat and dairy products** increased by 96% and 30% respectively between September 2006 and February 2008. However, agricultural prices are beginning to fall. From last autumn to April this year, milk prices dropped by around 30% and wheat prices fell by almost 20% form March to April this year.

There are many reasons for the rise in prices, some structural, others more temporary:

- **Increasing global demand for staple commodities and higher value-added food** – especially from emerging economies such as China, Brazil and India.
- **High energy prices** are also affecting agricultural prices, as they push up the price of inputs such as fertilizers, pesticides and diesel, as well as processing and transport costs.
- **The development of alternative market outlets** like biofuels has also had an impact. While current EU biofuel production has little impact (involving less than 1% of EU cereal production), that of the proactive policy pursued by the US has had a noticeable impact on the corn market, but even so, it has remained a relatively moderate contributor to high food prices in general.
- **Slower growth in food cereal yields in Europe and years of under-investment in agriculture in developing countries**. Adverse weather and poor harvests in major producing and exporting countries like Australia (3 droughts in 6 seasons and a 50% drop in production in 2006), North-America and Europe. The weather-related cereal supply shortfall of North-America, Europe and Australia in 2006 was more than 60 million tons, 4 times more than the increase in cereal use for ethanol in these countries.

The very rapid and dramatic increase in world agricultural prices has made its impact felt in a rather extensive list of other interrelated areas all the way to the final consumer. Yet, the causality attributed to what is already termed as the ***"food crisis"*** generates one paradox:

Why were the largest increases in agricultural prices observed in wheat and rice, i. e. two commodities where two major causes used to explain the recent prices increases (demand for biofuels and demand in China/India) have had the smallest impact?

The above observation may seem counterintuitive in the current context of the public debate, but is nonetheless indicative of the complexity in understanding the reasons behind the recent surge in commodity prices, and of assigning the appropriate weight and significance to the various factors involved. ***Demand growth in China and India explains, of course, developments in many sectors; so does the increased demand for biofuels***. ***Supply constraints from weather or from policies, exchange rates and increased speculation in commodity markets, all have also played a role in recent price boom.*** But the degree – by which each factor explains things – and the reasons – for which some developments are even harder to explain at this stage – varies a lot by commodity and by region (European Commission, 2008a).

Price hikes are a normal feature of commodity, including agricultural, markets. One common feature of price surges is that they often lead to the conclusion that they represent a new situation expected to last in the foreseeable future. Yet ex-post analysis reveals that there is no common pattern in the emergence of such price surges or their duration.

A boost in demand clearly plays a role in any price increase, but changes in consumption patterns are generally smooth in nature. As a result, demand growth could explain why in some commodities and regions prices may reverse their genetically downward long-term trend, but cannot explain why price surges occur in the span of a few months.

It is generally **on the supply side that the reasons for price surge are to be found**. An abrupt **climatic shock** that affects supply in a major producing region **widens the gap between demand and supply** of basic staple food commodities. Stocks, whose role is to bridge the gap, are consequently drawn down, and prices fall. Other times, policy changes also impact upon prices of certain commodities by limiting supply. In both cases, the resulting price surges usually short-lived, as high prices act as a natural "cure" for high prices by providing the best incentive for an increase in supply (either domestically or among competitors).

Macroeconomic shocks (such as oil price crises or exchange rate fluctuations) also impact upon the cost of food commodities, and thus their price, often regardless of the level of their supply. During the three decades after the 1973 oil shock and interrupted the post-WWII long period of declining commodity prices, all previous agricultural **price surges found their own path of adjustment towards more normal price levels mainly through a supply response**.

Is there evidence enough to suggest that the recent price surge could follow a similar path with previous ones? The answer seems uncertain because **the recent price boom is characterized by several parallel developments that simultaneously push in the same direction** – that of adding pressures to increase prices:

- Supply has been lagging behind demand in a series of agricultural markets
- Energy and fertilizer prices are increasing faster than agricultural prices
- The USD decline and/or export bans reduce supply response by major exporters
- Bio-energy policies increase demand for agricultural commodities (European Commission, 2008a).

MATERIALS AND METHODS

Looking at the tendencies of the different agricultural markets, we can observe a various picture. World ***wheat production*** has stayed **below world consumption during the last 6 years**. This development is **not due to changes in demand**, which has continued increasing at a rather constant pace (while the combined consumption of China and India even declined since 2000), but **to the significant production shortfall** in major suppliers (Australia faced 3 severe droughts in the last 6 years, but EU, Russia and Ukraine were also affected more recently). As a result, world stock declined significantly during the same period, thus contributing to the increase in prices.

World ***rice production and consumption*** **increased at a similar, slow pace** during the period of 1995-2007, and there has been no recent market shock explaining the price

hike. Population and economic growth remain strong in the main consuming countries, but while consumption is growing in some (Vietnam, Philippines, India), it is declining in others (China, Thailand).

In ***corn***, **an acceleration of *world consumption*** is evident since 2003, driven by the increased use of corn for ethanol in the US and increasing corn imports in developing countries, mainly China and Mexico. In the US, growth in non-feed use of corn jumped by 63 million mt during the last 7 years (2001-2007), while it had grown by just 10 million mt during the preceding 5 years (1995-2001), with the corresponding increase in US biofuel from corn equalling the annual corn production of Brazil. The subsequent price increase led to a **strong supply response** in the US, China, Brazil and Argentina, where production seems to be following demand growth.

Developments in corn are also linked to developments in the **oilseed complex,** with significant annual variations in the area corn/soybean rotation in the US. A 10% decline in US corn area from 2007 levels, with parallel shift to soybeans, could represent a similar part of world production (roughly 4% for each commodity), but has a completely different impact on consumption (with the corresponding 33 million mt of corn clearly impacting both feed and biofuel demand more than their equivalent 10 million mt of soybeans). This takes place at a time of strong demand for vegetable oils and palm oil, mainly for human consumption, but recently also some for biodiesel. Both ***production and consumption for soybeans***, the dominant crop in the complex, **grew very fast** during the 1995-2007 period, at a pace of around 5% annually.

In ***vegetable oils***, use for domestic rapeseed oil production for biodiesel and its impact on food oil consumption has turned the EU a net importer of rapeseed and sunflower oil. Part of the gap in the food oil demand created by biodiesel has been filled by ***palm oil***, whose **production and consumption have also increased** significantly in recent years (European Commission, 2008a).

Despite their significance for developing countries, ***sugar*** has been left out of the price hike. The developments are dominated by Brazil, where **strong production growth,** driven partly by ethanol, continues to put **downward pressure on world sugar prices** even when the EU is gradually withdrawing as an exporter.

In ***beef***, **consumption** growth in Russia, China and India **is strong**, but **production response is even stronger** in Brazil and Argentina, while other major exporters also increase their exports replacing the gap left by declining production in the EU. Thus growth in this market **does not generate major price pressures**, especially because a significant part of the growth in the cattle herd is grass fed and the overall level of world production and consumption growth is moderate at around 1.3%.

The **growth in *pork and poultry* consumption**, on the other hand, is **stronger**, particularly in China**.** Exporters have, in general, responded to this growth, keeping price increases at more moderate levels. But the price impact is felt in feed costs, which are increasing both because of the general increase in production costs and because of the additional demand for feed. In both of these meats, production has clearly kept pace with consumption, with an implied increase in feed of around 20 million mt.

The ***dairy sector*** was the first to face a significant increase in prices, driven by **strong demand growth** in a rather "thin" world market (less than 10% of dairy products are trade), and has become the first sector to witness a significant supply response. In the EU strong production recovery has led domestic prices to return towards more normal levels. The sector is also characterized by **significant structural changes**. In general, **dairy products continue their shift away from fat towards protein**. In cheese and butter, production generally follows consumption in the main producer countries, while milk power production is concentrated in developed countries and consumption in the developing ones.

Some tentative conclusions:

- **Supply (mainly weather) factors played a major role in the recent increase** of prices in food grains (namely wheat and rice) and in the dairy sector.
- **Supply response in several sectors (meats, sugar) is stronger than demand pressures**, and explains why price increases in these sectors were more moderate.
- **Demand factors explain upward price pressures** in corn and vegetable oils.
- **Bio-energy policies have an impact on the prices of corn** (ethanol use in the US) **and vegetable oil** (biodiesel use in the EU), which are accentuated by parallel effects from other factors.
- **The increase in energy, fertilizer and – in some cases – land prices, is stronger than output prices**, complicating farmers supply response. EC TH/14147 (European Commission, 2008a).

The impact of high food prices has been felt differently across the EU member countries and social strata within each country. Those with smaller household budgets will feel the greatest impact on their purchasing power. While arable farmers have benefited, livestock producers have been hit by higher feed prices. Worldwide, the implications of rising food prices for developing countries differ in the short and long term, although impacts vary from country to country, and within countries:

- **Recent violent protests and food riots in Latin-America, Africa and Asia** demonstrates the immediate and dramatic impact on the world's poorest populations. Few dispute that the net welfare effect on the global poor is negative, particularly in the short term.
- In the medium to long term, **rising prices offer new opportunities for farmers to generate income**. Given the right incentives, they could enhance the contribution of agriculture to economic growth.
- In the longer term, **rising prices could help rural communities in some developing countries out of poverty**.

Agricultural sector faces **several challenges** in 2008, such as the increased need for management of production risks, fighting climate change, more efficient management of water,

making the most of the opportunities offered by bioenergy and the preservation of biodiversity. Adjusting the CAP to meet these challenges will obviously cost money and the best way of meeting them is through **Rural Development Policy**. The agri-food sector in the EU provides 19 million jobs and global demand for food is growing on a daily basis.

The policy ensures the highest standards of environmental care in farming and forestry, as well as for related activities. Rural Development Policy helps develop the economic and social fabric of the rural areas. The **CAP and the Rural Development Policy have a vital role to play in confronting new challenges**, like climate change.

Rural Development Policy seeks to establish a coherent and sustainable framework for the future of Europe's rural areas. In its early days, Rural Development Policy was essentially sectoral (dealing mainly with agricultural structures) with limited territorial aspects. AGENDA 2000 established Rural Development Policy as the second pillar of the EU's Common Agricultural Policy and brought rural development under a single regulation to apply across the whole of the EU for the period 2000-2006. Besides agricultural restructuring, it assessed environmental concerns and the wider needs of rural areas (European Commission, 2008a).

As a coherent package of measures it had three main objectives:

- **to create a stronger agricultural and forestry sector**, the latter recognized for the first time as an integral part of the Rural Development Policy;
- **to improve the competitiveness** of rural areas;
- **to maintain the environment** and preserve Europe's rural heritage (European Commission 2007a).

In September 2005, the Council of Ministers adopted a **Rural Development Regulation for the period 2007-2013**. Rural Development is implemented through one fund, one management and control system and one type of programming. The aims of the policy have been simplified and clarified around three clearly defined economic, environmental and territorial objectives:

- improving the competitiveness of agriculture and forestry;
- improving the environment and the countryside;
- improving the quality of life in rural areas and encouraging diversification of economic activity (European Commission, 2007c)

In order to see the importance of the agricultural sector in the member states **we consider two major indicators important:**

- the contribution of agriculture to the GDP and
- its share within the employment.

In addition to these indicators, we have also tried to find correlation between the GDP per capita and the share of agriculture in the GDP to see whether agriculture plays important role rather in the poorer countries or not. In the table we indicated the maximum and minimum values of each column with bold.

Table 1. **Major indicators of the EU member states in 2006**

	Total area (km^2)	Utilized agricultural area (1000 ha)	Rate of UAA/ total area (%)	Population (1000 inhabitants)	Unemployment rate (% of working population)	Employment rate in agriculture (% of employed working population)	GDP/ inhabitant PPS	Share of agriculture in GDP (%)
EU27	**4 322 633**	**182 103**	**4,21**	**492 975**	**8,2**	**5,9**	**23 500**	**1,2**
Belgium	30 528	1 382	4,53	10 511	8,2	2,0	28 200	0,7
Bulgaria	111 002	5 190	4,68	7 719	9,0	8,1	8 600	6,2
Czech Republic	78 868	3 566	4,52	10 251	7,1	3,8	18 500	0,8
Denmark	43 098	2 699	6,26	5 427	**3,9**	3,1	29 600	1,1
Germany	357 050	16 951	4,75	**82 438**	9,8	2,3	26 900	0,6
Estonia	45 227	762	1,68	1 345	5,9	5,0	16 100	1,7
Ireland	70 295	4 307	6,13	4 209	4,4	5,7	34 200	1,9
Greece	131 957	3 254	2,47	11 125	8,9	12,0	23 000	3,1
Spain	504 878	25 359	5,02	43 758	8,5	4,8	24 700	2,3
France	**549 087**	**29 538**	5,38	62 999	9,2	3,9	26 100	1,4
Italy	301 323	14 710	4,88	58 752	6,8	4,3	24 300	1,7
Cyprus	9 251	169	1,83	766	4,6	4,3	21 700	2,3
Latvia	64 589	1 856	2,87	2 295	6,8	11,2	12 700	1,9
Lithuania	65 300	2 791	4,27	3 403	5,6	12,4	13 200	2,3
Luxemburg	2 586	129	4,99	469	4,7	1,8	**65 700**	**0,3**
Hungary	93 034	5 809	6,24	10 077	7,5	4,8	15 300	2,5
Malta	**316**	**10**	3,16	**405**	7,3	1,7	18 100	1,2
Netherlands	37 358	1 899	5,08	16 334	***3,9***	3,3	30 700	1,7
Austria	83 870	3 240	3,86	8 266	4,7	5,5	30 000	1,0
Poland	312 683	15 957	5,10	38 157	**13,8**	15,8	12 300	2,4
Portugal	91 909	3 767	4,10	10 570	7,7	11,7	17 500	1,8
Romania	238 391	14 117	5,92	21 610	7,3	**30,6**	**9 100**	**7,2**
Slovenia	20 273	491	2,42	2 003	6,0	9,6	20 700	1,5
Slovakia	49 035	1 939	3,95	5 389	13,4	4,4	15 000	1,1
Finland	338 150	2 301	**0,68**	5 256	7,7	4,7	27 500	0,5
Sweden	448 474	3 150	0,70	9 048	7,1	2,2	29 300	0,4
United Kingdom	244 101	16 761	**6,87**	60 393	5,3	**1,4**	27 800	0,4

Source: European Commission (Eurostat and Agriculture and Rural Development DG), FAO and UNSO

Looking at the table we can see that compared to the EU27 average, the values differ quite much from each other concerning the role of agriculture. We can see that there is a big difference even between the size of the countries and also the size of the utilized agricultural lands. In the 27 member states **4.21%** of the total area was used **for agricultural purposes** in 2006. The share of agricultural land is primarily based on the natural endowments, but market conditions also have great impact on it. Overall, in 2006 the **United Kingdom** had the **highest share (6.87%)** of agricultural land compared to the total area of the country and because of the poor natural conditions; **Finland** had the **lowest share with 0.68%.**

It is very interesting to see that even if the **United Kingdom** has the highest proportion agricultural land within the total area, the **rate of agricultural employment** is **the lowest (1.4%)** among all the countries and also the **share of agriculture in the GDP does not reach the EU27 average (0.4%)**. It is also very surpiring that only **10 countries out of 27 has lower agricultural share within the GDP than the EU27 average**, which means that in most countries agriculture plays a more determinant role in the GDP production than the average. **In those countries the GDP per capita is well under the 75% of the EU27 average,** so they are rather the poorer countries, eligible for the Structural Funds under the regional policy.

The first two countries with significant agricultural share are **Romania and Bulgaria**, those countries which joined the Union in the last enlargement round on 1st January 2007. **Romania was the very first from three different aspects**: it had far the highest agricultural share in the employment among the member states with **30.6%.** There were not any other countries which would have – at least – similar share as Romania. Romania had also **far the lowest GDP per capita (9100 PPS)** in the European Union, which is only about **14% of the highest value in Luxemburg and 38.7% of the EU27 average**, thus reflecting the big differences among income conditions of the member states.

Examining the contributions of agriculture to the GDP it can be seen that the **7.2% share in Romania is extremely high**. The importance of agriculture has been gradually decreasing in the past few years in the EU, but since 7.2% is still much higher than the EU average, it can be expected to remain high in the near future even after some reduction. However, it must be examined how efficient the agricultural production is considering its determining role within the economy and the fact that the GDP per capita did not increase in Romania in the last period.

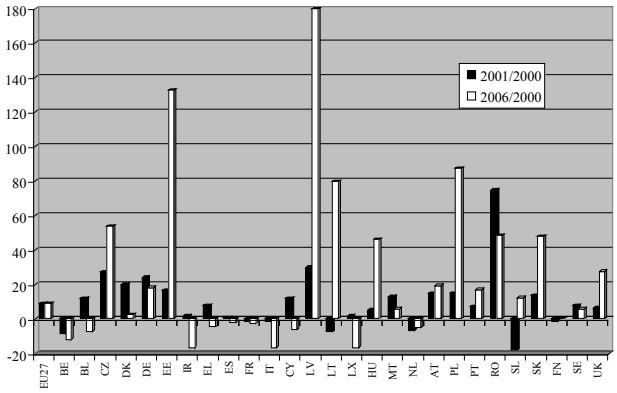

Figure 1. **Development of agricultural income in the EU member states over 2001-2006 compared to the year of 2000**

Source: Eurostat

On Figure 1 we intend to display why agriculture is not an attractive sector of the economy in many countries and why it needs to be developed so that it could provide higher income for those who work in it. Obviously, there are some countries where **huge development could be observed concerning the income originating from agricultural activity** during the period 2000-2006, e.g. **Latvia and Estonia (282.6% and 232.8% respectively)**. But the incomes in 18 countries out of 27 did not show big positive shift from 100%, meaning that in most countries low improvement has happened or there has not been any improvements at all. The biggest decrease by 2006 was in **Ireland and Italy**, where the **agricultural incomes dropped to 83.4%** of the figures in 2000.

Table 2. **Agricultural employment in the 27 member states 2001-2006**

	Agriculture (% of total civilian employment)					
	2001	2002	2003	2004	2005	2006
EU27	7,7	7,1	6,8	6,3	6,1	5,9
Belgium	1,4	1,8	1,7	2,2	2,0	2,0
Bulgaria	9,7	10,7	11,1	10,7	8,9	8,1
Czech Republic	4,9	4,9	4,5	4,4	4,0	3,8
Denmark	3,5	3,2	3,3	3,3	3,2	3,1
Germany	2,6	2,5	2,4	2,4	2,4	2,3
Estonia	6,9	6,5	6,3	5,5	5,3	5,0
Ireland	7,1	7,0	6,5	6,4	5,9	5,7
Greece	16,1	15,5	15,3	12,6	12,4	12,0
Spain	6,6	6,0	5,7	5,5	5,3	4,8
France	***4,1***	4,1	4,4	4,0	3,8	3,9
Italy	5,2	4,9	4,7	4,2	4,2	4,3

	Agriculture (% of total civilian employment)					
	2001	2002	2003	2004	2005	2006
EU27	7,7	7,1	6,8	6,3	6,1	5,9
Cyprus	4,8	5,3	5,2	5,1	4,7	4,3
Latvia	15,1	15,3	14,6	13,3	11,8	11,2
Lithuania	17,6	18,6	18,7	16,3	14,0	12,4
Luxemburg	1,5	2,0	2,7	2,0	1,7	1,8
Hungary	6,2	6,1	5,4	5,3	4,9	4,8
Malta	***2,3***	2,3	2,5	2,3	2,0	1,7
Netherlands	3,1	2,9	3,0	3,3	3,3	3,3
Austria	5,8	5,8	5,5	5,0	5,5	5,5
Poland	19,2	19,6	18,2	17,6	17,4	15,8
Portugal	13,1	12,5	12,8	12,1	11,8	11,7
Romania	44,4	37,7	37,7	32,6	32,3	30,6
Slovenia	9,9	9,7	8,4	9,8	9,1	9,6
Slovakia	6,3	6,6	6,0	5,1	4,8	4,4
Finland	5,8	5,5	5,3	5,0	4,8	4,7
Sweden	2,6	2,5	2,5	2,5	2,3	2,2
United Kingdom	1,4	1,4	1,2	1,3	1,4	1,4

Source: European Commission, Eurostat

Table 2 clearly shows the **decreasing role of agriculture** in those member states where the agricultural employment was high a few years ago. The reason for that may be that those countries have recognized the inefficiency and the low income perspectives of agriculture and they try to shift to the service sector. In such countries where the agricultural employment was around 2-4%, the values only fluctuated, but no steady drop could be observed. Thus we can consider this 2-4% share as "normal and acceptable" in Europe.

RESULTS

Based on the abovementioned factors and displayed data, **several arguments can be listed up in favour of and against the development of agriculture and its long-term role within the European economy**. Although the picture is quite colorful in the member states in this aspect, there are some – general though but important guidelines that must be followed in all the European countries in order to develop the agriculture and the related sectors. It is especially important in long terms because agriculture produces food for the population, supplies raw material to other industries, provides employment for people primarily in rural areas, helps to protect the environment etc.

Because of all these important roles, agricultural development must not be realized only with improving the conditions of production, but also with improving the human resource of the farming society. Unfortunately, the proportion of farmers with basic or

full agricultural training in those countries, where agriculture has proven significant, is very low. For example, in **Bulgaria and Romania only 5.3% and 7.4% of the farmers**, respectively, **have agricultural qualifications**, meaning that the primary reason for the inefficency of the production is the lack of necessary professional qualification, which fundamentally determines the future of the sector, especially in the increasingly tight competition.

DISCUSSION

The continuation of present CAP shows that the current policy framework, as reformed in 2003, contributes positively to fulfilling the main CAP objectives. The analysis points to areas where adjustments in current policies would lead to more optimal solutions. The screening exercise, the Health Check of CAP, has showed that the present tool kit of measures available under rural development programs appears to be sufficient to address new challenges. The best way to strengthen the role of these measures within the rural development policy appears to be the creation of mechanisms that guarantee an increased uptake by member states, as well as the provision of additional financing through progressive modulation (European Commission, 2008b).

It is well-known that agriculture is a priority in the common policies of the EU, and that fact is also proved by the funds available for agricultural and rural development purposes from the EU's budget. Based on the history and traditions as well as the natural endowments of the member states, we can state that agriculture will and must be supported in the future and adjusted to the market conditions and challenges. Since agriculture has close relations with several other economic and social sectors, its development does not only involve a sectoral improvement, but it has serious impact on the economic and social well-being of the European population.

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