

## AGRICULTURAL POLICY FOR FOOD SECURITY: THE CASE OF ROMANIA

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**Abstract:** *This paper evaluates the impact of agricultural policies in Romania on certain dimensions of food security, namely on the national agricultural markets of major products, markets integrated single European market, but also on household food consumption, analyzed both in terms of nutrition, and in terms of economic determinants of its level. An important conclusion of the analysis is that the pattern of food consumption in Romania approached nearer to the model of the European Union without being supported by agricultural production for each of the major sub-sectors, especially in the consumption of meat, being outlined such vulnerability of Romania in terms of food security.*

**Key words:** *agricultural policy, food consumption, consumer surplus*

### INTRODUCTION

With Romania's accession to the European Union (EU), the agricultural policies applied in Romania represent the result of the interaction between the Common Agricultural Policy (CAP) and the national agricultural policy measures, which complete the European actions and programs (Steriu and Otiman, 2013). The agricultural policy pattern in the EU increasingly guided the agricultural policy reform in Romania, with the initiation of the accession negotiations, which ensured the compatibility between the agricultural policy measures of the pre-accession and post-accession period, also facilitated by the three-year transition period, when the instruments used before 2007 could be maintained. However, the agricultural sector competitiveness in Romania, judged from the perspective of farm performance, is lagging behind that of the EU Old Member States.

On the other hand, the food consumption pattern in Romania is getting increasingly closer to the EU pattern (Otiman et al., 2012), without getting support from the agricultural production for each of the main sub-sectors, mainly with regard to the consumption of meat and vegetables. Thus, Romania is prone to vulnerability from the food security perspective, mainly in the context of the prolonged economic crisis of the last years (Otiman, 2011). The food security concept multidimensionality (Alexandri, 2002) targets three main directions, namely availability, accessibility and utilization of foodstuffs, each of these covering several dimensions, measured by specific indicators.

The present paper intends to evaluate the effects of the agricultural policies from Romania upon certain dimensions of the food security, upon the national agricultural markets of certain important products (integrated to the European single markets) respectively, upon the farm performance (under the influence of a functional land market inclusively), as well as upon the food consumption on households (investigated both from nutritional perspective and from the perspective of its economic determinants).

### MATERIALS AND METHODS

The adopted approach for the proposed analysis considers that the food consumption on households is indirectly influenced by the agricultural policies through the prices of agricultural and food products, even though the share of food expenditures in total consumption expenditures of households also depends on some other factors, among which the income level is an essential factor. The agricultural policies directly influence the agricultural prices through the farmer support measures, combined with the protection against the competition of products outside the country, as well as through the measures targeting the adjustment of agricultural structures, which subsidize the investments,

stimulating the introduction of new technologies and favouring the farm structure adjustment process.

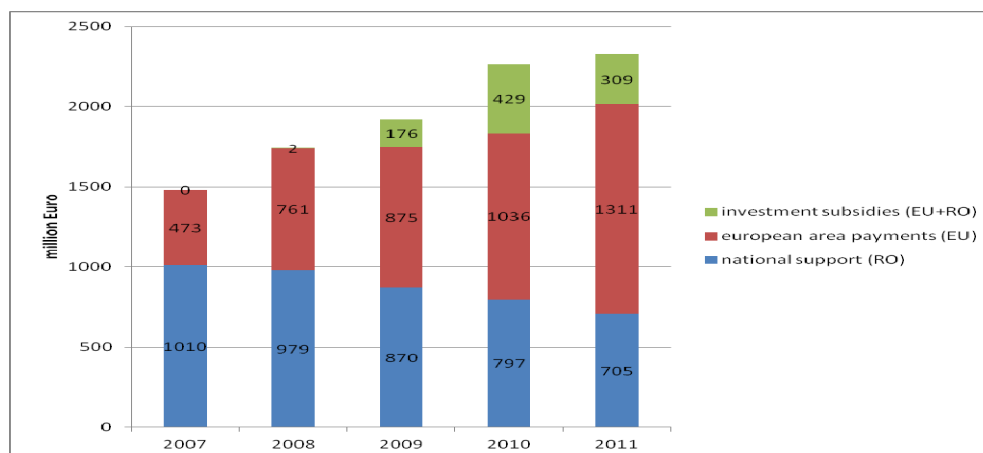
## RESULTS AND DISCUSSIONS

The interaction between the agricultural policies and food security is investigated both at the level of state and of the household and individual, as the effects of the agricultural policies upon a country's food security are multiple, direct and indirect, determining both the equilibrium of markets and the individual consumption.

Two dimensions of the interaction between the agricultural policies and the food security were investigated for Romania's case, namely: -the typology of agricultural production support and the implications of accession to the EU on the volume and structure of subsidies for agriculture; -the food consumption situation, both from the perspective of availability of foodstuffs and of their accessibility for the different household categories.

**The agricultural policies in Romania.** Seen retrospectively, throughout the transition period, until the accession to the European Union, food security represented an important objective of the agricultural policies in Romania, even though the results were sometimes contradictory (Luca and Pelinescu, 2012). The governments that succeeded after Romania joined the EU have continued to be concerned with the food security issue: the first objective of the governance program 2009-2012, in agriculture, was to ensure food security for the country's population by the increase and diversification of agricultural production, while in the governance program 2013-2016 the first direction of action in agriculture was the increase of productivity in agriculture in order to cover the population's agri-food needs.

The situation presented in Figure 1 reveals a public financial effort for the agricultural sector from Romania, from EU and national funds, worth more than 2 billion euro each year, since 2010. As it is normal (in conformity with the Common Agricultural Policy and Romania's Accession Treaty) the share of payments from EU funds increased, while the share from national funds decreased each year. The figure also presents the limited volume of investment subsidies, as compared to the support to production and income support, which partially explains the low performance of Romania's agriculture.



**Figure 1. Total volume and structure of subsidies provided to Romanian farmers per year after the accession to the EU, from EU and national funds**

The subsidies provided per total country, each year, cumulate: - the support from national budget, as presented above in detail, whose main component is represented by the

complementary national direct payments; - EU area payments, which are paid from EU funds, i.e. the payments provided under the Single Area Payment Scheme (SAPS) and the payments provided under Axis 2 of the National Rural Development Program (NRDP), the payments for agricultural land in the mountain area, those for the land in naturally less-favoured areas and those for agro-environmental measures; - subsidies for investments, representing the sums provided by selection of projects under public co-financing form, to the beneficiaries of measures under Axis 1 from NRDP (mainly investments on farms and on agro-processing units), from EU and national funds, at rates previously agreed with the European Union.

Under the conditions of a large-scale (semi-)subsistence agriculture, the general development of rural areas cannot be considered in the absence of ample investment programs, especially at farm level (large-sized, small-sized and, in particular, medium-sized). From this perspective, strengthening CAP Pillar 2, through the allocation of additional financial resources, is the only modality for Romania to reduce the gaps compared to the EU Old Member States.

**Food consumption pattern evolution in Romania.** The analysis of the evolution of food availability per capita (INS, 2012a and 2012b) reveals the gradual change of the population's consumption pattern, mainly the increase in meat consumption (pork and poultry meat), as well as in milk consumption, in the period 2000-2009. The qualitative changes of the food consumption pattern measured by the amount of proteins in diet, out of which proteins of animal origin, reveal that in Romania significant evolutions took place in the last two decades, as regards the proteins in diet, as the amount of proteins increased, mainly proteins of animal origin. The analysis of the caloric ratio of the different groups of foodstuffs reveals that although cereals and cereal products supply a consistent part of the average diet, the amount of meat and meat products in diet increased, together with the amount of milk, dairy products and eggs, indicating a correction tendency of the food consumption structure, in the sense of convergence with the pattern from the developed countries.

The analysis of the caloric ratio of different groups of foodstuffs (Tabel 1) reveals that the cereals and cereal products provide a consistent part of the energy needs, both per total households (40.4 % in 2011), and by categories of households (44.5% in the households of pensioners and 38.6% in the households of employees). Compared to 2004, the contribution of meat and meat preparations increased, as well as the contribution of milk, dairy products and eggs, indicating the correction tendency of the food consumption pattern, in the sense of convergence to the pattern in the developed countries.

**Table 1**

**Caloric contribution of the main categories of food products in the food consumption of households from Romania (% of total food consumption)**

	2004	2008	2011
<b>Cereals and cereal products</b>	44.3	41.1	40.4
<b>Meat and meat preparations</b>	9.0	10.7	10.8
<b>Milk, dairy products and eggs</b>	10.3	11.1	11.1
<b>Fats</b>	15.6	14.8	14.9
<b>Vegetables, potatoes and beans</b>	8.5	7.9	8.2
<b>Fruit (melons incl.)</b>	2.2	2.9	3.0
<b>Sugar, confectionery, chocolate</b>	6.9	7.7	6.3

Source: National Institut of Statistics

A complementary remark to those mentioned above refers to the caloric contribution of the different groups of foodstuffs by residence areas. Thus, it was noticed that in the

urban area the caloric contribution is higher in the case of meat, fish, cheese, fats, fruit, vegetables and sugar, while in the rural area it is the cereals, milk, beans and other legumes that have higher contributions. Average daily food consumption expressed in calories differs depending on household size, number of children and amount of revenue. Increasing household expenditure for food in 2011, accounting for 44.9% of total consumption expenditure, mark the end of a long period with gradual diminution in the share of food in household budget. The economic growth in the period 2004-2008, on the other hand, was reflected in income and consumption, leading to a relative decrease in food consumption expenditures, i.e. a diminution of the share of these expenditures, the evolution model of developed countries.

**The welfare effects of the strong European integration of certain agricultural markets.** The period 2014-2020 will bring certain development opportunities to Romania's agriculture (OECD/FAO, 2012) in the poultry and wheat sector, but also certain threats associated to competition from the pig sector and to the reform in the milk sector, which add to certain pressures upon the maize sector (which is influenced by the livestock sector). Taking into consideration the essential importance of pork and milk production in reaching food security for the population from Romania, the respective sub-sectors have to get support, through investments, so as to be able to face competition on the European Single Market.

The welfare effects are measured as positive or negative changes of producers' and consumers' incomes (Hubbard and Thomson, 2007), owing to the modifications of agri-food prices in the period 2012-2020. The model calculates the effects upon welfare for two alternative scenarios, generically named "Fragmentation maintenance" and "Deepening of integration", comparing the effects of a stronger integration of seven important agricultural markets from Romania upon producers and consumers. The model forecasts the effects quantified in money of the differences between the equilibriums of investigated markets, in the situation when the markets from Romania maintain the present fragmentation by the year 2020, which is specific to a partial integration, compared to the situation of deeper integration, favoured by the Common Agricultural Policy and accelerated by its reform measures. The differences between mentioned two scenarios, for producers and for consumers are presented in Table 2.

**Table 2**

**The economic welfare effects of the deepening of European integration on the main agricultural markets from Romania, compared to maintaining their fragmentation (expressed in million euro)**

Product	Producer surplus	Consumer surplus	Net welfare
<b>Wheat</b>	14.06	-6.25	7.80
<b>Maize</b>	-285.61	17.25	-268.35
<b>Sugar beet</b>	-0.69	7.40	6.71
<b>Milk</b>	-379.57	350.94	-28.63
<b>Beef</b>	204.67	-130.37	74.30
<b>Pork</b>	-199.51	313.86	114.47
<b>Poultry meat</b>	368.38	-193.02	175.36
<b>Total</b>	-278.27	359.81	81.54

Source: author's calculations

In the case of grains, an uniformization of wheat prices by the year 2020, under the background of maintaining the high prices from the beginning of the decade, would mean a moderate producer surplus, the consumer loss being even lower. It results that Romania's

wheat production is relatively competitive, even though the yields are low on the average (the costs are also lower).

The maize situation is an example of existing fragmentations on the European Single Market. Starting from the high price level in Romania in the baseline period, price uniformization (in other words surmounting the fragmentation drawbacks) will lead to a significant producer loss, accompanied by consumer surplus (yet not at the same intensity, as maize does not have a very high share in the population's food consumption).

Considering the pig sector, the producer losses, determined by the Romanian price getting closer to prices from other EU countries, great pork producers, would amount to about 200 million euro in the year 2020, which imposes the development of investment programs, which should increase the sector economic performance. The pork consumer surplus in the year 2020 is even higher (over 300 million euro) and it is due to the pork imports at lower prices.

Poultry meat consumption will not exceed pork consumption by the year 2020, even though the poultry sector in Romania is a competitive sector (the producer prices in Romania were half the prices in France in the year 2011). This reveals another aspect of market fragmentation: the difficulty in marketing a competitive production. According to the scenario, the deepening of integration on this market would lead to a producer surplus of over one third of billion euro in the year 2020. Correspondingly, the consumer will have a welfare loss (evaluated at about 200 million euro), under the background of a slight diminution of poultry meat consumption.

The asymmetry between the beef market situation from Romania and the situation in other EU producers (where beef quality justifies the high producer prices) makes the results for this sector be relevant only from the perspective of the sector development potential.

Sugar beet cultivation in Romania drastically declined in the transition period, and the incentives from the post-accession period only succeeded to stabilize the situation at its previous level. The producer welfare effects, under the hypothesis of integration deepening scenario, reveals a modest loss compared to the fragmentation maintenance scenario. The consumer surplus is higher than the producer loss, and it is mainly due to the decrease of sugar price (regardless of its origin) induced by giving up the quota system.

The milk sector is also confronted with a problem of effects directly linked to the agricultural policies (Luca et al., 2010), the quota system expiring in 2015, according to certain decisions made before the present reform proposal. The milk production increase potential in EU following the milk quota removal represents a challenge for the Romanian producers, whose milk prices will diminish, under the deep integration scenario, compared to the fragmentation maintenance scenario, resulting in a producer loss around 380 million euro in the year 2020. This amount will be almost totally transferred to consumers, under the form of surplus due to lower prices.

## CONCLUSIONS

The discussion of results obtained during the analyses led to the formulation of certain policy recommendations, among which giving priority as far as possible to the programs supporting investments rather than direct payments, in the case of establishing the strategic orientations of European funds allocation. Furthermore, a most targeted allocation of funds for agricultural policy measures funded from the national budget is necessary.

The prospective evaluation of the policies targeting a stronger European integration of the Romanian markets in the case of seven main agricultural products, on the basis of a

partial equilibrium analysis model, revealed the need of support measures in the pork and cow milk sub-sectors.

#### REFERENCES

1. **ALEXANDRI, C.**, 2002. Securitate și echilibru alimentar în România, Editura Geea, București
2. **HUBBARD, C., THOMSON, K. J.**, 2007. Romania's accession to the EU: Short-term welfare effects on food consumers, in Food Policy, Volume 32, Issue 1, pp. 128–140
3. **INS**, 2012a. Bilanțuri alimentare – anul 2011, Institutul Național de Statistică, București
4. **INS**, 2012b. Bilanțuri de aprovizionare pentru principalele produse alimentare – anul 2011, Institutul Național de Statistică, București
5. **LUCA, L., ALEXANDRI, C., GRODEA, M.**, 2010. The adjustment factors of the dairy farm sub-sector in Romania, în revista Lucrări științifice - Seria Agronomie, vol. 53, nr. 1, pp. 371-376, Editura Ion Ionescu de la Brad, Iași
6. **LUCA, L., PELINESCU, E.**, 2012. Metode de evaluare a politicilor agricole și relevanța lor pentru România, în Lucrări științifice - Management agricol, seria I, vol. XIV, pp. 49-56, Editura Agroprint, Timișoara
7. **OECD/FAO**, 2012, OECD-FAO Agricultural outlook 2012, OECD Publishing, Paris
8. **OTIMAN, P.I.** (coord.), 2011. Alternativele economiei rurale a României: dezvoltarea agriculturii sau insecuritatea alimentară și deșertificare rurală severă, Editura Academiei Române, București
9. **OTIMAN, P.I., TODEROIU, F., SIMA, E.** coord., 2012. Economia agroalimentară și dezvoltarea rurală în România: implicații ale Politicii Agricole Comune asupra securității alimentare, Editura Academiei Române, București
10. **STERIU, V., OTIMAN, P.I.** (coord.), 2013. Cadrul național strategic pentru dezvoltarea durabilă a sectorului agroalimentar și a spațiului rural în perioada 2014-2020-2030, Editura Academiei Române, București