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RECENT AGRICULTURAL POLICY DEVELOPMENTS AND OPTIONS IN ROMANIA

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ABSTRACT

The drive towards trade liberalisation as evidenced by the recent conclusions of the GATT Uruguay Round has forced governments to focus on the effects of trade protection and distortions. Agricultural price policy has especially been recognised as a crucial area in which government intervention has introduced major distortions. Clarifying the impact of agricultural policy on the whole agro-chain provides policy makers with better feedback on the impact of their decisions, which is particularly important in the Central and Eastern European countries (CEECs). This paper aims to analyse the different changes in agricultural policy and trade that have occurred since 1989 in Romania and their impacts on agricultural developments in the process of the integration into the European economy. It also shows the use of a partial equilibrium multi-product model for the Romanian agriculture for the simulation of alternative policy choices.

KEYWORDS:

AGRICULTURAL POLICY, PRICE POLICY, TRADE POLICY, SIMULATION, ROMANIA

1. INTRODUCTION

The accession of the Central and Eastern European Countries to the European Union (EU) has been is the greatest challenge for Europe at the end of the 20th century. Agriculture is one of the issues strongly discussed and all changes in this area reflect the significance of the sector in the economy of the associated countries.

Many thoughts have so far focused on agriculture and the impact of enlargement on the Common Agricultural Policy (CAP). A series of reports for each CEE country have been published by the Commission analysing the role of agriculture in the economy of the CEECs, the internal market rules, the measures that should be taken in order to stop decline and stabilise income and production in the agricultural sector of the CEECs, trade strategies which should be followed for increasing the agricultural trade relationships between the EU and the CEEC's and the policy options which are more consistent with CEECs macroeconomic stabilisation.

This paper presents a description of the reform process in Romania and the main features of the agricultural policies. It also uses PSE (producer subsidy equivalent) estimates as a means of introducing policy measures in a model of agricultural policy analysis and presents the results of alternative policy simulation. Macroeconomic performance is introduced into the model through alternative assumptions.

2. RECENT DEVELOPMENTS IN ROMANIAN AGRICULTURAL POLICIES UNDER TRANSITION

Agriculture was traditionally one of the main sectors of the Romanian economy but decades of negligence and forced industrialisation have taken their toll. Currently the agricultural sector contributes to about 20 percent of GDP and this share remains relatively stable (table 1).

Table 1. Structure of GDP for the main economic branches in %

	1989	1990	1991	1992	1993	1994	1995
Agriculture	13.9	21.2	18.3	18.6	20.7	19.5	19.5
Industry	52.9	40.5	37.9	38.3	34.4	36.6	34.6
Services	26.8	24.1	32.7	35.9	31.2	31.1	25.5

Source: Statistical Yearbook, National Commission for Statistics, 1997.

Romania has fairly fertile soil. Out of 23.8 million ha of the total surface of land, about 62% consists of agricultural land, 28% forestland, (including land under forestry vegetation) and about 10% consists of roads, buildings, waters and swamps. Nine point three million ha (about 63%) out of 14.8 million ha of agricultural land are used as arable land. Pastures account for about 3.4 million ha (23% of the total agricultural land), meadows account for 1.5 million ha (10% of the total agricultural land), vineyards account for 298,400 ha (2% of the total agricultural land) and orchards for 289,000 ha (about 2% of the total agricultural land).

Prior to the demise of Romania's communist regime, there existed three types of production units in agriculture: state farms, agricultural production co-operatives and small-size private farms. The latter owned about 13% of agricultural land with an average size of about 2 ha per farm, located mainly in mountainous areas. Romania's agriculture has experienced the most rapid pace of privatisation as regards land. Co-operative ownership (co-operative farms, inter-co-operative associations, state and co-operative mixed economic associations) has been completely abolished, the farms passing into private ownership. Thus, starting 1991, Romania adopted radical land reform, envisaging both the restitution of land to former owners and the distribution of land to farm workers and rural citizens.

According to the recent institutional framework adjustments, the newly amended Land Law entered into force in October 1997 giving former landowners or their heirs the right to demand up to 50 hectares of agricultural land and up to 30 ha of forest land. A controversial element in the new Land Law permits foreign companies to buy land in Romania and it is expected to encourage foreigners to invest in Romanian agriculture. Other institutional initiatives are the introduction of land legislation that would ensure free land sales by individuals, as well as amendments to the current Land Lease Law that would remove restrictions on leasing transactions.

As far as the agricultural operational structure is concerned, at the end of 1996, about 56% of agricultural land (8.3 million ha) was owned by 3,6 million smallholders farming 2.3 ha on average. Family associations, based on family relations and formed mainly to exploit land exceeding the labour and financial capacity of the household (numbered 15807) have farmed about 10% of agricultural land (1.4 million ha). They appear however to be fragile farming organisations as most are only established at harvest time. They are also fairly poor in terms of capital goods.

Commercial agricultural companies, which are more stable organisations with their own means of production (i.e. tractors, plugs, sowing machines and storage facilities) have farmed another 12% of agricultural land (1.8 million ha). These commercial companies buy inputs and sell output on the market. On average, the size of farms operated by family associations and commercial companies were 95 hectares and 466 hectares respectively.

In 1996, state property still accounted for 14% of agricultural land (4 million ha), 17.6% of arable land and consisted of 477 crop state-owned farms and 112 animal breeding state-owned farms. The newly established state-owned enterprises are organised according to the principles of joint-stock companies in which the private farmers (those having land within the former State Agricultural Units have parts representing 25% of the total shares).

These state-owned commercial companies still represent an important sector of agriculture as they are great producers of commodities owning 70% of all fixed assets and producing about 40% of total pig and poultry output, being the main suppliers of urban areas. Furthermore they are said to promote economic development and technological progress in agriculture.

The state-owned commercial companies are also subject to privatisation. However, the privatisation of state-owned crop farms was stalled in 1996 pending clarification of land ownership issues, and eventually they were not included in the mass privatisation program. Instead, the animal breeding state-owned farms were included in the mass privatisation program but they drew little interest from the public and neither manager nor employees took full advantage of the preferential treatment granted to them under the management and employee buy-out. Therefore, out of 112 animal breeding state-owned farms, only two were privatised in 1996.

The essential problem with the ownership structure is the predominance of the peasant household (family farm) which clearly requires further consolidation in order to become the main supplier of food in Romania as in all developed European countries. For many crops, most work is done by hand, except for planting. Furthermore, the majority of farmers still possess only temporary certificates and not full legal titles to their land.

The findings of an early post reform survey, indicate that 90% of those who benefit from land privatisation and live in towns do not want to set up a farm; 80% of rural land owners do not want to take bank credits and only 1-2 % of them want to buy land. At present, land consolidation is often carried out on a voluntary basis and it appears extremely important to facilitate the conditions for farm restructuring via land market liberalisation and long-term effective land leasing.

A very restrictive legal framework on land transactions has prevented the development of a land market and has put a freeze on farming structure since the land reform of 1991. According to the Land Law of 1991, land transaction is legal only if they are processed through a Rural Development and Planning Agency (RDPA) with pre-emotion rights. The tasks of such an agency should include land consolidation and the creation of model farms to be sold to young farmers on credit of preferential rates. Although there was some debate in 1996 over a draft RDPA, no new law was passed and no agency was established. Consequently, land sales remained, de facto, illegal in 1996 and most land sales took place on an informal basis.

Part-time farming is important in Romania. According to the latest survey (September 1996), less than 60% of the people employed in agriculture work full time. Nevertheless, part-time farming provides a temporary job to those who lost employment in other economic sectors and offers a cheaper self-food consumption (which accounts for about 55% of total income).

Another aspect of agriculture, which seems to be incompatible with the new agrarian structure, is irrigation. Taking into consideration Romania's continental climate, with frequent dry periods which last, for long duration especially throughout the spring and summer, the government has allocated significant financial resources to build large irrigation projects. The large-scale irrigation and drainage system, which can serve 5.5 million ha, is barely functioning on only one million ha due to the breaking up of former agricultural production co-operatives. Large investments in both irrigation and drainage have never paid off. The price of water is expensive because of high electricity rates. However, the government subsidises part of the cost of irrigation for those producers who sign contracts with state purchasing agencies or food processing industries. Farmers' participation in this program is nevertheless low because the cost of irrigation is still unaffordable for most producers despite the government subsidies that they are given.

Diversification of the rural economy is necessary to encourage new employment and the development of rural areas. The main problem of how to start the private business remains due to both lack of experience and finance to set-up private business. There are possible opportunities for increasing rural incomes via increasing agricultural competitiveness and improving quality and efficiency in the food-processing sector, marketing and related services in the short-term. In certain parts of Romania, especially mountainous areas and the coastal regions, there is potential for tourism, including agro-tourism.

The agricultural sector historically accounted for a large share of total employment in Romania, averaging 75% in 1950 and about one-third in the first five years of the transition period. However, as of 1995 the agricultural employment started to decrease. As a result, in 1996, agriculture's share in total employment was 32% (35.6% in 1994, and 33.6% in 1995). The disproportionate share of employment with respect to the agricultural contribution to the gross value added formation is a clear indication of the sector's low labour productivity. The percentage of the population living in rural areas has nevertheless declined much less dramatically, from 77% to about 50%, further indicating a strong rural feature of the Romanian society.

A sustained decline in crop and animal production occurred in the early 1990s mainly owing to the inherited weaknesses of the agricultural economy, falling domestic and external demand, the extreme organisational dislocation due to the overall implementation of the economic reform programs and adverse weather conditions. Moreover, the livestock sector was hit particularly hard, with livestock number falling to pre-war levels, causing a sharp decline in the production of meat, and other livestock products. Increased government aid consisting namely of subsidised producers' credit, seed and fertilisers along with substantial direct price and income support, has reinforced the effect of privatisation in bringing about a recovery which has also remained fragile since 1993. However, agricultural output still continues to be held back because of the prolonged preservation of state monopolies in agricultural input supply, marketing and processing.

Grains (wheat, maize and barley) and livestock (pork, beef and poultry meat) are the most important activities of the agricultural sector which has been steadily recovering since 1994. Thus, Romania's 1994 grain production increased by 2.7 million tons over the previous year to 18.2 million tons. In 1995, wheat output amounted to 7.4 million tons and maize to 9.7 million tons. This ample supply, together with large carry over stocks, have significantly depressed domestic prices. The government announced that Romania had an exportable surplus during the 1995/1996 marketing season of 2.0-2.5 million tons of wheat and 2 million tons of maize. However, a fact that limits exports, is the loading capacity at Romanian ports.

According to the European Commission opinion formulated in the 1997 report "Central & East

European Agriculture and the European Union", recovery is unlikely to be significant in the period leading up to the year 2000. Given the problems that affect inputs and demand arising from the general economic disarray, an increase in economic growth of 2-3% a year would be surprising. Demand for agricultural products is likely to remain stagnant. Assuming no major growth in the industrial sector, agriculture is likely to remain an employment buffer. This surplus of labour can be expected to remain an important obstacle to the modernisation of the agricultural economy.

The privatisation and the restructuring of service companies have been also relatively slow, thereby small-scale farmers lack services developed towards their needs. The main inputs consisting of fertilisers and pesticides were used on 20% of the arable land (especially for cereals and oilseeds crops). This land comprised the best soils and mostly belonged to the state farms. The remaining 80% of the arable land is cultivated by private farmers with a low level of inputs and with special structural constraints of small and scattered plots located mainly in hilly areas with difficult access to mechanisation (both physically and economically). Therefore, the consumption of fertilisers sharply declined since the transformation process started in agriculture, but more recent evidence has shown certain recovery. However, the use of fertilisers is about half of that prior to transition.

Other agricultural services have not yet adjusted to the new agrarian structure. This constitutes a serious obstacle to the reform process and leads to a less productive and inefficient activity as a whole. Consequently, there is a crucial need to identify feasible approaches to improve the organisation and management of all agricultural services and input supply systems on behalf of small scale farmers.

Basically, during the transition process the market for agricultural services was influenced by two main factors:

- On the supply side, as in many countries of the region, there was rather poor provision of services and lack of skills in operating under market conditions. From that point of view, there was a large margin for improvement;
- On the demand side, there was a contraction of demand caused by the low profitability of farming and decreasing farming incomes.
- It appears, therefore, that, in the case of Romania, land reform alone can not resolve the problem of creating viable farms. A favourable economic background is also necessary for the creation of efficient commercial farms.
- Small holders access to credit has been restricted mainly due to:
- high interest rates caused by high inflation rate;
- the widespread lack of title of full ownership to land;
- low profitability in agriculture;
- the unwillingness of commercial banks to land money to farmers because of the perception of high risk;
- a lack of skills in preparing and evaluating agricultural projects; and
- poorly developed systems for agricultural credit in rural area.

The option of establishing both credit co-operatives or mutual funds and specialised institutions for agricultural credit in rural areas should be carefully assessed. The option of creating special insurance systems for agricultural production activities should be envisaged.

The restructuring and privatisation of the agricultural marketing and processing entities in Romania has proceeded slowly and has not reached that level of competition necessary for it to function efficiently. Consequently, the former state-owned processing and marketing units still have monopolistic market powers. In some cases, however, the monopolies have been removed (as in the case of the horticultural sector), but new structures have not yet emerged to replace them so an unproductive vacuum exists.

Transformation from a centrally planned to a market-oriented economy has a rather serious problem: the prior establishment of certain types of co-operatives, created from the top down without the genuine participation of their members. For this reason, new governments and potential members have tended to reject co-operative enterprises. Moreover, there is still an insufficient awareness of:

- the substantial economic and social weight of cooperatives throughout the world,
- their success in adjusting to varied and hostile societal environments, and
- their contribution to the achievement of the personal objectives of millions of individuals, to their families and their communities and, thereby to national economic progress.

Consequently, the establishment of vigorous true co-operatives may eliminate economic and social problems mainly found in rural areas. In the present transition phase, a great deal of emphasis has been placed on the settlement of property rights. Yet, the privatisation of land by itself will not be sufficient to create a dynamic and profitable agricultural sector. As small-scale farms confront harsh market conditions, they have to arrange to buy fertilisers and seeds, gain access to machinery, process their produce, and find markets. The transition years represent an opportunity for farmers to build true members-oriented co-operatives to meet their needs, and may be key institutions in the revitalisation of agriculture and the development of rural areas. Furthermore, they may play a vital role in the successful economic transformation. Farmers should be encouraged to organise themselves into marketing co-operatives and, wherever feasible, to establish co-operative processing units in rural areas.

The foreign trade of the centrally planned economies was state monopolies directed by the Ministry of Foreign Trade and conducted through central agencies known as "foreign trade corporations". Thus, trade flows were integrated within the general scheme of "scientific socialist centralised planning" requirements, irrespective of the market prices which were artificially determined and politically administered. The limited foreign trade that occurred was not permitted to provide suggestions for improvement of the relative prices. Commodities which Romania exported profitably were taxed into Export Equalisation Funds which were used to cover the losses of those where the domestic costs (procurement and trade related costs) were above the export revenues.

The pattern of foreign trade within Eastern Europe was strongly influenced by the network of trading relationships within the Council for Mutual Economic Assistance (CMEA or COMECON), a kind of "Common Market" set up by Stalin in 1949, designed to establish trade flows among the member countries, under the circumstances of an intensive and forced industrialisation process. Trade with Western countries decreased more and more during the time due to the gap between their different technological and selling conditions. Also, as shown in the literature, the protectionism policies promoted by the EC (referring to import quotas, especially) represented a barrier that must be taken into consideration in an objective analysis of the evolution of the East-West economic bilateral trade flows.

In recent years, the Romanian trade performance of the agricultural sector has been adversely affected by several factors. The 1992 drought explains a significant part of that year's production decline. As a consequence, instead of exporting its standard products, Romania had to resort to emergency imports of wheat and milk products. But, several government policies have intensified the problems in agriculture, caused reductions in production and, therefore, in exports.

The most important of these government policies concerns the overvaluation of the lei and restrictions to access of foreign exchange. Of course, the exchange rate regime affects all sectors in the economy, but since agriculture has a substantial promise for exports, the exchange rate regime is particularly important for imports of agricultural inputs which are vital to possible expansions in agricultural exports. Another policy that has serious adverse effects on agriculture embraces the restrictions on exports, specifically the export bans that exist on several specific agricultural products (wheat and maize) and the export quotas that apply to other products (livestock and meat products).

On the other hand, there are two trade policy areas where considerable progress has been achieved. The first area is the relaxation of controls on companies which wish to import and export. There has been a huge response to this important policy change, as the number and relative importance of new private enterprises has greatly expanded. The second area is the import regime that applies to agriculture and all other products. Import tariffs are the only trade measures used to restrain imports, and the most favoured nation (MFN) tariff rates for agricultural and food products are relatively uniform. So far, import quotas have been shunned, and this is a highly positive development. Foreign trade policy could be a main key in this period of transition, providing proper information about prices of agricultural products. Also, to avoid the distortions, domestic prices should be closely linked to world market prices.

If at least some of these demand factors become less strict in the medium term, there will be substantial export market possibilities. In the opinion of experienced Romanian traders, there are large export possibilities in the former Soviet Union and the Middle-east. Traditionally, agricultural exports and imports have played a major role in Romania. Indeed, the Romanian economy was dominated by agricultural grain exports during the latter half of the 19th century and during the inter-war period. By the beginning of the First World War, Romania was the world's fourth largest exporter of cereals and the fifth largest of wheat. This refers to the country's borders in the late 19th century which do not correspond to the current borders (it excludes Transylvania). Agricultural trade continued to have an important role in the Romanian economy after the Second World War, but with some significant changes. The first change was the reorientation of the economy due to industrialisation programs. The second change was in the inter-country pattern of agricultural trade. In the 19th century and especially in the inter-war period, Romania's major agricultural markets were in Western Europe. Only very few exports went to the Soviet Union. After the Second World War and the establishment of the COMECON, a significant volume of agricultural trade took place with the Soviet Union. Another change was a diversification of agricultural exports and a reduction of the role of cereals.

Although there are questions about the exactness of Romanian agricultural data, it appears that post-war agricultural exports rose to a maximum during the 1970s and thereafter declined. Table 2 shows that for most agricultural products export volumes increased in the 1970s over the 1960s, and then declined in the 1980s. These are based on data from the Romanian Statistical Yearbooks, but, based on other data sources, for example, Gencaga (1994, p.3), total agricultural exports were USD 1.4 billion in 1980 and declined to USD 534 million in 1989 (table 2).

Romania's current foreign trade policy has as its major aims the country's integration into Western markets. Romania is an associate member of the European Union (EU) and the European Free Trade Association (EFTA). To expand trade relations with other transition economy countries, Romania also joined the Central European Free Trade Association (CEFTA) effective June, 1997.

Table 2. Agricultural commodity exports of Romania, in million US dollars

	1986	1987	1988	1989
Seeds	32.1	22.1	22.1	16.1
Live animals	20.8	22.6	6.8	6.2
Cereals	35.4	61.9	28.8	47.3
Livestock products	344.4	313.0	246.8	190.2
Fresh & frozen fish	1.6	16.2	6.7	2.6
Fruits & vegetables	167.3	141.3	144.3	118.0
Sugar	5.9	22.0	42.1	61.8
Beverages & tobacco products	62.5	43.0	42.6	71.4
Others	50.1	84.9	64.4	20.4
Total	720.1	727.0	604.6	534.5

Source: Gencaga, 1994

Trade relations with the United States (US) have been strengthened by the US–Romanian trade agreement (1993), the bilateral investment treaty (1994), and the August 1996 granting of unconditional MFN treatment. In 1996, the United States ranked sixth in Romanian imports (after Germany, Italy, Russia, France and Korea) and eighth in Romanian exports (after Germany, Italy, France, Turkey, Holland, Egypt and the United Kingdom).

As a result of a relatively good performance in the agricultural sector, starting from 1995, some surpluses were left for exports, which resulted in a fall in the country's trade deficit from US$375 million to US$81 million in 1996. Exports increased by 27%, mainly due to the export growth of cereals, beverages and wine. Prior to 1995 grain exports were negligible but in 1995 and 1996 grain accounted for 26.2% and 41.6% respectively of total agricultural and food exports and became the most important group in agricultural exports. In 1996, other exports included live animals and meat products (mainly pork and sheep), and edible oils. Together, all these products accounted for three-quarters of all agricultural and food products. Imports decreased by 15%, the main imports consisting of sugar (which account for 18.1% of all food and agricultural imports), alcoholic beverages, tobacco, oil cakes and animal feed.

Some changes occurred in agricultural trade flows recently. The export share going to OECD, especially in the EU countries, decreased substantially, whilst the share of CEECs and NIS countries in Romania's agricultural exports increased. By contrast, the share of agricultural imports from OECD countries increased, and two-thirds of them came from the EU countries. Imports from CEEC and NIS countries declined and the negative balance of Romania's agricultural trade, in 1995 turned into a surplus.

Free trade agreements between Romania and Czech and Slovak Republics came into force in January 1995. In April 1997, Romania signed all bilateral agreements as well as the CEFTA agreement. In 1996, Romania started to negotiate a free trade agreement with Turkey. Romania is a founding member of the World Trade Organisation (WTO) as a result of the Uruguay Round negotiations. The government requested a six-month delay in implementing its WTO commitments in order to change the import duties for agricultural products. While the new duties are in line with commitments made by Romania during the Uruguay Round negotiations, they are clearly aimed at providing import protection to domestic producers against foreign competition. Since the prices of Romanian food products are in general higher compared to similar imported products, the new duties will encourage inefficiency of many local food and agricultural producers and will drive up the prices paid by consumers. This will undoubtedly slow down any advancement of the Romanian agricultural sector toward a free market.

Agriculture is a sector which utilises a great proportion of bank credits and other financial schemes available in the Romanian economy. In 1993, the government introduced new policies to reinvigorate the Romanian agricultural sector, trying to increase output to ensure domestic supply, and also to induce some surplus for export. Some of the measures used to achieve this are low interest credits, tax and interest rate exemptions, advance payment for production contracted for between producers and commercial companies, price support aimed at encouraging production, provision of machinery, fertiliser, seeds and fuel.

Owners of agricultural land in 1993 were still exempt from tax, as it was the last of a three-year tax-free period, which began in 1991. Various preferential loans, in 1993, worth a total of 144 billion lei (about USD 182.3 million), were made available in order to encourage agricultural production. These were usually given through the Agricultural Bank and they included: a) 119 billion lei (about USD 150.6 million) from the reserves of the National Bank of Romania at an interest rate of 15 percent (the non-subsidised rate was between 50-60 percent) to be used as short-term credits for agricultural producers. This was to assist in the 1993 spring and summer crop production and to be repaid after the harvest and sale of these crops; b) 15 billion lei (USD 19.0 million) of credits at an interest rate of 15 percent for the purchase of domestically produced agricultural machinery. Repayment is to be made in cash or kind over a five year period; c) 10 billion lei (USD 12.6 million) at an interest rate of 15 percent for the purchase of fodder in order to consolidate some agricultural units for pig and poultry breeding and fattening. In 1994, a new law provided for continued financial assistance to the agricultural sector. Also, the government planned to provide interest rate subsidies on credit obtained for production and investment purposes and facilitate a variety of short and long-term loans through the banks with special low interest rates and conditions attached.

Reportedly, 88 billion lei (USD 11.4 million) was invested in agriculture in 1993, partly from the state budget, but largely from private sources. State budget financed investments were used for irrigation and drainage work, environmental purposes such as erosion prevention and veterinary and sanitary service works. Private investment has been used for modernisation and reparation of existing capacity and purchase of agricultural machinery.

In addition to Romanian government assistance to the agricultural sector, other external sources of finance have been made available to Romania. As part of the PHARE[1] (Poland and Hungary Assistance for Economic Restructuring) program with Romania, a fund of ECU 9 million was earmarked for rural credits aimed at small and medium sized companies operating with private capital (Mergos 1994). From the EC counterpart fund for Romania, 2 billion lei was allocated to the Ministry of Agriculture; and another USD 70 million was made available from the International Bank for Reconstruction and Development (BIRD) and European Bank for Reconstruction and Development (EBRD) for restructuring enterprise units involved in the privatisation programme.

Huge transfers were provided to the agricultural sector (especially to the state- owned sector) through so-called "directed credits". Several governmental decrees and laws obliged the National Bank of Romania (NBR) to make direct agricultural credit available for financing spring work, harvest costs, the purchase of agricultural products and storage costs. Although the private sector was encouraged to participate, about 70% of the total loan money was borrowed by state-owned food processors (oil and sugar factories), storage agencies (NAAP) and state-owned farms (which account for less than 15% of total

[1] After 1992 the program was extended to other CEECs such as Albania, Bulgaria, Romania, the former Yugoslavia.

agricultural output). The main financial institution through which state financial support has been channelled was the Agricultural Bank or so-called "Banca Agricola". Generally, the preferential interest rate was fixed at 15% while the market interest rate in 1996 was between 50% and 60%. The difference between the preferential rate and the market rate was covered by a subsidy to be paid from the 1997 budget. In addition, the State Ownership Fund provided some credits at zero interest rates for investment purposes in state-owned enterprises only.

By adding up direct budget transfers (2% of GDP) to indirect budget transfers (subsidised credits channelled through "Banca agricola"), total public expenditure towards the agricultural sector grew to 4% of GDP, contributing substantially to the budget deficit and to a relaxation of monetary policy which eventually led to an increase in money supply with strong inflationary effects.

In the 1990s, the agricultural sector received substantial support in the form of price and income support and in the form of subsidised inputs and loans. Some tax relief for economic agents whose income comes mainly from farming is subject to an income tax of 25% instead of the standard 38% rate.

The price and support policies in Romania after 1989 were mostly defended on the grounds of food security, guaranteeing supplies of food to the population. The notion of food security however appears to be confused with self-sufficiency, as Romanian agricultural policies tend more towards maintaining domestic production at self-sufficiency levels as opposed to ensuring that the country has the economic capacity to secure food supplies for the population from all sources, both domestic and foreign. In principle, prices are determined by market forces in Romania, but in practice, many agro-food products are either directly or indirectly subject to government intervention. This is especially the case for "basic" products - maize, wheat, cow milk, live cattle and pigs, poultry and others - whose contract and purchase prices were guaranteed by the state in 1993. The intention behind such price intervention was to stimulate domestic agricultural production through higher prices and therefore to reduce the country's reliance on agro-food imports. However, this appears to conflict with separate policies introduced to keep the retail price of selected food products low in the interest of consumers and other policies whose aim is to restrict exports of agro-food products perceived to be in short supply. It is not clear whether these policies will be able to achieve the desired outcomes, and they could prove expensive for the state budget.

According to price liberalisation measures introduced in 1993, seventeen products and services which had their tariff and prices controlled by a special order of the Ministry of Agriculture and approved by the Ministry of Finance, were freed. The major products were kept in the previous system: wheat, maize, cattle, milk, pigs and poultry. The state also controlled retail prices of bread, milk and milk products, and meat and meat products from state-owned companies. As a measure to ensure the population's access to basic products, and especially those people whose purchasing power has fallen dramatically, wholesale and retail prices for meat, milk (except powdered), bread, oil and butter were made exempt from value-added tax (VAT). To offset this, "luxury" goods, such as refined alcohol, alcoholic drinks, cigarettes and tobacco products, were subject to additional taxes.

The population's access to food supplies, especially the population living in the cities, was further secured by the continuing existence of the State Agricultural Fund, the previous procurement system. An important part of this fund is used by specified food processing companies, most of the output of which is for domestic consumption although some is allowed to be exported. In 1992 the fund share of total Romanian agricultural output was less than 50 percent, except for sugar beets (92 percent) and sunflowers (91 percent). The majority of output was maintained by the producers and depending on the product, up to 70 percent was then sold on the free market. This implies that the free market prices and conditions are generally more attractive than those offered by the state fund. It also suggests that the sugar and oil processing industries are still highly state controlled. Additionally, if data based on the fund's activities were used to make food consumption per capita calculations, actual consumption levels would be considerably underestimated.

The Romanian government has special social security and pension schemes for male farmers who worked on the former collective and state farms for a period of 30 years (when aged 62) and female farmers who worked for a period of 25 years (when aged 57). It also has emergency financial aid for natural disasters, which affect agricultural output.

The Romanian food policy was geared to supply the urban population with a pre-determined basket of food items at prices deemed reasonable, and is still largely in place. The target food basket was dominated by livestock products, particularly meat. Meat, together with bread and potatoes, accounts for over 80% of the protein and half of the total caloric intake. Vegetables, fruits, oil and fats, and sugar are of relatively minor importance in output, consumption expenditures, and nutrient sources. The food consumption targets determined the agro-processing capacity. Together with commodities consumed without processing, these determined the target output and regional land allocation, while at the same time taking into consideration the already mentioned regional self-sufficiency. Having determined the self-sufficiency level of farm output and composition and its regional location the producer prices which provided a similar level of price incentives at the national level were derived. Cross subsidisation has compensated for the local and inter-enterprise differences in efficiency.

Producer prices were, and still largely are, based on the cost-plus principle. Both for agro-industries and primary producers, the government used this method to estimate average cost of production. A fixed profit margin was added to these calculated costs to arrive at sale prices. This method of price determination completely disregarded Romania's comparative advantage in production: commodities for which the country did not get any comparative advantage were produced, while others, in which Romania is an efficient producer were penalised by the extent of their efficiency. The principle of cost-plus formation was, from the economic point of view, in all probability more costly for the agricultural and food sector than for other sectors, since this sector was heavily affected by the past planning practices which commanded production of specific products even in regions which were not the best equipped with natural resources to produce some of the agricultural products. Regional specialisation which would have improved the efficiency in the economy was not allowed to the greatest possible extent as the planner considered self-sufficiency for some products on the county level as necessary. Hence, the sector had to adjust the regional production pattern significantly. Moreover, the sector has been widely restructured after 1989, but all the necessary changes will either be delayed or even undertaken in an incorrect way if price ratios do not signal in what direction the sector has to adjust.

During the last years, the government of Romania has maintained subsidies for four “sensitive” commodities - wheat, milk, pork and poultry - which benefited both from high farm gate administrated prices and extra price subsidies. The producer subsidies program is considered important for the consumers’ protection, because food retail prices have increased at a faster pace than wage rates and pensions. Controls over margins were applied throughout the different stages of the food chain process (storage, processing, wholesale and retail). Producers who sold their output at state administrated prices to the mandated state processors were eligible for bonuses amounting to about one-third of the fixed price. However, the state administered prices were in some cases below market prices and world prices. For instance, administered prices for wheat and milk were set at less than 90% and

60% respectively of the import prices. For these two commodities as well as for pork, a significant proportion of sales were realised at market prices outside the state purchasing system. Live poultry was sold exclusively to state processing industries.

Total direct budgetary support for agriculture accounted for 2% of GDP in 1996 and most agricultural budget expenditures consisted of:

- premiums representing 56% of total budgetary support for agriculture;
- interest subsidies, which accounted for 16% of agriculture budget expenditures;
- subsidies to cover half of the purchase price of domestic certified seeds which accounted for 6% of agricultural budget expenditures;
- free distribution of about 60-80 kg of fertilisers per hectare to grain producers who drew up contracts with the state and agreed to deliver a certain amount of their harvest (at least 40% in the case of wheat) at the administered prices. Since most of the raw materials and energy required to produce fertilisers are imported, the price of chemical fertilisers has been increasing continuously. Currently, the price of a 50 kg bag of fertiliser ranges from US$120 to US$180, depending on the type. High transportation costs are also driving the fertiliser price up;
- the financing of the public irrigation system which accounted for 7% of total budgetary support for agriculture; and
- environmental damage compensation comprising about 5% of total budgetary support for agriculture.

There is no significant budget expenditure on general services, such as research, market information or extension services. Projects for the development of information and extension systems were financed exclusively through the Phare program.

The overriding constraint to the revival of the agricultural sector in Romania is an institutional infrastructure carried over from the system of central planning. Agricultural input supply, marketing and processing are dominated by inefficient, state-owned entities, which discourage private new entrants into the market. Agricultural exports were not entirely free, and subsidies on inputs and outputs were distorting production patterns on the farms and burdening the state budget.

According to the FAO World Food Summit Follow-Up Draft Strategy for National Agricultural Development: Horizon 2010, there is a strong need for the Romanian government to formulate and implement appropriate policies for the creation of a conductive environment towards market economy and an efficient, private marketing system. Only so, agricultural productivity could be expected to follow a long-term up-trend and enable the country to provide ample domestic food supplies, become competitive in export markets and generate rising incomes for farmers.

The actual minister of agriculture conceded that Romania was facing "a prolonged crisis which started in 1990." The actual government needs to "deepen reforms to give better financial support to farmers, create market systems and ensure complete development of rural communities."

The strategic options would be to:

- promote policy adjustments in support of the transition to a market economy
- privatise a major share of the productive assets in agriculture; and
- free up markets and enable the private sector to invest, produce and trade in line with Romania's comparative advantage.

Other main ideas included in the reform programme regarding the agricultural sector are as follows:

- development of a competitive market for land transactions, including sales and land lease;
- clarification of the ownership rights;
- increasing of the ceiling for the land area that may be possessed by a physical person;
- reduction of fiscal and economic costs of storage and ensuring of food security of the country.

3. ANALYSING THE IMPACT OF AGRICULTURAL POLICY OPTIONS

Assistance to the agricultural sector has an impact on trade either directly, because it is implemented through border measures, or indirectly, because it affects levels of domestic production and consumption. The PSE shows the subsidy equivalent needed to compensate producers for termination of commodity programs, tariffs, quotas, and other supports. The concept of the PSE's has been useful in multilateral trade negotiations over time, its methodology as it has been developed by OECD does not take into account differences in input costs in domestic and world prices resulting from distortions in markets or government intervention in other sectors. But since these differences are in fact a source of welfare transfer between suppliers of inputs and agricultural producers which support them, they should be taken into account in determining the level of support to producers and transfers at the farm level.

The agricultural price policies pursued since 1990 generated a rapidly expanding system of subsidies since the difference between the cost of production and returns at mandated prices (in farm input industries, at farm level and in processing) had to be largely compensated in the form of state subsidies.

The main instruments of government support for agriculture were direct and indirect support -price subsidies and deficiency payments to producers, input subsidies and some tax concessions. The major agricultural products included in the analysis are: wheat, maize, barley and sunflower. Calculation of PSEs has been made on the basis of official and statistical published data. According to the PSE methodology, all policy measures are allocated to the following groups: direct support to producers, indirect support to producers, and market price support.

In 1992, total budgetary subsidies related to the food economy totalled more than 268 billion lei (USD 0.5 billion), of which 170 billion lei were consumer food subsidies and 97 billion lei were agricultural subsidies. Total food economy subsidies were equivalent to more than 20% of agricultural GDP and about 4.5 % of total GDP. The government expenditures on agriculture in real terms decreased if the high inflation of this period is taken into account.

The results of the PSE calculations for selected products are shown in Table 3. On average, PSEs are negative which shows that farmers' losses due to the distortions in the price system outweigh all the concessions given to them. The partial price and trade liberalisation in conjunction with decreasing real government support and other measures taken by the government had different effects on crop production. The factors underlying the changes in total PSEs are analysed on the basis of the percentage share of the components in total PSEs. The results of the component share analysis show that during the analysed period, measures taken by the government have had opposite effects on agriculture.

The direct support as shown in table 3, has an insignificant influence on net total PSE (also, the indirect support for the investigated products exerts only a small influence on PSEs). Within the period and for the investigated products, market price support is negative, which largely determines the negative results for PSEs and shows that there is a transfer of farm income to taxpayers from other sectors, or to consumers through the price and distribution systems. The rate of transfer is high. Since market price support during the observed period is negative, the price gap between domestic and world prices does not have the effect of non-support, but rather of taxation.

Table 3. PSEs for selected Products

	1991	**1992**	**1993**	**1994**	**1995**	**1996**
Wheat	-143,6	-116,4	-60,8	-59,00	-6,57	-30,35
Barley	-69,7	-44,6	-8,2	-23,69	-26,56	-65,04
Maize	-103,2	-36,2	-45,1	-13,65	-28,06	-12,55
Sunflower	-206,1	-51,0	-39,1	0,88	-96,18	-10,16
Potatoes	62,08	-30,69	-37,01	-53,50	24,85	4,65
Tobacco	-217,04	-262,85	-76,01	-22,25	-99,84	-97,59
Beef	-74,72	0,06	9,29	52,04	27,90	-1,49

In spite of the liberalising changes in agricultural policy which took place in the period analysed, PSEs for analysed products and for agriculture as a whole remained mostly negative. Nevertheless there were some small increases in percentage PSEs so that discrimination against production of the products analysed and against agriculture in general declined. Due to the large size of the components in relation to the total PSEs for all analysed products, it is difficult to determine their impact on changes in PSEs on the basis of component share analysis. It is also impossible to make any conclusions concerning the changes in the influence of the components on PSEs. Nevertheless it is obvious that the distortions of the price system during the transition period have continued to be large. The change of the impact of the components of PSEs can be determined and analysed only by decomposition of the changes in PSEs.

4. THE MODEL AND ITS IMPLEMENTATION

The model used in this paper to analyse Romania's agricultural policy and trade options is a partial equilibrium, multi-product simulation model. This model is flexible enough to accommodate government policies that affect the direction and volume of trade. A rather important characteristic of the model is the incorporation of dynamics in supply and demand responses. Dynamics are associated with the dynamic nature of the production process. Demand is a function of relative prices and income. The core of the model is made up of two elasticity matrices, a matrix of demand elasticities and a matrix of supply elasticities. The model explicitly recognises the relation between quantities demanded or supplied to changes in prices. A detailed analysis of the model structure is presented in Mergos et al. (1999) and Stoforos et al. (1999).

The implementation of the model depends heavily on the availability and the quality of data. Given the structure of the model, the following data are required: Population, Income and Inflation Rate. Data on population, per capita income and CPI are required for the base year and for the projection years. The basic assumptions for the future is that population will decrease by 1% per annum while GDP will increase by 3% p.a. and CPI will increase by 5% p.a. (1997-2002). The two matrices of demand and supply elasticities constitute the core of the model and are necessary in the implementation of the model. The elasticities are borrowed from the literature. In terms of quantities of the products, retail demand and farm level supply at the base year is required. Prices at the various market levels (farm, wholesale, retail) are determined for the base year and assumptions are made for the future.

As far as international market prices are concerned, most relevant are border prices. They usually involve cost and transportation to a port or at the border (CIF) and are denominated in a international currency such as the US$. Border prices are converted to domestic currency using the prevailing exchange rate, which is assumed to remain to its 1997 level (8015 lei/$). All taxes and subsidies are modelled using unit rates so that in effect they operate through the price system by changing the price level. The model considers tax/subsidy rates as policy measures. To determine the cost share of production inputs, information is used to establish the cost share of the main input categories thereby deriving input prices. Next, supply response in this model distinguishes yield and acreage. Land allocation to various crops is determined for the base year and for the projection period as well.

The model is disaggregated in four main product categories: a. agroindustrial crops, rice (RIC), tobacco (TOB), rapeseed (RAP), lineseed (LIN) and tomatoes (TOM), b. food crops: wheat (WHE), maize (MAI), barley (BAR), potatoes (POT), dry beans (DBN), sugarbeet (SUG) and sunflower (SUN), c. trees: grapes (GRP) and apples (APL), d. livestock products: cattle meat (CMT), pig meat (PMT), poultry meat (LMT) and cow milk (CML). As it is extremely difficult to collect all the necessary data for the implemention of the complete model, some simplifications were introduced in its original version. In fact, while price liberalisation is one of the most important factors of the economies in transition we were bound to consider the prices as exogenous in the functioning of the model to simulate the price reform in order to evaluate its impact on the real side of the agricultural sector.

Three scenarios are examined for Romanian agriculture. The first one is the baseline scenario where it is assumed that the present policies will continue in the near future, the second scenario assumes full liberalisation of prices (world prices equal domestic ones) and the third scenario is an extension of the previous one where full liberalisation is accompanied by a world price increase (2% p.a.). All simulations cover the 1997-2002 period. The results of all three scenarios are presented in Table 4.

Full liberalization along with an increase in world prices (TW) produce better results than the continuation of present policies. This applies for most of the products (except grapes, apples, dry beans, tomatoes, beef and poultry, where in the case of baseline scenario are in better position), and for most Romanian farmers. In terms of demand, Romanian consumers will be in a worse situation in full liberalization with the world price increase (except in the case of grapes) compared with the baseline (BL) and full liberalization (TL) circumstance. The best scenario for consumers is the full liberalization (TL).

Figure 1 presents wheat production under the various scenarios (BL, TL, TW). As it can be seen TW scenario presents the most important increase followed by the TL with an increase of 1.768th.ton. by the year 2002. BL scenario presents a small increase, 1.597th.ton. Figure 2 presents sunflower production under the various scenarios (BL, TL, TW). As it can be seen, TW scenario presents the most important increase followed by the TL with an increase of 288th.ton. by the year 2002. BL scenario presents a small increase, 279th.ton.

5. CONCLUSIONS

This paper presents an overview of the developments in agricultural policy in Romania under its transition to market. It further attempts to create an agricultural policy analysis model that can be used to examine the impact of alternative agricultural policy options on production, consumption and trade. The results are encouraging although substantial further work is needed before this model can provide reliable indications of policy impact. The model is particularly useful for simulating the impact of price and trade policies that are important in the prospect of further integration of Romania in the European economy and the adoption of CAP-type policies.

Table 4. Impact on Supply, Demand, and Trade in all Scenarios (2002/97)

	BL	TL	TW		BL	TL	TW
Grapes				**Rice**			
Supply	16	-6	-4	Supply	9	2	28
Demand	-16	5	3	Demand	-20	-6	-22
Trade	737	194	253	Trade	-135	-161	-132
Apples				**Tobacco**			
Supply	10	-2	-1	Supply	-9	1	28
Demand	-22	33	19	Demand	2	-19	-25
Trade	494	253	299	Trade	-31	-22	-16
Wheat				**Rapeseed**			
Supply	-12	0	3	Supply	-22	-32	0
Demand	2	3	-6	Demand	39	31	12
Trade	-698	-501	-262	Trade	0,8	0,6	1,3
Barley				**Lineseed**			
Supply	-9	1	3	Supply	-3	39	47
Demand	44	37	22	Demand	10	-36	-40
Trade	-270	-96	58	Trade	-0,5	1,7	2,0
Maize				**Tomatoes**			
Supply	-11	5	14	Supply	20	-32	-22
Demand	24	19	14	Demand	-16	-17	-21
Trade	-44	-40	-37	Trade	290	-55	34
Sunflower				**Beef**			
Supply	-7	-5	-2	Supply	-9	-13	-13
Demand	28	25	19	Demand	0	1	-10
Trade	-99	-84	-57	Trade	-27	-37	-13
Potatoes				**Pig Meat**			
Supply	-23	-23	-21	Supply	-18	-15	-15
Demand	8	12	0	Demand	0	13	2
Trade	-42	-49	-24	Trade	-67	-131	-56
Beans				**Poultry**			
Supply	-25	-39	-37	Supply	-12	-28	-28
Demand	45	45	28	Demand	1	3	-2
Trade	148	84	115	Trade	-22	-82	-68
Sugarbeet				**Milk**			
Supply	-26	-33	-25	Supply	-10	-1	-1
Demand	7	55	39	Demand	0	-2	-10
Trade	-1496	-3316	-2556	Trade	281	767	1083

Notes: a. Supply and Demand are presented in % changes in 2002 over 1997 and trade in quantities (000 ton.), b. (BL) is the baseline scenario, (TL) the full liberalization scenario (constant world prices), (TW) the full liberalization scenario with an increase (2% p.a.) in world prices.

Figure 1. Wheat Production Under the Various Scenarios (1997-2002)

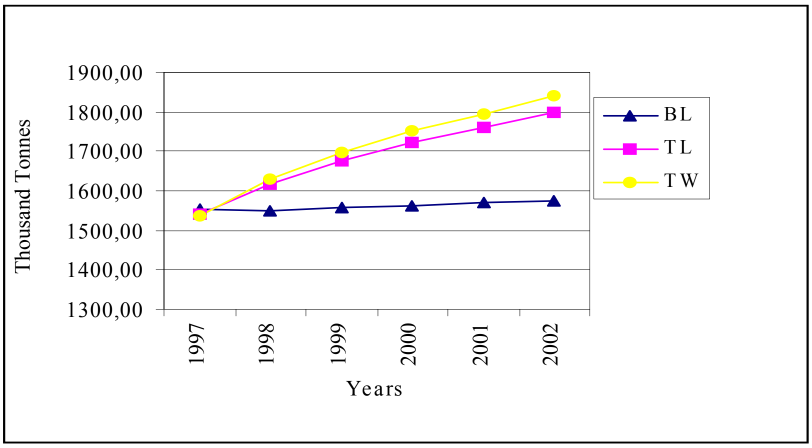
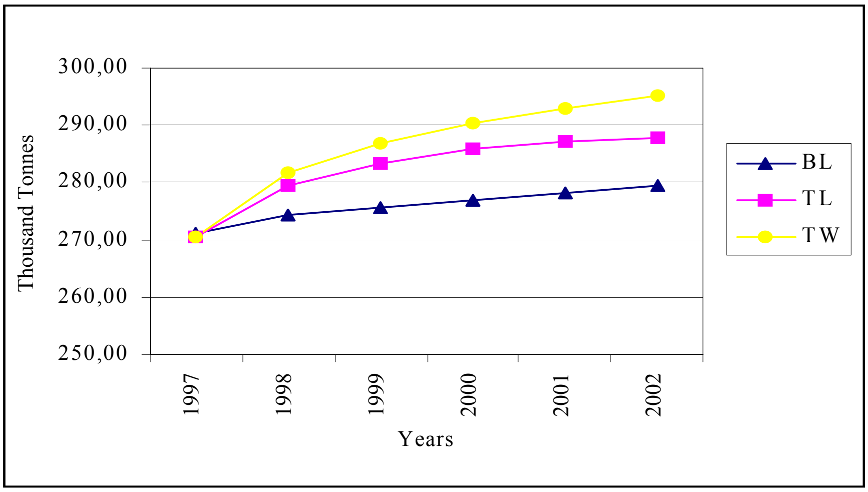


Figure 2. Sunflower Production Under the Various Scenarios (1997-2002)



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