A Brief Overview of Agriculture in Greece[1]

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For over 20 years now, since the country's accession to the European Union (EU), Greek agriculture has become an integral part of European agriculture and is fully regulated by the Common Agricultural Policy (CAP). Within this framework, radical or sometimes dramatic changes have occurred that have resulted in a progressive transformation of the sector domestically. However, certain parameters are still dominant in the sector. It should be reminded that Greece was the first of the Southern European countries to have joined the Community. At that time, the country was still at a much lower stage of economic development of the then richer nine Members. An exceptionally large share of Greece's total economy was devoted to agriculture of purely Mediterranean character, and with very weak agricultural structures. The differences were later softened after the accession of Spain and Portugal. Even so, certain characteristics (so-called "particularities") continue to exist that considerably differentiate the Greek sector from that of the rest of the Community and still influence the Greek approach towards the continuous process of making the CAP.

The share of agriculture in the economy

The share of agriculture in the total economy of the country, although diminished considerably in the previous decade, continues to be at much higher levels in comparison with other Member States (Pezaros, 1995; European Commission, 2003). The agricultural output was 17% in 1980, but still accounts for 5-6% of GDP as compared to 1.5% of EU-15.

Agricultural employment has decreased dramatically from 35% in 1980 to 17% in 2000 (Table 1). It is true that the age structure of farmers is deteriorating continuously, given that almost 40% of the farming community appears to be over 55 years old today (2000 data), a percentage that in no way is to be replaced by young farmers in the near future (Table 2). Reasonably, therefore, and as long as farming does not become attractive to young people anymore, one should expect that, for natural reasons only, the share of agriculture in total employment will further decrease in the near future . However, the recent share of 17%, when compared to 4.3% in EU-15, indicates that the sector continues to provide jobs to a considerable number of people, in a country where unemployment continues to be one of the greatest problems.

[1] The present paper should be considered as an abstract of the book by S.Stamatiadis, J.M.Lynch, J.S.Schepers (Eds.) (2004), "Remote Sensing for Agriculture and the Environment", GAIA Centre / OECD [ISBN: 960-88000-8-0]

A large portion of the gross fixed capital formation (5-6%) is still devoted to agriculture, double the EU-15 average (around 3%). Agricultural and food products continue to hold around 30% of the total exports (7-8% in EU-15) and 13-14% of the total imports. These comparatively high shares explain why small changes in the agricultural accounts, brought about by radical changes in applied policies, seriously affect the total economy of the country.

Land and production patterns

The Utilised Agricultural Area (UAA) is 3.5 million hectares and represents only 27% of the country's total surface as compared to 55-60% in EU-15. 40% of the total surface is characterized as "grazing land" or "permanent pastures" (60% of the permanent pastures are state-owned), while forest areas account for 20%. Actually, these numbers reflect the mountainous nature of the Greek landscape. In this respect, it should be noted that 78% of the agricultural land and 70% of the total holdings are found in less-favoured areas.

In terms of land use, 35 to 40% of the total agricultural land is cultivated with arable crops, 20% with olive trees, 11% with cotton, 8% with fruits and vegetables, 3.5% with vines and 1.5% with tobacco. If these figures are analyzed further, 50-55% of the cereals, 60-65% of olive trees, 70% of sheep and goat herds, and 40-50% of bovine animals are cultivated or raised in the semi-mountainous and mountainous areas. Yet, despite the unfavorable natural resources, the country is 97-98% self sufficient as regards to agricultural and food products (European Commission, 2001).

Over all, the ratio of plant to livestock production (70:30) continues to be almost reversed to that of the average Community (50:50). It is of interest to note that before the accession of Greece and up to 1980, the CAP had been established and developed on the basis of a 35:65 ratio.

Size of holdings and socio-economic factors

Statistically, about 800,000 of family-type holdings appear to still be active in Greece, a number disproportionately large in relation to the total Utilised Agricultural Area (UAA) of the country (Table 3). Indeed, this number gives a very small average size of 4-5 ha/holding, as compared for instance to 10 ha in Italy and Portugal, 15-20 ha in Spain, the Netherlands and Austria, 40 ha in Denmark and 70 ha in the United Kingdom. However, when using the Farm Accountancy Data Network (FADN), it can be realized that almost half of the 800,000 holdings are on average less than 2 ha (Table 4). These small farms should be characterized as plots, rather than real commercial holdings, used for providing perhaps supplementary income to ex-professional farmers. Indeed, research has indicated that, due to the exodus of farmers to urban areas, agriculture started becoming the most "popular" second occupation for almost all the professional categories outside agriculture. This trend accelerated in the '90s and the number of those receiving supplementary incomes through their involvement in agriculture has increased. In addition, the absence of regulating land use and registration has led to the raising of the value of land, independent of its productive value, and this has increased producer's costs and has acted as a handicap to expansion (Louloudis and Beopoulos, 2001). These statistics reflect the fact that agricultural structures in Greece, despite the radical changes that have occurred during

the preceding 20 years, continue to be quite weak. If we add that, on average, each holding is dispersed in 6-7 parcels, then the viability of Greek farming in purely competitive conditions is seriously questionable.

Certainly, and taking into account the limitations put by the natural landscape of the country, a permanent ambition of the domestic policy was to increase the average farm size, aiming at raising the yields of all the factors of production. This policy, however, has met a kind of "resistance" by the farming society, due to a number of social, economic, historical and cultural factors. For instance, there is an instinctive tendency of Greek farmers to keep the ownership of their own private land as long as they live even avoiding to be succeeded by younger members of the family. Some other traditional rules of heritage, predominant in the countryside, result in similar tendencies (Pezaros, 1987). Despite these outcomes, on the other hand, it can be seen that the total number of holdings has decreased from 1 million in 1981 to 800,000 in 2000 (Table 3). This actually indicates that concentration and expansion takes place slowly but steadily. Characteristically, holdings of over 10 Ha have increased from 6% to 10% of the total in 20 years.

Agricultural inputs

The total intermediate consumption (variable inputs) is maintained around 25% of the gross value of agricultural production, as compared to 40-45% in EU-15 (Table 5). This low share indicates that, generally, a different and less intensive model of agricultural development is followed by the Greek farmers, again discriminating the Mediterranean character of the Greek agriculture from that of the North.

Like in the EU-15, the most important input is animal feed accounting for about 40% of the total. The second largest input is energy consumption, the share of which is about 20% of the total (as compared to 7-8% in the EU-15). This high share reflects a) the relatively high cost of energy in Greece that contributes to a much higher cost of production and, b) the increased use of mechanization and modernization of production plants. As shown in Table 6, for instance, the number of tractors has increased by 25% in 20 years. Their total number (380,000 in 2000) indicates a relationship of 1 tractor / 10 ha of UAA. The number of combine harvesters has decreased by 15% while that of cotton harvesters has doubled indicating the expansion of cotton cultivation at the expense mainly of the arable crops. The electrically-driven pumps have also doubled. All these developments indicate that considerable investments have been made that have led to a boom of energy consumption in farming.

The consumption of fertilizers covered 8% of the total inputs in 2000 (Table 5) and this share is close to the EU-15 average. This proportion represents a decreasing trend in their use in the 90’s as compared to that of previous decades. Indeed, due to the small size of holdings and the aging farmers, the increasing use of fertilizers in the '70s and '80s appeared to be a key factor in raising the yields in Greek agriculture (Beopoulos and Skouras, 1999). It should be noted, however, that the consumption of fertilizers was high in the plains of intensive farming and quite inadequate in semi-mountainous and mountainous areas. On this issue, research has found that the mean consumption of nitrogen (an input directly linked with water pollution) was about 100 kg per ha in the mid '90s, but ground water was not actually polluted as much as in

other Community areas (See L. Louloudis: "Biological agriculture in Greece. Constraints and opportunities for development" in Pezaros and Unfried, 2002).

Finally, the share of plant protection products appears to be about 6-7% of intermediate consumption (Table 5). It should be stressed that the total sales of chemicals represent 2.5 kg per ha of UAA, this being one of the lowest in the EU. Although there is always a danger of increasing the use of chemicals for high yield crops (cotton, maize, tobacco, etc), their consumption currently remains at low levels. For instance, all checks and controls have found no impact of chemicals on olive oil which remains one of the principal products of Greece.

On the other hand, there was a great increase of irrigated areas during the last two decades indicating the importance of irrigation for the considerable improvement in the overall productivity of the sector. In 1961, irrigated areas covered 13% of the UAA. In the mid '90s irrigated areas reached 40% of UAA, and this was the result of irrigating not only vegetables and fruit trees but also arable crops (maize, sugarbeet, cotton).

Effects of CAP integration to the domestic agricultural policy

In general, the integration of CAP into the domestic agricultural policy had important positive results, but also some long-term negative impacts on Greek agriculture. The high support and protection levels of CAP in the '80s allowed Greek agriculture to avoid an immediate, after its accession, exposition to international competition. Yields were increased and, thanks to the over-mechanization that was boosted through investment aids and favorable loans, productivity was improved, sometimes at the expense of capital efficiency. Therefore, despite the unfavorable economic conditions of the country, farmers enjoyed a considerable increase in their income rather rapidly. Income distribution had been definitely improved in favor of agriculture. Indeed, comparing the average income per employed person between the sectors, the farm income was about 40% of that earned in the other sectors in 1980. This relationship has become almost 55% in the early '90s (Pezaros, 1995). There is no doubt, therefore, that a clear trend towards an (internal) convergence and cohesion has taken place in terms of income. Due also to the improvement of the economic and social conditions in the countryside, the above mentioned rapid changes in the agricultural sector slowed down and seem to have been stabilized in the late '90s. As a result, the previous dramatic exodus of farmers from agriculture to urban areas gradually slowed down as well (Louloudis and Beopoulos, 2001). The composition of agricultural production changed rapidly, in favour of products of higher yields and higher levels of support. For instance, maize and cotton were favored over wheat and other cereals, oranges and peaches over other fruits, table grapes over currants, etc. (Pezaros, 1995).

On the other hand, however, the structural dimension of the CAP was inadequate to meet the requirements of the domestic sector. The protection of agricultural income, based mainly on high guaranteed prices, had a rather short-term effect and was made at the expense of the overall inflation of the country, which continued to move at much higher than the EC average levels, at least up to 1996-97. The farmers continued to be isolated from the market forces and did not get the right signals in time to be prepared to follow the new developments of the Agenda 2000 reforms. Due mostly to the mechanisms of the CAP, the continuous deterioration of the agricultural

trade balance is considered to be the most important negative impact of integration. The internal market rules and the community preference principle (on which Greece relied most when applying for membership) had a serious trade diversion effect. Products in deficit (meat, dairy), with an exceptionally high level of support and protection under the CAP, were imported from the other member states after the accession at prices three and four times higher than the world level (Pezaros, 2001). The lack of a similar level of support for Mediterranean products resulted in the deterioration of the domestic terms of trade, as agricultural exports covered an increasingly smaller part of imports.

Meanwhile, other internal changes in the farming society had been accelerated after the accession. Factors such as the multi-employment of farmers, the deterioration of their age pyramid, the absence of women who leave the countryside (reflecting cultural changes towards farming), the relatively low literacy of the farming population, etc, were all among the biggest deficiencies that did not find a positive response through the CAP and also limited any effort to raise the professional standards of the farmers (Damianos and Skouras, 1996).

Future trends and priorities

The last Agenda 2000 CAP reform, the future enlargement and the expected new developments in the Community and international scene (Doha Round at WTO) have already put forward pressures for a further adaptation of the Community's (and therefore the Greek) agricultural sector. It has become clear that various factors advocate towards further market orientation of agriculture and enforcement of the rural development rather than agriculture as such.

To the Ministry of Agriculture's view, it is necessary to substantially strengthen the so called "second pillar" within the context of a new CAP to support investment, the improvement of infrastructures and the creation of supplementary jobs in rural areas[2]. The new policy should be long-term oriented and consistently applied. It is also essential to compensate and further strengthen the multifunctional role of farming, by encouraging the benefits it offers to the society as a whole. We cannot, however, isolate the environmental and socio-economic dimension of farming from its core function of producing food and raw materials. If the productive role of the farming society is to be abandoned, the other parallel functions are also doomed to extinction. For the Greek point of view, it is utopian to believe that farmers everywhere can switch rapidly and fully from livestock breeding or crop cultivation to gardening, eco-tourism or handicraft production.

Greece has already made its position known that the first and second pillars of the CAP should be mutually complementary and not a substitute for one another. The first

[2] Indeed, this was one of the most important elements of the latest reform package proposal presented by the Commission in January 2003 under a new "CAP Reform: A long-run policy perspective for sustainable agriculture", which had been examined exhaustively during the Greek Presidency. At the end of intensive negotiations, Member states basically accepted the principle of redirecting the available funds of the Agricultural Budget from first-pillar support (by reducing the direct aids to farmers by a percentage of 3-5%) into measures for rural development. The savings will be reallocated to the Member States by taking into account certain criteria with respect to the agricultural situation of each country.

pillar continues to be as necessary as the second, to the extent that regulatory mechanisms are more balanced and in the position to secure a decent level of employment and income among the farmers, in particular among those who need it more, the small farmers who usually work under unfavorable conditions.

The second pillar is essential principally to the extent that helps in the creation of adequate infrastructure and in fostering the investments necessary to further modernize the sector, increase its competitiveness and promote an integrated rural development.

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