Regional impacts of the common agricultural policy of the EC

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CONTENTS

1. Introduction 5

2. General description
   2.1 Agriculture as part of the national economy 6
   2.2 E.C.-agriculture in the world 7

3. Regional differences in input and output 9
   3.1 Regional specialization 9
   3.2 Differences in inputs 9
   3.3 Differences in the productivity of land 11
   3.4 Regional concentration of production 12
   3.5 Differences in income 12

4. Causes of divergent regional developments 16
   4.1 Structural adjustments 16
   4.2 Spatial and physical conditions 18
   4.3 Economies of scale 19

5. Effects of the CAP 21
   5.1 Regional objectives 21
   5.2 Effects of price policy 21
   5.3 Structural policy 23
   5.4 M.C.A.'s 25
   5.5 Financial efforts 25

6. Future developments 27

7. Concluding remarks 30

Literature 31
1. INTRODUCTION

In this paper 1) the relation between the Common Agricultural Policy of the E.C. (C.A.P.) and regional development will be analyzed. We will concentrate upon the agricultural production; the regional aspects of the development of agricultural industries and aspects of the financial efforts for the agricultural policy are discussed only very globally.

After a short description of the agricultural sector of the E.C., in relation to other sectors and in relation to agriculture outside the E.C., emphasis is given to the quantification of regional inequality in agriculture. In the subsequent paragraphs the causes of divergent regional developments are analyzed, in which, apart from differences in spatial and natural conditions, the impacts of the structural development process play an important role. After that the E.C.-agricultural policies regarding regional differences are described. This paper will be concluded with some remarks on possible future developments and some conclusions.

1) With minor differences this paper will be printed as Chapter 2 in: R. Cappelin and W.T.M. Molle, Regional Impacts of Community Policies, Gower, Aldershot, 1986 (forthcoming).
2. GENERAL DESCRIPTION

2.1 Agriculture as part of the national economy

The agricultural sector of the countries of the EC has developed from being the main sector of the economy to a sector generating less than 4% of the gross national product 1). Nevertheless it gets often much more attention than could be expected on the basis of its share in total value-added. There are some reasons for this special attention. The first is that agriculture, although not very important on a national scale, is the main source of income and employment in quite a lot of regions of the EC. In the southern regions of Italy and in Greece, agriculture produces one sixth, or even one quarter of the regional product, being also the most important source of employment with about one third. But even in the highly industrialized countries in the northwest of Europe, agriculture is relatively important in the rural regions. In the Dutch province of Friesland 9% of the regional product is produced by agriculture, with about 13% of total employment 2). Stating that agriculture generates only about 4% of the Gross Domestic Product of the Community is moreover an undervaluation in the sense that an important part of the food processing industry directly depends on agriculture. For the EC as a whole this part is more than half of the total food industry, both in terms of production and employment. The remainder of food industry is not primarily connected with EC-agriculture but with the agricultural sector of foreign countries (cocoa processing industries etc.) 3). Food processing industry as a whole generates another 3% of GDP, so the percentage for agriculture and related industries together is about 6%.

A second reason for the relative importance of agriculture is that this sector is the main user of the open space. More than 60% of total land surface of the EC is used by agriculture. So, changes in the state of agriculture have major influences on the landscape and the natural environment.

The third and perhaps most important reason is that agriculture produces a range of goods for basic needs, with elasticities of supply and demand resulting in strong changes in prices and income in response to small changes in production and consumption. So, relatively small changes in the level of production or delivery have large impacts on consumers' welfare.

Agricultural products and food are rather important in relation to international trade. About 12% of intra-EC and 9% of extra-EC trade is trade in agricultural products and food. After the USA, France and the Netherlands are the second and third exporter of agricultural products in the world. The most important agricultural importers in the EC are West-Germany and the United Kingdom.

There are large differences in the development of labour productivity in agriculture between the EC-countries. In the period 1973-1983 (three years averages) the annual growth of gross value-added per worker was for instance 3.4% in Greece, 3.9% in France, 5.3% in the United Kingdom and 5.8% in the Netherlands. The EC-average was 4.7% per annum (Commission of the European Communities, 1986).

2) Calculated from: Eurostat, 1984, table III.2 and LEI, 1984, table 31A.
It appears that in general the share of agriculture in value-added is lower than its share in employment. This suggests that agriculture in the EC is relatively backward. It can not be denied that in some parts of the EC agriculture has a more or less backward character: a low level of income or even subsistence production, a surplus of labour and the use of out-dated technologies. In some regions there have been hardly any changes in agriculture in decades. At the same time we can be sure that in such regions the other economic sectors are also relatively stagnating or declining. So, mostly it is not so much agriculture but the region as a whole that is underdeveloped (De Veer, 1981; Strijker, 1982). The above picture does not apply to all regions of the EC. In large parts of the EC agriculture has gone through the same rapid economic expansion as the rest of the economy. Between 1950 and 1980 in the northwestern countries of the EC labour productivity in agriculture increased more rapidly than in the industrial sectors (Van der Meer, 1983). These are the same parts of the EC where for instance intermediate consumption in agriculture is more than 50% of final production and still relatively increasing 1). The invested capital per worker in those areas is also rather high. For full-time farmers it amounts to about 25,000 ECU in the EC as an average in the years 1979-1983 and in the UK and the Netherlands even much higher (about 100,000 ECU per farm) 2).

The basic unit of organization of EC-agriculture is the family farm. In nearly all countries the percentage of family workers, including the holder, is above 90, the United Kingdom being the only exception (63% in 1977). In all countries, except Belgium, more than half of total cultivated area is owned by the operator. The normal economic reaction on a strong increase in labour-productivity and a stagnating demand for output is to reduce the input of labour. On family farms, however, such a development possibly results in a reduction of family income if alternative employment opportunities are lacking. Especially at an uneven distribution of land and capital this will result in a strong pressure on farmers' incomes, which in turn can be a reason for compensating agricultural price-policy measures.

2.2 EC-agriculture in the world

The Common Agricultural Policy (C.A.P) has deeply influenced the state of EC-agriculture. Although it is difficult to say what kind, if any, of agricultural policy would have been pursued in absence of the C.A.P., it is quite sure that the growing self-sufficiency in agricultural products has been stimulated by the C.A.P. The EC became a net exporter for quite a lot of products. It is calculated (Thiede, 1984) that between 1973 and 1982 the net degree of self-sufficiency of EC-9 for all agricultural products together increased from 83% till 95%.

An increase of the rate of self-sufficiency and a rising export surplus are not to be considered as negative if based on competitive strength. For most agricultural product this is, however, not the case as domestic prices are kept above world-market prices and exports are only possible on the basis of subsidies. As long as the export surplus was relatively small and the EC had a minor share in total world-exports this did not raise serious problems. This situation changed when, in first instance for dairy products the share of exports in total sales increased and the EC became a major supplier (Meester and Oskam, 1984). In this situation world-market prices are influenced significantly by changes in

2) Ibid. It is supposed that investments are depreciated in 10 years.
the volume of the EC's exports. In that case the export-revenues decrease rapidly and the budgetary costs for surplus disposal increase strongly at a further growth of the volume of output.

The rapid growth of production consequently had a serious impact on the EC-budget. The budget of the EC, with agriculture as the main chapter (three-quarters of the total budget) increased between 1973 and 1984 from 3.8 mld. to 20.1 mld. ECU, an increase of more than 400%. The budget expenditures in 1985 amounted to about 13% of the value of agricultural production. The total government expenditures for agriculture are even much higher, because the national governments spend important sums of money for agriculture too. It will be clear that for a declining sector this rate of growth was not acceptable, especially not in times of concern about budgetary deficits. It set into motion a tendency to reconsider the C.A.P. and its effectivity. In the subsequent paragraphs of this chapter we will deal with the regional effects of the C.A.P. and with the possible consequences of changes in that policy.
3. REGIONAL DIFFERENCES IN INPUT AND OUTPUT

3.1. Regional specialization

Until recent years there was a great shortfall of information on the regional distribution of agricultural production capacity and production. In the 1970's the EC-institutions initiated some research projects in these fields (Jacobs and De Boer, Commission of the European Communities (1981), Rainelli and Bonnieux, (1978), Van Hecke, (1983). Partly as a result of these projects, more regional data on agriculture became available and nowadays such data are published annually in the Yearbook of Regional Statistics (e.g. Eurostat, 1984). The study of Rainelli and Bonnieux is the most complete one; the publication of Van Hecke the most summarizing.

Van Hecke classifies the (102) regions of the EC according to the Standard Gross Margins 1) per ha. The resulting figures give information about the concentration of the production of a certain sector in a region. They are the combination of the degree of specialization and the level of land productivity. For arable farming, the highest scores are found in the north-western regions of France, the central regions of Germany, the north-eastern regions of Italy and some Dutch, Belgian and Danish regions. Very low scores are found in Ireland, Wales, Scotland and large parts of France (the south). Horticulture is heavily concentrated in the adjoining regions of Belgium and the Netherlands and in some Mediterranean regions. Apart from that some concentration occurs around big cities (Paris, London, Hamburg, Rome etc.). Perennial cultures have high scores in most regions of Italy and Mediterranean France, and apart from that in the famous wine regions of France and Germany. Herbivores, especially dairy cattle are concentrated in the Netherlands and Belgium, and to a lesser extent in the northern and southern regions of Germany. Finally, intensive animal husbandry is concentrated in the northern regions of Belgium, the southern regions of The Netherlands and the northwestern regions of Germany. This sector has also some importance in central Germany, Brittany and the Po-area. When this information is summarized we get the degree of specialization in one direction or another (Chart 1). This chart gives only a first impression as in section 3.4 we will try to quantify the regional differences in other ways too.

3.2 Differences in inputs

Although it is common knowledge that the input structure of agriculture varies substantially between the regions of the EC, there is only limited quantitative information available on these differences. Especially the knowledge of levels of investments is very poor. About an other important factor of production, labour, existing information is much more detailed.

In the first place there is a large difference in the contribution of agriculture in the total employment of the regions. In the United Kingdom and the industrialized regions of West-Germany this is less than 3%, while in the southern part of the EC 25-30% is not unusual (for instance Abruzzi-Molise, Puglia, etc.). The agricultural area per worker shows more or less the same pattern. In the RICAP-study (Commission of the European Communities, 1981) it is found that the agricultural area per worker in

1) Regionally determined standardized Value Added per ha or per animal in the various sectors of agricultural production.
Chart 1 Agricultural production Community typology "1972-74" Standard Gross Margins

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DOMINANT CATEGORY</strong></td>
<td>one type &gt; 2/3 of total value</td>
</tr>
<tr>
<td>12 field crops</td>
<td></td>
</tr>
<tr>
<td>2(a) horticulture</td>
<td></td>
</tr>
<tr>
<td>324(b) permanent crops</td>
<td></td>
</tr>
<tr>
<td>411 cattle</td>
<td></td>
</tr>
<tr>
<td>412 dairying</td>
<td></td>
</tr>
<tr>
<td>dairying with cattle</td>
<td></td>
</tr>
<tr>
<td>431 rearing/fattening</td>
<td></td>
</tr>
<tr>
<td>432 cattle rearing/fattening</td>
<td></td>
</tr>
<tr>
<td>433 grazing livestock, various</td>
<td></td>
</tr>
<tr>
<td><strong>PARTIALLY DOMINANT CATEGORIES</strong></td>
<td>1/3 &lt; one type ≤ 2/3 not other &gt; 1/3</td>
</tr>
<tr>
<td>624 field crops</td>
<td></td>
</tr>
<tr>
<td>625 horticulture or permanent crops</td>
<td></td>
</tr>
<tr>
<td>711 cattle, dairying</td>
<td></td>
</tr>
<tr>
<td>712 grazing livestock other than dairying</td>
<td></td>
</tr>
<tr>
<td><strong>BIPOLAR CATEGORIES</strong></td>
<td>two different types ≤ 2/3</td>
</tr>
<tr>
<td>811 field crops with dairying</td>
<td></td>
</tr>
<tr>
<td>812 dairying with field crops</td>
<td></td>
</tr>
<tr>
<td>813 field crops with grazing livestock other than dairying</td>
<td></td>
</tr>
<tr>
<td>814 grazing livestock other than dairying with field crops</td>
<td></td>
</tr>
<tr>
<td>823 horticulture or permanent crops and grazing livestock</td>
<td></td>
</tr>
<tr>
<td>622 field crops and permanent crops</td>
<td></td>
</tr>
<tr>
<td>623 permanent crops</td>
<td></td>
</tr>
<tr>
<td>no type ≤ 1/3</td>
<td></td>
</tr>
<tr>
<td>822 crops-livestock, various</td>
<td></td>
</tr>
</tbody>
</table>

Source: Van Hecke, 1983, chart 11.
the British regions is eight times higher than in the southern regions of Italy. It is quite sure that, apart from the area per worker, the quality of the land and the quality of the workers (education) varies too. When a direct relation is found between the quality of the soil and the yield, it appears that this connection is a loose one (Jacobs and Strijker, p. 77-83). This is not surprising because infrastructural quality, climate, nearness of non-agricultural resources or large consumption centres affects land-use, man-land ratio and yields too.

About the capital-input in the agricultural production process it is known that on a national scale intermediate consumption varies from less than 40% of total production value in Greece and Italy to about 65% in Denmark and West-Germany. Depreciation, as a yard-stick for the use of capital goods ranges from less than 70 ECU/ha in Ireland to more than 500 ECU/ha in the Netherlands (Commission of the European Communities, 1985)

3.3 Differences in the productivity of land

A rather detailed analysis of the regional variation in yields for many crops was published by Jacobs and Strijker. A serious drawback of that study is that it is based on data up to 1973. But because one of the main findings of this study was that the regional differentials in crop fields are very stable, we think the results of that study still useful 1).

For the majority of the 341 regions of the EC-9 it appeared that the annual average growth rate of physical yields of the main crops did not deviate much from the EC-average. For most crops the largest growth rates were found in the French regions, bringing these regions to or even above the general EC-level. Only the central and southern parts of Italy were lagging behind. These regions were in 1950 already among the lowest yielding of the EC and the relatively low growth rate placed them in an even more backward position.

The interregional differences in yields therefore remain large, especially between the northern and southern part of the EC. It is known that in the beginning of the EC the 20% of regions with the highest yields for wheat were all situated north of Paris, while the 25% regions with the lowest yields for wheat were exclusively situated south of that city. Of course such a clear geographical separation line between high- and low yielding regions does not exist for all crops, but at least for barley and potatoes the same pattern exists. Differences between lowest and highest yielding regions have not changed significantly after 1960, although some areas improved their position considerably (Meester and Strijker, 1985, p. 190).

At the level of member states for most crops, within the EC the highest national average is generally twice the lowest one. In 1982 the average wheat-yield in Greece was 3010 kg and in the Netherlands 7380 kg, for barley in Greece 2740 kg, in Italy 3010 kg and in Belgium 5690 kg. In 1981/82 average production per ha of sugar beets in terms of white sugar was in Ireland 4800 kg and in France 8330 kg. The average milk production per cow varied in 1983 from 3470 kg in Italy to 5280 kg in the Netherlands.

The regional differences are even more pronounced. In 1979 the average wheat-yield on the isle of Crete was about 1300 kg and, at the other end of the scale the south-western provinces of the Netherlands had an average yield of 6400 kg. For potatoes the yield differs from less than 10 ton per ha in the Italian regions of Molise, Basilicata and Umbria to more than 40 tons per ha in some Dutch regions.

1) At the moment the updating of the data is done by the Agricultural Economics Research Institute (LEI) in The Hague. The analysis of the updated data is planned for 1987.
Regional concentration of production

Regional production can be considered as resulting from two effects: the area used for various crops and the yields per ha. A meaningful comparison between regions or for one region between years, is only possible when total production of that crop is related to the total agricultural area. Ordering the regions according to their production per unit of agricultural land leads to information about the degree of concentration of the production. This yardstick for instance gives information about which regions are heavily involved when EC policy with respect to a certain crop is changed. This method of calculating regional concentration was developed by Meester (1980). Represented graphically we get a concentration-curve, similar to the Lorentz-curve which is often used to present (changes in) income distribution (see also the RICAP-study, Commission of the EC, 1981). For wheat we have calculated this curve on the basis of the data gathered by Jacobs and De Boer for two periods, 1950-1952 and 1971-1973 (Chart 2).

From this chart it appears that in both periods half the EC-production is concentrated on less than a quarter of the EC-area. Comparing the two curves shows that between 1950-1952 and 1971-1973 the degree of regional concentration became a little larger. In 1950-1952 27.5% of wheat production was concentrated in the first decile, in 1971-1973 this is 31.8% of production. At the other end of the distribution it appears that in the last two deciles, in 1950-1952 about 2.6% of total wheat production was generated, in 1971-1973 about 0.3%. There is evidence that for wheat this tendency continued in more recent years. The cumulative distributions of wheat production in the periods 1961-1965 and 1977 on the basis of a regional division of the EC-6 in 42 parts also indicated a growing concentration of production (Meester, 1980).

However, it is quite certain that this development does not hold for all other crops. On the basis of the figures of Meester a development comparable to wheat is found for potatoes and milk, but not for barley, rye and sugarbeets. On the basis of a regional division of the EC-9 in 38 parts it can be calculated that between 1958 and 1980-1981 the same applies to the EC-9 (Meester and Strijker, 1985).

So, we can be rather certain that in the last decades for wheat, milk and potatoes a concentration of production took place, while this was not the case for some other important crops as barley and sugarbeets.

It is certain that a growth of regional concentration also took place in intensive livestock production. One must keep in mind that regional concentration of production is not the same as regional specialization. The high-yielding regions in the northern part of the EC, especially in France and in the Netherlands, have relatively large shares in the EC-production of many agricultural products. So, production is more or less concentrated in those regions while at the same time the regions are not at all specialized in each of these products. This development is contrary to the general belief that a common market would lead to regional specialization and that it would help to alleviate the regional problems of the EC.

Differences in income

The consequences of differences in input-output ratios and concentration of production for the position of the agricultural economy in the regions of the EC can be summarized in a comparison of incomes. Both regional differences in agricultural incomes and changes in the relative position of regions are analyzed in detail in the RICAP-study (Commission of the European Communities, 1981). In that study Gross Value Added (G.V.A.) per working year unit, as a yardstick for income, is divided into
Chart 2  Cumulative distribution of production, EC-9, 341 regions, wheat, 1950/52 and 1971/73
two components: one for intensity (G.V.A. per ha) and one for structure (ha per unit of labour). At the beginning of the common market (1968/69) the regional differences in the area per agricultural worker varied, as stated before, from 1 to 8. In the same year the G.V.A. per ha varied from 1 to 6, going from the Irish to the Dutch regions and the agricultural income per working year unit varied from 1 to 6 going from the southern part of Italy to the vicinity of Paris or the regions in the north of Germany. In the period 1968/69 - 1976/77 on EC-level G.V.A. per working year unit increased in real terms at a rate of 5.5% per annum. Of this increase 25% could be attributed to intensification (G.V.A. per ha) and 75% to structural change (ha per worker). The differences between the member countries were large, varying from 1.9% annual growth of G.V.A. per working year unit in Denmark to 6.7% in Ireland. There were also large differences in the composition of this growth. In Belgium, France, Luxembourg and Denmark growth of G.V.A. per worker is mainly connected with the agricultural area per worker. In Germany, Italy and Ireland it can be attributed to both, an increase in the area per worker (2/3) and increase of real production per ha (1/3). In the United Kingdom and especially in The Netherlands growth of income mainly originates from intensification (growth of production per ha).

In the RICAP-study the regional G.V.A. per agricultural worker is related to the EC-average. These indices are calculated for two periods, 1968-69 and 1976-77. Comparing these two periods, four types of developments can be distinguished:

1) income per worker above the EC-average and increasing (The Netherlands, northern parts of Belgium and Germany, Scottish lowlands, north-eastern regions of France).

2) income per worker above the EC-average but declining (north-western and southern regions of France, Denmark, north-eastern part of Italy, Ireland).

3) income per worker below the EC-average but increasing (south-western regions of UK, western regions of France, southern regions of Germany).

4) income per worker below the EC-average and declining (central and south-western regions of France, north-western and southern regions of Italy).

For most regions it is possible to calculate the same index for 1980. The results are rather different. In that year four foregoing groups are composed as follows:

1) the majority of the French regions, United Kingdom.

2) Belgium, The Netherlands, the northern part of Germany, Denmark, north-western regions of France.

3) Ireland, the south-western part of France, the majority of the Italian regions.

4) southern regions of Germany, Sicilia, Campania.

Concluding it can be stated that after 1976-77 the regional differences in G.V.A. per worker have diminished. Especially Ireland and the majority of the Italian regions, starting from very low levels have come closer to the EC-average (20-30% below the EC-average in 1980). The position of the central part of the EC (north-west France, Belgium, The Netherlands, Denmark, Germany) has relatively worsened. Notwithstanding this for these regions incomes per agricultural worker remain 30-100% above the EC-average, with only central and southern Germany as an exception. The Federal Republic as a whole was in 1980 still on the EC-average, but especially the south was already far below that mark.

There is one important drawback related to the method used. It only gives information about the income per agricultural worker as far as it is generated in agriculture. It is certain that an important part of family income on for instance a lot of German farms is non-farm income, generated
by work of the owner or family members outside the own farm. It is not known whether or not the non-farm income per farm in regions with a low growth of G.V.A. per worker has increased considerably.

In the RICAP-study it is concluded that between 1968-69 and 1976-77 income in agriculture tended to concentrate. When we add the figures of 1980 the conclusion is reversed: a tendency to deconcentration. It appears even that the Lorentz-curve (RICAP-study, p. 154) for 1980 is both inside the curve for 1968-69 and the one for 1976-77.
4. Causes of divergent regional developments

4.1 Structural adjustments

In the early stages of modern economic development the rise of agricultural productivity was mainly achieved by the intensification of land use and the rise of crop yields. The resulting expansion of agricultural production was balanced by the growth of the population and the increase of per capita consumption, particularly of livestock products, vegetables and fruit. The land saving and yield augmenting technological improvements, therefore, did not require a reduction of the agricultural labour force. In the following stage, characterised by the introduction of labour-saving technologies under the constraints of a slackening demand for agricultural products and a limited area of agricultural land, the rise of agricultural production required more radical adjustments. The application of modern farm systems demanded a larger scale of operation and the increasing working capacity of farm workers created employment problems on the farms and for the sector as a whole (Maris and De Veer, 1973).

The adjustment of the scale of operations to the requirements of an efficient use of modern farm equipment and of the modernization of farming systems was not the main bottleneck. To a great extent this could be solved within the existing farm size structure by specialization, diversification, cooperative use of farm implements or employment of contractors. However, this could not solve the employment problems for farm workers. In many rural areas the major part of the farms became too small to provide sufficient employment and income for the farmer and his family. These farmers were trapped because, on the one hand they could not profitably introduce modern labour saving farming technology for lack of a rewarding alternative use for the family labour whereas on the other hand, the continued use of obsolete equipment and farming methods confronted them with a deteriorating income because they could not keep pace with the declining real product prices and with the rising incomes in other sectors. This situation enforced a reduction in the number of farm workers, and subsequently, the number of agricultural holdings. This was a slow and gradual process starting with the number of hired workers and dependent family workers and ultimately leading to a reduction in the number of farms. This decline of the number of farms evolved mainly through the retirement of older farmers without succession and to a much smaller extent through a change of occupation from agriculture to other sectors. In general the decline of the number of farms started with the smallest farms and went subsequently further to the following farm-sizes (vide chart 3 for the development in the Netherlands).

This process of a reduction of the number of farms and farm workers is still going on in the various regions although at different stages of development and presently seriously hampered by a shortage of alternative employment opportunities.

In the more prosperous and economically more developed regions with better alternative employment opportunities, the process started earlier and evolved more rapidly than in the poorer, economically less developed regions such as in southern Europe, Ireland and isolated mountainous and hilly rural areas elsewhere. Often these are also agriculturally less favoured areas.

There was some variation in the type of adjustment. In some regions, particularly in central and southern Germany, part of the problem was solved by a transition to part-time farming. This solution was favoured by a decentralized industrial development providing employment opportunities on commuter distance. In the peripheric, more isolated and less industri-
Chart 3  Number of farms (x 1000) according to their acreage

Source: Huizinga and Strijker, 1986.
lized regions this solution was not feasible and the majority of farm workers and young people lacking sufficient prospects in farming were forced to migrate to industrial centres. In many of these regions this initiated a cumulative process of underdevelopment with the concomitant phenomena of a declining and aging regional population, poor employment and investment opportunities and deteriorating physical and social infrastructures.

In all regions however, the relative importance of agriculture as a source of employment and income declined. Even in the most rural areas the majority of the workers now are not employed on farms and the majority of the farmers, registered in the farm census, live on small farms which cannot provide them with a sufficient living. The major part of agricultural production and agricultural land is in the hands of a minority of larger farms; typically 70-80% of the total farm output is produced by the 20-30% of larger farms 1). The larger farms, particularly in the more developed regions, generally have a sufficient size for an efficient application of modern farming systems and a full utilization of the family labour force. Most of the smaller holdings, however, have little future and are mainly farmed by older farmers without successors or as part-time and hobby farms.

In Western Europe the transition to modern farming is generally more confronted with historically determined obstacles than in the later developed farming regions of the New World, such as in North America and Australia. In the course of several centuries the agrarian structures and the parcellation of the rural areas was tuned to self-sufficiency at the maximum density of population under the prevailing ecological and technical conditions (Slicher van Bath, 1962).

This orientation on self-sufficiency of the farm and the farm family and on local markets, led to a great diversity in farm production and land use. The patterns of settlement and parcellation, the road system, the farming structures and the land use accommodated to this situation, to a great extent still persisted until after World War II. The structural adjustments in Western Europe, therefore, did not merely concern the number of farms and farm workers but generally also the adaptation of the lay-out of the rural areas, the agricultural land use and the regional physical infrastructures, and required comprehensive rural reconstruction and land consolidation programmes. Such adjustments also affect the historically developed landscapes and the, partially man-made, diversity of natural vegetation and wildlife and, therefore, conflict with the desire to preserve this heritage of our ancestors.

4.2 Spatial and physical conditions

Although their importance declines with the technological improvements in storage, conservation, processing and transport, transportation costs still play an important role in the location of agriculture and food industries. Especially livestock production is still strongly resource-based as the transportation over land of processed livestock products generally is considerably cheaper than that of the feed materials needed for their production. The keeping of herbivores, like cattle and sheep, for that reason is nearly always still integrated with the production of grass and fodder on the same farms. But also the location of the intensive livestock industry such as pig, poultry and veal production, based on the use of more easily storable and transportable feed stuffs depends strongly on the availability of, in particular, feed cereals from local production or overseas imports. As Western Europe and particularly the European Community becomes more selfsufficient with respect to feed cereals and less dependent

1) This situation is typical for agriculture in the highly industrialized countries. See for the U.S.A., Penn (1981) and Brewster et.al (1983).
on imported feed stuffs the comparative advantages for pig and poultry production of the coastal regions situated at short distances from both the ports of entry and consumption centres declines in favour of the more central cereal surplus regions (Meester and Strijker, 1985).

This locational link with the availability of feed materials also makes it difficult to encourage the expansion of livestock production as a basis for regional agricultural development in remote and isolated regions with a limited potential for feed production. As at the prevailing pattern of food consumption in high income countries the major part - about 70% - of the capacity for vegetable production - i.e. the agricultural land - is used for the production of feed for livestock, this connection between livestock and feed has also a great impact on the entire spatial distribution of agricultural production.

For vegetable production natural conditions still have an important impact on the input-output relations and, therefore, on the location of the various types of crop production and, indirectly, also of livestock production. Taking account of the declining importance of distances and transportation costs one should even expect an increasing tendency of regional specialization on the basis of comparative advantages originating from the variation in natural conditions. The development of more uniform and less nationally and regionally differentiated food consumption habits, moreover, reinforces such a tendency. The expansion of mediterranean productions - in particular fruits, vegetables, wine and decorative plants - in connection with a strong increase of demand for such products in the other countries is a striking example. Of course also the support and protection provided by the Common Agricultural Policy has favoured the expansion of these productions in the southern regions of the Community in stead of outside the Community.

The total area of land involved in this sort of agricultural production however, is, even in the mediterranean regions, relatively small. The major part of agricultural land use concerns either arable crops or grass and fodder crops for land-based livestock farming.

Natural conditions with respect to soil quality and the availability of water are more susceptible to human intervention than climate. Deficiencies in these natural conditions can be increasingly overcome by the use of modern yield increasing inputs, the application of adapted farming systems and cultivation practices and the development of suitable crop varieties. Natural conditions with respect to soil and water are moreover increasingly man-made. Modern technology makes it possible to level land, ameliorate soils and (re-) construct water management systems.

4.3 Economies of scale.

At a first glance economies of scale seem to be of little relevance for agricultural production. Even modern farms in Western Europe are still relatively small with a labour force of 1-2 permanent workers (Bergmann, 1975). The requirements of a sufficient and efficient utilization of modern farm outfit, which cannot be met by the individual farms, are fulfilled by the cooperative use of farm implements, the employment of contractors and the provision of services by downstream or upstream industries. This principle of external organisation is also applied to supporting activities such as research and development, marketing, accounting and all sorts of expert advise, which cannot be performed efficiently on the scale of the individual farms.

Modern farming, therefore, is embedded in a complex of, both geographically and organisationally, interrelated industries engaged in the provision of farm inputs and the processing and marketing of products including also servicing firms and governmental institutions such as research institutes, extension, veterinary and quality control services, etc.
Agriculture and these industries and private services, linked by commercial and contractual bonds, and the governmental supporting services constitute agro-industrial complexes. Interregional competition thus, to a great extent, has become a competition between such agro-industrial complexes.

Some of the components in such complexes involve scale requirements which affect regional competitiveness if the regional volume of supply is too small to achieve a sufficient scale of operation (vide for instance Post et. al (1986) in which is concluded that the dairy-complex in the western part of the Netherlands increasingly comes under pressure, due to decline of area and deteriorating production circumstances). Also the geographical concentration of agricultural production with its impact on the distances in the transport of inputs and outputs to and from the farms plays an important role. A higher concentration enables the achievement of a more efficient scale in industrial processing as the scale advantages then are less quickly neutralized by increasing internal transportation costs. A size which is too small for the efficient functioning of the various components of agro-industrial complexes and for establishing efficient inter-industrial linkages and infrastructural provisions in regions with a prevailing agricultural orientation increasingly constitutes handicaps which are difficult to overcome. Also seasonal underutilization of processing, marketing and transport capacities can be an important disadvantage. Particularly in vegetable and fruit production a diversification of regional supply is important for achieving a better utilization of the available capacity in the dependent industries and for the efficient functioning of marketing organisations.

There are also dynamic aspects involved in the operation of economies of scale as a locational factor. The early introduction of modern systems of production, processing and marketing give a lead on competitors entering the market at a later stage. Further development then can be based on the production experience acquired and the institutional framework developed with respect to the provision of inputs, processing, marketing servicing and last but not least, research, professional education and extension services. Also the more rapid diffusion of new knowledge and experience in highly specialized areas is of great importance, as has been concluded from a comparative analysis of glass house production in various regions in The Netherlands (Verhaegh, 1975).

These static and dynamic economies of scale reinforce the tendency of growing regional divergences in agricultural development. Owing to the increasing importance of large scale industrial processing and marketing and the diffusion of science-based and computer-aided farming systems modern agriculture in the same way as the modern manufacturing industries will increasingly tend to benefit of advanced research and education facilities, specialized servicing industries and recreational amenities which are scarce and difficult to establish in remote and isolated areas.
5. Effects of the CAP

5.1 Regional objectives

In the Treaty of Rome not much attention is paid to the problem of regional disparity. In Article 39 of this Treaty, which deals with the objectives of the Common Agricultural Policy, only slight reference is made to regional variation within the EC. The second paragraph of this article indicates that in the implementation of the Common Agricultural Policies the regional variation in farming structures and natural conditions should be taken into due account.

In the Conference of Stresa the link between regional policy and the C.A.P. was more explicitly mentioned (Meester, 1980, p. 44-64). This was still more the case in the Proposals of the Commission of 1960, where it was stated that the structural policy should be geared to both the reduction of production surpluses and the increase of productivity in backward regions in order to achieve a more equitable regional income distribution. It was also stated that the role of the EC would be rather small. Regional agricultural development could not be the only solution but had to be combined with general economic development which primarily is the responsibility of the national governments. In the following subsections we will discuss the regional impacts of the Common Agricultural Policy measures.

5.2 Effects of the price policy

The Community's systems for the protection and support of agricultural production vary between the different products. For the main temperate zone products such as cereals, sugarbeets, dairy and beef, covering together more than 90% of total agricultural land use, there is external protection combined with the possibility of intervention on the domestic market. These systems allowed production to expand far beyond the limitations of the domestic market and have resulted in the production of large surpluses which have to be disposed of at prices generally far below the domestic price level. Such an unlimited price guarantee virtually also prevails for a range of other crops for which the Community still has a considerable import surplus and for which the Community supports its agricultural producers with deficiency payments. The producer prices for all these products are therefore politically determined and, except for the urge to limit the budgetary expenditures, they are not linked to the market situation. Until some years ago the interregional competition within the Community therefore had an open end, as the expansion of regional production in one region did neither result in lower prices nor confronted other regions with a shrinking market outlet. The introduction of quota-systems (milk, sugar) fixes even more the interregional division of productivity.

For other agricultural sectors such as pig and poultry production, horticulture, fruit production and some arable crops (potatoes, onions) the prices mainly depend on domestic supply and demand. As far as there is a Common market regulation, interventions on the internal market are absent or weak and the external protection is generally much less prohibitive. As a result there is an effective interregional competition in these sectors under the constraint of a limited commercial demand. The locations of these agricultural productions, which are also generally less land-based, therefore depend much more strongly on locational competitive advantages.

Taking this position as a starting-point, one could say that the regional benefits of the price supports are distributed according to the regional share in total EC production, or according to the regional gross
production 1) per worker or per unit of agricultural land. In that case regions with a high production per unit of labour or land, (the western provinces of The Netherlands, the northern regions of Belgium, the northern regions of France, the areas around Paris and around Copenhagen) are the beneficiaries of the price-policy.

In the RICAP-study it is assumed that the indirect support is absent or negligible. In that case one can say that the more a region produces of a certain product with high price-support, the more it benefits from the price-policy. To calculate the "nominal protection-index" of a region, for all agricultural products the difference between internal EC-prices and world market prices are calculated. On the basis of the regional product-mix the weighted average difference between intra-EC and world market price is determined. This regional price-difference can be related to the difference for the EC as a whole, where in 1976/77 the weighted intra-EC-price was 80% higher than the world market price. Calculated in this way the regions which are more or less specialized in milk or in sugar-production (globally the north-eastern part of the EC) are the main beneficiaries of the price support. Regions which are specialized in e.g. fruits and vegetables fall in that case far below the EC-average (the southern regions of France and Italy, the western part of the Netherlands). A serious problem connected with this way of calculation is that the difference between intra-EC-price and world market price is partly influenced by the level of the world market price, which is for most products not independent from the EC-market- and price-policy. The actual world market price for dairy products is much lower than the world market price that would exist in absence of the EC-policy (Meester and Oskam, 1984). When this situation would also be taken into account, not only the regions specialized in dairy-production but also the regions specialized cereal production gain significant from the EC price support.

In the same study a more synthetic way of depicting the relative gains from the price-support is used. A compound index, built up from the price difference between EC and world market, the qualitative effectivity of internal price support and the qualitative effectivity of protection against imports from third countries has been constructed. This index was calculated for each region. The results are slightly different from the foregoing index because not only the average price but also the variation of the price is taken into account. In this case the cereal producing and olive-oil producing regions are the main gainers. Regions specialized in fruits, vegetables and meat production are according to this approach hardly affected by the EC market and price policies.

It will be clear that the results of the RICAP calculations are very dependent on the underlying assumptions and the method of calculation actually applied. This is even more the case when the influence of the C.A.P. on regional agricultural development is analyzed. For, it are not so much the static impacts of higher prices which are important in that case, but the dynamic influence on agricultural development. It is again the RICAP-study in which it is tried to outline the influence of the C.A.P. on agricultural development. For that purpose the before mentioned indices of regional price support were confronted with the regional growth-rates of agricultural production per unit of agricultural land (1968-69 / 1976-77). A significant correlation is not found. There are quite a lot of regions which combined a high level of price-support with low growth rates (regions in the vicinity of Paris, French mountain areas, some German and Italian regions). On the opposite, there are also regions which combined a low level of price support with a rapid growth of production (regions specialized in the production of vegetables, flowers, quality wines etc.). In the RICAP-

1) At least when constancy of costs of production per unit is assumed. In this situation of increasing costs per unit a decreasing price per unit leads to a less than proportional decrease of income.
study it is noticed that the growth of milk production explains the greater part of the regional divergencies in the growth of agricultural production. It is obvious that the relatively high prices for dairy products have something to do with this. On the other hand the low level of support for certain mediterranean products is thought to explain partly the relatively stagnating production on some mediterranean regions.

5.3 Structural policy 1)

Market and price policy is only one of the two pillars on which the Common Agricultural Policy is based. Structural policy was considered as indispensable for raising the productivity on backward farms and in backward regions and it was thought impossible to reach the policy goals solely by means of price policy. From the proposals of the Commission of June 1960 it appears that it had to be feared that the opening of a common market for agricultural products would aggravate existing regional differences. Apart from this the Commission thought structural policy a useful instrument to diminish production surpluses. The proposal of 1960 for structural policy emphasized the role of the individual member states, stressing that structural backwardness could only be solved in a general-economic context. Regional problems and agricultural problems were thought to be related closely. The communal activities were confined to financial support for national schemes and projects. It took several years before new proposals were made for the field of structural policy: the Mansholt-proposals. The reasons for new concern in this field were both the continuing growth of production and the unsatisfactory developments of agricultural income. The proposals were aimed at enlarging farms and stimulating the mobility of both people and land. It was stressed that off-farm job opportunities were vital for the desired restructuring of agriculture. The effects of Mansholt-proposals were rather limited. Only in 1972 some decisions were made which led to a curtailed structural policy with emphasis on the modernization of potentially viable farms, and the termination of farms with insufficient development opportunities.

Some years lateron (1975), an other approach was added: financial support for agriculture in less favoured areas (Directive 72/268/EC on mountain and hill farming in certain less favoured areas). In the same year the Council decided to establish the European Fund for Regional Development. This fund was aimed at general economic development of backward regions, but because of the close interrelation between agricultural and general economic problems, the fund also improved the chances for effective agricultural structural policies. After 1975 again proposals were launched to modify the C.A.P. Growing production surpluses made changes necessary. One element was the redirection of price-policy to market equilibrium (by lower prices), the other was using structural policy to support the modernization of farms in order to diminish differences in incomes. Because it could be expected that modernization not in all cases would be a sufficient to attain a reasonable income, the option of direct income supports was also emphasized.

Until recently most activities related with structural policy had two features which limited the redistributinal effects. Most programs were operative for all parts of the EC and thus not exclusively aimed at problem areas. Furthermore most activities had a rather general character. This was nearly always the case for the projects initiated by the individual member states and partly financed by "Brussels". But also the EC-measures did not always give priority to agriculture in problem areas. It is calculated that in the first five years of the existance of Directive 72/159/EC, on the modernization of farms, the large majority of farms with a certified Deve-

1) To a large extent based on Meester, 1980, p. 49-64

23
Development Plan was not situated in less-favoured areas. In normal areas 1.7% of all farms were farms with a Development Plan, in the less favoured areas 0.6%.

Improvements of physical conditions and adaptations of agricultural technology generally require heavy public investments in land consolidation schemes, rural reconstruction programs, irrigation and drainage systems, and in agricultural research, farm development and extension services. There is a bias in such public investments in favour of economically more developed and agriculturally more advanced regions. Public funds for such investments in agricultural infrastructures, and in research and development are generally more abundantly available in economically more developed countries and regions (see Evenson and Kislev). They are often granted in order to acquiesce farmers when they complain about an increasing income disparity arising from a rapid economic development and rise of incomes in other sectors of the national or regional economy.

Also the accumulation of capital within agriculture itself tends to be higher in agriculturally more favoured areas and this is still the most important source of capital in farming. As a consequence agriculturally more favoured and advanced regions tend to provide better prospects for a full and rapid utilization of improvements in physical conditions and infrastructures and of new technology and, therefore, to offer more promising prospects for effective and profitable public investment (De Veer, 1983).

Of course serious natural handicaps such as extremely adverse climates, elevation and slope are difficult to compensate for. These, however, tend to coincide with factors which impede the development of other economic sectors, with an exception for tourism in some cases.

As the conduct and the financing of such infrastructural policies within the European Community are still mainly the responsibility of national and regional authorities, they have the tendency to reinforce existing regional differences.

Until recently most activities in the field of structural policy had a micro-character. In principle the policy tried to develop the production potential of groups of backward farms, to give them better income opportunities. But because of the stagnating demand for agricultural products, an expansion of production brings down average prices, worsening income opportunities of all other farms. In this way the gap between comparable income and actual income in the tail of the agricultural income distribution is not closed. The ultimate effect probably is that at the best one group of marginal farms is replaced by another. Especially this second shortcoming is very important when structural policy is to be used for raising the agricultural income as a whole. Without specific additional measures structural policy might even aggravate the economic problems of agriculture.

Beginning in 1975 with the regulations for agriculture in less favoured areas the common structural policy got more and more a specific regional character. With this directive, during the seventies covering 25% of EC agricultural area, 15% of the farms and 12% of production, the specific regional handicaps for farming were recognised. In recent years the area under the directive is extended to a larger area. One of the reasons is that in this way the negative impacts of price adjustments on farm-incomes partly can be compensated. Especially the enlarging of the area under the Directive in West-Germany in 1986 is a striking example. Probably in a lot of cases it is better to talk about "problem-areas in a political sense".

In the dichotomy between sectoral structural policy and regional structural policy we can say that the last one was more emphasised. This notion gave way for packages for specific problem areas (irrigation in southern Italy, reconstruction of vineyards in Mediterranean France, hydraulic works in Hérault, infrastructural works and improving of processing and marketing conditions in the Mezzogiorno, drainage projects in
Western Ireland etc). In 1981 three integrated projects for coordinated efforts by the three Community funds were adopted (Lozère, Western Isles of Scotland and less favoured areas of Belgium).

Recently this line is continued by launching proposals for large scale reconstruction works in the Mediterranean area. The reason for these measures was the entry of Spain and Portugal into the EC.

5.4 MCA's.

An agricultural policy measure which rather strongly affected regional competitiveness within the Community is the introduction of monetary compensatory amounts (MCA's). It is a system of border taxes and subsidies introduced in 1969 to compensate for the immediate effects of exchange rate adjustments on national agricultural product prices. In appreciating countries an immediate lowering of prices after a revaluation is prevented by export subsidies and import levies and vice versa. As the reduction of existing MCA's evolved slowly and, owing to subsequent exchange rate adjustments continually new compensations were introduced, the ultimate effect was a continuous protection of agricultural production - especially cereals, sugar and livestock products - in strong currency countries such as the Federal Republic of Germany and The Netherlands and a continuous discrimination against the same agricultural sectors in the weak currency countries such as France and Italy (Ritson and Tangermann, 1979, De Veer, 1983). This system which will be gradually abolished in the period 1984-1988, to a great extent offsets the impact of strong non-agricultural export sectors such as the capital good sectors in Germany and natural gas in The Netherlands, on the terms of trade for agriculture, which at least within the context of the European Community is to be considered as an exposed sector. Likewise it curbed the growth of agricultural production in weak currency countries (Strijker, 1986).

5.5 Financial efforts

The variety of measures with regional components can be summarized by the sums of money involved. Four financial flows can be distinguished: support directly connected with the C.A.P., partly coming from the "Guarantee"-section of EAGGF, partly from structural agricultural policy measures. The third flow is constituted by the regional EC-programs and the fourth by all kinds of national measures.

Total expenditures from the Guarantee sector of EAGGF in 1984 amounted to 18.3 billion ECU (67.3% of total EC-expenditures). This is slightly more than 200 ECU per ha of agricultural land. Taking the regional distribution in 1976/77 (RICAP, chart 4) as a proxy for 1984, this would imply that support per unit of agricultural land would be less than 100 ECU in Sicilia, in Calabria and Piemonte, and more than 350 ECU/ha in, among others, The Netherlands.

Structural measures principally directed to the agricultural sector and originating from the "Orientation" part of EAGGF and from the budget chapters 30-33 and 38 (specific measures for agriculture), together account for 675 mln. ECU in 1984 or 2.5% of total EC-expenditures. Because a substantial part of this sum is not reserved for problem areas, the financial effort for backward areas is limited. It is calculated (COM 83, 24 def, Annex 6) that in 1982 per inhabitant this type of support was highest in the Mezzogiorno with about 8 ECU (the EC-average is 2.5 ECU).

More important than these agricultural structural supports are the joint efforts by other EC-funds in the field of regional development (EFRD, European Social Fund, ECGS, special subsidies). According to the budget, in 1984 the total expenditures for agricultural and non-agricultural struc-
tural measures were 3.7 billion ECU (14 ECU per inhabitant, 13.5% of total EC-expenditures). Support for less-developed areas was rather high. In 1982 this amounted for instance to 55 ECU per inhabitant for the Mezzogiorno and to 12 ECU in the mediterranean part of France.

The last type of policy with regional objectives is the national effort. It is nearly impossible to quantify the regional agricultural activities of the national governments. Notwithstanding this it is quite sure that this last type of regional support is the most important one. An important part of the national agricultural measures are in the field of structural policy. Seebohm (1981, p. 126) has calculated the total national support for the agricultural sector between 1974 and 1976. For the EC-9 in that period total national support was about twice as high as the total EC-budget for agriculture 1).

Although the greater part of these national efforts can be identified as structural measures, it is not known which part of this support can be associated with regional policy. But it is certain that the regional component is large. As we want to deal in the first place with the regional aspects of EC agricultural policy these national efforts will not be elaborated here.

1) The same figure is used in the detailed study of national structural policy in the EC (Balz, Meimberg and Schöpe, 1981, part 1, p. 14
6. FUTURE DEVELOPMENTS

Maybe the most important effect of the C.A.P. on regional development within the EC has been that the relatively high level of prices for agricultural products has considerably stimulated the development of the agricultural sector as such. It is certain that to a great extent the recent intensification of EC agriculture can be explained from the relatively high and guaranteed prices. As noticed before the result was a sharp increase in production of most products which, together with a stagnant demand, created a rapidly growing discrepancy between demand and supply. Until recent years this rising production could be sold on the internal market, pushing away imports, but more and more the internal market is saturated. Export refunds are expensive and create untenable international trade relations. So, we can say that the prospects for further growth are very limited.

At the same time we noticed that large parts of the EC are still far behind in agricultural yields and incomes. Economic development of the backward parts of the EC implies expansion of the agricultural production of those regions too. Without a competitive outlet for that production it is, however, questionable how such developments can occur. This situation has far reaching implications with respect to the scope for regional development of large parts of the EC, because general economic development and agricultural development are closely related. Two extreme positions of future regional distribution of agriculture can be defined:

a. one can imagine EC agriculture more and more concentrated in the core regions of the EC (between Copenhagen and Paris, Hannover and London, maybe the Po-delta included). Concentration in those regions would only be limited by the costs of agricultural congestion. The regions in the periphery of the EC would only have room for slow development, both within and outside agriculture.

b. at the other end of the scale one could think of a more equalized picture of EC agriculture. This would imply effective limitation of the intensity of agricultural production in the central part of the EC, leaving room for the more remote areas of the EC. Until now the relative growth of production in the already high-yielding regions of the EC was not much slower than in lower-yielding regions. This led to a larger absolute growth of production in the high-yielding regions, and to some concentration of production in the high-yielding regions (Jacobs and Strijker).

The tendency of an increasing concentration of production and intensification of agricultural land use in agriculturally more advanced and more favoured regions will sharpen the problems with regard to surplus production, divergent regional development and environmental pollution.

The increase of surplus production with the concomitant rise of budgetary expenditures and risks of retaliatory international trade interventions will force the European Community and national governments of other countries to take policy measures.

A lowering of prices - even if supplemented with nationally or communautarily financed direct income payments to compensate the farmers for their loss of income - certainly will generate a sharpening of interregional competition. The greater mobility of resources, in particular of labour and capital, may cause a stronger reduction of agricultural production in economically more developed regions. However, the higher levels of productivity, the more efficient processing, marketing and servicing infrastructures and the greater flexibility in farming systems in such regions may also have the opposite result. Our personal feeling is that such a development would widen the existing regional differences in agri-
cultural development and reinforce the tendency of regional concentration of agricultural production within the European Community. It must furthermore be feared that the political support for the financing of regional agricultural development plans will decrease if the latter result in a further expansion of production and depression of prices. Within the context of the Community as a whole and considering of the limited market outlets the implementation of such plans would moreover result in a marginalisation of other agricultural regions (Weinschenk, 1984).

The alternative policy option is to introduce direct supply controls such as the super levy system for milk production of the European Community and similar systems in other countries. Such systems which fix delivery quota for individual farms or for regional dairy industries will preserve the existing regional distribution and impede further regional specialisation and concentration of production. By reallocation of quota such systems, however, could also be used to change the regional distribution and to create room for expansion in hitherto less developed areas with potential locational advantages. The enlargement of the milk delivery quota for Irish dairy farmers may be considered as such an endeavour to widen the opportunities for the exploitation of potential comparative advantages and to support regional development in a sector which is of great importance for total employment and income in certain regions.

The vested national and regional interests, however, certainly will oppose strongly against such direct interventions to change the regional distribution of production and to achieve a more balanced regional economic development. On the contrary strong pressures may be expected to make quota transferable not only between farms but also across regional and national borders. Such a transferability would offset the negative allocational impact of the ossification of existing production structures but presumably also result in a further concentration of production in the regions with the most favourable conditions for agricultural production and the most efficient agro-industrial and marketing structures.

Modern agricultural development not only damages the historically developed rural landscapes and the diversity of natural vegetation and wildlife but also raises environmental problems. The increased use of chemicals in combination with a specialization of the cropping plan characteristic for modern arable farming, in extreme cases threatens to pollute the soil and surface waters and to have unacceptable ecological impacts. The high livestock densities, particularly in the north-western coastal regions with a strong concentration of pig and poultry production on the basis of imported feed stuffs, cause serious congestion problems with respect to manure. The disposal of manure on agricultural land in excess of the demand for plant nutrients results in an unacceptable pollution of the soil, surface waters, groundwater reservoirs and air and necessitates costly measures to dispose of the surplus manure by transportation to other regions or destructions (Wijnands en Luesink, 1985). The advantages of specialization and concentration in such areas are increasingly offset by the rise of environmental costs.

Generally agricultural production and industry located in regions with high population densities and a strong concentration of industrial activities face increasing environmental costs both because they add to other pollution sources and because of higher standards of environmental policy in such areas.

These developments will reduce the locational advantages of such regions for modern agro-industrial development. A redirection of agricultural policy to a more even regional distribution of agricultural production might, therefore, have important social benefits with respect to the protection of rural landscapes, the national environment and to a more balanced regional development (Weinschenk and Kemper, 1982; Van der Weijden et. al., 1984). The implementation of such policies would, however, require restrictive measures and would face a strong opposition from the national
and regional agro-industrial interests in the economically and agriculturally more developed and advanced countries and regions.

As stated before, governmental activities to make some room for further agricultural development of relatively backward areas, will be strongly opposed by regions possessing competitive advantages. One of the alternatives for the Common Agricultural Policy, recently discussed, is active withdrawal of agricultural land to slow down the growth of agricultural production (Meester and Strijker, 1985). Such a policy will probably affect all parts of the EC in more or less the same way. In that case it will at least give some scope for the development of agriculture in backward areas. On the other hand, when a policy of withdrawal of agricultural land would be concentrated in the backward areas, the negative economic effects could be very large, while the effects on EC-production would be marginal.
In conclusion the creation of the Common Market created better opportunities for regional specialization. But we also can say that the Common agricultural market and price policies did not contribute to a more even distribution of agricultural production over the Community or to the reduction of existing divergences in regional agricultural development. For the main temperate zone products which are subject to an intensive market regulation system the regional competition was mitigated by the unlimited market outlet provided by the Common Agricultural Policy. For these generally more land based products the national and regional policies in the field of physical and social infrastructures, farm development, research and extension had important impacts and tended to reinforce the position of agriculture in more advanced and more developed regions, particularly in economically more developed and more prosperous countries. The Common Agricultural Policy did little to counter this tendency. The funds available for supporting the agricultural development in agriculturally less advanced and economically less developed regions in the Community were small in proportion to the national and regional government expenditures. Central question for the future is whether or not there will be an ongoing tendency of concentration of production in a limited part of the EC. We stated that the diminishing market prospects for most agricultural products can have a very negative impact on the chances for growth and development for the more peripheral regions of the EC. Deconcentration of production implies that agricultural production in the central regions has to be limited, a development which can not count on many fans among farmers and agricultural decision makers in those regions. With regard to 'agricultural congestion' (manure, landscape) a limitation of (growth of) production appears to be preferable. A certain amount of deconcentration will be an absolute necessity to keep open development prospects for the peripheral areas. It is questionable however, whether or not there will be enough political support for such a redirection of agricultural policy. It is even questionable whether it is possible to construct a policy which is able to redirect the distribution of agricultural production from concentration to a more even distribution.
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