

The Common Agricultural Policy – its operation and its future

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The Common Agricultural Policy has been operated by the EC for over 30 years. It readily lends itself to simple microeconomic analysis, which is the main purpose of this article. The article analyses the policy, focussing on how it has become such a contentious issue within the EC, how attempts have been made to reform the policy, and in which direction the policy could move in the 1990's.

Introduction

For a variety of reasons, the European Communities (EC) has in recent years become an important focus for economic analysis.⁽¹⁾ The most important development has been the movement towards closer economic integration between the member states of the EC, known as the 1992 programme.⁽²⁾ There has, however, been one policy operated by the EC for a number of years that has continually put the EC in the public eye; that is, the operation and effects of the Common Agricultural Policy (CAP). This is the means by which the EC provides financial support for its farmers. It has been popularly associated with massive budgetary expenditures and the infamous 'mountains' and 'lakes' of surplus products as diverse as cereals, skimmed milk powder, beef and alcohol. These problems have, of themselves, caused great consternation, and have brought forth a number of attempts to correct imbalances in agricultural production and the resulting rising expenditures. However, these problems have wide implications. For the success of the 1992 programme, a larger EC budget will be required, to fund larger and new policies (for example greater regional spending, and the expansion of the EC's activities into area like research and development, and new high-technology industries). This must be accompanied by an effective reform of the CAP in order to ensure the larger budget is not simply swallowed up by ever-expanding support costs for agriculture.

In this article, simple microeconomic theory is used to consider the principles underlying the operation of the CAP, the reasons why the levels of surpluses and budgetary expenditures have risen over time as a result, and how the reforms implemented to try and control the growth of agricultural output and expenditures actually operate. Although reference will be made to a number of the different products supported under the CAP, the main reference will be to cereals, because of its importance to farmers across the EC, both as a final product and as an input into other production processes, notably as a feed input into livestock production.

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Why Support Agriculture?

Most developed economies' governments intervene in agriculture to some degree, and with a variety of aims in mind. The two principal motives stated are to counter unstable market prices and support farmers' incomes. Taking the question of price stability first, the nature of the agricultural production process means that for most products, arable and livestock, one production cycle lasts several months. Thus, *ceteris paribus*, supply is relatively price inelastic in the short run.

Moreover, there is a relatively low income elasticity of demand for food, so that in the high-income Western economies, a relatively low proportion of income spent goes on food. Thus food takes a smaller and smaller proportion of total consumer expenditure over time. This, coupled with the fact that unprocessed farm products face relatively price inelastic demand (even when a processed form of food may face relatively elastic demand), as well as the more obvious point that 'food' in total has no close substitutes, results in farmers facing a relatively price inelastic demand schedule. It therefore follows that, given inelastic demand and supply schedules, changes in either demand or supply will result in proportionately greater changes in the equilibrium price. Moreover, whilst demand tends to be relatively stable over time, supply can fluctuate quite significantly, given its reliance on such external factors as the climate (witness, for example, the high potato prices in the UK in 1976 when the drought of that year cut harvests significantly).

The second point, that of supporting farmers' incomes, stems (at least in part) from the argument stated above, that in developed economies demand for food rises more slowly than general demand in the economy as a whole. In addition to this, whilst consumers' expenditure on food is rising over time, this in no way guarantees a rising return to farmers, with the food bought by consumers increasingly being processed (convenience foods, TV dinners etc). Thus a larger and larger fraction of total expenditure on food goes on the marketing margin – processing, etc. Moreover, technological progress acts to increase supply over time, by developing higher-yielding varieties of seeds and improved inputs. Coupled to relatively static demand for farmers' products, if not for food in total, the price *faced by farmers* will be driven down over time.

Support Under the CAP

The CAP has a number of different methods of support, all aimed at fulfilling the aims of the CAP, as laid down in Article 39 of the Treaty of Rome. These are: to increase agricultural productivity and promote the optimal utilisation of factors especially labour; to ensure *thereby* a fair standard of living for the agricultural community; to stabilise markets; to ensure certain supplies; and to ensure

supplies to consumers at *reasonable* prices (this author's emphasis).

The principal method of support involves maintaining a market price for each commodity within the EC which is normally higher than the price in the rest of the world and, moreover, above the equilibrium price. Simple microeconomics suggests that without further intervention, this policy will result in the price charged being driven down to the equilibrium level. In the particular case of the CAP, there are two ways in which this high price could be undermined, and thus there are two distinct, but closely related, policies operated by the EC to protect this higher price.

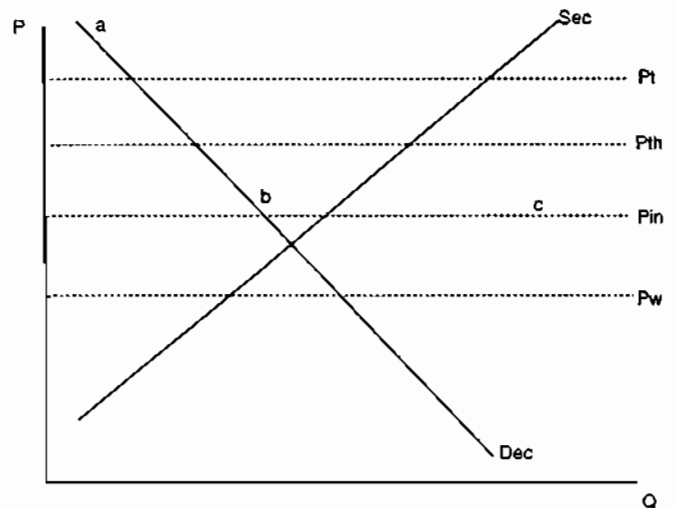
Firstly, the EC must protect against cheap imports from the rest of the world entering the Community and undermining the high EC price. It does this by applying variable import levies (VILs) to all imports coming into the EC. These are set by reference to the Target Price. This is defined as the market price at Duisburg in the Ruhr, assumed to be the place of greatest cereals deficit in the Community, and therefore the place with the highest market price. From this is deducted transport costs from Rotterdam (the main point of import into the Community) to Duisburg. This then gives the Threshold Price, that is, the minimum price at which imports are allowed into the EC. Thus the VIL is calculated as the difference between the price of the cereals landing at Rotterdam, and the threshold price.

Secondly, to prevent domestic over-supply from putting excessive downward pressure on the EC price, a system of intervention buying is available for most products. This acts to put a floor in the market, so that when the market price falls below this level, then the members states, on behalf of the EC, are obliged to buy in what farmers decide to offer to them for 'sale', subject to certain requirements such as minimum quality and current stock levels.⁽³⁾ When the products are sold out of intervention, they normally go for export to third countries. Resale onto the EC market would undermine the reason for the intervention buying in the first place, that of domestic over-supply, by simply adding to that over-supply. This, like all exports to third countries, requires a payment to cover the difference between the EC price and the world price – the export restitution payment, (though more commonly called the export refund or subsidy, funding the process which is popularly known as 'dumping'). Note that, for a number of reasons, the unit export refund is generally lower than the unit VIL. This system of protection operated by the EC can be seen in Figure 1.

The Target Price 'Pt' is above the Threshold Price 'Pth' by the transport costs from Rotterdam to Duisburg. Pin is the intervention or buying-in price, and Pw is the world price. Sec and Dec are the EC's supply and demand curves for this particular commodity. What these show is that at the institutional prices set by the EC, the EC is a net exporter, i.e. supply is greater than demand at those prices. At the world price however, the EC would be a net importer. Because the Intervention Price theoretically puts a floor in the market, the effective demand curve facing producers is abc.

Over time the EC has moved from being a net importer to being a net exporter. Demand for many agricultural products has remained fairly stable over time, but technological advances, encouraged by high support prices, have continuously increased supply.⁽⁴⁾ Given a higher unit VIL than export refund, being a net importer meant that this system of supporting agriculture was originally a net income generator for the EC. In recent years however, as the EC has moved from being a net importer for most products to being a net exporter (the situation shown in Figure 1), so the cost of supporting agriculture has risen. Although the unit VIL is still greater than the unit export refund, a far greater quantity of many products is exported than imported.

Figure 1: the Price Regime of the CAP



This point also demonstrates that whilst small cereals farmers are often cited as an example of perfectly competitive producers, even ignoring the impact of government intervention on this point, this example is highly questionable. The output of small cereals farmers can be highly differentiated. Thus the EC imports large quantities of 'hard' wheats, suitable for milling, whilst simultaneously exporting larger quantities of 'soft' non-milling wheats – all wheats, but very different in consumption and trading at very different price levels on international markets.

Moreover, not only will greater quantities of the surplus products be exported, requiring greater expenditure on export refunds, but for most products, greater quantities will also be sold into intervention.⁽⁵⁾ Thus expenditures rise here as well, to cover the operations involved in moving the products into and out of store, as well as the costs of keeping them there.

Therefore as surplus production has risen over time for the reasons set out above, so has the level of stocks (the 'mountains' and 'lakes' the media have been so ready to highlight) and the costs of the CAP, threatening, *inter alia*, the progress of the EC towards the completion of the internal market in 1992.

We have now established the principles underpinning EC support to agriculture, and how this has led to the evolution of surpluses. Considering the financial implications of dealing with these surpluses, we have also seen how the EC's expenditure on agricultural support has risen over time.

As a footnote to this section, it is worth noting that the CAP's intervention system does not operate like a buffer-stock, where surplus quantities are bought by the operating authority in years when production exceeds demand, and released onto the market in years when production falls short of demand. This sort of system is generally depicted in the theory as being self-financing. With the CAP however, many products are in structural surplus, with supply exceeding total internal EC demand year after year at the support price. Thus, unlike the (ideal) buffer-stock, the CAP's intervention system is a persistent net financial burden to the operator. This is because year after year surplus products have to be removed from the internal market, and then exported directly, or placed into intervention and exported later.

The Attempts at Reform

Because of the market developments outlined above, and the consequent rise in expenditure, by 1984 the EC was, in a technical sense, bankrupt, though the member states provided sufficient short-term injections to ensure the continued functioning of both the EC and the CAP.⁽⁶⁾ The fact that these additional payments were made reflects the value placed by the member states on the EC; rather than let this imbalance in agriculture risk the future of the entire Community, as some commentators suggested a budgetary crisis would, the Community was able to continue functioning. It was apparent, however, that this situation could not continue indefinitely, and simply providing more money would not solve the problem, since if the CAP were left unchanged, the extra money provided would simply go straight into agricultural support.

Thus in 1984, an attempt was made to secure both extra funds for the Budget as a whole, and control the amount spent on agricultural support via rules on 'budgetary discipline'. The formula agreed was one which set an informal limit equating the growth of agricultural expenditure to total EC expenditure. The agricultural price decisions (ie the setting of Pt, Pth and Pin) were to be taken so as to respect this lower growth in agricultural expenditure, but there was no legally binding mechanism to guarantee the expenditure guidelines were respected. In practice, the measures simply failed, as the price decisions taken left no chance of total expenditures falling below total revenues. The lower real prices paid to farmers were intended to slow or halt the growth in agricultural production, but the decisions taken were insufficient to outweigh the effects of steadily improving technologies and so extra payments were needed from the member states in 1984, 1985, 1986 and 1987 as production, and hence costs, kept on rising.

The 1988 Reforms

Finally, in February 1988 at the Summit held in Brussels, decisions were taken that tightened the budgetary discipline guidelines referred to earlier and made them legally binding. It was, however, a time when certain external (and internal) factors were also to come to the aid of the EC. Principally, there was a drought in the USA during the Summer of 1988. International cereals prices tend to be determined by US domestic policy, since it is the dominant producer on the world market. Thus the large fall in US output caused by the drought led to a sharp rise in world cereal prices and so savings in unit export refunds. Also, the seemingly inexorable rise in EC support prices began to slow. Support prices had been increased very dramatically during 1980/81. Indeed, for the first (and only) time, the prices increased in real as well as nominal terms. Since then, however, the real price has been falling. Indeed, the automatic increase in the nominal price every year has now become a thing of the past, with Pt and Pin having been frozen in nominal terms for the last five years.

Increases in production have been driven by yields, rather than area planted for some time now. Thus the likely effect of recent measures such as 'set-aside', whereby farmers receive a financial inducement to take land out of the production of certain surplus crops, is debatable, (especially as only around 1% of the total arable area is currently being set aside). For example, with cereals the area planted has been declining steadily for some years, but rising yields have outweighed this, resulting in steadily rising production.

As mentioned earlier, a package of reform measures known as 'stabilisers' was passed at this Summit. This principal weapon is an automatic cut in Pin whenever production exceeds a particular level, known as the Maximum Guaranteed Quantity (MGQ). This, *ceteris paribus*, cuts the per-unit refund. This price cut to farmers, it is also hoped, will slow down the rate of growth of agricultural production – ie slow down the rate at which the supply schedule shifts to the right over time.

Coupled to this agreement was an increase in the EC's 'own-resources' (total revenues), felt necessary to fund the policies needed to achieve a single market by 31 December 1992 and extend the number of common policies operated by the EC beyond just the CAP.

An Assessment of the Reforms

The foregoing discussion on policy reforms suggests that although the EC has introduced a number of ways of trying to control agricultural production and resultant expenditure, perhaps the most significant feature is that the underlying principle of high prices (ie prices maintained above their world levels) has continued. Reform has simply consisted of a gradual lowering of this price, in the hope that farmers will respond by producing less, therefore yielding savings to the EC budget. If one considers the experience of the EC's cereals sector however, it can be suggested that this path will prove to be ineffective. Research by this author suggests that between the early 1970's and 1989, the real price to cereals farmers in the EC roughly halved. During this same period, the total area

planted to cereals in the EC fell by around 4-5%. Yet despite this, total cereals production rose by approximately 33%.⁽⁷⁾

These figures suggest that the EC's current reform policy of gradually cutting support prices paid to farmers in order to correct market and financial imbalances will not work. The reason can be seen quite clearly in Figure 1, which shows whilst the levels of the different support prices have been changed over time, these changes have been too small to have any significant effect on production and expenditure levels.⁽⁸⁾ Pin has been cut, but it is chasing a moving target, as the steady increase in supply pushes down the equilibrium price.

This point is further evidenced by the market events of late 1990 and early 1991. Following the reforms of 1988, expenditures did fall, but against the background of the drought in the US. Most commentators felt that the cause of the expenditure cut was the drought, rather than the stabiliser reforms. The prediction was therefore that once world production rose (with production in the US returning to 'normal' levels, and production elsewhere responding to the higher world prices realised in 1988), CAP expenditures would once again rise. This process started in earnest in 1990, with rising surpluses in a number of sectors, and increasing quantities of products going into store and for export. Official stock figures (taken at the end of the accounting year) indicate that the highest level of cereals intervention stocks in the EC occurred at the end of 1985, when the figure was 18.5m tonnes.⁽⁹⁾ The data suggest that current stock levels are already back to that order of magnitude.

In addition to the cereals sector, a number of other sectors are facing major difficulties. Among these is the beef sector. Here, however, the causes of the problems are somewhat different. Firstly, there are large quantities of cheaper beef 'entering' the Community from the former East Germany, resulting in more producers in the rest of the Community trying to sell their beef into intervention. Secondly, in the UK in particular, demand has been affected by the BSE 'mad-cow disease' scare, causing producers to increase their 'demand' for intervention as 'market' demand falls.

Thus it can be seen that attempts at reform have failed *de facto*, because they have in no serious way altered that fundamental underlying method of support under the CAP. The 'adjustments' that have been made can be seen to have failed.

Alternative Proposals to Reform

This therefore begs the question of what sort of reforms could be implemented that would succeed in cutting production and support expenditure. To fully consider this issue could take years of debate and argument. Therefore this section simply outlines a few of the alternatives and considers how and where they would impact on the important variables considered above.

Firstly, there is the notion of set-aside, that is, paying farmers to either grow nothing on a portion of their land, or to switch production into certain other crops. Although currently operated in a

limited way within the EC, it faces a number of problems. There is, for example, political opposition to a scheme in which the farmer is perceived as being paid to do or grow nothing, though this could be offset by requiring farmers to manage the set-aside land in an environmentally-friendly way, eg by requiring the planting, restoration and management of suitable wildlife habitats.

A rather more immediate problem can be highlighted by reference to data presented earlier, which demonstrate that whilst the area planted to cereals in the EC has fallen, the rise in yields has offset this effect, resulting in production still rising. To overcome this particular problem, a considerably larger quantity of land would have to be set aside than has been so far. To this would have to be added a cautionary note based on the experience of the US over many years; that is, often it is the poorest land that is set aside, i.e. the land with lower than average yields. Thus output is cut by less than intended when a given area of this poorer land is taken out of production. Moreover, the potential environmental impact of such a policy would also have to be considered, given that farmers may farm the rest of their land more intensively, as has happened in the US.

A second alternative could be a reform such as Ray MacSharry, the Commissioner for Agriculture, proposed in early 1991. With this, the troublesome cereals sector would face large price cuts, down to a level close to, though still just above, the world price. As compensation, farmers would receive direct payments, but not equal to the previous level of support in all cases. The smallest farmers would receive a greater degree of compensation than the larger farmers. This reflects concerns in many parts of Europe regarding the social significance of the 'family farm unit' within society, often over and above purely economic allocative inefficiencies these units may possess. Moreover, for the larger farmers to receive their payments, they would have to agree to set aside a given portion of their land. For the largest farmers, this would be 35% of their total acreage. This is known as 'cross compliance', and is seen as one way in which environmental elements can be incorporated into agriculture support policies. Put crudely, the argument could be presented to farmers that unless they protect the environment by, say, setting aside land or limiting fertiliser use then they would not be eligible for financial support under the CAP.

As can be seen with this proposal, there would be a fundamental shift in the source of support for farmers. With the high price policy as represented earlier, it is consumers who bear much of the burden, by having to pay artificially high prices. Under this reform proposal, they would pay lower prices, with support for farmers coming increasingly from taxpayers. This would represent an important change, since the scheme as it now operates is regressive, in as much as poorer people spend a higher proportion of their income on food, and therefore make a disproportionately large contribution to the costs of agricultural support. With the MacSharry proposal however, support would better reflect people's ability to pay, since

much government revenue comes through income tax, which is a proportional tax. In essence, the reform proposals for most other sectors supported by the CAP, for example oilseeds (rape and sunflower in particular), and beef are the same; that is, a significant reduction in the official support prices as represented in Figure 1, coupled with direct payments based on an assessment of farm size (land area or head of cattle) and cross compliance.

These proposals are attractive to economists as they would represent an increase in the efficiency of income transfers. One of the failings of the CAP has been its inability to channel income support to the poorest farmers, since the amount of support received has historically depended on the level of output. The MacSharry proposals represent a targeting of income support on those smaller farmers deemed most in need of income support, and who also, it ought to be noted, contribute least to the production of surpluses.

As regards controlling surplus production, the intention is manifold. By lowering support levels to the large 'agribusinesses', it is hoped this would lead directly to their cutting production. It could also be that they would cut costs by reducing the use of inputs.⁽¹⁰⁾ Furthermore, a set-aside scheme within this package of measures would add further to the potential fall in output possible under this package.

Overall therefore, it may well be suggested that from an economic perspective, this latter alternative has many points to recommend it. It has, however, faced very tough opposition from within the EC. There is one very important reason for this – the dominance of political factors over economic factors within the EC's decision-making process. Thus the UK sees the proposals as being damaging to UK farming and UK farmers. As they have, on average, larger holdings than most of their European counterparts, they would receive lower support (regardless of their potentially lesser need for that support). On the continent, however, there is 'social' opposition to the idea of direct payments to farmers from taxpayers via the government. It can be argued justifiably, that however, they presently receive direct payments, albeit from consumers rather than taxpayers. This latter payment, though, is seen by the farming community as qualitatively different in so far as it is based on what the farmer produces, not on what the government thinks he or she, as a farmer, ought to receive.⁽¹¹⁾ Thus because the ultimate decision-making authority in the EC, the Council of Ministers, is made up of politicians from the member states, the political issues involved often, as in this example, dominate the decisions taken.

There is, however, a wider political influence that could have an effect on the reform of the CAP. The EC and its member states are all members of GATT, the General Agreement on Tariffs and Trade. Within the present 'Uruguay Round' of trade negotiations sponsored by GATT, there is currently great pressure on the EC from the US and the 'Cairns Group' of agricultural free traders, which all want the EC to reduce its support for agriculture because of the trade-distorting effects such

intervention has; notably the use of export refunds, which depress the world price and permit the EC to compete, unfairly as these other countries perceive it, in export markets.⁽¹²⁾ Returning to the MacSharry proposals outlined above, they could reduce the trade distortion resulting from the CAP, as they would cut the market prices of agricultural products within the EC, thereby requiring much lower export refunds on trade. Indeed, when these proposals were announced, it was at a time when the GATT negotiations had just collapsed (December 1990), with the US, Cairns Group and EC deeply divided. Not long after, the parties reconvened, suggesting that these proposals could possibly provide a base from which some sort of agreement can be reached internationally.

Conclusion

Since its inception, the CAP has been a cornerstone of the operations of the European Communities. The policy has, however, generated much political and economic discussion over the way in which it operates. It has been shown that the method of support used under the CAP has been instrumental in generating the much publicised surpluses of agricultural products, and also creating financial crises for the EC. Both outcomes are predicted by simple microeconomic theory. Although it has been reformed over the years, the policy is, in essence, the same as when it was instituted over thirty years ago. It has been suggested that in order to survive, the EC must 'radically' reform the CAP, in order to prepare itself for 1992 and beyond. There are many ways in which this could be done, just a few of which have been outlined. Although the internal political will for effective reform has been questioned, external factors may force reforms. As with much else described in this article however, the actual reform decisions, whilst capable of being analysed using economic theory, will probably be based more on political will.

References

1. It is now standard practice to talk of the European Communities – plural – the union of the European Economic, Atomic Energy, and Coal and Steel Communities.
2. D. K. Whyne (1990), "After 1992: The Political Economy of the Single European Act", *Economics*, Vol.26 (1), 109, 19-23.
3. This takes place at the 'intervention price' or 'buying-in price', depending on the particular commodity in question.
4. Price support raises the prices received by farmers, who then increase their demand for new, better inputs. Technological advance would still occur without this price support; the point is that price support accelerates this process by *raising* the demand for the products of the agricultural input industries.
5. Not only will the 'quantity' of export refunds rise with greater exports, but so will the per-unit size of the refund. This is because the EC exports a 'large' quantity of cereals onto the world market, thereby lowering the world price to which the refund must go to. In terms of Figure 1, exporting products lowers P_w . This occurs because P_w is set by world supply and demand for cereals traded, and the EC exports a quantity large enough to affect the position of the 'world' supply curve.

6. This 'technical' bankruptcy needs a brief explanation. The EC's operations are funded by means of 'own resources' (customs duties and agricultural levies on imports, a payment based on the VAT base in each member state, and more recently, a payment based on the relative wealth of the Member States as measured by their relative GNP's). These are limited each year, and total expenditure can't exceed total revenues. In 1984 however, expenditure did exceed this total and it was this excess Member States had to cover. This was due principally to rapidly rising expenditures under the CAP, since these are 'Compulsory' i.e. they *have* to be made in order to fulfill the requirement of agricultural support as laid down in the Treaty of Rome.
7. Note that these figures make a full allowance for the fact that the EC has grown from 9 to 12 member states in that period.
8. It may be that price cuts of the order of 25-50% may well have the desired effect in terms of cutting production and expenditures, but at the unacceptably high political cost in terms of people force out of farming.
9. Though at some point DURING that or another year, the stock figure may well have been higher than that.
10. For this to occur, the marginal cut in input costs would have to be greater than the marginal cut in income from the lower output likely. Although on the surface it may seem unlikely that farmers would currently be operating where $MC > MR$, it transpired in the dairy sector after the introduction of quotas in 1984 that when a number of farmers cut their use of concentrated feed inputs to cut yields per cow, their margins went up. It is not inconceivable that some arable farmers are currently operating in that same region.
11. Cynics would also point out that they prefer transfers from consumers as they are harder to quantify – transfers from taxpayers show up in government expenditure accounts for all to see and comment upon!
12. Led by Australia, Canada and New Zealand.