4 Agriculture

4.1 INTRODUCTION

While protection to trade in manufactured goods has fallen steadily in recent years, restrictions on agricultural trade such as tariff barriers, production support and export subsidies have remained high in many countries. As measured by world price effects, developed economies
account for nearly 80 per cent of the worlds agricultural market distortions. However, among developed countries support levels vary widely. In general – and unsurprisingly – support is smallest in countries that have efficient, export-oriented sectors (notably Australia and New Zealand) and largest in those that are relatively inefficient and import substituting (Japan, Korea, the EU). The EU accounts for 38 per cent of world price distortions, compared to Japan plus Korea (12 per cent), the United States (16 per cent), and Canada (2 per cent) (Diao et al. 2001). The EU also accounts for over 90 per cent of global export subsidy expenditures.

Among numerous distortions in international agricultural trade, those imposed by the EU are the most disruptive, resulting in substantial welfare costs both for the EU itself and the world economy. Under the Common Agricultural Policy (CAP) the EU has switched from being a large net importer of agricultural products to a large exporter. This has resulted in production surpluses, artificially depressed and volatile world prices and high food costs for domestic consumers. Low agricultural prices have also created tensions between the industrial countries, who have found their budgets for agricultural subsidies escalating.

This chapter analyses the issues surrounding the impact of the EU's trade barriers in agriculture and explores the welfare costs of agricultural protection. Section 4.2 considers the role of agriculture
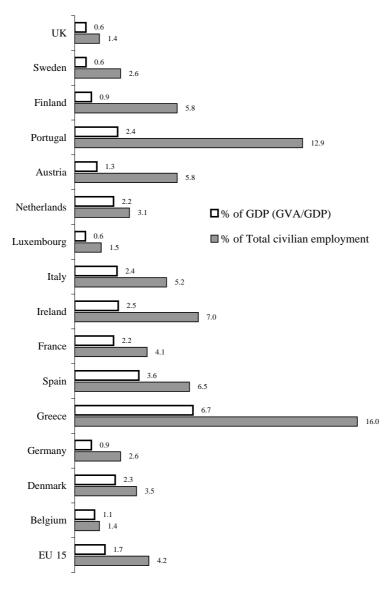
in the developed economies. Section 4.3 reviews data on trade volumes and prices of agricultural goods. Tariff barriers on trade in agriculture are described in section 4.4. Section 4.5 focuses on the evolution and the current state of the Common Agricultural Policy (CAP) of the EU. Recent agricultural trade disputes between the US and the EU are reviewed in section 4.6. Section 4.7 outlines the main empirical findings concerning the welfare effects of trade liberalisation of other studies for the EU, NAFTA and the rest of the world.

4.2   THE ROLE OF AGRICULTURE IN THE ECONOMY

Agriculture's contribution to GDP in EU countries is quite low – below 4 per cent, with the exception of Greece, and is decreasing (Figure 4.1). During the 1990s it fell by over 20 per cent in the core eight countries of the EU (France, Germany, Italy, the Benelux countries, the United Kingdom and Ireland). In other developed countries, agriculture accounts for 1 per cent in Switzerland, and less than 2 per cent in the United States and Japan. As for employment, agriculture (and hunting, forestry and fishery activity) accounted for around 4 per cent of the employed civilian population of the EU 15 Member States in 2001, the highest being in Greece at 16 per cent. With the entry of countries like Poland into the EU, where farming still accounts for more than 27 per cent of the workforce, with more farmers than France and Germany combined, the share of agriculture in total employment in the EU will go up. Enlargement of the EU has also added as many as 100 million new consumers to the EU's domestic market.

As for the UK, agricultural output is estimated at £15.1 billion in 2001, which represents 0.7 per cent of GDP. Milk represents nearly 19 per cent of this total followed by cereals (13 per cent), beef (13 per cent) and poultry (8 per cent). The sector employs 550000 people (2.2 per cent of the total workforce) and accounts for about 70 per cent of the total land area of the UK. Nearly half of the holdings are small and probably part time.

Compared with the US, average farm size is significantly smaller in the EU (46.2 acres), about one-tenth the size of the average US

UK
0.6
1.4

Sweden
0.6
2.6

Finland
0.9
5.8

Portugal
2.4
12.9

Austria
1.3
5.8

Netherlands
2.2
3.1

□ % of GDP (GVA/GDP)

▨ % of Total civilian employment

Luxembourg
0.6
1.5

Italy
2.4
5.2

Ireland
2.5
7.0

France
2.2
4.1

Spain
3.6
6.5

Greece
6.7
16.0

Germany
0.9
2.6

Denmark
2.3
3.5

Belgium
1.1
1.4

EU 15
1.7
4.2

Source: European Commission (2003)

Figure 4.1: EU agriculture: basic statistics for 2001

farm (USDA, 2004). Within the EU, the largest holdings are in the UK (about 171 acres) and the smallest in Greece (11 acres). Both the EU and the US account for significant shares (20 per cent or more) of world production in several agricultural commodities. The US is one of the world's largest producers of corn, soybeans, beef and cotton, while the EU has a large share of world production in milk and pork.

4.3   TRADE VOLUMES AND DIRECTIONS

The relative importance of agricultural trade to total world trade has declined from 30 per cent of the value of merchandise trade in the 1950s to less than 10 per cent in the 1990s (Batavia et al., 2001).[1] Within agricultural trade, an increasing trend towards trade in processed goods has been detected since the early 1990s (WTO, 2004a.)

The EU is the world's biggest importer and second biggest exporter of agricultural products, the largest being the US. The EU is the largest agricultural importer from developing countries due to the numerous trade preferences granted to former colonies. Imports and exports of agricultural goods each account for approximately 6 per cent of total imports and exports in the EU respectively (Table 4.1). In 1999, EU exports of individual commodities accounted for a substantial portion of world trade: wine (41.5 per cent), milk powder (32 per cent), cheese (31.9 per cent), butter (20.5 per cent), wheat (15.1 per cent), and sugar (13.5 per cent). The EU's two largest agricultural import commodities are fruits and nuts, and coffee, tea and spices, together accounting for approximately one quarter of total agricultural imports.

As for the UK, the declining contribution of agriculture to the economy can be seen from the falling share of imports and exports of agricultural goods in total trade (Figure 4.2). Whereas the share of agricultural imports has fallen from 22 per cent in 1970 to 9 per cent in 2003, the exports share has fallen from 6.1 per cent to 5.7 per cent over the same period.

---

[1]However, as in most other sectors of world trade, the rate of growth of agricultural trade continues to outstrip growth in world agricultural production with the result that an increasing proportion of world agricultural production is now traded.
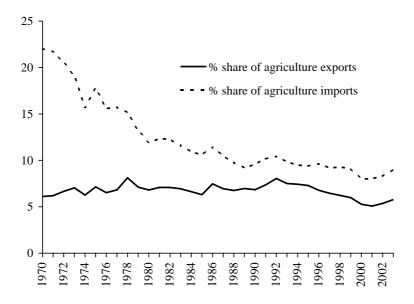
Table 4.1: Basic agricultural statistics for the EU, 2001

	Imports[a]	Exports[b]	Balance[c]	Prices[d]	Expenditure[e]
EU 15	6.0	6.1	−199	2.3	16.1
Belgium	6.7	5.7	−1078	2.4	16.8
Denmark	8.1	20.5	2750	2.3	17.4
Germany	4.8	2.9	−3283	2.4	15.8
Greece	5.4	21.8	686	3.7	21.4
Spain	8.2	10.4	−840	2.8	18.5
France	4.7	7.7	4930	1.8	17.6
Ireland	3.8	7.7	1891	4.0	17.2
Italy	6.4	5.1	−946	2.3	16.9
Luxembourg	1.2	1.2	−17	2.4	:
Netherlands	9.9	16.4	−2114	5.1	10.5
Austria	4.1	4.3	208	2.3	15.6
Portugal	11.8	8.6	−825	4.4	22.5
Finland	3.3	3.6	367	2.7	18.1
Sweden	4.1	3.1	183	2.7	16.7
UK	5.7	5.1	−3904	1.2	13.9
New member states	9.0	9.2	−2281	:	28.8[f]
USA	3.9	8.6	12083	2.8	:
Japan	10.1	0.7	−36532	−1.6	:

Notes:

a.   Imports of food and Agri products to total imports (%)

b.   Exports of food and Agri products to total exports (%)

c.   Trade balance (€millions)

d.   Trend of food prices (% change from previous year)

e.   Expenditure on food, beverages and tobacco to total consumer expenditure of households (%, 2000)

f.   For Member States intra + extra trade; for EU-15 extra trade includes total trade for individual countries and extra-EU trade at the EU-15 level

Source: European Commission (2003a)

Figure 4.2: UK imports and exports of agricultural goods, as a percentage of total

Although the US is the world's largest agricultural exporter, the value of US exports has fallen significantly since 1996 due to low world prices and the appreciation of the dollar. The US, however, continues to have one of the largest market shares in grains, oilseeds and poultry meat. On the imports side, beverages are the largest category of US agricultural imports and account for more than 15 per cent of the total.

Bilateral trade between the EU and the US in agriculture accounts for only a small share of total trade in goods between them. Since 1999 the US has been a net importer of agricultural goods from the EU with a decline in US exports of oilseeds, animal products and grains to the EU. Exports of corn by-products continue to dominate exports of the US, with Europe accounting for more than 78 per cent of US exports in that category. The EU main exports to the US on the other hand, are beverages (mostly wine and malt beverages) and cheese and other dairy products.

In the EU 15 countries, spending on food and tobacco accounts

for about 16 per cent of consumer spending; in the 10 new countries, the average is 29 per cent (Table 4.1). In 1999 US consumers spent 13.6 per cent of household expenditure on food (BLS, 1999). The higher percentage of expenditure on food in the EU compared to the US is partly due to higher prices in the EU. Food is generally less expensive in the US than in the rich states of the EU (but more expensive than in relatively less wealthy countries of the EU). In purchasing power parity terms, a basket of bread and cereal that costs $100 in the US would cost $156 in Denmark and $147 in Finland (but $90 in the England and only $40 in the Czech Republic) (USDA, 2004). Similarly a quantity of meat costing $100 in the US would cost $210 in Denmark and $128 in the England (but only $73 in Poland and Hungary). It is also estimated that food prices in the England are over twice as high as those in New Zealand, a country with no subsidies or tariffs for agricultural production (Table 4.2). In 2001 the total cost of a basket of 15 food items including beef steak, lamb chops, olive oil and rice was £84.68 in the England, and (equivalent) £39.48 in New Zealand (Consumers' Association, 2001). Food prices also vary significantly among the EU Member States. However, on average the CAP is reckoned to add up to 20 per cent to food prices in the EU (*Guardian*, 26 Oct, 2002) and around €90 billion in higher food costs. Whereas the funding of the CAP is estimated to add £8 a week to the food bill of an average family of four (*Guardian*, 12 July, 2003), DEFRA (2003a) estimates that reforms of the CAP would lower the annual food bill of a family of four by around £65. Another study estimates that EU food prices are 44 per cent higher than they would be without the CAP, while US food prices are 11 per cent higher because of US farm supports (Rural Migration News, 2002).

4.4 TARIFF BARRIERS

There is little doubt that agricultural protection remains one of the major distortions in the world economy. While in recent years the average tariff on manufactured goods has fallen to about 5 per cent in developed countries, average tariffs on agricultural goods remain at 40 per cent. There is an even deeper problem of tariff peaks (that is, tariffs higher than three times the average) as high as 300 per cent and other prohibitive tariff rates on certain goods.

Table 4.2: Average price of a food basket

	England (£)	New Zealand (£)
Butter (500g)	1.73	0.66
Beef – filet mignon (1kg)	19.99	7.35
Beef – steak entrecôte (1kg)	9.61	5.21
Beef – minced (1kg)	3.46	2.64
Beef – stewing (1kg)	5.02	2.63
Beef – roast (1kg)	6.43	3.03
Olive oil (1 litre)	6.68	3.25
Lampchops (1kg)	9.22	3.32
Lamb – stewing (1kg)	7.58	2.71
Lamb – leg of (1kg)	6.62	2.73
Rice – white (1kg)	1.97	0.53
Margarine (500g)	1.06	0.65
Cheese, imported (500g)	4.20	3.95
Sugar, white (1kg)	0.60	0.40
Milk, pasteurised (1 litre)	0.51	0.42
Total cost	84.68	39.48

Source: Consumers' Association (2001)

Unlike manufacturing the level of agricultural protection has not fallen as a result of the Uruguay Round of trade talks. In fact many of these high tariffs came into practice as a result of the conversion of non-tariff barriers (often at levels above the 'tariff equivalent') during the Uruguay Round.[2]

As for the US, the average MFN tariff rate stood at 10.6 per cent for agri-food products in 2000. Along with tariffs, the US protected agriculture by providing direct support to farmers. The largest recipient of government outlays in the US is the agricultural sector, and these outlays nearly tripled between 1997 and 2000, exceeding the decline in the value of agricultural output. In

---

[2]However, in some cases the bound tariffs are above the levels actually in use, where a bound tariff is a commitment made at the WTO setting out the maximum tariff rate that a member will charge on a good. In these cases the distortion is potential rather than actual, but such tariffs should still be reduced so as to make market access more transparent.

2000, nearly US$30 billion was made available in direct payments to farmers. As a result, direct payments amount to over one half of net farm income. The Farm Security and Rural Investment Act of 2002 (the Farm Bill) provides subsidies as emergency payments in compensation for the decline in world commodity prices. This bill will increase average agricultural subsidies each year over the period 2002 to 2011 to $12.4 billion, compared to $4.3 billion in 1996. The Farm Bill appears to undermine 1996 reforms under the Federal Agricultural Improvement Act (the FAIR Act) that sought to improve efficiency and discourage overproduction by reducing price supports. Since most of the support under the Farm Bill is directed to programmes that are linked to prices, it would further reduce the sensitivity of US agriculture producers to market forces.

The EU's simple average tariff on agricultural goods is higher than the USA's at 16.1 per cent in 2002, down from 17.3 per cent in 1999 (WTO, 2002). The decline is not attributable to policy changes, but to different estimates resulting from the conversion to ad valorem equivalents (AVEs) of the non-ad valorem rates applied on 946 lines (45 per cent of agricultural product lines). In 2002 the average weighted tariff on agricultural products was, at 20 per cent, about five times higher than that on non-agricultural products (Table 4.3), with above average tariffs on products subject to the CAP. In general, tariffs are low on agricultural products not produced in the EU (for example, coffee, tea, spices), but are considerably higher on primary CAP products and products processed there. They average 30 per cent and range up to 233 per cent for dairy products, sugar refining and wine. Nearly 280 tariff lines carry rates with ad valorem equivalents exceeding 50 per cent. The highest-tariff items (above 120 per cent) are the meat of cattle, pigs and sheep, edible offal of animal origin, milk and cream, some cheeses, rice, wheat flour and bran, and manufactures of prepared animal feed (OECD, 2001a). The estimate does not include the 'snapback' tariffs imposed by the EU when using the special safeguard (SSG) regime of the WTO. An agricultural safeguard clause allows the imposition of supplementary tariffs in the event of import prices falling or import quantities surging relative to specified base-year levels (1986–88). Over the period 1995–98 the EU imposed price-based snapback tariffs 38 times and volume-based snapback tariffs 120 times.

Tariff peaks (triple the simple average) remain in evidence for

Table 4.3: International comparisons of government policies aimed
at protecting agriculture

| | Tariff[a] on imports of | | | |
| | All goods and services from | | Agricultural goods from | |
Quad[b] economies	Quad	Non-quad	Quad	Non-quad
US	2	3	9	13
Canada	2	4	16	13
EU	3	4	19	20
Japan	7	7	57	44
Non-quad economies	Quad	Non-quad	Quad	Non-quad
Rest of Asia	6	6	24	21
Western hemisphere	8	11	18	14
Former Soviet bloc	9	8	21	16
Sub-Saharan Africa	11	12	22	23
North Africa and Middle East	12	13	51	46
India and China	14	16	43	26

Notes:

a.   Tariffs are a weighted average (by import value) of rates and include
an imputed value of subsidies spent on price support.

b.   In the language used by trade negotiators, the 'quad' is the premier
group of developed countries – US, Japan, Canada, the EU – which have
considerable power within the WTO, given their significant share of current
trade.

Source: IMF (2002a)

meat, dairy products, processed and unprocessed cereal products, processed fruits and vegetables. The range of applied tariffs, in terms of the minimum and maximum rates, is also wide (from 0 to 470.8 per cent). For a given overall tariff average, the greater the dispersion in tariff rates, the greater the likelihood that consumers' and producers' decisions are distorted by the tariff structure. Between 1993 and 1996 the dispersion of tariffs, as measured by the standard deviation, increased for primary agriculture and food products (OECD, 2001a).

Under the Uruguay Round Agreement on Agriculture, countries agreed to open agricultural markets by converting existing non-tariff barriers to tariff-rate quotas (TRQs). This system established a quota and a two-tier tariff regime for affected commodities. A lower tariff applies to imports within the quota while a higher tariff applies to imports exceeding the quota. The market access provisions under the Uruguay Round caused a proliferation of tariff-quotas in agricultural trade in most OECD countries including the EU.

Even though tariff barriers for agriculture are high, the agricultural sector relies heavily on domestic supports relative to assistance provided by border barriers. Domestic price supports and export subsidies compound the problem of trade distortion, costing taxpayers huge amounts while creating market distortions that spur demand for import protection. The Common Agricultural Policy of the EU is a prime example of such inefficiency.

4.5 THE COMMON AGRICULTURAL POLICY

The CAP was developed in the early 1960s largely around a price support mechanism which aimed to avoid food shortages by developing a stable internal food market on the basis of a high level of self-sufficiency. The main mechanisms of the CAP are guaranteed common prices and Common Market organisations (CMOs) for 18 product categories. For many commodities, support includes a minimum buying-in price, at which intervention agencies of the Member States purchase surplus production; charges are also levied on imported produce so that it enjoys no price advantage over that produced within the EU. The export of products is made possible by the payment of export refunds to enable EU exporters to sell on

world markets at the going price. Market support arrangements are financed by the guarantee section of the European Agricultural Guidance and Guarantee Fund (the guidance section of which finances structural measures to promote rural development). Following the introduction of the CAP the average nominal rate of protection in western Europe increased from 30 per cent in the early 1950s to 40 per cent in the later 1950s, and 60 per cent in the late 1960s (Gulbrandsen and Lindbeck, 1973). In the UK, Ireland and Denmark, levels of agricultural protection were significantly lower before the introduction of the CAP (OECD, 2001a).

Overall, the level of support and protection to agriculture has decreased since the mid-1980s and there has been some shift towards less distorting policy measures. Nevertheless, the continued dominance of the most distorting forms of support means that farmers remain shielded from world market signals.

The current support levels impose a burden on consumers and taxpayers in the OECD countries. They also constrain agricultural growth and development opportunities in non-OECD countries. The OECD (2001a) estimates at $300 billion (1.3 per cent of GDP) the size of total transfers to the farm sector from taxpayers and consumers in the OECD. According to the OECD on a 'per farmer' basis, corrected for part-time farming, transfers to EU farmers averaged about $14,000 in 2000 and to US farmers about $20,000 (OECD, 2003a).

The latest estimate of the cost of the CAP in the EU15 stands at €92 billion (0.4 per cent of GDP) for 2001 (DEFRA, 2003b). This is made up of a cost to EU consumers of €53 billion, resulting from the difference between EU and world price levels, and to taxpayers of a further €39 billion. As the UK is a net importer of foodstuffs the impact in the UK is likely to be higher than the average. Firstly, for imports from outside the EU, the tariff and variable levy revenue which would normally accrue to the UK has to be handed over to the EU as part of the EU budget's own resources.[3] Secondly, for imports from the rest of the EU, the UK must pay the high EU price and thus suffers a terms of trade loss on its imports, compared to the alternative of importing them at world market prices. In addition, the UK also contributes to the EU

---

[3]Although since 2001 the Member States keep 25 per cent of total revenue, there is no net gain since it pays for administrative costs incurred during the collection of agricultural duties.

agricultural budget to pay for the export subsidies paid to the net exporting EU countries. Leach (2000) estimates the overall annual cost of the CAP to the British economy at 1 per cent of GDP (£9–10 billion annually). Similar estimates have been previously calculated by Minford (1996) and Hindley and Howe (2001).

There are various measures of protection used by the OECD and the EU. Total support estimate (TSE) is the annual monetary value of all gross transfers from taxpayers and consumers arising from policy measures that support agriculture, net of the associated budgetary receipts. The TSE amounted to $318 billion in 2002 and accounted for 1.3 per cent of the GDP in the EU (and 1.2 per cent in the OECD area), compared with 2.7 per cent in 1986–88 (and 2.3 per cent in the OECD area). Compared with the US, the EU spent more on support to farmers as a percentage of GDP (Table 4.4).

Table 4.4: US–EU farm total support estimate

	US	EU
Total support estimate (TSE)	$97.4 billion	$119.4 billion
TSE per capita	$342	$268
TSE as % of GDP	1.00%	1.30%

Source: OECD (2001a)

The level of support to producers, as captured by the producer support estimate (PSE), varies widely across countries and commodities. It is an indicator of the annual monetary value of gross transfers from consumers and taxpayers to agricultural producers, measured at the farm gate level, arising from policy measures which support agriculture, regardless of their nature, objectives or impacts on farm production or income (OECD, 2004c).[4] The

---

[4]An alternative to the PSE is the WTO's aggregate measure of support (AMS). AMS however, is a narrower concept than the PSE and covers only domestic policies considered to be trade distorting. The AMS excludes explicit trade policies covered by the PSE such as export subsidies and import restrictions. It also excludes certain types of budgetary payments. Moreover, the AMS is not a measure of the current support to agriculture because some of its components are calculated using historical (base period) prices instead

EU, Japan and the US collectively account for around four-fifths of all support, although as a percentage of the value of gross farm receipts, support is highest in Switzerland, Norway and Korea. Rice, sugar and milk are the most supported commodities, with transfers to producers exceeding 50 per cent of gross receipts for these products.

As Table 4.5 reflects, compared with the 1986–88 period,[5] 2000–02 was characterised by a lower overall level of support to producers, as a result of the Uruguay Round implementation. Whereas in the US the PSE was 18 per cent of farm receipts in 2002, it was 36 per cent in the EU. Prices received by OECD farmers in 2002 were on average 31 per cent above world prices (OECD, 2002a). While this is a significant reduction from the mid-1980s when producer prices were 57 per cent higher, farmers in many countries remain shielded from world market signals. Whereas prices received by farmers were 10 per cent higher in the US, farmers in the EU received 35 per cent higher prices. If we turn to the extent to which consumers paid for this support through higher prices (the consumer subsidy equivalent) rather than taxpayers through direct farmer subsidy, we find that the CSE varies from a small consumer subsidy of 4 per cent in the US to an implicit consumer tax of over 28 per cent in the EU in 2002 (Table 4.5).

In 2001 France received the largest amount of CAP funding, claiming 22.2 per cent of the total budget of €41.53 billion (EC, 2002a). The next biggest recipients were Spain (14.8), Germany (14.1), Italy (12.8). In 2000 the UK was a net contributor to the EU, accounting for 15.8 per cent of EU financing and only 10.6 per cent of EU spending (Table 4.6). France, Spain, Greece and Ireland are clearly strong beneficiaries. Germany is the main net contributor with a net contribution of €4.4 billion, accounting for 24.8 per cent of financing and only 14 per cent of spending. The CAP spending in Germany is much lower than countries such as France and Ireland. Yet Germany continues to support the CAP – a policy which is clearly not based upon simple national benefit.

The primary pressures on the CAP come from the EU's budget constraints, and the enlargement of the EU to include the first wave of Central and Eastern European Countries (CEEC). If the CAP is

---

of current prices as is done in the PSE calculations.

[5]During the Uruguay Round 1986–88 was the base period for negotiations related to reduction in market access and domestic support.

Table 4.5: Producer and consumer support estimates of support to agriculture (PSE, CSE)

	EU		US		Canada		Japan	
Producer support estimates of support to agriculture (US$ billion)[a]								
1986–88	95.4	(40)	41.8	(25)	5.7	(34)	48.9	(61)
2000–02	92.3	(35)	46.9	(21)	4.3	(19)	47.8	(59)
2000	88.6	(34)	49.7	(22)	4.2	(19)	54.1	(60)
2001	83.7	(34)	51.7	(23)	4.0	(17)	45.4	(59)
2002p	100.7	(36)	39.6	(18)	4.6	(20)	43.9	(59)
Consumer support estimates of support to agriculture (US$ billion)[b]								
1986–88	−70.5	(−41)	−8.7	(−7)	−2.5	(−22)	−55	(−57)
2000–02	−45.2	(−26)	3.8	(2)	−2.1	(−14)	−59	(−51)
2000	−44.7	(−27)	4.7	(3)	−2.1	(−14)	−67	(−51)
2001	−41.3	(−24)	−0.15	(0)	−1.9	(−13)	−56	(−51)
2002p	−49.6	(−28)	6.8	(4)	−2.2	(−14)	−54	(−51)

Notes:
a. In brackets: % PSE which is the ratio of PSE to the value of total gross farm receipts measured by the value of total production at the farm gate prices.
b. In brackets: % CSE which is the ratio of CSE to the value of total gross farm receipts measured by the value of total production at the farm gate prices.
p Provisional estimate.
Most CSE figures are negative since it is an indicator of gross transfers from consumers due to support to agricultural producers. It is a measure of negative protection or costs to consumers.

Source: OECD (2003a)

Table 4.6: Member states' contributions to and benefits from the EU, 2000

	Share in budget contributions % of total budget		Net budgetary positions	
	Without UK rebate	With UK rebate	Billion €	% of GDP
Belgium	3.7	3.9	−0.4	−0.2
Denmark	1.9	2.0	0.2	0.2
Germany	23.4	24.3	−9.6	−0.5
Greece	1.6	1.7	4.4	3.6
Spain	7.3	7.8	5.1	0.8
France	15.8	16.9	−1.4	-0.2
Ireland	1.2	1.3	1.7	1.6
Italy	12.1	13.0	0.7	0.2
Luxembourg	0.2	0.2	−0.2	−0.3
Netherlands	6.2	6.5	−1.7	−0.4
Austria	2.3	2.4	−0.6	−0.3
Portugal	1.4	1.5	2.2	1.8
Finland	1.4	1.5	0.3	0.3
Sweden	2.6	2.7	−1.0	−0.5
UK	19.1	14.3	−3.8	−0.2

Source:　　Swinnen (2003)

to be fully implemented in the new Member States, it would substantially increase CAP expenditure. At the Copenhagen Summit in December 2002 it was decided that direct payments will gradually be phased in over a 10-year period. During this period farmers in the new Member States will receive payments at a reduced but gradually increasing rate compared to that received by farmers in the EU 15. Only the complete liberalisation of the CAP will reduce expenditure significantly. But given that any reform proposal must attract support from France and Germany, it is clear that only a partial liberalisation scenario seems to be a realistic option in the near future.

Efforts to Reform the CAP

The CAP's inefficiencies, combined with pressures from green issues and falling farm prices, have led to momentous efforts for reform. Reforms to curb overproduction were introduced in 1984, 1988, and, most radically, in 1992. These involved a market-oriented price strategy (the resulting drop in agricultural incomes being cushioned by specific income support); quantitative and qualitative control of production through quotas and compensatory payments; premiums for set-aside schemes (grants to farmers to take land out of production); and diversification of production to bring supply more in line with demand.

Of all the reforms of the CAP, the most important were the McSharry reforms of 1992. The core of the reforms was a nominal cut of 30 per cent in the cereal price, phased over three years, complemented by a smaller cut in the institutional prices for beef and butter. Farmers were compensated for these price cuts by payments per tonne, translated on the basis of regional yields to a per hectare payment. In reality, as noted by Ackrill (1999), it is estimated that over the four year period 1993/94 to 1996/97, EU farmers were overcompensated between €8.5 billion and €14.3 billion. This was due to the unexpectedly high market prices that were used to calculate compensation.

Johnson (1995) and Messerlin (2001) confirm that although the 1992 reforms represented a significant change in the structure of farm support in Europe, they did not reduce the level of support and thus failed to reduce the welfare cost of agricultural protection. Since the McSharry reforms, the EU has continued to pursue

a strategy of agricultural exports by a combination of export sub-
sidies, internal price support and direct aid to producers to com-
pensate for revenue losses. Despite production costs being consid-
erably higher in the EU, it has maintained market share in many
agricultural commodities through the CAP's complex range of sub-
sidies. Policies providing support prices, implemented through
trade barriers and/or other export support, or deficiency payments
that raise producer revenues to target levels, shield producer re-
turns from world market signals. Other support, such as payments
linked to land or other inputs, also tend to increase short-run sup-
ply and investment, with long-term consequences in the form of
greater production potential.

The recent reforms of the CAP, called the Agenda 2000 reforms,
agreed in Berlin in March 1999 failed in several respects. Firstly,
according to an agreement reached between France and Germany,
there will be no change in the size of the CAP budget, which
at some €50 billion ($58 billion) a year will continue to take up
nearly half of all EU spending. Secondly, cereal prices, which the
commission had proposed should be cut by 5 per cent, will remain
unchanged. Thirdly, France has secured agreement that it can put
off applying the new terms of the CAP until 2007, even though
other countries can bring in the rules in 2005 if they wish (precisely
how this can be made compatible with the free movement of farm
products inside the European Single Market remains unclear).

In June 2003 the Council of Agriculture Ministers of the EU
reached another agreement on the reform of the CAP. The agree-
ment is based on the EC's previous proposals set out in January
2003. The main elements of this package were decoupling [6], single
farm payments, modulation (a reduction in direct payments), ru-
ral development measures and market reforms in dairy and cereal
sectors. However, it has left the EU with massive overproduction
as measured by self-sufficiency rates. This is 115 per cent in wheat,
116 per cent in wine, 113 per cent in sugar, 104 per cent in beef
and veal and 107 per cent in pig meat. Nor does this help small
farmers: according to the Australian-based agricultural think tank
ABARE, large farms in Europe which constitute 17 per cent of the

---

[6]The key change in recent EU reform proposals is 'decoupling' or separating
payments from production. This means that farmers will still receive money at
a level based on past income, but it will be in the form of a one-off payment that
it is hoped will encourage them to farm for the market rather than subsidies.

farming community get 50 per cent of total subsidies while small farms (39 per cent of the farming community) get only 8 per cent of the total resources (De Boer, 2002). The main beneficiaries of farm support measures are the largest farmers and agri-businesses.

Export subsidies became an important policy instrument in the 1980s when domestic support policies generated excess supplies mainly in Europe and in North America. Even though between 1990 and 1999 export subsidies have fallen from 31 to 14 per cent of CAP expenditure, subsidies for a wide range of agricultural commodities and processed products have continued. Export prices of wheat, powdered milk and sugar are fixed at 34 per cent, 50 per cent and 75 per cent respectively of their production costs. Cheese, other milk products, beef, sugar and feed grains are most reliant on subsidies. Dairy products accounted for 30 per cent of total export subsidies in the 1995–1998 period. Beef accounted for 22 per cent, sugar 12 per cent, grains 13 per cent and incorporated products 11 per cent.

One of the most damaging features of the CAP is that the money is tied to production, with surpluses dumped on world markets via the payment of export subsidies.[7] The EU argues for the retention of export subsidies, and yet strongly argues the case for anti-dumping policies at the same time. Export subsidies for agriculture are, by definition, dumping, and the CAP is the world's largest dumping programme.

4.6 THE EU'S AGRICULTURAL TRADE DISPUTES WITH THE US

While both the EU and the US provide significant support to their agricultural sectors, there are key differences in their approaches and in the policy instruments they use.[8] For example, whereas

---

[7]The sufferers are mainly developing countries, many of whose economies depend heavily on agriculture. Not only will their exports to rich-country markets still be heavily obstructed; even their domestic markets will continue to be distorted by the dumping of EU surpluses. That is why the rest of the world insisted that the Doha Round of trade talks should aim to phase out all farm-export subsidies. For most countries, indeed, this is the biggest single objective of the round.

[8]For a detailed review of US and the EU farm policies, see Normile et al. (2004).

the EU remains much more reliant on price support mechanisms, the US is more dependent on income support measures. The two countries also differ in their reliance on tariffs and subsidies. These differences have given rise to numerous trade disputes between the EU and the US over the years.

In the 1980s nearly 90 per cent of all US actions against the EU (seven of eight) involved agriculture. In fact, three-fourths of all lawsuits by any country against the EU involved agricultural products (12 of 16). By contrast, only roughly 40 per cent of all lawsuits against the US covered agriculture (5 of 12), and mostly due to actions brought by the EU (three of five). The US was initially concerned with the shrinking market in Europe, as trade diversion took place, encouraged by the high trade barriers after the introduction of the CAP. Later the use of export subsidies in the EU, which tried to keep surpluses from depressing the internal market, became a cause for concern for the US. In the 1980s there were major differences between the EU and the US over what constituted a subsidy and over how to determine the magnitude of subsidies.

The US retaliated against the EU subsidies with its Export Enhancement Program (EEP) expressly targeted at those markets where the EU was increasing its share.

The 1990s once again witnessed a sharp intensification of trade disputes between the EU and the US. The main agricultural trade disputes between the US and the EU in the last decade have been: 1) the beef hormone dispute, 2) the Banana dispute, 3) bans as a result of bovine spongiform encephalopathy (BSE), 4) problems due to Foot and mouth disease, and 5) Genetically Modified Organisms (GMOs).

In 1989, the EU banned the use of six growth hormones used for cattle and prohibited the imports of beef containing such hormones. The ban led to a GATT lawsuit, and later to a WTO dispute settlement case filed in 1996 by the US and other beef-exporting nations. The ruling was in the US's favour. In view of the non-compliance by the EU with the WTO ruling, in 1999 the Dispute Settlement Body authorised the US to impose retaliatory tariffs on imports from the EU of $117 million per year. This measure is still active.

In 1993, following the implementation of the Single Market, the EU imposed an EU-wide system of import quotas for bananas.

The new system led to two GATT lawsuits, and later to two WTO dispute settlement cases filed in 1995 and 1996 by the US and several Latin American countries. This dispute was also settled in favour of the US. In 1999 the US imposed retaliatory tariffs on imports from the EU of $191 million per year. This measure was deactivated in 2001, but $116 million in punitive duties remains in effect due to the beef dispute. This, in turn, led the EU to threaten retaliation against US exports that the WTO found in violation of an export subsidy agreement. In addition, the EU has filed numerous WTO dispute resolution petitions alleging that a variety of US trade laws violate international obligations in some technical fashion.

More recently some of the most contentious EU-US agricultural trade issues have been in the area of sanitary and phytosanitary standards (SPS) and other more technical trade issues. These include the dispute over the import of hormone-treated beef into Europe, the potential ban by Europe of imports of beef by-products ('specified risk materials') that may harbour vectors of BSE, or mad cow disease and the regulation of the use and labelling of genetically modified organisms (GMOs). It is estimated that the EU will be isolated from the downward pressure on world prices brought about by the global productivity boost as a result of GM crops (Meijl and Tongeren, 2002). In addition the CAP isolates the EU from productivity increases in GMO-adopting regions through flexible import tariffs.

4.7   WELFARE COSTS

In recent years agricultural trade liberalisation has been one of the most contentious issues in world talks. Both the US and the EU are in the process of making significant changes to their agricultural policies. Welfare gains to the EU and the US as well as to the world economy from such reforms have been estimated by numerous studies, mostly using computational general equilibrium (CGE) models, especially the global trade analysis project (GTAP) model. In this section we discuss some of the recent studies in brief.

Global Welfare Gains

Table 4.7 summarises the global welfare gains due to the liberalisation of worldwide barriers to agricultural trade. It is estimated that complete elimination of agricultural support would raise global welfare in the region of typically 0.4 per cent (IMF, 2000b) and 0.7 per cent of world GDP (World Bank, 2002). Whereas Elbehri and Leetmaa (2002) estimate that removal of all export subsidies, domestic support and tariff barriers to agricultural trade would increase global welfare by 0.2 per cent of GDP, Hertel et al. (2000) calculate an annual gain of 0.5 per cent of world GDP from the complete elimination of world support to agriculture in all forms including tariffs and export as well as production subsidies. The largest gain in terms of percentage of GDP from agricultural liberalisation is estimated by Stoeckel (2002) at 2.2 per cent.

Table 4.7: Welfare gains due to reduction in worldwide barriers in agricultural trade

Studies in 2000s	% Reduction in global barriers	World gain (% of world GDP)	EU gain (% of EU GDP)
Hertel et al. (2000)	40	0.2	–
	100	0.5	–
Diao et al. (2001)	100	0.2	–
IMF (2000b)	100	0.4	0.41
CIE (2002a)	50	0.3	0.12
	100	0.5	–
Elbehri and Leetmaa (2002)	100	0.2	0.13
Stoeckel (2002)	100	2.2	–
IMF (2002b)	50	–	0.29
	50 subsidies in QUAD	–	0.24
Brown et al. (2002)	33	0.03	0.02*

Note: *EU and EFTA

The above estimates from different studies are difficult to compare. Even when the same CGE model (the GTAP) is used, different liberalisation scenarios are applied and policies are modelled in different ways. Nevertheless, it is clear that the potential gains from agricultural trade reform are large.

Gains to the EU

Studies which estimate gains to the EU from agricultural reforms have used both the CGE and partial equilibrium framework. Table 4.8 summarises the welfare cost of the CAP to the EU as calculated by studies in the 1980s and 1990s. Estimates range from 0.1 per cent of GDP (Harrison et al., 1995) to 2.7 per cent (Burniaux and Waelbroeck, 1985). The relatively large gains are generally associated with CGE models. The estimates from the studies vary significantly which reflects the differences in model structures, liberalisation scenarios and level of aggregation, among other things.

Tyers and Anderson (1992) estimate that the benefits to producers from EU protection amount to about 25 per cent of gross farm income. Similarly, it is calculated that approximately $142 billion was transferred from consumers via high domestic prices to the agricultural sectors in the EU in 1991 (OECD, 1992). In addition to the studies discussed above, which estimate welfare gains of agricultural liberalisation to the EU using world CGE models, there are several studies which focus on specific CAP policies and reform agenda to calculate the cost of such protection to the EU.

Results of recent empirical studies which focus on welfare gains from the reforms of the CAP are summarised in Table 4.9. Using a CGE model Elbehri and Leetmaa (2002) estimate a welfare gain of 0.13 per cent of GDP to the EU from agricultural reforms the world over (including the EU), largely from improved allocative efficiency, as opposed to terms of trade gains. The US welfare gain of $US7.2 billion (0.1 per cent of GDP) on the other hand, is mostly from improved terms of trade. Using the GTAP model the IMF (2002b) calculates that the EU would experience a significant (near 0.25 per cent of GDP) increase in welfare because of the distortions removed in the EU economy.

Borrell and Hubbart (2000) estimate the total welfare cost of the CAP to the EU at 0.9 per cent of GDP. The study suggests that the CAP has made the non-grain sector eight times larger than

Table 4.8: Estimates of welfare costs of the CAP to the EU (studies between 1980 and 2000)

Studies in 1980s and 1990s	Model Structure*	% of GDP
Morris (1980)	PE	0.5
Harvey and Thomson (1981)	PE	0.5
Buckwell et al. (1982)	PE	0.5
Tyers (1985)	PE	1.1
Roberts (1985)	PE	0.3
Spencer (1985)	GE	0.9
Burniaux and Waelbroeck (1985)	GE	2.7
Tyers and Anderson (1987)	PE	0.3
Stoeckel and Breckling (1989)	GE	1.5
EC (1994)	PE	0.22
Harrison et al. (1995)	GE	0.1
Hubbard (1995a)	GE	0.8
Hubbard (1995b)	GE	0.14–1.3
Folmer et al. (1995)	GE	0.3
Blake et al. (1998)	with Cournot Oligopoly reforms (GE)	0.42
Weyerbrock (1998)	GE	0.1–0.2
Blake et al. (1999)	GE	0.12–0.18

Note: ∗ PE – Partial equilibrum model, GE – General equilibrium model.

Source: Philippidis and Hubbard (2001)

Table 4.9: Estimates of welfare costs of the CAP to the EU (studies in 2000s)

Studies in 2000s	% Reduction in Barriers	% of EU GDP	% of UK GDP
Borrell and Hubbard (2000)	100	0.9	–
EC (2002a)	100 in support price for cereals, meat, milk and eggs (partial equilibrium)	0.1	–
Philippidis and Hubbard (2001)	CAP abolition in 2005	0.2	0.5
	Domestic support, export subsidies and 30 reduction in tariffs	0.2	0.3
Gohin and Meyers (2002)	Phasing out of export subsidies	0.02	–
Dimaranan et al. (2003)	50 in market price support (wheat)	0.001	–
DEFRA (2003b)	Reforms under Agenda 2000	0.05	0.05
Frandsen et al. (2003)	Decoupling payments	0.1	0.2
	Domestic support	0.1	0.3

it would otherwise be and has enlarged milk products and grain sectors by more than 50 per cent. It confirms that without the CAP the EU would greatly increase its agricultural imports and decrease imports of other products because non-agriculture sectors would expand. The scrapping of the CAP would increase US and Canadian exports of dairy products by over 70 per cent and crop exports between 25–46 per cent. These results may underestimate the welfare cost because they do not take into account dynamic gains from higher capital accumulation and the productivity boost that would occur as a result of open competitive markets. The results from Stoeckel and Breckling (1989) suggest that omitting these factors could underestimate the costs by at least 20 per cent.

Gersfelt et al. (2002) assess the impact of liberalising domestic support in the EU at the individual Member State level in the EU and in non-member regions. In the first scenario, removal of domestic support in the EU results in an increase in EU GDP of 0.1 per cent. At the EU Member State level real GDP increases by between 0.1 per cent and 0.7 per cent, of which a major part is explained by the significant changes in the inter-regional transfers between the individual EU member countries. In particular, Germany gains from a lower contribution to the common financing of the CAP, and the UK gain of 0.3 per cent of GDP is due to significant budgetary savings and an efficiency gain.

Frandsen et al. (2003) examine the economy-wide effects of full decoupling (a uniform land payment) measured against a baseline of 1997–2013. Using the GTAP general equilibrium model the study estimates that the EU would gain welfare benefits of 0.06 per cent of GDP in 2013, with the UK gaining approximately 0.04 per cent of GDP as a result of the move towards decoupling payments. The overwhelming majority of the welfare gains would be achieved through a more efficient allocation of resources. In addition to eliminating all direct support as illustrated in the previous case, if all export subsidies (which mainly affect the export of other grains, dairy products, processed rice and sugar) are eliminated, and this is supplemented by a 30 per cent reduction in the import tariff equivalents, real GDP in the EU would increase by 0.2 per cent and the efficiency gain is 50 per cent higher in this scenario as compared with scenario 1. At the Member State level real GDP increases by 0.1–0.8 per cent. Real GDP increases the most in Greece (0.8 per cent), Portugal (0.5 per cent) and Ireland (0.5 per

cent). For the UK the efficiency gain amounts to €4 billion (0.2 per cent of GDP).

In recent years, empirical studies have focused their attention on measuring the cost of protection in specific commodity markets. It is estimated by the European Union (2000) that full implementation of a reduction in support prices for cereals, beef and dairy products under Agenda 2000 CAP reforms would result in an increase in consumer welfare of €8.8 billion in 2005/06 and €10.5 billion in 2006/07 (0.1 per cent of GDP).

The CIE (2002b) estimates the effect of reducing protection levels in the sugar market. The results suggest that halving of the intervention price by 2012 would lower the EU producer prices for refined sugar to the world market price – a fall of 50 per cent, and would increase EU consumption by 10 per cent and decrease production by 64 per cent. This would increase EU net imports from −3.7 million tonnes to 9.3 million tonnes a year. Complete removal of the export subsidy on sugar would raise the world price by about 2 per cent in 2012. It would reduce the average EU producer price by around 10 per cent and would decrease EU exports from 6.4 to 3.6 million tonnes.

Messerlin (2001) estimates the cost of protecting the five farm sectors (cereals, milk, meat, sugar, bananas) in the EU at roughly a third of the value added for these five sectors. If the study is extended to the whole of the agriculture sector assuming the same level of protection as enjoyed by these five sectors, the costs of EC protection would represent roughly 12 per cent of EU total farm value added. The study also estimates that the average price for agricultural goods would decline by 14–17 per cent and only around 5 per cent of total jobs in agriculture would be lost if protection were altogether removed. Colman et al (2002) showed that the milk quota removal and the price reduction to world levels planned under the Agenda2002 reforms would bring gains of broadly €0.7 billion (0.04 per cent of GDP) to farmers in the EU. The study also estimates that the marketing chain would benefit by about the same magnitude.

In a series of studies, DEFRA analyses the impact on the UK and the EU of the CAP reforms (DEFRA, 2003b). It estimates that the proposed CAP reforms (under the European Commission's mid-term review published on 22 January 2003) would deliver substantial benefits for consumers in the form of lower relative

food prices; the economic benefit of the price reductions would be worth broadly £1 billion a year in the UK, when the reforms were fully implemented in 2008. Benefits to consumers would exceed the combined cost of the reform to taxpayers and producers, resulting in a significant benefit to the UK economy, worth broadly £500–£900 million a year once fully implemented. The net benefit to the EU economy would be in the region of £5.7 billion (0.1 per cent of GDP). The reforms would encourage productivity growth and restructuring (dynamic gain), which would generate extra economic benefits of about €0.4 billion in the UK (0.03 per cent of GDP)and €2.2 billion in the EU (0.03 per cent of GDP). In the dairy sector alone the net welfare gain would be £60 million in the UK and €870 million (0.01 per cent of GDP) in the EU.

As the above evidence suggests, the benefits of agricultural trade liberalisation and reforms of the CAP are well established. Beyond the direct observable cost, agricultural support policies pursued in the EU have caused distortions in the allocation of resources. Higher domestic prices have given incentives to retain more resources – land, labour and capital – in agriculture than would have been the case if farmers had faced world market prices. Additional benefits of the reforms would come from the dynamic long-term effects from increased savings and investment and from increased productivity when resources are allocated efficiently.

Logically, it should be in the EU's self-interest to reform agricultural protection as quickly as possible. However, agricultural trade reforms in the EU have been slow. There has been resistance to liberalisation by those who would stand to lose and the sector is viewed as being fundamentally different from other sectors because of environmental protection and food security.

4.8   CONCLUSION

This chapter has reviewed barriers to agricultural trade and gains from reforming such barriers, particularly in the EU. It is well known that the CAP is beset with many problems. EU consumers are forced to pay a high price for their food, not only because they have to pay large sums of money in taxation, most of which is spent on farm subsidies, but also because competition from foreign imports is hampered by various trade barriers. Attempts have been

made to alleviate some of the barriers, but with little effect. France has led the anti-reform campaign along with Spain and Ireland, and given their political influence within the EU it is unlikely that fundamental CAP reforms will take place in the near future.