FAIR TRADE IN BANANAS?

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International trade policies in bananas and proposals to alter existing policies in line with the Single European Market.

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Preface

Many aspects of world trade have been under the spotlight as the Uruguay Round of GATT negotiations struggles towards the series of compromises that consitute an agreement. At the same time, the European Community has been moving inexorably towards the date when it completes the transition to a Single Market, due to take full effect from the beginning of 1993. All this has significant economic and political implications for a wide range of countries, rich and poor, industrial and agricultural, inside and outside the EC, who stand to gain or lose by the changed patterns of trade that will result under the new order. There is no single way forward, and alternative proposals are floated which form the basis for discussion and negotiations among the interested parties. Ultimate agreement is guided by a variety of factors from carefully constructed analyses, through 'guesstimates', to straightforward assertion and political lobbying.

Economic analysis has an important role in all this. Its aim must be to inform the discussions with structured explorations of the possible/likely outcomes associated with the various alternatives and policies under consideration. There are great strengths in the economist's approach to this task, particularly in the rigour and specificity with which analyses can be conducted. But there are also certain dangers. One is that the analyst becomes a captive of his model, believing that the real world is actually portrayed within the frameworks he employs to manipulate the numbers; this danger is exacerbated by the inevitable simplifications that have to be made to model any real situation. The second danger is that the underlying culture of economics methodology, which tends to confer on resource use efficiency an importance which dominates all else, can obscure other (competing) objectives which have genuine validity in the political and institutional framework of this 'real' world.

Also involved are issues of equity, of distribution of benefits between advantaged and less advantaged groups; in addition they touch upon political aspects of historical interest and obligation, along with less analytically tractable things such as institutional considerations, practicality, short and long term developments, and administrative feasibility. The 'standard' approach of economic analysis may appear, therefore, to be more than usually restrictive in reflecting these complex considerations. More generally, a range of economic analyses is required.

This paper aims to be a contribution to this wider framework of assessment that all international policy-setting must receive. It widens the discussion by pointing out features and considerations that deserve also to be recognised in the decision process. As such it attempts not to establish a position as to question whether any particular position is easily arrived at on solely economic grounds.

The study has been compiled from the work of several researchers who are named overleaf. Where views are expressed or conclusions offered, they are the responsibility of the editors.

Biographical Notes

Professor J P McInerney is Glanely Professor of Agricultural Policy, and Director of the Agricultural Economics Unit at the University of Exeter.
He is a frequent consultant to the World Bank, and contributor to analysingWorld Bank projects.

Lord Peston is Emeritus Professor of Economics at Queen Mary College, University of London. On various occasions he has acted as Specialist Economics Advisor to the Treasury, Department of Prices and Office of Fair Trade. He is also the Editor of 'Applied Economics' and 'Applied Financial Economics' and Chief Opposition Spokesman on Industry in the House of Lords.

Dr David Hallam is Senior Lecturer in Agricultural Economics in the Department of Agricultural Economics at the University of Reading. He is a specialist in modelling agricultural commodity markets and has been a regular consultant in this area to a number of international organisations. Currently, he is advising OECD.

Steve McCorriston is a lecturer in the Agricultural Economics Unit at the University of Exeter, specialising in economic analysis of international trade and primary commodities. He has recently been visiting Professor at Purdue University, USA. His main areas of specialism are in international trade policy and market structure issues.

1 Introduction

The banana industry and the international trade in bananas perhaps suffers from some unfortunate perceptions and associations. "Banana republics", "banana boats" and just "bananas" are faintly humorous terms. The usual implication is that the fruit is somehow peripheral and that it symbolizes a less than serious effort or activity. But banana growing, shipping, distributing and marketing is big business and, as an economic activity, deserves proper consideration and analysis.

The distinctive element of the banana trade is that about one fifth of total production is exported. and around 70% of this amount comes from Central and South American countries and the Caribbean. Some small economies, such as the Windward Islands, and Belize are very heavily dependent on the banana export trade. The concentration of trade is even more striking when its control and organisation is considered. Three multinationals: United Brands (Chiquita), Dole and Del Monte, control nearly 70% of the world trade in bananas. Their production or production contracts, shipping, distribution and marketing network have a very significant influence on the returns to banana growers and prices paid by consumers.

Against this background, the European Community, in its moves to create a Single European Market, has to provide a common trade policy for banana imports to its Member States. The difficulties in doing this arise from reconciling historical trade relationships and preferential trade agreements in some Member States, eg UK, Spain, France, which protect smaller scale producers, with more open trade policies which allow imports from larger scale producers in Central and South America, into other Member Countries, eg Germany, the Netherlands and Denmark. The Community is legally obliged to incorporate its promises under the fourth Lomé Convention. Protocol 5 of the Lomé Convention (1990) promises that:

'In respect of its banana exports to the Community markets, no ACP state shall be placed, as regards access to its traditional markets and its advantages on those markets, in a less favourable situation than in the past or at present.'

Larger scale producers trading in an open market are categorized as 'efficient' providing large benefits to the Community's consumers in the form of 'cheap' bananas. On the other hand, there is an inequity if the Community abandons its ties with smaller scale producers in the smaller countries of Africa and the Caribbean. Fairness is a very real issue on these grounds alone.

Given the industry's structure and the concentration of market power in the banana trade, there is a further need to consider all the economic arguments in the current debate about the appropriate policy for the Single European Market. The unbridled exercise of multi-national power is likely to lead to imperfect competition and loss of consumer welfare.

A further complication is that banana trade policy is now caught up in the closing stages of the Uruguay Round and the push to agree 'tariffication' policies. In doing so, it is evident that the relatively simple economic models used to analyse many agricultural commodity markets, and put forward by some analysts as relevant to the banana industry, are inadequate. An alternative set of assumptions and models are put forward here and the implications for the Community's banana regime are drawn out.

Whatever policy is finally decided upon, the thoughts and conclusions presented this report suggest that fair trade in bananas will only be obtained by regulation of the market in one form or another.

2 World Production and Exports of Bananas

Production

World production of bananas in 1991 is estimated by FAO at 47.7 million tonnes, with Asia being the single most important production area with 19 million tonnes. Figure 2.1 and Table 2.1 provide an illustration of FAO estimates of banana production in different regions and in the major individual producing countries.

Figure 2.1 Banana Production 1980, 1989 to 1991

Source: FAO
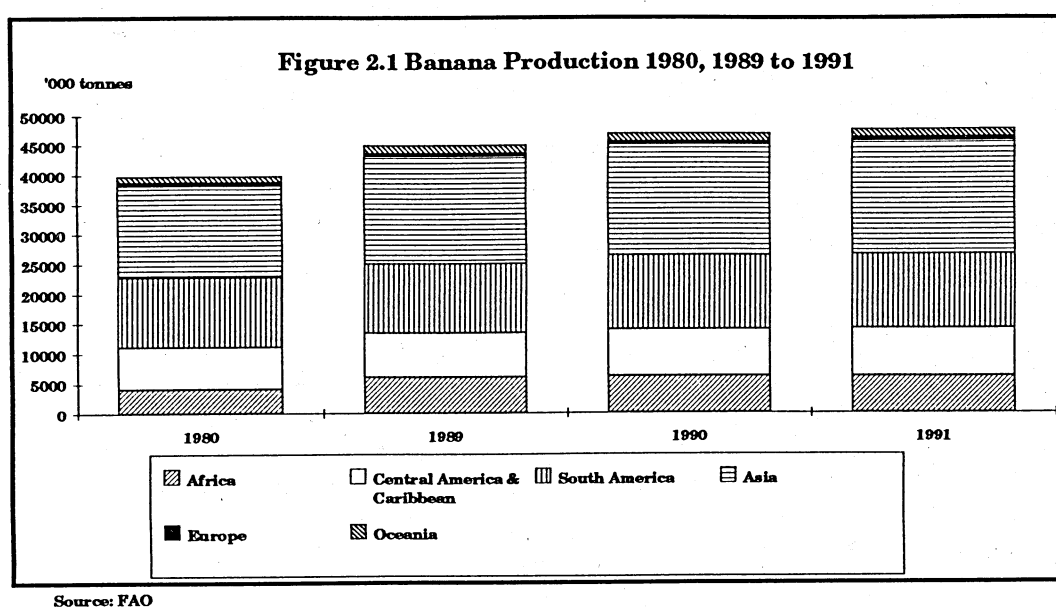
The geographical spread of production is wide, though largely confined to the tropics and subtropics. There is some production outside this zone, in the Canary Islands, Madeira, and Crete, for example, but the volumes involved are relatively small. The major producing regions in 1991 were Asia with 40% and South America with 26% of total world production. In terms of individual countries the biggest single producers were India and Brazil, accounting for 13% and 12% of world production respectively.

Production has shown a steady increase during the 1980s in all regions with world output rising by 19% since 1980, though there is some evidence that the growth has slowed in the last two or three years. Africa has seen the biggest increase in production since 1980 - about 50% - but it appears now to have stagnated. In Central America and the Caribbean, production has increased by around 15% since 1980, but it is only in Mexico that strong growth has continued. Production in South America has grown at a slower overall rate than in other major producing region, and as elsewhere, has remained fairly static in the last three years. In Asia, total production has continued to increase, driven on by expansion in China. European production is relatively insignificant to the total and appears to have

declined. In most other important producing countries production has stagnated.

| Table 2.1 Banana Production ('000 tonnes)				
	1980	**1989**	**1990**	**1991**
World	40051	44970	46923	47660
Africa	4108	6076	6127	6141
Central America/ Caribbean	7010	7304	7865	8049
Costa Rica	1092	1512	1740	1550
Honduras	1330	1092	999	1100
Mexico	1501	1185	1591	1888
Panama	1050	1254	1166	1170
South America	11618	11624	12361	12460
Brazil	6721	5505	5502	5630
Colombia	1030	1450	1600	1630
Ecuador	2269	2576	3055	2954
Venezuela	890	1134	1167	1170
Asia	15458	18136	18678	19090
China	276	1602	1657	2105
India	4830	6056	6655	6400
Indonesia	1977	2192	2360	2400
Philippines	3977	3733	3409	3545
Thailand	2014	1610	1613	1620
Europe	512	439	422	448
Oceania	1086	1386	1465	1468
Papua New Guinea	916	1150	1200	1200

Source: FAO

Trade

Most banana production is for local consumption but bananas are (along with rubber, cocoa, sugar and coffee) one of the five major tropical products entering into world trade. Export production involves different varieties and specific production, harvesting, packing and distribution systems necessary to maintain the high fruit quality required by distant import

markets.   Unlike the other major tropical products entering into world trade, bananas are a short life perishable product that are easily damaged hence they require relatively sophisticated and costly handling and distribution systems.

Figure 2.2 and Table 2.2 give estimates of the volume of banana exports from the major exporting regions and countries.

Figure 2.2 Banana Exports 1980, 1988 to 1990

Source: FAO
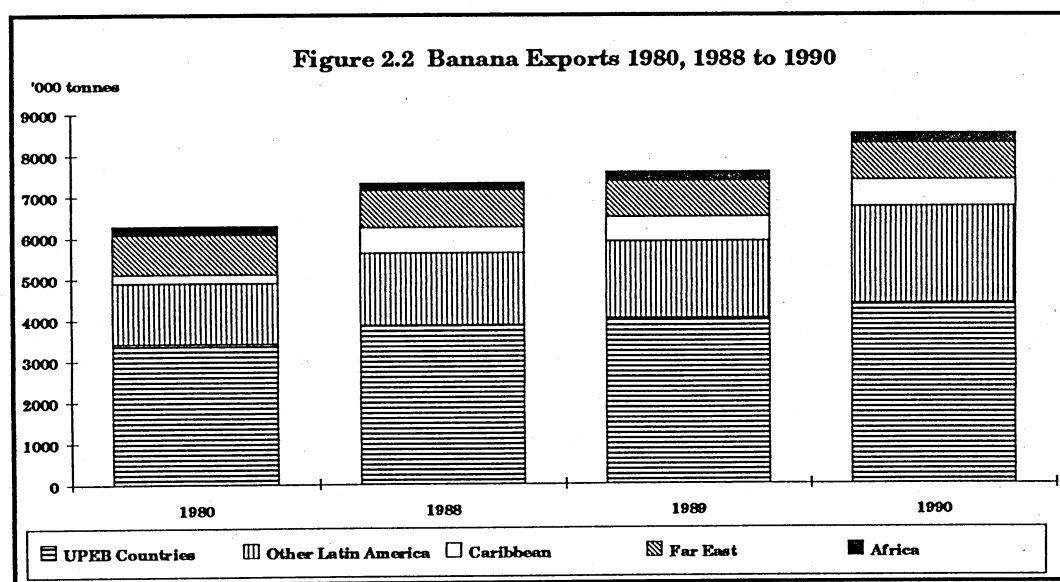
The proportion of bananas entering world trade is only a small proportion of total production - around 20% in 1990.   However, this average is misleading.   In some countries, especially in Latin America, production is very much geared to the export market.   In 1990, around 80% of production in Costa Rica and Honduras was exported; in Ecuador the equivalent proportion was around 70%, and in Colombia and Panama around 60%.

The pattern of exports across countries is rather different from the pattern of production, and is centred on Central and South America - the so-called "dollar exporters".   Very few major producers are also major exporters, only Ecuador (the biggest exporter) and the Philippines being also among the world's largest producers.   India does not figure amongst the major exporters at all, although it is the biggest producer, while Brazil only exported 53.2 thousand tonnes in 1990 out of a total production of 5.5 million tonnes.

This heavy dependency of some banana-producing countries on the export market is illustrated by the following proportions of production that are exported;

-   90% for the Windward Islands

-   80% for Costa Rica and Honduras

- 70% for Ecuador

- 60% for Colombia and Panama.

Table 2.2 Banana Exports ('000 tonnes)				
	1980	**1989**	**1990**	**1991**
World	6904.3	7881.9	8128.8	9031.9
UPEB Countries	3427.0	3863.1	4028.3	4368.2
Colombia	691.6	921.7	877.2	990.8
Costa Rica	887.7	1026.7	1224.8	1344.4
Guatemala	352.0	309.0	349.3	348.1
Honduras	866.5	871.0	818.7	864.0
Nicaragua	110.0	61.0	70.0	72.0
Panama	504.2	669.8	681.8	738.0
Other Latin American	1451.8	1762.0	1878.8	2363.2
Belize	15.0	26.0	27.0	30.0
Brazil	67.3	76.9	83.5	53.2
Ecuador	1318.2	1534.8	1648.9	2160.0
Mexico	17.3	88.7	90.0	90.0
Surinam	34.0	35.6	29.2	30.0
Caribbean	230.8	614.1	579.6	650.2
Jamaica	33.1	28.1	42.6	62.7
Guadeloupe	56.9	130.5	93.8	95.0
Martinique	73.0	185.0	193.0	215.0
Windward Islands	67.8	270.0	250.2	277.5
Far East	958.5	900.8	884.7	892.0
Philippines	922.7	866.8	851.0	850.0
Africa	221.9	188.1	230.3	247.5
Cameroon	59.5	36.0	57.5	74.7
Cote d'Ivoire	121.0	82.0	92.8	94.2
Somalia	32.0	64.0	76.0	74.6

Source: FAO

The growth in exports in recent years has come from the Central and South American producers, up nearly 20% in 1989-91 as compared with a 5% increase from the Caribbean.

The Structure of Trade

The banana exporting countries share the characteristics of being less developed economies with low per capita incomes. However, there are significant differences between them as regards production systems and productivity, the organisation of export marketing and distribution, and the particular export markets served. It is convenient to divide exporters into three basic groups:

- the dollar area banana suppliers of Latin America

- the producers of the Caribbean and Africa (mainly ACP countries)

- the Far Eastern producers, the most important of which is the Philippines.

The Concentration of Trade

By far the most important of these groups are the dollar suppliers which account for around 75% of world exports. Largest among them, and in the world, is Ecuador which acts as the world's "residual supplier" meeting shortfalls in exports from other countries to satisfy world demand.

The ACP producers are those in the Caribbean and African countries from among the African, Caribbean and Pacific States which are signatories to the Lomé Convention. However, Guadeloupe and Martinique, which are French overseas departments (DOMs), can be grouped in with these for the purposes of this section. With their special trade relationships with certain members of the European Community, these ACP countries accounted for around 10% of world exports in 1990.

Total exports from all sources increased by about 30% during the 1980s, rather more than world production, continuing the upward trend of the post-war period. Both area expansion and yield increases have contributed to this trend, although by the 1980s, the scope for further yield improvements by most Latin American exporters was much reduced. In Latin America, expansion has been most pronounced in the case of Ecuador, where exports increased by more than 60% between 1980 and 1990. The high production level of bananas reinforces the significance of this growth. It represents a high absolute contribution to the level of world trade. From a much smaller base, Caribbean Islands' exports more than doubled (and in the case of the Windward Islands, trebled) over the period. However, these very high growth rates partly reflect recovery from the devastating effects of hurricanes in 1979 and 1980. While yields in the Caribbean exporting countries have increased, the prevailing smallholder production and

ecological conditions mean that they remain substantially lower than those achievable on the plantations of Latin America.

Production Variability

The general upward trend in banana exports has been interrupted in particular countries at particular times by a variety of exogenous factors though fortunately the short production cycle of bananas means that output can recover more rapidly than certain other tropical export crops. Colombian production suffered the effects of Sigatoka disease in 1985. In 1980 Hurricane Allen destroyed all of St Lucia's crop and most of St Vincent's, while hurricane Gilbert in 1988 inflicted similar damage on the Jamaican industry. The combination in 1983 of floods in Ecuador, high winds in Honduras and Guatemala, and drought in the Philippines are estimated to have reduced world banana exports by 15%. Besides disease and weather, man-made problems have also, from time to time, had an adverse effect. In 1988, for example, industrial disputes and civil disturbances reduced exports from Colombia, Panama, Honduras and Guatemala.

The Economic Dependence on Banana Export Earnings

The extent to which exporting countries rely upon bananas for their foreign exchange earnings varies widely. For the Windward Islands, bananas account for between 50% and 60% of export earnings, and in the French overseas departments, Guadeloupe and Martinique, dependency is around 50%. In Belize the equivalent proportion is about 30%. Measures to reduce dependency on bananas have frequently been discussed in these countries. Elsewhere, dependency is still in excess of 20% in Costa Rica, Honduras, Panama and Somalia, but less than 10% in most other banana exporting countries.

Banana production can also be a major source of income and employment for the domestic population. In the Windward Islands, the banana industry contributes around 30% of GDP and occupies about 50% of the working population. Importantly, bananas have a weekly harvesting schedule throughout the year and so offer regular employment, unlike some seasonable tropical products. This regularity has important social and infrastructure implications. Obviously, such dependency means that the economies concerned are particularly exposed to the risk of exogenous shocks to their production or market opportunities. However, small country and island economies have few alternatives to banana production and, often, bananas are an important part of their diversification programmes.[1]

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[1]   The regular weekly harvesting and shipping schedule for bananas is also a significant part of any diversification policy for these developing countries. The availability of shipping allows other smaller scale tropical fruit and vegetable activities to be developed. In addition banana growing has been recommended by the World Bank and other agencies as a diversification option in itself. For example, Belize has been encouraged to move away from sugar and into bananas.

Differences in Production Systems

There are important differences between export producers in terms of the prevailing production systems and costs of production, and hence in their competitiveness on world markets. The major contrast is between the plantation production of Central and South America and the smallholder production of the Caribbean islands. In the latter situation topographical factors lead to lower yields and prevent the adoption of the plantation system, so resulting in higher unit costs for these island economies.

Latin America banana plantations, up to 5,000 hectares in area, demand massive investment in roads, drainage and irrigation systems, cableways and packing facilities, but do provide the opportunity to reap economies of scale. At the same time, a history of low wages, limited workers' rights, poor working conditions and consequent social and political unrest in the plantations has attracted much concern. Plantations have also been criticised on environmental grounds, accused of destruction of forests, excessive use of pesticides and water pollution.
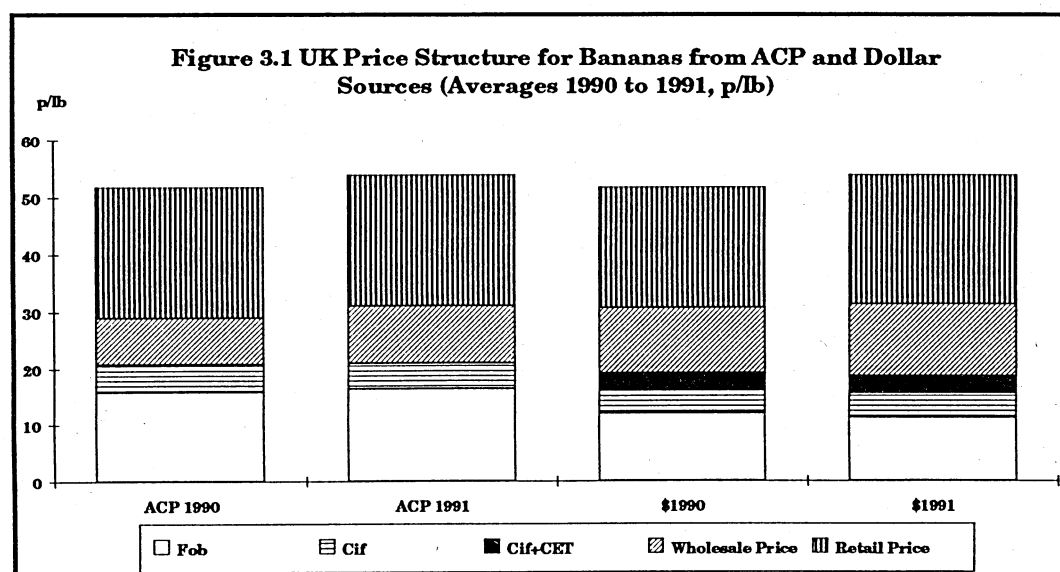
By contrast, smallholder production, being less capital intensive and more labour intensive, is perhaps more appropriate to the resource conditions of some countries, and may have advantages in terms of income distribution. However, it does result in export prices of Caribbean bananas being up to 100% higher than dollar bananas. Guadeloupe and Martinique are at a further cost disadvantage in having to adhere to French minimum wage legislation. Not all ACP production is at quite such high-cost. Belize, Surinam, Cameroon and Côte d'Ivoire have lower costs than in the Caribbean islands, though not as low as the dollar exporters. In the light of this it is difficult to see how the small Caribbean island and other ACP producers could compete on the world market with the dollar suppliers if their current preferential trading arrangements with the EC were removed. The same would apply for the high cost European Community producers in the Canary Islands, Madeira and Crete.

In countries where plantation systems are employed, multinational corporations have control and ownership of production. In Latin America, for example, they are responsible for around 60% of total production. Ecuador is unusual in that production is controlled by national producers because of restrictions on land ownership by foreign investors. Where production is not directly undertaken by the multinationals they may nonetheless have exclusive control through associate producer arrangements. Contracts with independent producers may specify exclusive rights to purchase of production, the price at which it will be purchased, the quality standards which must be achieved, the management practices which must be followed to achieve them, and the penalties for failure to do so. Production inputs such as chemicals, and packing materials may also be provided. Such contracts are guarded jealously by the multinationals against their rivals as the "banana war" in Honduras between Chiquita and Fyffes illustrates.[2]

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[2] In April 1990, The Financial Times carried the story 'Bananas War Split Honduras'. Chiquita was reported as defending its contractual monopoly on export rights over an independent banana producer. An offer by Fyffes to increase producer prices to the producer by 50% was over-ruled by a judge's warrant which resulted in bananas being unloaded from a Fyffe chartered ship.

3 The Production/Distribution Chain

The stages in the chain between producer and consumer and the build-up of prices along this chain in Europe, are illustrated in Figure 3.1.

Figure 3.1 UK Price Structure for Bananas from ACP and Dollar Sources (Averages 1990 to 1991, p/lb)

Source: MAFF

(CET=Common External Tariff, CIF=Carriage, Insurance and Freight, FOB=Freight on Board)

Export marketing and distribution of perishable bananas requires major investment in specialised refrigerated and ventilated vessels for shipping, and ripening, storage and transportation facilities in the importing countries. Coordination of the production, shipping, ripening and wholesale distribution processes is necessary if fruit is to be moved rapidly and smoothly through the marketing chain, and the high unit costs of less than full-capacity use of expensive capital are to be avoided. Not surprisingly, perhaps, multinational corporations dominate the scene in this respect, handling about 70% of world exports.

Table 3.1: Multinationals in the World Banana Market			
	Share of World Market	Share of European Market	Share of Japanese Market
United/Chiquita	35%	43%	22%
Standard/Dole	20%	13%	21%
Del Monte	15%	10%	21%

Source: Prudential Bache Securities and Chiquita Brands

There are some major national alternatives to multinational power. NOBOA is the main Ecuador exporter, exporting up to half of Ecuador's production, and with a market share of about 8% of world banana exports. UNIBAN of Colombia, marketing the TURBANA brand, might have around 7% of world exports. In the case of smallholder producers, the first sale might be arranged by a producer association, but this will often be to a multinational enterprise.

Shipping and transportation costs have been identified by various authors as being a key element in the viability of tropical fruit and vegetable exports. In the case of bananas, the relatively high volume per unit and low value of the commodity ensures that these shipping costs are critical to producer returns.

Table 3.2 Ranking of selected horticultural products in El Salvador by transport feasibility		
Commodity	**Transport feasibility US \$/metric tonne[3]**	**Labour cost advantage hours/tonne[4]**
Strawberries	2400	113
Mushrooms	2000	120
Asparagus	1500	85
Broccoli	1200	55
Tomatoes	1000	60
Cucumbers	750	47
Cauliflowers	650	40
Citrus Fruits	550	28
Bananas	350	32
Pineapple	300	30

Source: Islam, 1990

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[3]   The index of transport feasibility is the value of a ton of output. The higher the value the greater the crop's ability to sustain high transport costs.

[4]   Labour cost is the number of labour hours spent per month for producing, harvesting and packaging a ton of produce.

Some or all of the stages in the chain of production, exporting, shipping, importing, ripening, wholesaling and distribution will be undertaken by the same vertically integrated company which directly owns the investments (facilities) at each stage. Alternatively, the various links in the chain may be more loosely coordinated by a single company through contracts which have the advantage of reducing the costs and risks associated with direct investment. Recent years have seen some movement away from ownership of ships by the banana companies in favour of chartering, for example, and some withdrawal from direct production in favour of associate producer arrangements. In negotiating such arrangements the large banana companies will have significant bargaining power. Hence, the term "independent" as used to described independent ripeners/wholesalers, etc may not mean exactly what it seems, since the market power of the multinationals may preclude truly independent operation of these activities. The 1976 EC Commission reaction against Chiquita illustrates the problem.

1976 EC Commission Decision

In December 1976, the Commission of the European Communities adopted a decision which found that Chiquita, having a dominant position in bananas in the European Community, had infringed Article 86 by:

"(a) requiring its distributors/ripeners in the Belgo/Luxembourg Economic Union, Denmark, Germany, Ireland and the Netherlands to refrain from reselling its bananas whilst still green;

(b) in respect of its sales of Chiquita bananas, charging other trading parties, namely distributors/ripeners other than the Scipio group in the Member states referred to above, dissimilar prices for equivalent transactions;

(c) imposing unfair prices for the sale of Chiquita bananas on its customers in the Belgo/Luxembourg Economic Union, Denmark, Germany and the Netherlands (other than the Scipio group);

(d) refusing, from 10 October 1973 to 11 February 1975, to supply Chiquita bananas to Th. Olesen A/S, Valdi, Copenhagen, Denmark."

In a later appeal to the European Court of Justice item (c) above was annulled on the ground that the Commission had failed to answer some of the counter arguments made by Chiquita in relation to the allegation of unfair pricing.

In 1990, the EC Commission commenced new proceedings against Chiquita Brands International for unfair restrictions on competition and abuses of its dominant position.

The existence of vertical integration means that the intermediate prices such as those illustrated in Figure 3.1 may bear little relationship to true market prices. In many cases such prices will be transfer prices from one part of a vertically integrated company to another.

The Involvement of Multinational Corporations

The world trade in bananas is dominated by the activities of three vertically integrated multinational corporations, whose banana interests are just one part of a larger multinational conglomerate. The strength of their market share was indicated in Table 3.1. The three are:

- United Brands, formerly United Fruit Company, responsible for the Chiquita brand

- Castle and Cooke (Dole) which acquired Standard Fruit

- Del Monte.

Together, these three companies account for around 60% of world exports: United Brands is the biggest with just over 30% of world exports, Dole has just over 20%, and Del Monte around 16%. The multinationals are global in operation, although their relative individual strength varies from one country to another: Dole for example, have around 30% of the trade into North America but less than 10% of the trade into Europe.

The multinationals are perhaps most closely associated with exports from Latin America, and espcially Central America, where they are directly involved in the production of around 60% of their export supplies. However, they were quick to become involved in the Philippines after the opening of the Japanese market in the 1980s. They are also active to a lesser extent in certain ACP exporters: United Brands, for example, has been involved in the management of the banana industries of Belize, Surinam and Jamaica, and until the mid 1980s owned Fyffes. Casson (1986) notes the apparent incongruity of the involvement of multinational companies in the production and trade of what is after all an unsophisticated unprocessed fresh product. It is explained by the importance of quality control in the marketing of a highly perishable product. This perishability leads to the central importance of the shipping, marketing and distribution chain, which in turn leads to the high returns that can be earned in these activities rather than in production itself. However, the logistics need to be managed very efficiently if these profits are to be realised, and it is here that the management skills of the multinationals are relevant. It is also true that the economies of scale in production, shipping and transportation will also encourage large vertically integrated organisations. This is particularly so if, in the producing countries, there is no organisation or institutional framework to counter the powerful influence of large scale foreign investment.

In fact, the multinationals have been involved from the very beginning of the banana export trade (Read, 1986). The United Fruit Company (now United Brands) was formed in 1899 and grew rapidly partly through acquisition of smaller banana companies. The origins of Standard Fruit can be traced back to the same period. These two had reached their position of dominance by the 1920's and were vertically integrated concerns with production facilities in a number of Central and South American countries, coupled with their own vessels and marketing and distribution networks in the United States. Standard Fruit were acquired in the mid 1980s by Dole. Del Monte has a more recent history, joining the industry in the late 1960s[5].

Today, the multinationals maintain much the same nature: vertically integrated production, packing, shipping, ripening and wholesaling concerns. At all stages they have the size to reap economies of scale, profiting from small margins per unit on high volumes of trade. Their production or purchasing is spread through a variety of countries to minimise risks of interruption to supplies through disease, floods, hurricanes, political disturbances or hostile governments. In each host country, the multinationals have been instrumental in developing the plantation production system. However, there is some evidence to suggest that they have reduced their direct involvement in actual production, partly of their own volition to avoid the risks noted above, but also in some cases, (such as Ecuador and Guatemala) through expropriation of their assets.

Barriers to Entry and Market Power in World Trade

Although there has been some slight reduction in the multinationals' share of world banana exports they remain in control of around 70%. Newcomers to the market face significant barriers to entry. These arise from the large minimum efficient size which firms need in order to achieve economies of scale, and to be able to source from a number of countries to supply interruptions due to exogenous factors.

Further entry barriers arise from:

- the multinationals' control of access to banana supplies, either through their ownership of land via direct production or through tight and exclusive contracts with producers;

- their control of port facilities and shipping through ownership or contracts and charters;

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[5] One of the results of the 1958 judgements by the US Courts arising from the 1954 Anti-Trust Complaint against Chiquita was that Chiquita was obliged to dispose of at least one-third of its banana imports to an independent company. It was as a result of this that the Del Monte Corporation, the world's third largest exporter of bananas, achieved its foothold in the banana market. Chiquita complied with the 1958 'Consent Decree' by selling the Guatemalan Bananera Division (which controlled 3,000 ha. of the plantations) to Del Monte.

- their control of ripening and distribution facilities, and exclusive contracts with retailers.

An example of the constructed power and imbalance between producers and the multinationals is given in a Financial Times Report in 1991.

'In Panama, growers are celebrating a record year for exports. The 40m boxes (18kg each) represented the first time Panama has achieved its full production potential. But the success masks continuing frictions between the Chiniqui Land Company and independent producers, who account for a third of the country's export crop.

The battle, as always, is over the price the company pays independent growers for their produce. Attempts in the past to set up a rival Panamanian exporting company failed miserably, mainly because independent growers could not compete with Chiquita's world marketing network.

So Panama's independent producers are compelled to give five and 10 year supply contracts with the Chiniqui Land Company. In a good year, Chiquita creams the profits. In a bad year, independent growers have a guaranteed buyer and are shielded against losses.'

Leslie Crawford, The Financial Times, 15 February 1991

These obstacles raise the size of the investment needed to break into the market. Furthermore, the riskiness of that investment could be enhanced by the adoption, or the threat of adoption, of predatory pricing policies by the established firms. While such action leads to a drain on the resources of the established firms in the short-run, it can inflict unsustainable losses on new competitors. Market conduct of this kind led to the antitrust case brought against United Fruit Company in the United States in 1954.

1954 US Anti-Trust Complaint

Between 1908 and 1911, other properties and companies were sold by Chiquita under divestiture orders from the United States government and courts. Despite this, by 1954 Chiquita, with the exception of some land in Equador, owned, leased or otherwise controlled 85% of the land in the American tropics suitable for banana cultivation. Due to Chiquita's agressive policy of acquiring competitors and of securing control or ownership over all suitable production lands, the US government filed an anti-trust complaint against Chiquita under Section 4 of the Sherman Act and under Section 74 of the Wilson Tariff Act. In the 1954 complaint it was claimed, inter alia, that Chiquita (referred to in the complaint as 'United') had:

"(c) entered into, performed and obtained performance of contracts, agreements and arrangements with other persons pursuant to which United has:

(i) acquired ownership or control, in most of the existing banana producing countries, of most of the land available for the growing of bananas saleable in the US markets;

(ii) acquired the right to purchase the entire production of bananas grown by others;

(iii) acquired ownership of or control over a predominant part of the land transportation facilities necessary for transporting bananas from farms and plantations to ports of export in many areas of the American Tropics;"

(e) engaged in the following exclusionary practices and unfair methods of competition:

2   interfered with existing or potential contractual relations among the competitors and others, including growers, transporters and purchases of bananas for the purpose or with the effect of excluding such competitors from one or other phases of the banana industry;

10   refused to sell bananas to jobbers, dealers and other customers on the grounds that they had previously purchased bananas from its competitors or that they had not previously been customers of the United;

11   coerced customers, under threat or withdrawal of supply of bananas, into refraining from purchasing bananas from its competitors;

13   induced banana jobbers and dealers to purchase bananas exclusively from it;

16   engaged in a widespread and thorough system of surveillance of the activities of its competitors for the purpose or with the effect of maintaining and strengthening its dominant position in the banana industry and eliminating such competitors from the banana industry;

17   operated or controlled concealed or 'bogus' independents as competitors of United'.

The complaint against Chiquita alleged that the effects of the abuses were, inter alia that:

'(a) other persons have been excluded from engaging in the banana business;

(b) United have acquired the power to fix prices at which bananas are sold in the United States;

(c) United imports at least 65% by weight of all bananas sold in the United States and 100% of the bananas imported by water in the states of California, Oregon and Washington;

(d) consumers have been deprived of the benefits of competition in the banana industry in the United States'.

In 1958 final judgement was entered. The restrictions and orders imposed upon Chiquita in the consent judgement were to be valid for 20 years from the date of disinvestment.

The 1958 judgement against Chiquita ordered substantial divestiture by Chiquita of assets, and limited the number of stems they would be entitled to import into America.

There has also been a history of official complaint in Europe against Chiquita before the more recent Commission actions.

Given the market power and business conduct of the multinationals, and the concerns over working conditions, wages, and environmental effects of large plantations mentioned earlier, it is not surprising that the role of the multinationals is controversial. Neither is it surprising, that faced with the immense size and resources and economic bargaining power of the multinationals, the producing countries should feel exploited for only a minor share of the profits of banana production and trade. The relationship between the multinationals and the host producing countries has therefore not always been harmonious. In the extreme this led to the assets of United Fruit Company being expropriated in Cuba, Ecuador and Guatemala.

There have been less dramatic attempts by the producing countries to retrieve some of the profits of the multinationals. One of the most famous was the imposition in 1974 of export tax of $1 per box by Panama, Honduras and Costa Rica, which led to the 'banana war' between the multinationals and the countries concerned. The multinationals stopped exports and threatened to cease production altogether, and after a few months agreement was reached on an export tax of rather less than $1 per box. The Union de Paises Exportadores de Banana (UPEB) was formed by the three combatants in the banana war, together with Colombia and Guatemala, in an attempt to establish a bargaining body to redress the balance in bargaining power between the producing countries and the multinationals.

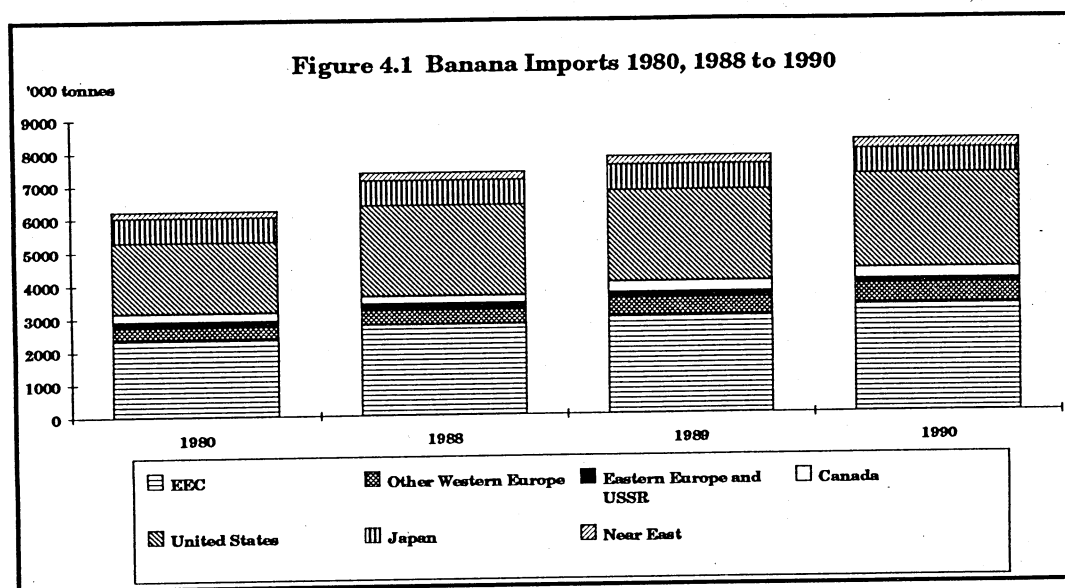UPEB now also includes the Dominican Republic, Nicaragua and Venezuela. The UPEB also established its own banana company COMUNBANA with 80% of its capital held by the governments concerned and the rest by nationals of those countries. However, COMUNBANA's capital was too limited, confining it to an ineffective small scale; it ceased operation in 1983. Other state-run schemes to produce and export bananas

have in general suffered the same fate, unable to achieve the economies of scale of the multinationals or to match their management expertise.

There are, however, some successes for national companies. NOBOA of Ecuador was mentioned earlier. The Colombian Union de Bananeros de Iraba (UNIBAN) was also established as a response to what was seen by producers as unacceptable contracts offered by the United Fruit Company. UNIBAN began F.O.B. selling of 'Turbana' brand bananas to the United States and Europe, and more recently has integrated forward into shipping to sell F.O.R. and capture additional margins. UNIBAN however, has recently applied for Chapter 11 bankruptcy in the United States.

4 World Consumption and Imports

In terms of per capita consumption in the major importing countries, bananas are one of the most popular fruits. More bananas are consumed in the United States than any other fruit, while in Germany bananas are second only to apples. In the United Kingdom bananas have just overtaken apples as favourite fruit. The imports of bananas into the major importing regions are shown in Figures 4.1 and Table 4.1, and imports per head are shown in Figure 4.2 and Table 4.2.

Figure 4.1 Banana Imports 1980, 1988 to 1990

Source: FAO

Figure 4.2 Banana Imports per Capita 1980, 1985, 1989-90
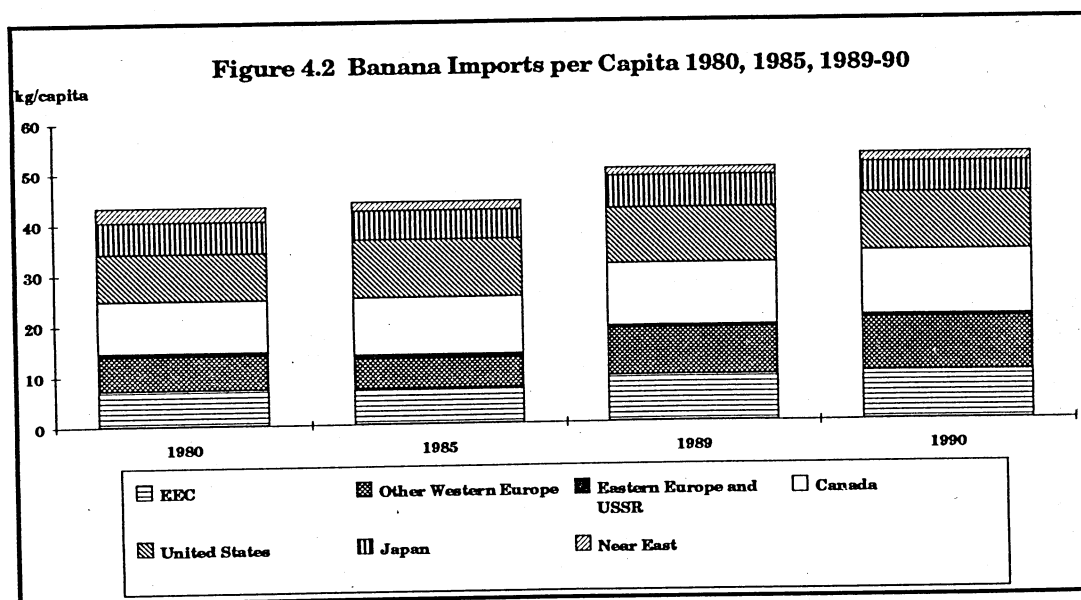
Source: FAO

Imports

More than 90% of world imports are into the developed market economies of the northern hemisphere.

The biggest importers are the European Community and the United States, with 38% and 33% of the world total respectively in 1990. Within the European Community, Germany is the largest import market, accounting for 13% of the world total itself. Some European Community "imports" relate to what might be regarded as home production: trade between Madeira and Portugal, the Canary Islands and Spain, and the French Overseas Departments (Guadeloupe and Martinique) and France are all counted as imports. Japan is the other major importer with around 9% of total world imports in 1990. Eastern Europe and the former USSR remain insignificant as importers with less than 2% of the world total.

World imports increased by around 28% between 1980 and 1990, although the increase in per capita terms was only about half of that. The greatest increase has been in imports into Europe and North America: imports into the European Community increased by 39%, into the rest of Western Europe by an enormous 66%, and into the United States by 33%. By contrast, the growth of the Japanese market observed in the 1980s was only of the order of 9%.

This overall expansion conceals significant shifts in individual country trends after the mid-point of the decade, as Table 4.2 shows. In the first half of the decade world imports expanded slowly, with per capita imports static. Only the steady increase in imports into the large United States market, with per capita imports rising by 23% between 1980 and 1985, kept the world market roughly in balance. Per capita imports into Germany, Austria and especially Sweden were also increasing, but in the rest of Europe per capita imports were static or even slightly declining. In Japan per capita imports declined.

After 1985, the situation changed dramatically with significant increase in per capita imports into Europe and a slowdown in imports into North America. Between 1985 and 1990 world per capita imports increased by 14%, driven by the sharply rising imports in Europe. European Community imports per capita increased by 37%, while in other Western European countries the increase was 74%. Within the Community, German per capita imports increased most, by 51% from already relatively high levels. The United Kingdom and Italy also had significant increases, by 44% and 39% respectively. However, elsewhere in the Community per capita imports showed only modest expansion, if any. Large increases of 56% in Austria and 64% in Sweden, lay behind the expansion in imports into Western Europe outside the Community. Imports into Sweden doubled during the 1980s as a whole. Meanwhile per capita imports into the United States remained unchanged between 1985 and 1990. In Japan per capita imports recovered, but only to their 1980 levels.

Eastern Europe and the Near East have been seen as import markets with great growth potential. However, recent trends in imports into these regions have not lived up to these expectations. Imports into Eastern Europe have been static and erratic as might have been expected given the political upheavals on top of the usual foreign exchange and market infrastructure constraints. Per capita imports have declined accordingly. Only Hungary seems to have increased its imports steadily through the 1980s.

In the Near East the rapid growth in imports during the 1970s has not continued. Imports into Iran, Iraq and Syria had fallen more or less to zero by the early 1980s. It is only really in Saudi Arabia, the largest importer of the region, and Turkey that imports have been on an upward trend during the 1980s. Per capita imports into the region fell during the first half of the 1980s and stagnated during the second.

Table 4.1 Banana Imports ('000 tonnes)				
	1980	**1988**	**1989**	**1990**
World	6781.7	7753.0	8196.7	8712.9
EEC	2360.6	2753.7	2982.9	3281.3
Other Western Europe	356.4	462.0	518.8	593.4
Eastern Europe & USSR	188.8	159.3	177.2	152.0
Canada	245.8	229.7	322.4	340.8
United States	2147.1	2750.0	2760.0	2850.0
Japan	726.1	760.4	773.7	757.5
Near East	197.8	247.1	260.7	311.72

Source: FAO

Table 4.2 Banana Imports per Capita (kg/per capita)				
	1980	**1985**	**1989**	**1990**
World	2.9	2.9	3.1	3.3
EEC	7.2	7	9.2	9.6
Other Western Europe	6.6	6.1	9.2	10.6
Eastern Europe & USSR	0.7	0.6	0.5	0.4
Canada	10.2	11.3	12.3	12.8
United States	9.4	11.6	11.1	11.4
Japan	6.2	5.6	6.3	6.1
Near East	3.0	1.6	1.6	1.8

Source: FAO

Factors Affecting Demand

It is not a straightforward matter to identify the precise factors which are significant in explaining the differences in the levels and trends of per capita banana imports between countries and through time. It is difficult to explain, for example, why banana consumption increased so significantly in the second half of the 1980s in Germany, Italy and the United Kingdom, but remained static in their European Community partners, Netherlands, Belgium and France. However a number of factors might be put forward in at least partial explanation of variations in import levels and trends which may have been influential at certain times in certain countries. It is certainly not just a simple matter of relative prices as some commentators would argue.[6]
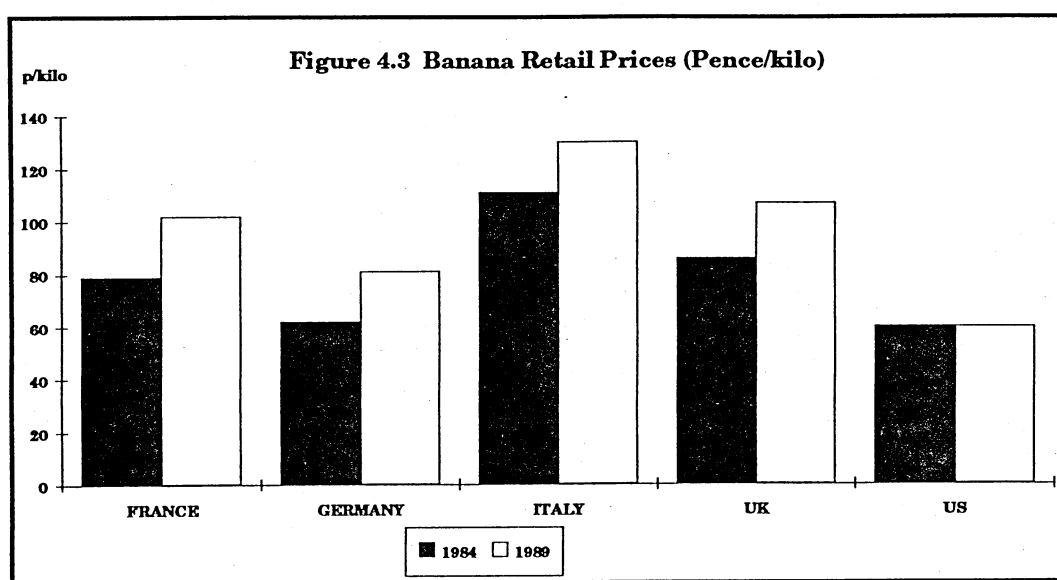
Price

The price of bananas is obviously an important influence upon demand in importing countries, though one would expect that for such an unprocessed, relatively inexpensive commodity changes in price would have a less than proportionate effect on demand. A recent study has estimated the price
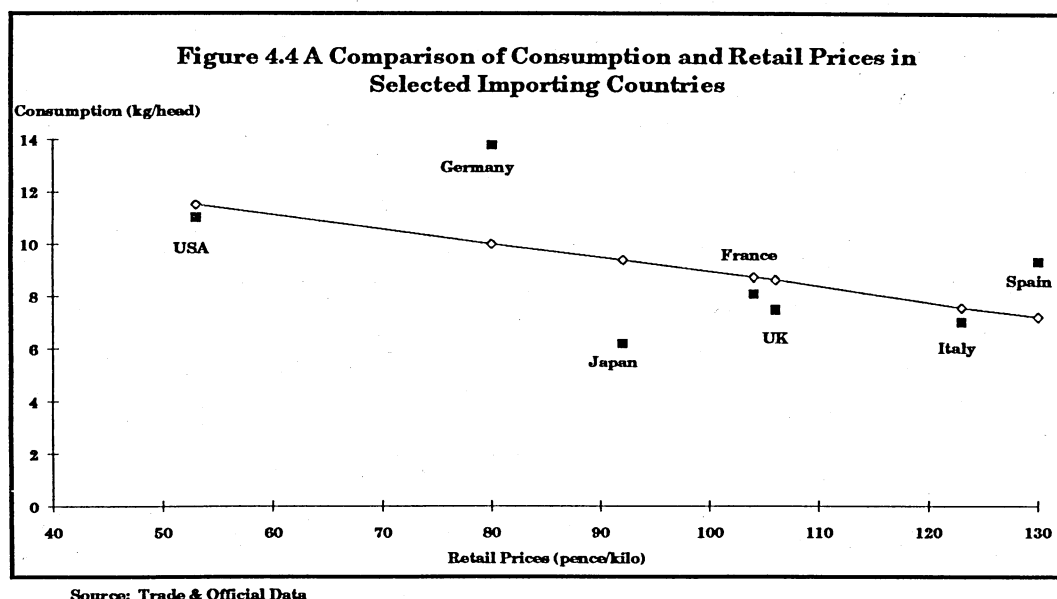
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[6] For example in the submission by Herbert Smith, lawyers to Chiquita, to the House of Commons Select Committee inquiry into the Community banana regime (House of Commons, November, 1992)

proportionate effect on demand. A recent study has estimated the price elasticity of demand for bananas in the importing countries to be inelastic, with a value of around -0.4 (Islam and Subramanian, 1989).

Differences in price are often cited as an explanation of the difference between high consumption levels per head in Germany compared to France or the United Kingdom. Figure 4.3 illustrates EC member state comparisons. Prices in Germany are low due to duty free imports of low-cost dollar bananas and imports per capita are around 14.4kg. Prices in France and the United Kingdom are relatively high due to protection of high-cost bananas from their traditional suppliers, and imports per head are 8.2kg.

Figure 4.3 Banana Retail Prices (Pence/kilo)

Source: Trade

However, the differential between UK and Continental European prices will now have narrowed in pence/kilo terms because of Sterling's withdrawal from the ERM. In the Netherlands and Belgium, prices are also low (even with the 20% tariff) for the exclusively dollar bananas imported, yet imports per capita are the same as in France and the United Kingdom. Equally, banana consumption per capita is relatively high in Spain despite prices being higher than in Germany. Figure 4.4 shows that the relationship between price and consumption is far from being a simple one.

Figure 4.4 A Comparison of Consumption and Retail Prices in Selected Importing Countries

Consumption (kg/head)

[Scatter chart: Consumption (kg/head) on vertical axis from 0 to 14, Retail Prices (pence/kilo) on horizontal axis from 40 to 130. Data points labelled: USA (~53, 11), Germany (~80, 14), France (~105, 9), Japan (~92, 6), UK (~106, 7.5), Italy (~123, 7.5), Spain (~130, 9). A downward-sloping trend line passes through the points.]

Retail Prices (pence/kilo)

Source: Trade & Official Data

Considering the trends in banana imports referred to earlier, price movements might have had some influence, but again the picture is not clear. The increase in per capita imports in the United States in the first half of the 1980s coincided with real retail prices falling by 18% between 1980 and 1985. However, while prices continued to fall in the second half of the 1980s, consumption did not respond. (There are indications that a similar pattern of falling prices and static consumption may be occurring in Germany now). In the European Community real retail prices were increasing in the first half of the 1980s during which per capita imports were stagnant. In the second half of the 1980s prices remained fairly static overall, and actually fell in Germany, Italy and the United Kingdom after 1987. This may partly reflect the depreciation of the dollar, in which world banana prices are quoted, at that time and hence falling import prices in national currencies. Imports per head, especially in the three countries mentioned above, increased significantly as described above. In Italy the consumption tax on bananas was also removed at about this time.

Whatever the precise effect of price on demand, it is clear that high cost bananas will always lose out to lower cost bananas of comparable quality. However this is a comment on trade demand rather than final consumer demand, ie the distributive trade will attempt to use lower cost bananas even if the importance of price to consumers is relatively low.

Income

Changes in income levels might also be expected to have an influence on banana consumption, but again given the nature of the product one would not expect these effects to be proportionate. The income elasticity of demand for bananas in the major importing countries has been estimated at around 0.6 (Islam and Subramian, 1989), and therefore imports might be expected to show some rise with income growth. Again, the evidence for this

is rather mixed. Italy and the United Kingdom enjoyed higher than normal rates of growth in the second half of the 1980s, which is consistent with their observed increase in per capita banana consumption. However, Japan had consistently higher growth than other OECD countries right through the 1980s but banana imports did not rise above their 1980 level. United States income growth exceeded that of Germany from 1985 to 1989 but banana imports remained static.

Non-Economic Factors

Like other fresh fruit bananas have benefited from the interest in and shift towards healthy eating in the 1980s. Bananas are cholesterol free, low in fat, sugar and salt, and high in fibre, vitamins, minerals, and trace elements. They are seen as a natural, convenient, ready-wrapped, healthy snack food which fit well with the decline in traditional family meals and an increase in 'snacking'. This might explain some of the increase in per capita imports into the European Community in the second half of the 1980s, although, as noted above, this increase was not common to all Member States. It might be that these were driving factors behind the increase in US consumption in the early 1980s but that the effect had largely exhausted itself by 1985. These arguments do not explain why per capita imports have not continued to increase.

Consumer preferences and taste are open to influence through advertising and sales promotion. The 1980s saw a number of successful advertising campaigns in a number of European countries. These include generic advertising, such as that mounted by a collaboration between Geest, Fyffes and Jamaica producers in the United Kingdom which introduced 'Bananaman'. Brand advertising was also tried e.g. Chiquita's promotion in Germany and Italy. In the UK the growth in consumption of bananas has outstripped the major competitive products (apples and oranges) and this also prompts questions that are not easily answered.

As with all fresh fruit, consistent high quality is paramount both to consumers and to the retailers who serve them. Important quality dimensions are attractive appearance with unblemished skins, and, of course, freshness. For retailers, especially the large multiple retailers through which most bananas are purchased, consistency of high quality supply and service are essential. Increasing year round availability of high quality fruit has increased the attractiveness of bananas. These requirements tend to favour the dollar suppliers although significant improvements have been made in the quality of ACP fruit in recent years. Some suppliers have made efforts to reinforce this quality advantage through brand advertising. Chiquita, for example, is said to have been successful in establishing itself as a quality brand in a number of European Community countries.

Improvements in the quality of Windward Islands' fruit may have contributed to the expansion of United Kingdom imports, while in Italy

imports may have benefited from the increasing proportion of higher quality dollar supplies, together with heavy advertising and promotion of the Chiquita brand.

Before accepting these final observations as evidence of a link between increased quality and increased consumption, the contrasting German and Netherlands experience needs reporting. In Germany there may be some correlation of high per capita imports of 14.4kg with the 40% market share of the high quality Chiquita brand. However, the Netherlands imports similarly high quality fruit and at similar prices - yet its consumption per head is only 8.2kg, the same as in France with its supposedly lower quality and higher cost supplies from Guadeloupe and Martinique.

A relevant observation to conclude on is that German consumers are high per capita total fruit eaters, it is not just bananas. But, interestingly, as a proportion of the total fruit bowl more bananas are consumed per capita in the United Kingdom than Germany; 19% against 12%.

5 The Structure of World Trade

The world market for bananas is not a single entity, but rather contains a number of distinct trade groupings. To some extent, trade flows can be explained by factors such as proximity to markets which minimises transportation, time and costs: For example:

- exports from Central America, the Caribbean and Africa to Europe;

- exports from Central and South America to North America;

- exports from the Philippines to Japan.

Superimposed on such geographic and economic factors is the influence of the trade policies of importing countries. These divide the world market into two basic main segments:

- the 'preferential' markets which are guaranteed to particular exporters by particular importing countries

- the 'open' market in which importing countries do not discriminate between exporters, although they may impose tariffs.

In practice the two groups overlap, since shortfalls in supplies from preferred suppliers in the preferential markets can be made up from the open market.

More than two thirds of international trade in bananas is on the open markets and is free of tariffs and quantitative restrictions.[7] The open market is dominated by Latin American exports and by the multinational corporations. As described below, certain European Community countries import on the open market. Dollar imports from the open market also supply the rest of Western Europe. In most cases this is entirely free trade, but some countries do impose barriers: Switzerland imposes an import duty, for example, while Finland imposes an import duty and quantitative restrictions at certain times of the year to protect its domestic fruit production. The United States and Canada import all their supplies without restrictions from Latin America. Ecuador also exports an

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[7] The existence of marketing and trade policies that affect horticultural exports from developing countries is widespread. Both tariff and non-tariff barriers apply. In some cases the barriers are used to protect developed economies' domestic production, in others the restrictions are used to protect historical trading ties with former colonies. Islam (Chapter 5, op cit) presents a review of the trade barriers that exist.

Effective tariff rates are seen to be relatively high on processed fruits in Japan and the US. Japan also had high rates on processed vegetables and fresh fruit and vegetables. The EC had the second highest rates on fresh fruits and processed vegetables.

Non-tariff barriers are particularly important in horticultural trade. In industrialized countries 39% of fresh vegetables and 20% of fresh fruit were affected by non-tariff barriers. But it was even worse for processed vegetables and processed fruit where the proportions affected were 48% and 54% respectively.

increasing amount to Japan, although Japan's main supplier is the Philippines. All imports into Japan are subject to a tariff.

In the preferential segment of world trade, restrictions surrounding access to certain European Community markets to protect high cost 'domestic' production or 'traditional' suppliers are of particular importance. The European Community spans both preferential and open markets. Under Article 115 of the Treaty of Rome individual member states have been allowed to determine their own banana trade policy. However, this is subject to the general requirements that imports from ACP countries should enter duty free, while imports from non-Community or non-ACP countries should be subject to the 20% Common External Tariff (CET). The obligation to the ACP countries is set out under Protocol 5 of the fourth Lomé Convention, the so-called 'banana protocol'. This is discussed in detail later.

The largest market, Germany, obtains all its supplies on the open market from Latin America. These enter duty free under a special quota agreed under the Treaty of Rome, which is increased in line with increasing demand. Belgium, Denmark, Ireland, Luxembourg, and the Netherlands also obtain all their imports on the open market from Latin America, but subject them to the 20% CET.

France guarantees two thirds of its market for production from its overseas departments, Guadeloupe and Martinique. The remaining third is allocated to supplies from Francophone Africa, especially Cameroon and Cote d'Ivoire. Imports from other sources are permitted under licence only when there is a supply shortfall from the preferred sources.

Italy guarantees a market for imports from Somalia, although these have not accounted for more than about 10% of its total imports in recent years. The bulk of Italy's imports are from Latin America under quota and subject to the 20% CET. This quota was increased by almost 20% in 1989. Bananas were also subject to a consumption tax, though this has been removed. Italy also imports some bananas from the Windward Islands.

Greece, Portugal and Spain are self-sufficient to varying degrees. Greece effectively banned imports until a European Court of Justice ruling in 1988 outlawed restrictions on imports from other European Community states. The restrictions were subsequently re-established under Article 115. Portugal obtains more than 40% of its bananas from Madeira. The remainder are imported under a quota system from Latin America. Spain meets 99% of its needs from the Canary Islands, one of the highest cost banana producers.

The United Kingdom guarantees a market for exports from the Windward Islands, Jamaica, Belize and Surinam. These countries export almost exclusively to the United Kingdom. The Windward Islands are the major supplier with about half of the market and rapidly increasing export volumes. Licences are issued to import dollar bananas to meet any estimated shortfall between demand and imports from the preferred

exporters. However, the amount covered by the dollar licences is not allowed to fall below a guaranteed minimum which is equivalent to about 10% of the market.

Background to the Trade Policy Debate

Against this background of a segmented structure of world trade there has been a longstanding general interest and series of discussions in FAO about the world banana market. As with major tropical exports (rubber, coffee, sugar and cocoa) there was much debate and counter debate. A brief summary of the FAO discussions in the 1980s follows.

A popular explanation for the slowdown in growth in banana imports in the early 1980s was that banana consumption in the importing countries had reached a saturation level (FAO, 1986). This saturation level was put at between 9kg and 10kg per head per year, a level which had already been reached in North America and a number of West European countries. This view led to serious discussions of market balance and the possibility of excess supplies and depressed prices on world markets. Certainly the characteristics of banana demand and supply gave grounds for concern, namely inelastic demand with respect to prices and incomes, and recent rapid increases in yields which had risen by a factor of three in the previous twenty years. Also, the position and market power of the multinational corporations and the less than transparent transmission of costs and prices through the distributive chain implied that producer returns may be vulnerable to undue pressures.

Mechanisms to maintain equilibrium between market supply and demand at 'remunerative' producer prices and 'reasonable' consumer prices by coordinated action of the banana exporting countries had been under consideration by the FAO Intergovernmental Group on Bananas since the mid 1970s. A Working Party was to prepare a draft commodity agreement for bananas. Discussions also explored the potential of new markets in Eastern Europe and the USSR and the Near East. Attention was also given to the expansion of demand in established import markets through sales promotion and reduced prices by reductions in import tariffs. In practice the latter was unlikely to help much, given the low price elasticity of demand, and in any case most bananas were traded duty-free.

In the mid 1980s imports began to rise sharply as described earlier, while the rate of yield improvements had slowed since 1980. Pessimism concerning current market balance began to abate. The market review by FAO in 1988 was much more upbeat on prospects (FAO, 1988). Nevertheless the maintenance of equilibrium in world markets continued to exercise the FAO Intergovernmental Group, and in 1987 the Expert Consultation on Possible New Policy Initiatives to Increase the Economic Viability of the World Banana Economy was asked to report on how this might best be achieved (FAO, 1987).

As a result four basic measures were proposed:

- intensified market monitoring and improved market intelligence

- the improvement of quality and productivity

- the expansion of consumption in importing countries through sales promotion and reduction of trade barriers; and

- the adoption of policy guidelines setting out agreed principles and objectives for national and international policy on bananas.

The emphasis, therefore, was on the informal international coordination of supplies with rationalisation of production in individual countries, and the expansion of demand, partly through trade liberalisation.

The Single European Market

The moves to create a Single European Market (SEM) have acted as a catalyst to the debate about future banana trade policies. The SEM means that previously protected markets will be open to imports of low cost dollar bananas, and implies that the protective and preferential trading arrangements operated by certain Member States cannot be sustained in their present form. But the banana protocol requires that these preferential agreements have to be incorporated in the SEM. Supplies from preferred high cost sources - either European Community producers or traditional ACP exporters - could not compete on a free market, not even with the protection of the 20% tariff on dollar imports. Proposals for a Community-wide banana trade policy which provides continuing protection to Community and traditional ACP suppliers have been the focus of intense and prolonged discussion.

A banana trade policy for the European Community as a whole needs to satisfy a number of requirements which may not be entirely consistent. There is an obligation to maintain Community production in the Canary Islands, Crete, Madeira, and French overseas departments of Guadeloupe and Martinique. There is also an obligation under the Lomé Convention to guarantee markets for supplies from the traditional ACP exporters - the Windward Islands, Jamaica, Belize, Surinam, Cameroon, Cote d'Ivoire, and Somalia.

Protocol 5 of the fourth Lomé Convention promises that

'In respect of its banana exports to the Community markets, no ACP state shall be placed, as regards access to its traditional markets and its advantages on those markets, in a less favourable situation than in the past or at present.'

The relatively high cost of Community and ACP production means that market access cannot be guaranteed without some kind of protection

against lower cost dollar supplies. It has been suggested that any such protection must also be compatible with the European Community's commitment to the Uruguay Round of the GATT negotiations. In particular it should meet the 'tariffication' solution offered to the Round, by which all current levies, tariffs and quotas would be transformed into a tariff which in turn would be progressively reduced over time. Sensitivity to these obligations is particularly heightened after the EC/US bilateral deal of November/December 1992 on agricultural policy reform.

Hence banana trade policy for the SEM is caught up in the 'high politics' of international trade negotiations and is involved in the same discussions as the EC's subsidised cereal exports, US sugar and corn sweetener policy, and Japan's rice policy.

Most of the economic analyses and trade policy options considered for bananas have favoured more liberal 'tariffication' regimes. They have suggested that this would bring the greatest increase in aggregate economic welfare will be obtained in the European Community. The more liberal the regime, the more consumer prices in the previously protected markets are expected to fall. In practical terms the most liberal regime likely to be adopted would still mean protection of the Community market by a tariff, but this would not exceed the current 20% common external tariff which is bound under GATT. Imports from ACP countries would enter duty free under the terms of the Lomé Convention, and tariff revenues might be used to compensate or aid Community and traditional ACP suppliers. None of these analyses have taken account of the market structure of the banana trade and all have been based on a relatively simple perfect competition model.

The more liberal the regime, the greater is the expected benefit to the dollar suppliers in terms of increased exports and earnings. Expansion in dollar imports would presumably imply an increasing share of the European Community market for the multinational companies. While dollar suppliers may benefit, the more liberal the regime the greater are the expected adverse effects on the market shares and earnings of European Community and traditional ACP producers. In any case, as far as the latter are concerned, the more liberal options do not meet the obligations under the Lome Convention as regards market access.

A further element which has been largely neglected in the discussion of policy options is consideration of the relative environmental effects of further expansion of plantation production, especially in Latin America, as opposed to maintenance of small-holder production. However, there has been little rigorous analysis of this important issue.

Nor have the political, social and distributive effects as between labour income on the one hand, and multinational corporation revenues on the other, received any attention.

As a recent FAO (1991) commentary has noted, most economic analyses have failed to consider the impacts of the various policy options on the economies of the traditional ACP exporting countries. These are potentially devastating, especially for the Caribbean Islands which are so highly dependent on bananas. The damage may be political as well as economic. As Dame Eugenia Charles, Prime Minister of Dominica where 70% of export earnings are from bananas, has said;

'If we lost the industry completely, we would lose the country. It would be the beginning of despair'.

6 Trade Policies and Economic Analysis

A range of alternative schemes for a new EC banana trade policy have been presented and discussed, and their economic implications analysed in a number of studies (Borrell and Yang, 1990, 1992; Fitzpatrick and Associates, 1990; Borrell and Cuthbertson, 1991; Davenport and Page, 1991; Matthews, 1992; FAO, 1992). The broad conclusions of these studies are outlined below. The policy options considered ranged from the creation of a free market with no trade barriers, through reliance on the 20% common external tariff, deficiency payments for Community and traditional ACP suppliers, and variable levies on dollar imports, to dollar import quotas.

It is a commonplace of economics (albeit frequently ignored) that any analysis of policy options must be placed in an appropriate theoretical context.

It is useful for empirical studies of trade policy to assume perfectly competitive markets. This is particularly true of agricultural trade policy analysis. All the studies cited above concerned with the banana industry have assumed perfect competition. However, while this model may be a reasonable characterisation of the production of agricultural commodities, it is inappropriate when considering the processing and/or distribution of raw agricultural commodities. It must be emphasised that the perfectly competitive model is frequently adopted not because of its realism or relevance, but because of its tractability. Sometimes that does not matter. In the case under consideration it does. As several recent studies have pointed out (for example, Sutton (1992)), these industries are, to varying degrees, imperfectly competitive. By imperfect competition we mean at leat two things - firms exercise market power with respect to the setting of price, and firms' actions are interdependent, ie each is strategically interdependent with others. In these circumstances, competition is more apparent than real, and collusion is the order of the day. The market, in the end, is oligopolistic. The question arises as to how the analysis differs when market structure is explicitly accounted for.

Market structure issues have been a major research area for international economists in recent years. There are several related, but distinct, issues which have received attention. The first is to do with the *raison d'être* for government intervention in oligopolistic markets. This literature (also known as Strategic Trade Theory) was pioneered by Brander and Spencer (1985) who showed that, under certain circumstances there could be a case for the use of optimal import tariffs and export subsidies. Subsequent work has refined these arguments to show that the optimality of the government's role is very sensitive to key assumptions of the model used such as the nature of strategic interaction, the nature of the trade policy instruments used and the possibility of retaliation by competitors. Grossman (1992) contains some key papers in this area and Krugman (1986) also provides a useful summary. There has been little attention to the potential application of these arguments to primary commodities markets although McCorriston and Sheldon (1992a) do provide a discussion of this topic.

In the context of agricultural trade policy, market structure has also been the subject of some, albeit limited, research. However, the research here is different from that above in so far as it has typically focused on the implications of the existence of government institutions (such as state marketing boards) and the typical dominance by a few countries of world production and trade on world prices. This has a long history dating back to McCalla (1966). Some recent work has built on McCalla's theme, such as that by Kolstad and Mathiesen (1991) who note the relative neglect of empirical work in computing equilibria under conditions of imperfect competition. The deficiencies of the perfect competition paradigm for international commodity markets are briefly noted, and references to the oligopoly and imperfectly competitive nature of the international wheat market are given. They present an algorithm for imperfectly competitive equilibria under common conditions but with different assumptions about spatially segmented product markets, and differentiated products.

A third issue associated with market structure and trade, and most relevant to the discussion here, is the effect of changes in already-instituted trade policies (such as the reduction of tariffs) when markets are oligopolistic.

Some insights come from recent developments in the international macroeconomics literature. A key issue of concern to US economists in the late 1980s was why US export/import prices did not respond by the same order of magnitude to changes in the dollar exchange rate. Given the Law of One Price ($P = eP^*$, where P and P^* are US and foreign prices respectively and e is the dollar value against a basket of currencies), foreign prices should *ceteris paribus*, change by the same amount as the change in the exchange rate. Empirical observation, however, showed that changes in prices were of a considerably smaller magnitude relative to changes in the dollar. In an attempt to explain this phenomenon, economists focused on the role of market structure. For example, Trugman (1986) discussed a range of models - all emphasising imperfect competition - that could account for these observations, a phenomenon that may be termed 'pricing-to-market'. Indeed, what is oberved in this case is impossible to understand without postulating imperfection of market forms and market structure. Dornbusch (1987) was more specific in explaining these observations. Essentially showing that the extent of price adjustment following a change in the dollar would depend upon:

a) the degree of product substitutability

b) the number of firms in the market

c) the nature of strategic interaction between firms.

These studies cast some light on the role of market structure in the analysis of trade reform. Indeed, Feenstra (1989) has shown that the effect of exchange rate and tariff rate changes are symmetrical. Recent work by McCorriston and Sheldon (1992) has explored the issue of market structure

and trade reform in the context of agricultural producers from a theoretical perspective. An outline of this research is discussed below.

Oligopolistic behaviour is typically complex in practice, and modelling it requires more than simple diagrams can provide. Indeed, one reason why a simplistic approach based on perfect competition is often adopted is because of the richness of the possibilities under oligopoly. This discussion relies on an intuitive framework for discussion of the issues, the detailed mathematics are covered in McCorriston and Sheldon (op cit). Two forms of strategic interaction are compared: one that considers price as the strategic variable (the well-known Bertrand case) and the alternative where sales are the strategies variable (the Cournot case). In both these classic cases arms length competition is assumed. (It is worth noting, however, that they lead inevitably to showing the forces for and the benefits from collusion). In these non-cooperative models, there has to be some assumptions about firm's expectations of how their competitors will respond to their actions. In the Bertrand case it is assumed that firms choose prices on the expectation (or conjecture) that their competitors will keep their prices unchanged. In the Cournot model, firms set sales on the expectation that their competitors will keep their sales unchanged. In equilibrium, Cournot prices (quantities) are higher (lower) than Bertrand prices (quantities), and firms' profits are higher with Cournot behaviour than with Bertrand behaviour.

Assume, therefore, that there are two firms competing to supply a particular market. The products of these firms can be regarded by consumers as either perfectly homogeneous or completely independent, or lying anywhere between these two extremes. These firms add value to an unprocessed agricultural commodity through processing and/or distribution activities before the product reach as consumers.

The key question one would want to answer in this framework is: what would be the effect on consumer prices if the cost of the unprocessed agricultural commodity increased, say, due to the introduction of a tariff? In other words, what is the extent of policy-transmission through the oligopolistic (in this case duopoly) market?

McCorriston and Sheldon show that the degree of policy transmission depends on the nature of strategic interaction between the firms, ie whether they are employing Cournot or Bertrand strategies, and the degree of prevalent differentiation. The results are summarised in Table 6.1:

Table 6.1 Policy Transmission following introduction of a Tariff		
	Cournot Behaviour	Bertrand Behaviour
Homogeneous Products	0.67	1
Heterogeneous Products	0.5 - 0.67	0.5 - 1

Source: McCorriston & Sheldon, op cit

The only case that gives complete pass through, ie in which the tariff is fully reflected in changes in consumer prices is with Bertrand strategies with homogeneous goods.   This corresponds to the perfectly competitive case (since, in this case, prices will equal marginal cost and consumers will not perceive any difference in the commodities) and is thus equivalent to what is being explicitly assumed in most agricultural trade policy studies.   With either Cournot or Bertrand behaviour, when the goods are independent consumer prices will rise by only 50 per cent of the level of the tariff.   These cases correspond to the monopoly case.   As the degree of product differentiation varies between these two extremes, the degree of policy transmission also varies.   Typically, it will vary between 50 and 100 per cent, the final effect depending on the firm's behaviour and the degree of product differentiation.   In other words, in the relatively simple theoretical environment of duopoly without collusion (and without non-price strategies) more significant pricing conclusions are arrived at.

To fully evaluate the degree of policy transmission, therefore, careful - and industry/commodity-specific - empirical studies would need to be carried out using analytical models which reflect decision-making behaviour in the market place.   There has been little research in this area although Feenstra (1989) reports a pass through of 6 per cent following a 10 per cent change in the tariff for the US drink industry.   Nevertheless, the key point is that ignoring industry and market structure is an important deficiency in agricultural trade policy analysis as it is typically carried out. Consequently, by assuming perfect competition such studies are likely to over-estimate the welfare effects following trade policy changes.   Indeed, one must go further.   The perfectly competitive model in this case is quite misleading.

A Model of the EC Banana Market

The papers listed at the beginning of this chapter have all been put forward by others as contributions to the discussions on a banana trade policy for the SEM. All essentially use the same techniques of analysis

and have similar conclusions. These are, broadly, that liberalizing the EC's banana trade regime will significantly benefit EC consumers, and that a 'tariffication' solution is the preferable way of dealing with the problem of obtaining a Single Market in bananas in the European Community after 1992 The reports also consider several tariff-quota solutions (so-called "dirty tariffication")[8]. The following commentary concentrates on one paper, Borrell and Yang (1992), which has received the most prominence and has the highest calculated values for costs and benefits of alternative banana trade policies.

The Borrell/Yang analysis is sensitive to assumptions about:

-   supply and demand elasticities;

-   forecast 1993 imports/exports;

-   the world price of bananas;

-   the market structure of banana importers/distributors inside and outside the EC;

-   uniform product quality; and

-   the margin between retailers' and producers' prices in the EC.

It cannot be emphasised too strongly how important the assumptions are, and how easily the conclusions change when the assumptions are modified. That means firstly that the assumption must always be subject to critical scrutiny, and secondly that no conclusions are safe without much more empirical support. This is shown very clearly below.

Sensitivity to Basic Assumptions

Borrell and Yang assume an elasticity of demand for bananas of -1.0. Lower elasticities will reduce their calculated consumer loss and the empirical evidence suggests that a value of -0.3 or -0.4 is more appropriate. The analysis is also quite sensitive to estimates of imports to/exports from the EC in the base year, 1993. For example, the effects on UK consumer welfare are calculated (with respect to removing the current scheme and adopting completely free trade) with varying assumptions about UK imports in 1993. The estimated effects on consumer welfare of varying UK imports between 400,000 and 550,000 tonnes for 1993 are presented in Table 6.2 below. This shows how sensitive the results are to a change in the baseline assumptions. As the projected level of imports increases, consumer welfare

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8   Note that "pure" tariffication implies that only a tariff is used to replace existing tariff and non-tariff policies, whilst "dirty" tariffication allows for import quotas associated with one lower tariff level and a higher prohibitive tariff set for excess-quota supplies - the result being an "average" tariffication level.

would also increase in direct proportion from $183.6m with 400,000 tonnes to $252.4m with 500,000 tonnes. With Borrell and Yang's projected level of imports of 477,000 tonnes, consumer welfare would increase by $219m.

Table 6.2 Changes in UK Consumer Welfare with Free Trade ($m): Alternative Baseline Import Projections	
	($M)
Baseline Imports	**Changes in Consumer Surplus**
400,000	183.6
450,000	206.6
500,000	229.5
550,000	252.4

Borrell and Yang also assume a 'world price' for bananas (at retail level) in 1993 of US$1,520/tonne. There are grounds for believing that this price is too low. Incorporating a higher price in the analysis would reduce the calculated consumer loss and hence the required 'tariffication' level. Changes in consumer welfare under two different levels of world price -the Borrell and Yang (1992) estimate and assuming a price 10 per cent higher - are reported in Table 6.3. With the Borrell and Yang price, the total change in EC consumers' welfare amounts to around $1.6 bn; with an initial world price just 10 per cent higher, total consumer losses in the EC amount to around just over $1 bn, some 40 per cent lower. The magnitude of this difference indicates clearly how sensitive the price assumption is.

Table 6.3 Changes in EC Consumer Welfare under free trade, assuming different World Prices	
	($m)
Borrell and Yang ($1520/tonne)	1,598
Prices 10% higher	1,150

The distribution of the consumer welfare gains under the higher world price assumption is as follows:

	($m)
UK	137.23
France	171.24
Spain	438.66
Other Europe	505.85
Germany	-103.00
Total	1,149.98

(Although some economists ignore distributional effects, it mut be stressed that they are important. It is interesting in this example that they are lower in the UK than in France and Spain, and also that there are significant effects in 'Other Europe'.)

Borrell and Yang estimate from their analysis that a tariff of 17% on all banana imports into the EC would generate sufficient revenue to finance an aid scheme for preferential suppliers which maintained their current position after completion of the SEM. However, this conclusion is highly sensitive to assumptions about the price elasticities of supply and of demand, as the figures in Table 6.4 show. More plausible values for the elasticities are those which suggest the necessary tariff equivalent is more likely to be in the order of 26% (see below).

Table 6.4 'Tariffication' Values for Different Supply/Demand Elasticities

Elasticities			Tariff Equivalent
$ Supply	ACP Supply	EC Demand	
3	1	0.5 - 1	17%
2	1	0.5 - 1	23%
1	1	0.5 - 1	29%
2	0.5	0.4	26%
1	0.5	0.4	32%

Source: Borrell and Yang, (1992), and Authors' calculations.

Compared to the alternative values examined here, the overall net effect of Borrell and Yang's assumptions about supply, demand and world prices is to increase the estimated benefits from trade liberalization and to increase the costs of the proposed EC banana regime. In summary, recalculating their model using more realistic values of world prices reduces their $1.6 billion estimate of consumer gains to around $1.0 billion. The 'tariffication' level required to maintain parity increases from 17% to 26% when more realistic demand/supply parameters are used.

Analysis of Market Effects within the EC

The methology used to generate the results reported here is similar to that employed in other cited studies on the EC banana regime. It involves specifying a non-spatial, partial equilibrium model for each of the principal banana importing countries in the EC. External estimates of supply and demand elasticities are used to calibrate the model such that the parameters of the supply and demand schedules are consistent with equilibrium in any given year.

To provide a more detailed breakdown of effects, the Borrell and Yang model was used to analyse the banana market within different regions of the Community. The EC market was divided into five areas: the UK, France, Spain, Other Europe, and Germany. As noted previously, each of these countries currently operates different policies with regard to imports of bananas.

The UK is a substantial market for ACP suppliers and currently operates a quota to restrict exports from dollar banana countries. France is also a quota-restricted market with banana exports coming from both ACP countries and Overseas Departments. Spain obtains its banana supplies largely from domestic sources. Other Europe (comprising Belgium, Denmark, Ireland, Luxembourg, and the Netherlands) impose a 20 per cent tariff on third country bananas. Germany, however, unlike its EC neighbours, has no restrictions on banana imports and hence can be regarded as a free market.

Borrell and Yang report substantial differences in the retail prices of bananas throughout the EC, as shown below.

Retail Prices for Bananas in the EC ($/tonne, 1990)

UK	2,036
France	2,086
Spain	2,587
Other Europe	2,315
Germany	1,520
Highest : Lowest	1.7:1

Source: Borrell and Yang (1992)

These price data from Borrell and Yang (1992) were used in the calibration model of each EC area. Quantity data was also the same as that used by Borrell and Yang and refers to forecasted 1993 trade volumes. The demand elasticity chosen for the calibration was -0.4 for each EC area with the supply elasticity for ACP exports being 0.5 and for dollar suppliers 2.00. As discussed earlier, the model's parameters and hence the empirical results can be quite sensitive to choice of the initial data set.

The Effects of a Common External Tariff

Having calibrated the model, the next step in the exercise was to estimate the transfers the ACP and preferred suppliers currently receive from the EC market. These are presented in Table 6.5 below:

Table 6.5 Current Transfers to ACP and Preferred Suppliers ($m)		
		$m
From:	UK, France, Italy	407
	Spain	444
	Total	851

The next step was to derive the level of an EC common external tariff that would generate sufficient resources so that currently-preferred suppliers could be adequately compensated for any losses they would potentially face with a change in the EC's banana regime. (This has become known as the 'tariffication' option.) This calculation was found by an iterating process and this is how it was estimated that an appropriate level of the EC tariff should be 26 per cent.

It is also of interest to identify the effects this 26 per cent common external tariff would have on the EC market as a whole. In terms of the total level of sales in the EC, the tariff would lead to a slight expansion of the EC banana market, total banana sales expanding by around 3 per cent, as shown in Table 6.6. However, distribution of these sales throughout different markets in the EC would vary with a more marked expansion in Spain and Other Europe (9 per cent and 5 per cent respectively), and a contraction of 13 per cent in Germany. The estimated changes in banana sales in the UK and France are negligible.

Table 6.6 Changes in Banana Sales: Current Regime to 26% CET	
	%
UK	0.5
France	1.4
Spain	8.9
Other Europe	5.0
Germany	-13.0
Total EC	2.8

The effects on EC consumers' surplus (compared to the current regime) by the adoption of free trade, and by the change to an EC-wide tariff of 26 per cent are reported in Table 6.7. The current regime generates losses to EC consumers amounting to $1.6bn[9] with most of these losses originating in Other Europe and Spain ($650m and $529m respectively). The UK and French markets where non-dollar suppliers currently enjoy preferential access, suffer reduced consumers' welfare by $258m and $219m respectively. German consumers currently gain from the present regime by around $100m.

Moving from the currently differentiated market to a common EC banana regime with a 26 per cent CET would slightly increase overall consumer welfare. Other Europe and Spain would be the principal beneficiaries (consumer surplus increasing by $298m and $265m respectively) with smaller consumer gains in the UK ($12m) and ($38m). The principal loser with this new EC banana regime would be Germany, with the 26 per cent tariff causing consumers' welfare there to fall by around $594m. On balance, there would be an overall increase in EC consumers' surplus of

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[9]   This figure is (coincidentally) similar to that quoted by Borrell and Yang for the consumer cost of the current regime, although it has been calculated using entirely different price elasticities.

$20m, the major effect being Germany paying for the bulk of the gains enjoyed by its EC partners because at present it gains the benefits of free trade.

These changes in welfare are not surprising when one refers to the price data used by Borrell and Yang. The largest welfare gains are likely to be found in the currently-higher priced markets (Other Europe and Spain) with the losses originating in the lowest-priced market, Germany. Overall, it is clear that the 26 per cent common external tariff would have potentially significant distributional effects amongst consumers in the EC.

Table 6.7 Changes in Consumers' Welfare		
	($m)	($m)
	Current Policies to Free Trade	Current Policies to 26% CET
UK	218.95	11.95
France	258.05	38.05
Spain	529.20	298.23
Other Europe	650.64	265.80
Germany	-97.29	-593.85
Total EC	1,559.55	20.18

The Impact of Market Structure on the Analysis

The various studies referred to, and the results presented above, do not consider the effect of market structure in the analysis. This is the most important criticism of the work done so far, and cannot be emphasized enough. In passing, Borrell and Yang correctly point out the effects of import quotas on competition when there are few sellers and use these to criticise the UK's protected banana market. However, they largely ignore the fact that 70% of the world banana trade is handled by three American multinationals and do not explicitly consider the potential effects of this in their quantitative analysis. Despite their reference to the market power of the distributors, they assume a perfectly competitive model yet the possibilities for anti-competitive behaviour are obvious. Their tariffication solution implicitly assumes that perfect competition and free trade will occur despite this concentration of market power.

Similarly Borrell and Yang do not consider the structure of market power within the distributor/retailer chain. Despite evidence that there is a two-

tier market with wholesaler/distributors and retailers and the existence of large retail margins in several European countries they ascribe all quota rents to wholesalers. Furthermore, imports are assumed to be homogenous. It is not clear that this is a reasonable assumption as quality and type appear to be important characteristics of bananas. This is related to the market structure point above and also affects price transmission.

As noted earlier, the effect of tariffs and the transmission of protective effects through a distribution chain is not straightforward or necessarily intuitive. But it is significant to policy makers and the business community and so needs to be recognised. Essentially, economic theory demonstrates that there is a reduced level of price transmission as a result of a tariff when there is less than perfect competition. The extent of this will also depend upon the degree of product differentiation. Therefore, the loss in consumer surplus, compared to free trade, is lower with tariffs where the market structure differs from perfect competition. Working back from this, in order to compensate preferred suppliers for any loss in their current position, a more than proportionate rise in the tariff will be needed to allow for the effects of imperfect market structure. Hence, the marginal effects of tariffs under oligopoly are lower than the marginal effects with competition.

The results of ignoring these market structure aspects of the banana trade are significant for the general analysis of the EC banana market and the general 'tariffication' solution (and for any study that aims to describe the protective effects of tariffs on producers and consumers). Where there is any form of oligopoly or differentiated oligopoly (which require the market structure and product differentiation points made above) it is more accurate to say that producers may not obtain the full protective benefit of a tariff. A 'tariffication' solution that takes account of this will have to increase the tariff needed to maintain producer returns.

The size of this market structure impact on the protective effects of a tariff for producers is difficult to estimate. However, it seems plausible to suggest that in the banana trade any tariff applied to imports for the 'tariffication' solution would have to be increased by a factor of around 2.0. Hence a tariff value of around 26% - which is the more likely 'tariffication' value when realistic values are used in the calculation - would have to be increased to around 52%.

"Dirty" Tariffication and Tariff Quotas

The discussion above has been concerned with the effects of a tariff at one point in time - the so-called 'comparative statistics' of policy effects; it has also focussed on 'pure' or 'clean' tariffication. 'Tariffication policy' follows from the suggestion made by the US as part of the Uruguay Round of the GATT in which all trade barriers were to be transformed into an equivalent *ad valorem* tariff and then progressively reduced. A later modification to this is the so-called 'dirty' tariffication where one tariff is set on base level quotas and a higher prohibitive tariff is set on the excess over the quota in

order to achieve the required average tariffication level (though the intention is to phase out these tariffs over time also as part of the trade liberalization process). In addition, given the oligopolistic nature of the market, there are likely to be producer and distributor benefits and not simply consumer benefits. While supporting the classic case for free trade in general, there is no obligation to carry it over in the market presently under discussion. In particular, the entrenched position of those with market power may be increased following liberalization so that in the long run the consumer may be altogether worse off. In other words, market power and market structure is not constant but variable. Sometimes competition grows in the long run. In other examples, eg the present one, an apparent initial increase in competition may lead to less competition in due course as potential suppliers are destroyed.

The FAO (1992) study on the EC banana regime proposals suggests that the requirements of the GATT can be achieved with a combination of tariffs and quotas. A 20% tariff on a quota of 2 million tonnes is suggested for the EC, with a 50% further tariff on excess quota imports declining over 10 years. Yet again, however, the effects of industry and market structure are not considered in the FAO analysis. When market structure is important in an industry it is very relevant to consider the dynamic effects of policy and a market's behaviour.

In the long-run, tariffication (of both types) and quotas can have very different effects. In particular, where there is a concentration of production or distribution in the hands of relatively few suppliers/distributors these dynamic effects are likely to include predatory pricing behaviour strategies. For example, in the newly created Single Market of the EC, large relatively low cost suppliers/distributors may exercise their market power by placing bananas in previously protected markets without any sanctions except the extra costs of the common external tariff. Unless the tariff is set at a very high level, the marginal costs of this strategy may be very low and, in the medium term, may result in the gain of significant extra market share as higher cost suppliers/distributors have their markets eroded by 'dumping' tactics.

For example, with quotas, wholesalers and distributors in the UK and France have a secured market, but with the Single Market accompanied by tariffication this will no longer be the case. Dollar suppliers have lower costs than preferred suppliers, leaving open the possibility that distributors/wholesalers in current non-quota countries could export to UK and France at market prices below those commensurate with normal returns for UK/French distributors. This is how there could be 'dumping' within the single EC market and, given the different cost structures of alternative suppliers, $ suppliers could largely displace ACP suppliers. This would then drive out current UK and French distributors, leaving some aspects of the EC market less competitive than it is currently. Therefore, the dynamic effects of the tariffication could be very different

from the current situation and from what is assumed by the available studies of the banana market in Europe.[10]
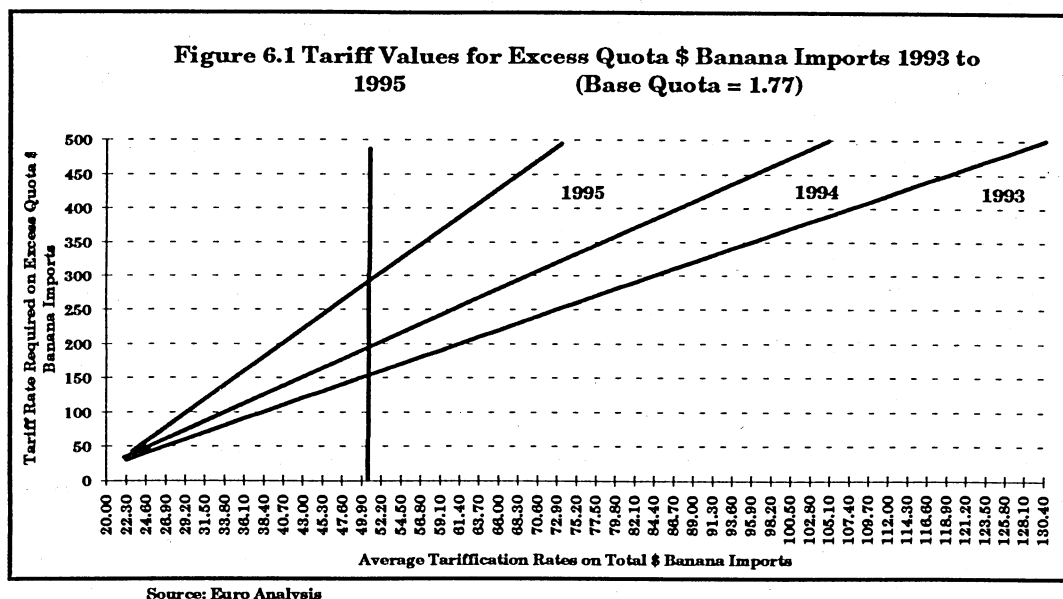
This is an important issue if the benchmark is not just consumer gains but maintaining some degree of market access for current (though higher cost) preferred suppliers in line with the commitments made under the Lome convention. And while the achievement of this commitment at the lowest reasonable cost is an important consideration, the determination of this cost is not as straightforward as many of the simple analyses may suggest.

Figure 6.1 below illustrates the size and pattern of tariffication values in a hypothetical tariff quota situation[11]. The tariff quota for $ bananas is assumed to be set at the 1988-90 three year average of $ imports into the EC (1.7 million tonnes). The tariff for this quota is set at the CET of 20%. For 1993 it is assumed that $ imports will be 2.3 million tonnes. Various alternative tariff values on the difference between the forecasted 1993 level of imports and the predetermined tariff quota are considered in order to produce a range of "tariffication" values. These "tariffication" values represent the weighted average of the initial $ banana quota tariff, and excess-quota tariff rates in a "dirty" tariffication system.

It is clear from the figure that the excess-quota tariff rates would have to be extremely high for the European Community. An average tariffication rate of 50%, for example, requires an excess-quota tariff of 160% in 1993. For expected total dollar imports of 2.4 and 2.5 million tonnes in 1994 and 1995 and a consequential increase in the tariff quota from 1.77 to 1.97 and 2.24 million tonnes respectively, the excess-quota tariff rates move up to 200% and 300% in order to achieve the same average tariffication level of 50%.
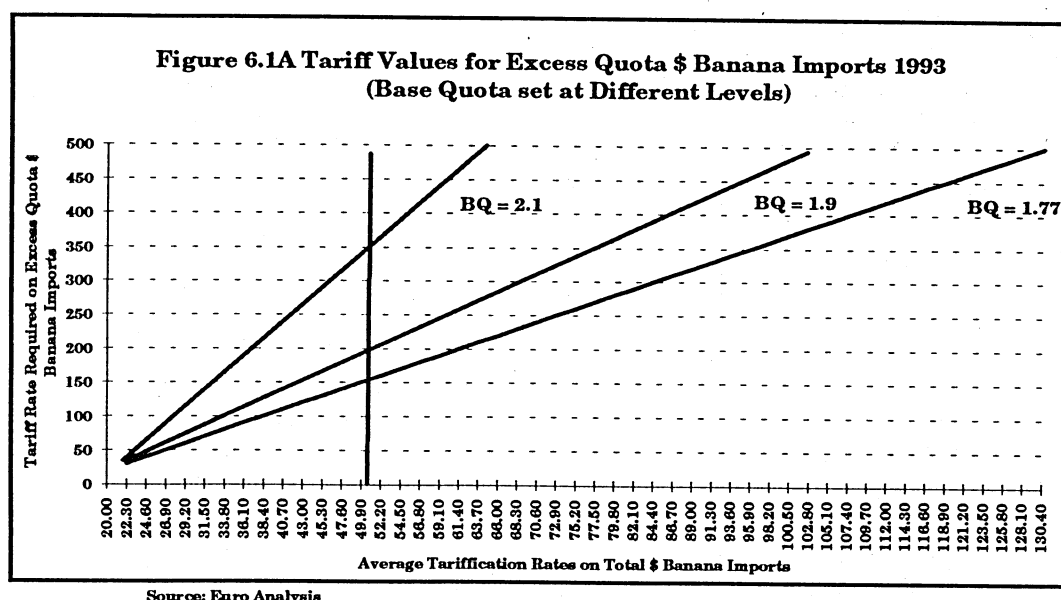
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[10] There has been some fairly complex modelling of the EC manufacturing sector following '1992' to support this. What these studies suggest is that though there are substantial gains from 1992, the manufacturing sector in the Single Market actually becomes more concentrated.

[11] The tariff and quota arrangements used in this example are drawn from suggestions made in the Foreign Affairs Committee at the European Parliament.

Figure 6.1 Tariff Values for Excess Quota $ Banana Imports 1993 to 1995 (Base Quota = 1.77)

Source: Euro Analysis

It follows from these results that with any growth in $ banana imports over time the tariff rate on excess-quota imports in a tariff quota scheme will grow very quickly. Tariff levels of 300% could be realised even for relatively small average tariffication rates. If predatory pricing were to be practised, this would imply ever larger tariff rates on the non-quota element of $ banana imports to ensure that average protection levels were maintained for ACP banana suppliers to the EC. (By predatory pricing we mean short run price cuts by the more powerful suppliers and producers designed to undermine the viability of the remaining suppliers. Once the latter are driven out of business, prices will be raised to reflect the strengthened market power of the predators).

Figure 6.1A below illustrates another aspect of the 'dirty' tariffication' concept: the effect of the choice of the base quota. Three base levels are chosen; 1.77, 1.9, 2.1 million tonnes. Tariff values are calculated at each excess quota level assuming a 20% tariff on the base quota. If any of these base quota levels operated in 1993 the excess quota tariff levels needed to achieve a 50% average tariffication level would be; 150%, 200%, or 350% effectively.

Figure 6.1A Tariff Values for Excess Quota $ Banana Imports 1993
(Base Quota set at Different Levels)

Source: Euro Analysis

To sum up, there is, therefore, a hierarchy of possible policies that might be adopted after 1992. Despite its theoretical aspect, pure tariffication is in some respects the least preferable way of dealing with market structure issues when liberalising trade policies. Partnership ratios or quotas do preserve market access and the welfare of suppliers/distributors who may be subject to predatory tactics. Somewhere in the middle, tariff-quotas (dirty tariffication) would allow some protection against adverse market structures, but, to retain that protection, will have to be carefully designed and implemented to allow change and safeguards through time. They will also require very large prohibitive tariffs on the excess quota element if they are to achieve their aim.

Modelling the EC Proposals for 'Partnership'

The points made above have emphasised the need to consider the impact of market structure when designing and implementing protective policies. In this respect, the EC's proposal for a "partnership ratio" for dollar/ACP banana suppliers/importers does recognise the importance of the shipping and distributive trade to the banana market. It also implicitly recognises that because of the nature of economies of scale and the oligopolistic character of world trade in bananas the shipping and distributive trade is unlikely ever to operate in conditions of perfect competition. Hence, excess margins or profits may be earned by some suppliers and producers as a consequence of the market structure of the industry.

The Commission's proposals may be summarised as:

-   a quota system based on a guaranteed quota for $ bananas of 2 million tonnes, bound in GATT, and subject to licence,

- an 'autonomous' or discretionary quota set annually on the basis of supply and demand,

- a 70/30 split of licences between traditional $ operators/ACP/EC operators,

- a limitation on ACP imports based on 1990 figures,

- a 'partnership' between ACP/EC and 'dollar' imports to enable ACP/EC to get higher returns from the market,

- a system of compensation for EC producers if the market does not deliver to them an expected average price. A similar aid package signalled for the ACP but no text is available.

The Commission has explicitly rejected free trade with tariffs or 'tariffication' because such a system would not deliver the Lomé commitments and would produce unnecessarily high consumer prices.

The partnership ratio concept is an extremely difficult one to model in practice. The suggestion in the EC proposal is that any margins of profits earned by one element of the market (the $ suppliers/distributors) will be shared with ACP suppliers. At one level, it is fairly easy to calculate the tariff equivalent effect of this. At a ratio of 60:40 ($:ACP) this would be equivalent to imposing a 20% tariff on $ bananas. Higher ratios than this (eg the suggested 70:30) would require a lower tariff, and lower ratios would require a higher tariff. However, the EC proposals require a 20% tariff *in addition* to the partnership ratio and this makes it very difficult to model the precise effects. The proposed regime is trying to hold the proportion of the $:ACP supplies in a constant ratio yet the imposition, at the same time, of a tariff on existing markets will tend to alter the market shares of $:ACP bananas in those markets.

One potential drawback of partnership quotas is to do with their interaction with market structure effects. Borrell and Yang (1990) highlighted the fact that import quotas in imperfectly competitive market frameworks could exacerbate the anti-competititve effects of firm behaviour on consumer welfare. The danger with partnership quotas is that the market could resemble an explicit market sharing arrangement converging on the monopoly outcome. In effect, it could change a non-cooperative oligopoly to acting like a cooperative one, with consumer welfare being reduced in the process. But at least the market regulation and regular monitoring implicit in the Community's proposal would exist and could react to prevent this. With a deregulated free market, ability to react with sufficient speed and timing may be less possible.

Fiinally, the above discussion focuses on the static effects of the quota, ignoring potential dynamic effects. There are certain issues to be considered here:

(i) it could be argued that the creation of rents will encourage market entry and improve the market power of preferred suppliers. Thus, in the longer run, the anti-competitive effects of the partnership quota (and the multinational structure of the banana industry) would diminish and prices would fall, though by how much is uncertain.

(ii) against this, import quotas and ratio quotas in particular could slow down growth in the EC banana market due to the short to medium-term effects of higher prices.

In sum, the impact of partnership quotas will ultimately depend on how the European Commission police this particular policy option. Certainly, of all the options considered the EC proposal for a partnership quota offers the only real guarantee of satisfying the terms at the Lomé Convention through a continuing banana trade. The other remaining option would be to restructure the world trade in bananas and, effectively, "pay off" existing preferred suppliers with aid. If there is insufficient scope for accommodating new entrants, then the anti-competitive effects of the scheme may be dominant and in the process, growth in the EC banana market will be restrictive to the detriment of consumers. Consequently, the detailed operational features of the proposed scheme will be paramount.

Concluding Comment

It is worth emphasising in conclusion that central to all this discussion are the two ends to be served. One is to satisfy the objectives of the Lomé Convention, and to provide reasonable access to the European Commission for certain otherwise disadvantaged producers and suppliers. This is, of course, based on the desirability of helping the Third World, and of meeting obligations to countries which have traditional connections to certain European nations. The second objective is to satisfy consumer demand, and, in technical parlance, to raise consumer welfare. A pure free market solution has been presented as the means of achieving the latter. That proposal has been based more on elementary economics theory than on empirical research. It is apparent that such a proposal would be incompatible with the terms of the Lomé Convention, and with obligations to traditional suppliers. It might, therefore, be rejected on those grounds alone. But the purpose of this paper has been to go a little further.

We have demonstrated that the perfectly competitive model is inappropriate for the banana market. Account must be taken of oligopolistic elements in that market. Once that is done, it ceases to follow that full liberalisation maximises consumer welfare. Even if an immediate price war occurred as the impact effect of such liberalisation, in other than the very short term, the survivors of the battle would (indeed, would be obliged to) raise prices very much to the detriment of EC consumers.

It is not, therefore, a correct formulation of the problem to say it is solely about how much consumers would lose in order to favour some producers

and suppliers. It is in the interests of EC consumers to maintain genuine access to the banana market by a wide range of suppliers, ie to ensure real competition in the marketplace.

We have noted that there are technically several ways of doing this. Economic theory cannot be used to show that one single way is the best. With a dynamic context fraught with uncertainty, probably some combination of effective tariffs and quotas is desirable. In our judgement, however, the EC must move to more explicit regulation of the market. It is always possible that measures to promote competition by protecting the weak element of the market to facilitate entry may be abused. The role of the regulators is to see that this does not happen, and, in particular, to offset any tendency to collusive pricing and supply, wherever it comes from.

BIBLIOGRAPHY

Armbruster W.J, Jesse, E.U., Nelson, Shafer, C. & Heifner, R 'A Review of Federal Marketing Orders for Fruits, Vegetables and Speciality Crops: Economic Efficiency and Welfare Implications'.   Agricultural Economic Report No. 477, AMS, USDA, Washington, November 1981.

Borrell, B and Cuthbertson S. 'EC Banana Policy' 1992, CIE, 1991

Borrell, B and Maw-Cheng Yang 'EC Bananarama 1992', Working Paper 523, World Bank, 1990.

Borrell, B and Maw-Cheng Yang 'EC Bananarama 1992: The Sequel', Working Paper 958, World Bank, 1992.

Branden, J A and B J Spencer (1985) 'Export Subsidies and International Market Share Rivalry' Journal of International Economies, 18, 83 - 100

Casson, M (ed) Multinationals and World Trade, Allen & Unwin, London, 1986

Commission of the European Communities Proposal for a Council Regulation on the Common Organisation of the Market in Bananas, Commission of the European Communities, COM 359, Brussels, 1992.

Davenport, M and Page, S. Europe: 1992 and the Developing World, ODI, London, 1991.

Dornbusch, R. 'Exchange Rates and Prices', American Economic Review, vol 77, pp 93-106, 1987.

FAO, 'Report of the Expert Consultation on Possible New Policy Initiatives to Increase the Economic Viability of the World Banana Economy', FAO, Rome, 1987.

FAO, 'Review of the World Banana Economy: Major Developments since 1984', FAO, Rome, 1988.

FAO, 'Policy Developments and Prospects for Co-ordinated International Action on Bananas', FAO, Rome, 1991.

FAO, 'Policy Developments and their Impact on the World Banana Economy', 13th Session Intergovernmental Group on Bananas,1992.

Feenstra, R. C.'Symmetric Pass-Through of Tariffs and Exchange Rates Under Imperfect Competition: An Empirical Text'
Journal of International Economics, Vol 27, pp 25-45, 1989.

Fitzpatrick, J and Associates 'Trade Policy and the EC Banana Market: An Economic Analysis', Dublin 1990.

Grossman, Gene M, (Ed) Imperfect Competition and International Trade, MIT Press, London, 1992.

Islam, N. 'Horticultural Exports of Developing Countries: Past Performance, Future Prospects, and Policy Issues'. International Food Policy Research Institute, April 1990.

Islam, N and Subramian A. 'Agricultural Exports of Developing Countries: estimates of income and price elasticities of demand and supply'. Journal of Agricultural Economics, 40 (2), 221-31., 1989.

Kingman, P.R. 'Pricing to Market when the Exchange Rate changes' in J.D. Richardson and S. Arnott (eds). Real-Financial Linkages Among Open Economies. MIT Press, Cambridge, 1986.

Kolstad, Charles D. and Lars Mathiesen 'Computing Equilibria in imperfectly competitive commodity markets'. Chapter 2 in International Commodity Market Models - Advances in Methodology and Application. Guveren, O., W.C. Labys, and J-B.Lesourd. Chapman and Hall, London, 1991

Krugman, P R (1986) Strategic Trade Policy and the New International Economics Cambridge MA: MIT Press

McCalla, A F (1966) 'A Duopoly Model of World Wheat Pricing' Journal of Farm Economics, 48, 711-727

McCorriston, S and I M Sheldon 'Imperfect Competition , Vertical Linkages and the Effects of Government Intervention in the Food Sector'. Unpublished paper. Ohio State University, USA, 1992.

McCorriston, S and I M Sheldon (1992) 'Is Strategic Trade Theory Relevant to Agricultural Trade Policy Research?' Paper presented in Frankfurt, Germany, December 1992

Matthews, 'A The European Community's Banana Policy after 1992', Discussion Paper 13, Institut für Agrarpolitik und Marktforschung, University of Giessen, 1992

Read, R.A. 'The Banana Industry: oligopoly and barriers to entry' in Multinationals and World Trade, (ed M. Casson), Allen & Unwin, London, pp 317-42, 1986.

Sutton, J. Sunk Costs and Market Structure. MIT Press, Cambridge, 1991.

Tyers, Rod and Kym Anderson Disarray in World Food Markets - A Quantitative Assessment. Cambridge University Press, 1992