IDS Discussion Paper 380

Can an agricultural 'commodity' be de-commodified, and if so, who is to gain?

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December 2001

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Brighton, Sussex BN1 9RE
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ISBN 1 85864 398 8

Summary

The weakness of redistributional mechanisms, both globally and within developing economies, makes it imperative to directly enhance the productive incomes of poor people. Coffee farmers, generally located in the poorest countries, have suffered especially badly in recent years, and farm gate and internationally traded bean prices are now at historically low levels. At the same time, though, global coffee consumers are becoming more discerning. With at least as much potential taste variety as in the case of wine, final product prices are becoming more differentiated. Margins for some coffees can therefore be expected to increase significantly as consumers become more discriminating in their tastes.

But who is to gain from these more differentiated prices? Analysis shows that whilst the price spread is growing in global trading markets, it is simultaneously narrowing at the farm gate. At the same time, the destruction of coffee marketing boards (largely as a result of Structural Adjustment Programmes) has had unintended effects: instead of their margins accruing to farmers, almost all of these margins are being absorbed in the high-income importing countries.

Thus, left to market forces, the likelihood is that farmers will gain little from increasingly discriminating final consumer tastes. Instead it is the global branders and the supermarket chains who are likely to appropriate these growing product rents. However, if consumers can be educated to recognise that better coffees are directly linked to their place of origin rather than to their brand names, a more equal global distribution of income is likely to emerge in this value chain. This paper ends with a discussion of which stakeholders may be involved in educating final consumer tastes in an appropriate manner.

Key words:
Coffee – value chains – global income distribution – sub-Saharan Africa – marketing boards

Acknowledgements

We are grateful to a number of people in the coffee industry (including those in the ICO, the retail industry, and in the coffee house and roasting sectors) for their assistance. We are particularly indebted to the librarians at the ICO for their generous assistance, to John Talbot whose work on the coffee value chain has proved especially useful, and to John Humphrey for comments on an earlier draft. Finally, we should like to acknowledge financial support from the Department for International Development.

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1 Introduction

> *'Mr Allaro [an Ethiopian coffee farmer] received just under 7 Ethiopian birr a kilo, about 32 US cents a pound ... The International Coffee Organisation estimates that production costs in Ethiopia are about 44 cents/lb.'*
> (*Financial Times*, 30 March 2001)

> *'The degree of variety of coffee and the variation in taste is at least as great as that of wine.'*
> (Herbert Oberhänsli, vice-president, Economic and International Relations, Nestlé SA)

Central to the development challenge is the search for sustainable growth, for without this, there is little prospect of meeting the physical, social and emotional needs of the population. But growth in itself is not sufficient: if growth is unevenly distributed, then there may be little increase in welfare.

Recent experience in the global economy highlights the importance of these growth and distributional issues. Between 1990 and 1999, the number of people around the world living above conditions of 'absolute poverty' increased by 670 million. That is, their incomes exceeded $1 per day (measured in 1985 purchasing power parity consumption standards, which take account of living costs in different countries). In historical terms this represents a major advance in human welfare. But there has also been a downside to globalisation. Despite the rise in living standards of many, the numbers continuing to live in absolute poverty remain stubbornly large and unchanged, at something over 1.2 billion. Moreover, there is overwhelming evidence that patterns of income distribution within and between countries have become significantly more unequal.[1]

There are essentially two (non-contradictory) ways of meeting these poverty-related concerns. The first is through *redistribution*, intra-nationally and internationally. Recent experience in Europe illustrates how important this can be, since this is one of the few regions where the distribution of consumption standards has not become markedly more unequal in recent decades despite a worsening in the patterns with which incomes have been distributed. This follows directly from social welfare programmes introduced by European governments (Förster and Pearson 2000). The second path is more direct, and involves *enhancing the incomes earned by the poor*.

From the perspective of poor countries, there is little evidence that the redistributional path has been pursued successfully. In terms of the international redistribution of income, the past two decades have seen a weakening of income transfers. And very few developing countries have the political and fiscal capacity to introduce structured programmes of intra-national income transfer. Hence, the key challenge is to take steps to directly enhance the income-earning capacities of poor countries and poor groups in poor countries.

Globalisation and integration into global product markets have become major elements in this poverty-focused growth agenda. The East Asian economies and China have illustrated how international specialisation can provide for scale economies and help producers and economies enter a virtuous circle

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[1] For details on these distributional patterns, see www.ids.ac.uk/ids/global, and Wade (2001).

of capability building. It has largely been through this that so many people have been lifted out of absolute poverty. If the 'losers' in the globalisation era had been confined to those who have been excluded from global processes, then the policy conclusions would have been clear: enter the global economy as rapidly as possible and take advantage of these economies of specialisation. However, the 'losers' in recent decades include (as we shall see in the case of coffee) those producers who have participated in the global economy, but who have done so in ineffective ways. The key challenge thus confronting policy design and implementation is not *whether* to participate in global processes, but *how* to do so in ways which provide for sustainable income growth.

This is of course not a new agenda. The ways in which developing countries and poor producers have entered the global economy, and the pattern of their global insertion, have long been a focus of concern. It has now been conclusively shown that their adopted paths of specialisation in primary materials have been a major cause (and perhaps even a consequence) of their low levels of income. This is because the terms of trade of these primary products – the prices that they realise compared with the prices paid for developing country manufactured imports – have systematically declined.

The observation of declining terms of trade and the recognition of what this implied for developing economies goes back to the 1950s (Prebisch 1950; Singer 1950). From this it was concluded that poor countries and poor producers should shift out of the production of primary materials, industrialise and move into the production of manufactures. Manufactures had characteristically been produced by high-income countries and were the flip side of the declining terms of trade of primary product producers. Thus it was widely concluded that developing countries should industrialise and become producers and exporters of manufactures.

For early entrants, this strategy proved to be highly successful. The newly industrialising economies of East Asia began their transition during the 1960s, and by the turn of the millennium had achieved high standards of living on the back of a sustained push towards industrial development. But by the early 1990s, it was beginning to become evident that this path was not without its dangers. In the same way that primary producers had suffered from low barriers to entry, global overproduction and declining terms of trade, so similar trends were beginning to become evident in many manufacturing sectors.

The entry of China into global markets, particularly in the manufacturing sector, was noticeably important here. Between 1985, when China first became a major exporter, and 1995, the terms of trade of developing country exports of manufactures declined by 20 per cent (Wood 1997). Wood's calculation of falling terms of trade in manufactured exports is corroborated by a recent study of the barter terms of trade in manufactures between developing countries and the European Union, which estimates an annual rate of depreciation of 2.2 per cent between 1979 and 1994 (Maizels *et al.* 1998). In a further study focusing on the terms of trade in manufactures between the US and developing countries for the period 1981–97, Maizels *et al.* conclude that '[o]ver the whole period, the relative terms of trade trend of developing countries, compared with that of developed countries, has significantly worsened (Maizels *et al.*

1999: 23).[2] So, even manufacturing is no longer a protected domain; indeed the speed of their declining terms of trade is rapid by comparative standards.

Two major linked conclusions can be drawn from this. The first is fairly obvious and arises directly from the observation of declining terms of trade of manufactures. It is that the concept of a 'commodity' applies to a factor or a product (both goods and services) where there are low barriers to entry, which is subject to intense competition, and hence to declining terms of trade. Because these characteristics were in the past associated uniquely with primary products, these were often characterised as 'commodities'. Yet unskilled labour and many manufactures now exhibit the same tendencies and hence can also be seen as commodities (Kaplinsky 1993). The development challenge is thus not to move out of 'commodities' defined as primary products, but out of all activities which are subject to sustained falls in their terms of trade.

The second conclusion relates to the nature and importance of barriers to entry as a factor protecting producers and products from 'commoditisation'. These can be created by attempts to 'fix the market' (for example, through producer or buyer cartels). But barriers can also be created through a process of upgrading. This occurs routinely in high-tech sectors, but there is no intrinsic reason why upgrading cannot also apply in sectors historically characterised by low barriers to entry, including in the agricultural sector. The attempt to reposition kiwi fruit by New Zealand producers suggests the possibilities that are open in the primary products sector (*see Box 1.1*). But what of other primary products?

Box 1.1 Reconfiguring the kiwi fruit

The kiwi fruit originated in China as the Chinese gooseberry, but as its name suggests, its commercialisation on a global scale was achieved by New Zealand growers who introduced the new name in 1959. It is reasonably easy to grow, and competition has expanded. By the early 1990s, the largest exporter was Italy, whose production grew to 262,000 mt (million tonnes) in 1998 (versus 240,000 mt in New Zealand) and to 330,000 mt in 2000. Chilean exporters were also entering the market on a global scale, with production growing to 156,000 mt in 1998. Not surprisingly, global prices have been on the decline. Given that it is New Zealand's single largest horticultural export crop, with annual sales of US$225 million, this represented a real challenge for New Zealand growers.

Their response was to develop:

- a new, gold-coloured variety: ZESPRI™ GOLD. Marketing began in Asia in 1998, emphasising the fruit's health properties, linking it to roller-board displays in large supermarkets and aerobics in smaller stores. The New Zealand Marketing Board has copyrighted the variety, and organised contract-growing in four Italian cooperatives;
- new varieties of organic kiwi fruit (copyrighted as ZESPRI™ GREEN) which are being marketed at a premium price, with exports doubling in 1999.

'It's an excellent product: after 25 years selling traditional green you don't know how exciting it is to sell something different.' (European marketing manager)

Source: *Financial Times*, 17 August 2000 and www.zespri-usa.com

[2] It is significant that neither of these recent studies by Maizels *et al.* reflects the fall in developing country manufactured export prices which followed the East Asian crisis of 1997–8.

Drawing on some of the insights offered by value chain analysis,[3] we consider the prospects for decommodifying segments of the coffee market. Coffee is an important case in point for three reasons. First, it has a large 'footprint' in poor countries, and amongst poor producers in these countries. For many African countries, coffee has long been the major export, and it also plays an important economic role in Latin America and Asia. Secondly, particularly in recent years, coffee has performed the role of a primary commodity. Not only have prices declined consistently, but in the very recent period, they have fallen below production costs and coffee stockpiles suggest that the price could sink even further. In May 2001, the global price had fallen to less than $0.50/lb, reaching a 30-year low point. Global stockpiles of 56 million bags – half of the annual global production (which, at 113 million bags, is itself larger than the annual consumption of 103 million bags) – threaten to push the price down even further.

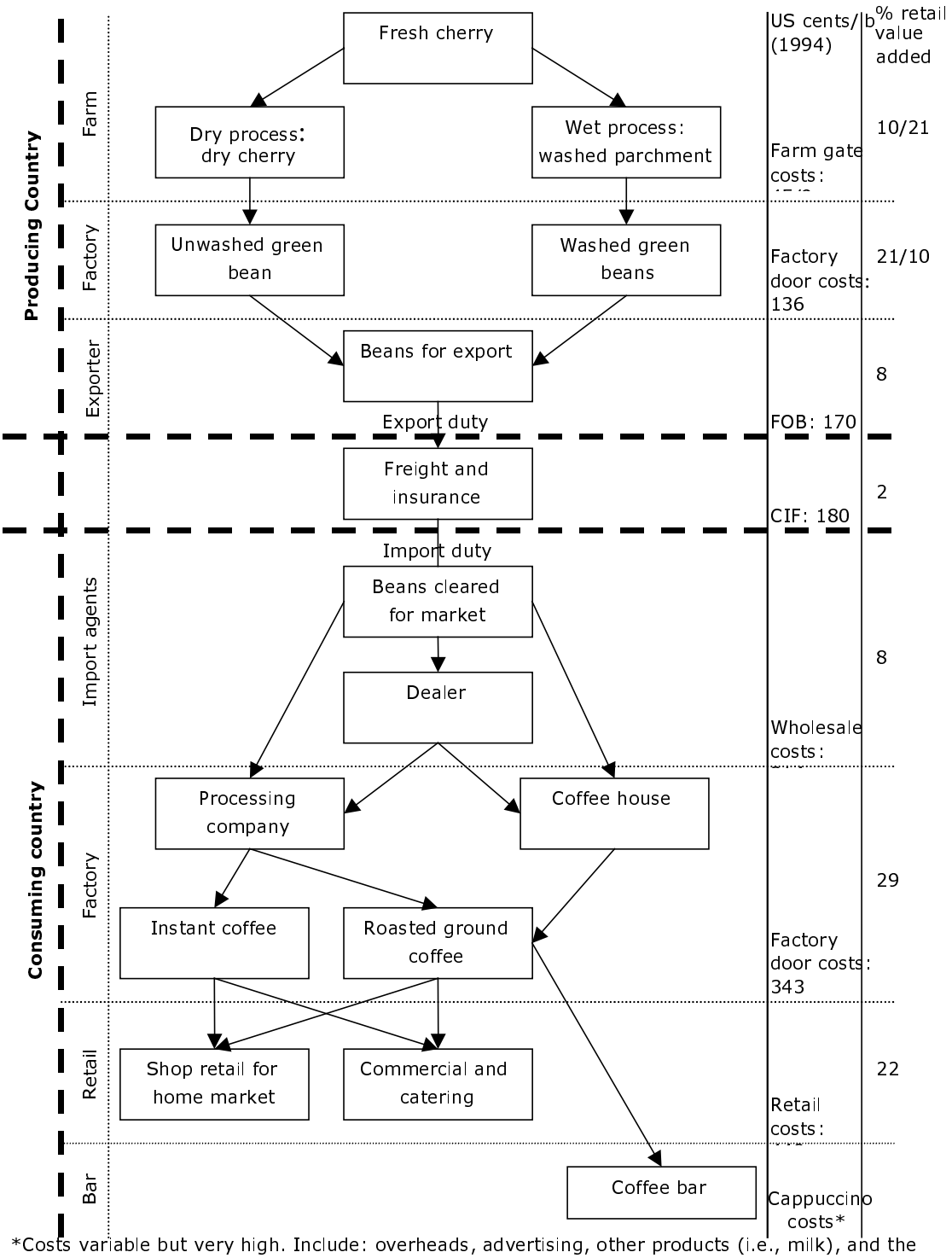
And, thirdly, as Nestlé's vice-president for Economic and International Relations points out, '[t]he degree of variety of coffee and the variation in taste is at least as great as that of wine'. Thus coffee is a product with significant potential for differentiation. Some decades back substitute products such as wine and mineral water were also marketed as relatively undifferentiated products, but are now sold as highly differentiated lines, with significant premiums for specific products. Are we going to see the same pattern emerging in the case of coffee? And, if so, who will reap the rewards of price differentiation? Will it be the global branders (such as Kraft, Nescafé, Douwe Egberts, Tchibo and Lavazza), global traders (such as Rothfos, E.D. and F. Mann, Volcafe and Cargill), producer governments using export taxes, or will it be the growers? And is it possible to identify policies which might help to ensure that some or all of these decommodification gains are reaped directly by poor producers rather than large transnational corporations?

Before we enter this discussion, we will begin by briefly describing the coffee value chain which is shown in Figure 1.1. This distinguishes a number of different categories each of which receives a share of income along the chain:

- Farmers pick and either dry-process or wet-process coffee cherries, receiving a *farm gate price*.
- The cherries are further processed; the end result of the two forms of input (dry- or wet-process beans) is roughly the same *factory gate price*.
- The beans then go to an intermediary for export, reflected in free on board *(fob) prices*.
- They are shipped to importing countries (landed at cost, insurance and freight (*cif) prices*).
- Importers then pass the beans on at *wholesale prices*.

[3] Value chain analysis has much more to offer in the analysis of the coffee value chain, particularly with regard to shifting patterns of governance. These issues are not covered in this paper, but are raised by Talbot (1997a) and Ponte (2001).

Figure 1.1 The coffee value chain



*Costs variable but very high. Include: overheads, advertising, other products (i.e., milk), and the 'experience' of the coffee bar. (See Figure 3.1.)

Source: Data provided by M. Wheeler reflecting the cost breakdown in 1994

- Roasters process the beans and sell them at *factory gate prices*.[4]
- Retailers sell the coffee on to the public (*retail prices*) for domestic consumption, as do restaurants, caterers and coffee bars for out-of-home consumption.

From Figure 1.1 it is evident that around 40 per cent of the final product price (that is, for supermarkets, rather than for coffee houses) accrues in developing countries.[5] It is important to note that these figures are a snapshot in a particular period of time, and refer to the price breakdown in 1994.

2 Coffee as a commodity

Many tropical and sub-tropical countries are able to grow coffee. Total global exports (75 per cent of production) exceed $9 billion[6] and the sector employs more than 25 million people globally on more than 5 million farms. Coffee fills approximately 400 billion cups a year and is estimated to be regularly consumed by more than 40 per cent of the world's population. Although there are between 25 and 100 different species of *Coffea*, almost all commercial coffee comes from either *C. arabica* or *C. robusta* which are known as arabica and robusta respectively.[7]

Arabica is grown at altitudes over 1000 m. It produces superior quality beans which possess the greatest flavour and aromatic characteristics, and accounts for 80 per cent of total global coffee. *Robusta* plants can grow at lower altitudes and have higher yields, but are more resistant to disease. More significantly, they produce beans of inferior taste to arabica, usually with a woody and astringent flavour and contain about twice the caffeine content. Robusta beans command a lower price on the markets and are generally used for cheap instant coffees, or to increase the caffeine 'kick' in products such as espresso.

The traditional way to make coffee is to roast the dry green beans and then to grind them. This is referred to as '*roasted ground*' coffee. This form of preparation can use blends of beans or beans from a single origin, and is popular in the main consuming regions: the USA, Japan and Europe. There are many sub-varieties of roasted ground coffee, for example, flavoured coffees, espresso and cappuccino. *Instant coffee* was developed by the American military in 1862 during the Civil War as a psychological restorative and to increase energy and aggression in the troops. During the Second World War, US soldiers were issued with a daily ration of two ounces (six strong cups) of coffee powder (Allen 1999). After the war

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4 Since roasted coffee has a short shelf life (two weeks, although vacuum packs with one-way valves have increased storage life to about one year), this value added stage tends to be completed close to the final point of sale. Instant coffee has a longer life and can more easily be processed in producer countries, but there is a long history of US producers influencing US trade policy to undermine attempts by the Brazilians to move into this form of processing (Talbot 1997a).

5 It is possibly an accident, but it is notable that a similar ratio exists in deciduous canned fruit (Kaplan and Kaplinsky 1998) and in fresh fruit and vegetables (Dolan and Humphrey 2000).

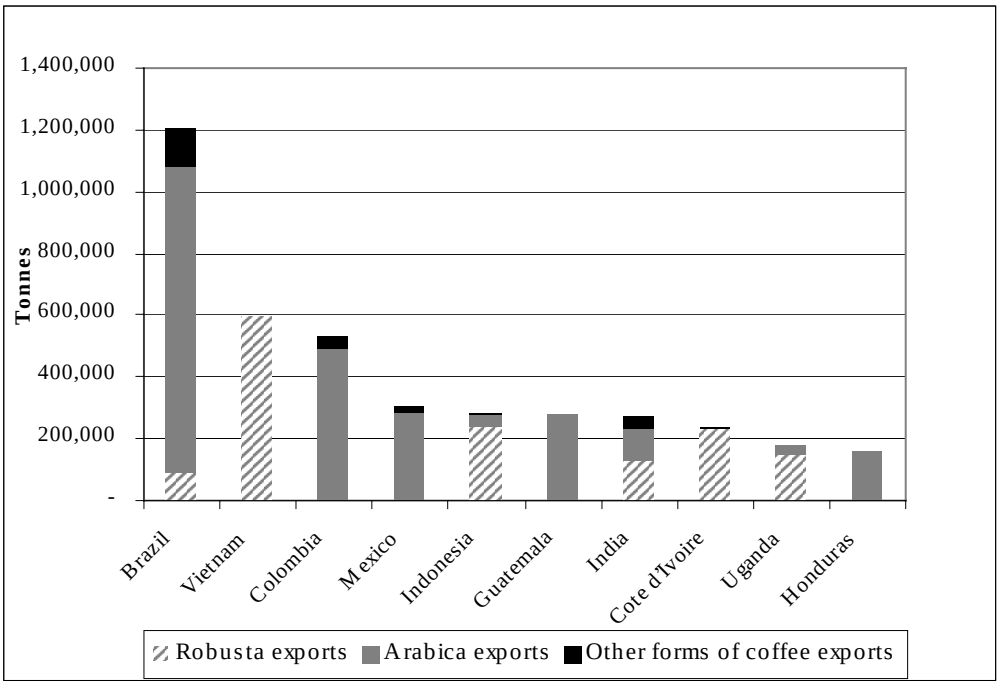
6 Coffee is often mistakenly described as the world's second largest commodity export after oil. This was the case during the period of high coffee prices, but since the mid-1990s the value of global exports has been exceeded not only by oil, but also by aluminium, wheat and coal (Ponte 2001).

7 The distinction between arabica and robusta coffee is less clear than it might seem. New technologies for steam cleaning robusta have improved quality and allowed for some substitution with arabica, even in demanding markets such as Germany.

domestic consumption of instant coffee powder rocketed as habituated soldiers returned home. There have been further developments in the instant sector in the form of freeze-dried and 'quality/gourmet' instant granules, but the bulk is still made from lower quality bean blends. In most of the major markets, instant coffee comprises only 20 per cent of the market (except in the UK where it accounts for 90 per cent of consumption). Finally, in relatively recent years, and especially in Japan, coffee has been marketed as a *canned ready-to-drink* product, predominantly from dispensing machines.

The main global exporters are shown in Figure 2.1, from which it can be seen that the Latin American economies dominate in arabicas while Vietnam, Indonesia and African producers tend to specialise in robustas. Over the past decade, the biggest change in country market shares has been the rise in Vietnamese production, which rose from 4 million 60 kg bags in 1995 to more than 11 million bags in 1999. (The apparent loss in Colombia's market share was in part the consequence of a poor harvest in 1999, but more significantly due to static supply in the context of rising global production.)

Figure 2.1 Exports of coffee July 1999–June 2000



Source: International Coffee Organisation (ICO)

Table 2.1 Share of global coffee exports, top ten producers (%)

	1994–5	1995–6	1996–7	1997–8	1998–9	1999–2000
Brazil	25.1	16.8	22.2	19.7	27.3	23.2
Vietnam	4.1	5.6	6.4	7.8	7.8	11.5
Colombia	15.4	14.4	13.1	14.3	12.8	10.2
Mexico	4.6	6.2	5.4	5.1	4.6	5.9
Indonesia	5.7	7.0	8.1	6.5	7.3	5.5
Guatemala	5.0	5.7	5.2	5.0	5.0	5.4
India	3.0	4.8	3.3	4.7	4.0	5.2
Ivory Coast	3.6	3.6	3.8	6.1	3.4	4.6
Uganda	4.4	5.4	5.2	3.9	4.4	3.5
Honduras	2.6	2.9	2.3	2.8	2.5	3.1
Total of top ten	73.6	72.5	75.0	76.0	79.2	78.0
Global total	100	100	100	100	100	100

Source: ICO

Although only two African economies (Uganda and the Ivory Coast) feature amongst the top ten exporters, a number of African countries are particularly dependent on coffee as a source of export earnings. For example, coffee represents 76 per cent of Burundi's exports and more than 60 per cent of Ethiopian, Rwandan and Ugandan exports. It would appear that the lower the level of per capita income, the more dependent producing economies are on coffee exports (Table 2.2). (Table 2.2 uses a five-year average export figure to iron out year-on-year price fluctuations.)

Table 2.2 Share of coffee in total export receipts (average 1995–9)

	Share of total exports (1995–9 average)	GNP/capita ($) (1995–9 average)
Burundi	76	146
Ethiopia	68	106
Rwanda	62	274
Uganda	60	310
El Salvador	26	1,886
Guatemala	26	1,608
Honduras	25	734
Colombia	17	2,424
Brazil	5	4,684

Source: Coffee exports from ICO; GNP and total exports from IMF International Financial Statistics

Europe is the largest market with an annual consumption of around 2 million tonnes, accounting for over 40 per cent of total global demand. The US accounted for 24 per cent of total consumption and Japan for just over 10 per cent. Total market growth (in volume terms) during the 1990s was slow at 1.1 per cent per annum, although this increased to an annual rate of 2.6 per cent during the second half of the decade. Coffee consumption grew much more rapidly outside of the triad, at annual rates of 9 per cent.

Relatively slow growth rates in the context of low barriers to entry and new entrants (such as Vietnam in recent decades) have led to long-term pressures on coffee prices.[8] Although the current prices of the four main categories of traded coffee were unchanged between the mid-1960s and mid-2001 (at around US cents 50/lb) (Figure 2.2a), real coffee prices (deflated by the UN developed market economy export index) fell over the long term. (By October 2001, coffee prices had fallen to US cents 42/lb.) Despite some short-term spurs in real prices (notably in the mid -1980s and mid-1990s), they continued to fall during the last years of the 1990s, reaching a level in 2000 which was around half that of the mid-1960s (and around 20 per cent of peak market values in 1978 (Figure 2.2b). The impact of these declining prices on producing countries has been severe, especially where coffee comprises a major share of export receipts. For example, falling prices over the past two years have cost Uganda almost 50 per cent of the Highly Indebted Poor Countries (HIPC) debt relief package (Oxfam 2001). The impact on particular regions which specialise in coffee, such as the slopes of Mount Kenya and Kilimanjaro and the Chiapas region in Mexico (where 60,000 growers have been forced off their holdings [*Independent on Sunday*, 22 April 2001]), have led not only to household poverty, but also to emigration and urban squalor.

In the context of these declining prices, coffee producers and importers have made a number of attempts to establish cartels, to limit supply into the final market and to drive up prices. The key development was the establishment of a quota system by the ICO in 1963. This worked well for a decade, but in the face of low barriers to entry in the industry, these quotas were increasingly circumvented, and the system finally collapsed when the US withdrew in 1989. A renewed attempt was made to re-establish a quota system in 1994, but this worked poorly and had little impact on prices.

Upward pressure on prices was not confined to quota restrictions, and nature has also played an occasional role. Most significant was the frost in Brazil in 1975. Since coffee trees take three to four years to mature, this led to raised prices for the rest of the decade. A Brazilian drought in 1985 had a similar, albeit less marked effect on prices, as did the frost and drought in 1994 and a poor flowering in 1996.

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[8] The 'world coffee price' is a weighted composite of four types of trade coffees. Three of these are arabicas (comprising around 70 per cent of global trade), and these consist of Colombian milds (the highest quality), other milds which are of medium quality, and the lowest quality arabicas, Brazilian. The fourth major traded type of coffee is robusta. See Talbot (1995). As a share of total coffee trade (in volume terms), Colombian milds account for 13 per cent, other milds for 32 per cent, Brazilian naturals for 23 per cent and robustas for 33 per cent.

Figure 2.2a
Coffee market prices: current prices

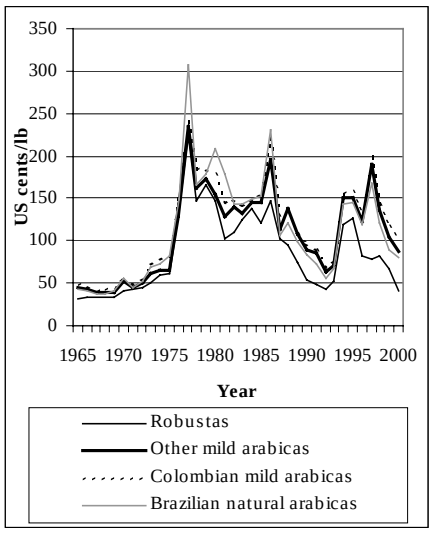
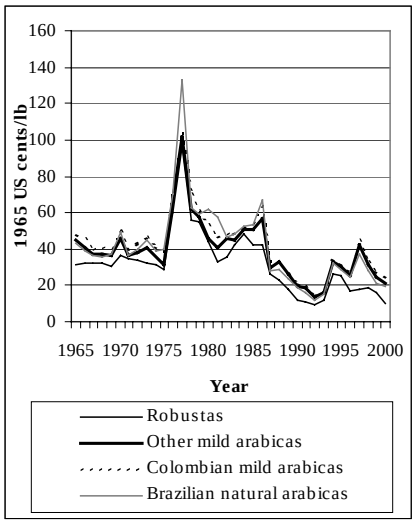


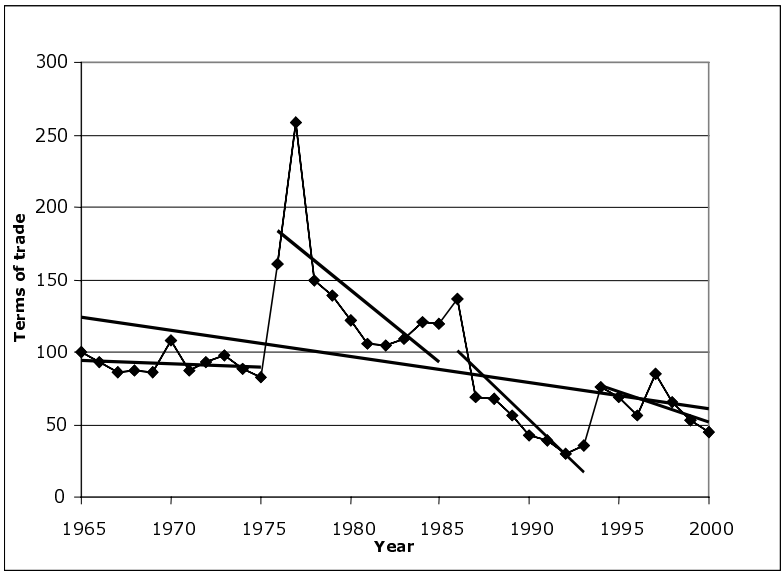
Figure 2.2b
Coffee market prices: 1965 constant prices



Source: ICO

Despite these occasional price-rising events, resulting from both human-made and environmental interventions, there has been a systematic long-term decline in coffee's terms of trade (deflated against the UN developed market economy export index). This shows up both in relation to the whole period (1965–2000) and in the sub-periods which follow from each of the exogenous shocks which led to a temporary hike in coffee prices (Figure 2.3).

Figure 2.3 Terms of trade: mean coffee price index (1965=100)/UN Developed Market Economies (DME) exports index (1965=100) and trendlines



Source: ICO

3 Signs of decommodification? The emergence of differentiation in coffee consuming markets

'Coffee is now where wine was ten years ago.'

(Chief buyer, large UK retailer)

Coffee, as we have seen, has behaved as a paradigmatic primary commodity over the past four decades, exhibiting sustained declines in its terms of trade, punctuated by occasional periods of price rises when natural factors or cartel activities have restricted global supply. Underlying this performance has been the relatively undifferentiated nature of final product markets, allowing roasters to substitute different coffees in their blends.[9] But there are increasing signs that final markets are becoming more differentiated. The major UK retailer of coffee currently offers 96 different types of coffee, but a typical store still only has 16 m^2 of coffee space compared to 40 m^2 for wine (for which it has a range of 400–500 wines). As the chief buyer of this retail chain observed, 'coffee is now where wine was ten years ago'.

The greater the degree of taste discrimination (as opposed to brand discrimination) in final product markets, the smaller the opportunities for bean substitution in blends, and hence the greater the possibility that coffee will lose some of its extreme primary commodity characteristics. In this chapter, we explore the nature and dynamics of changing tastes in final product markets.

3.1 Variations in the major product groups

Although coffee beans have traditionally been sold as a relatively homogeneous product, the final product made available to consumers is more differentiated. There are essentially five different products at the top end of this value chain: instant coffee; roasted ground coffee; canned ready-to-drink coffee; out-of-home catering and coffee bars; and ethically-traded coffee.

Instant coffee, as we have seen, has its origins in warfare. But it is now a staple drink in countries which had previously had a long tradition of tea drinking. This applies particularly to the UK and some of its former colonies, to China and to the USA. By the turn of the millennium, all of the world's largest instant coffee producers had a large portfolio of instant coffees; one has over a hundred brands. However, a more limited portfolio is sold in each market. One blender markets between six and ten different categories of instant in high-income countries, whereas in low-income markets the range is confined to three products. But, although sold under global brands, instant coffee varies to reflect taste patterns. The blend of coffee will vary not only to affect national taste differences, but also within countries: for example, the same 'brand' in northern France will have a different taste from its counterpart in southern France.

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[9] As Ponte points out, as coffee roasting became more concentrated, the roasters increasingly turned their attention to price and packaging, sacrificing quality by using lower quality beans, and reducing roasting times to reduce weight loss and to hide the impact of poor quality beans (Ponte 2001: 18).

Product innovation has been an important development in this sector. The basic instant powder was complemented by coffee granules in the 1990s, and these now dominate the instant market. More recently, freeze-dried coffee was introduced and played an important role in rolling back advances made by the roasted ground sector in the UK.[10] Over the past five years, as coffee consumers have become more attuned to variety, new grades of speciality coffee have been introduced, trading on the country of origin of the beans. There are also small niches, such as decaffeinated coffee, and sub-sub-niches such as decaffeinated coffees using a water-based, rather than chemicals-based process.

A key part of the instant coffee story, which we shall return to later, is the historic importance of blends. Price premiums in this market (*see Table 3.1*) depend on the brand name of the blender and its presentation of 'quality' under different labels. Although recent developments have allowed customers to choose the country of origin, they have not been allowed to investigate further to unravel the taste of different types of beans, let alone different geographical locales within countries.

Table 3.1 Differentiation in the instant coffee market: UK supermarket prices

Coffee	Company	Brand	Price (£/100g)	Market share (%)
Powders	Own brand	Value	0.35	5
	Maxwell House	Original	1.58	
Granules	Own brand	Value	0.45	75
		Classic	1.28	
	Nescafé	Original	1.65	
	Maxwell House	Original	1.58	
	Kenco	Rappor	1.65	
Quality	Own brand	Gold	1.95	9
	Nescafé	Gold Blend	2.14	
		Blend 37	2.39	
	Kenco	Really Rich	2.14	
	Carte Noire	Instant	2.45	
Speciality	Nescafé	Alta Rica etc.	3.09	9
	Café Direct	Medium Roast	2.59	
	Gourmet Percol	Caffe Espresso	2.48	

Source: Interviews

[10] In the UK, for example, instant coffee has traditionally accounted for 90 per cent of the market. During the 1980s, new filter coffee machines were introduced which had the effect of reducing instant's market share to 80 per cent. The introduction of freeze-dried coffee, coupled with effective advertising campaigns, reversed this change in market shares and by 2000, instant's share was back to almost 90 per cent.

A second category of coffee, particularly important in mainland Europe (which is the largest consuming region in the world, accounting for 40 per cent of the total) is *roasted ground* coffee. As can be seen from Figure 1.1 above, this represents a relatively simple processing stage, taking in imported green beans and either selling roasted beans directly to the customer, or selling ground coffee in vacuum-packed bags. Here, there is enormous variety, reflecting taste patterns in different countries. For example, Germany is an especially quality conscious market, focusing predominantly on mild arabica blends. And, although instant coffee predominates in Japan, this is a market with a very large variety of roasted ground blends. For example, Key Coffees (the second largest roaster) has more than 800 different types of roasted coffee. In Italy, robustas dominate due to the espresso market. Yet, despite this diversity, there has been a trend towards pan-European brand names and pan-European blends in the roasted ground sector (Wheeler 1998).

As in the instant market, there is a large spread of prices, reflecting not just differences in coffee type, but also the importance of roasting technologies and brand names. Table 3.2 shows that in the UK this has resulted in a 300 per cent price spread in supermarkets.

Table 3.2 Differentiation in the roasted ground coffee market: UK supermarket prices

Coffee	Company	Brand	Price (£/100g)
Entry level	Own brand	Original	0.57
Quality	Own brand	Gold	0.79
	Taylors	Decaffeinated	1.28
	Douwe Egberts	Le Café	1.20
Speciality	Own brand	Kenyan	1.01
	Café Direct	Medium Roast	1.01
Espresso	Lavazza	Espresso	0.80
	Carte Noire	Espresso	1.15
	Illy	Espresso	1.60

Source: Interviews

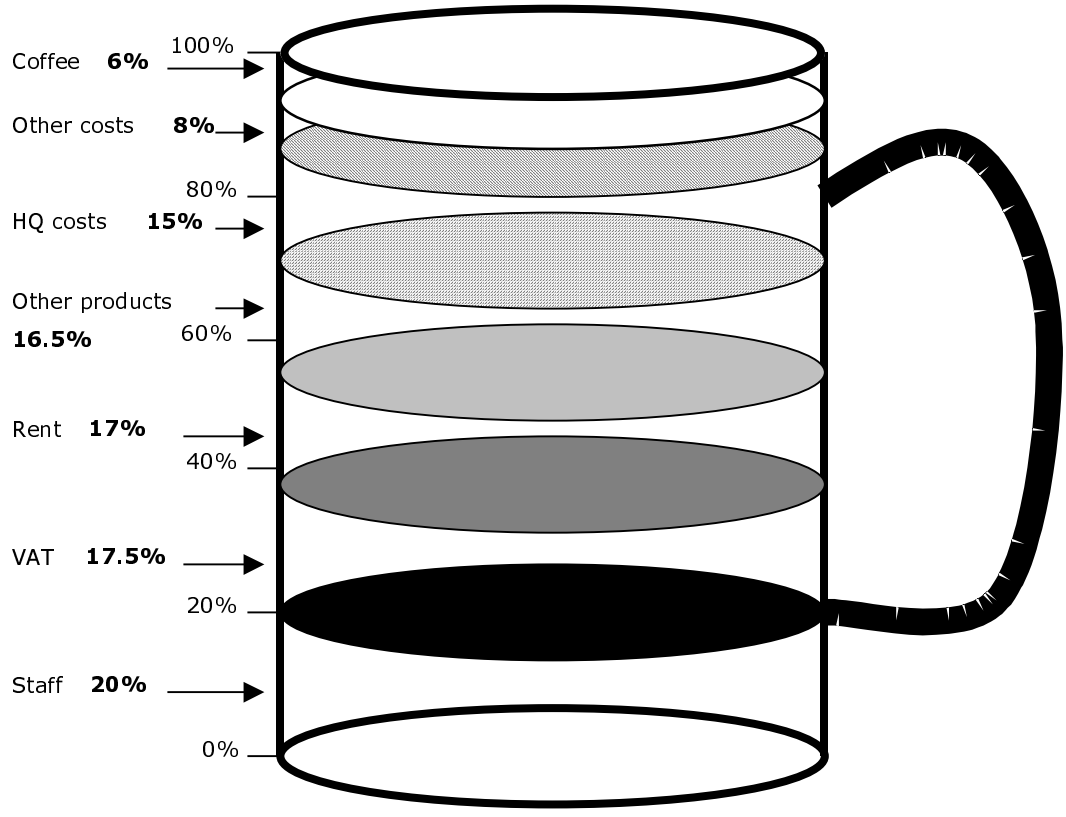
Canned ready-to-drink coffees have until recently largely been confined to the Japanese market. There, per capita consumption grew from 1.64 kg in 1979 to 2.91 kg in 1998, largely based on instants (where Nestlé dominates). But canned ready-to-drink coffee has now grown to 20 per cent of the market, dominated by Coca-Cola. In spring 2001 Nestlé launched a new canned drink in the UK market. Selling at £1.19 per can, it incorporates a technology which warms the drink after the can has been shaken (*Guardian*, 1 May 2001).

The *catering and restaurant* sector represents a big, but largely stagnant market. However, over the past decade, a rapidly-growing niche has been the *branded coffee bar* market. Its origins are to be found in the US specialty sector which sells a variety of products, predominantly characterised by blends which have to

'force' their way through milk-based products. So, in addition to flavoured coffees (designed to appeal to the youth market), the blends offered in this sector are distinctive. One European retailer, for example, dismissively refers to 'Charbucks', reflecting a blending process which deliberately chars the coffee to provide the consumer with a distinctive taste. Coffee houses such as Starbucks have spread to Europe and have been matched by local alternatives such as Seattle Coffee Co. (acquired by Starbucks in May 1998), Costa Coffee, Coffee Republic, and so on. In the UK, for example, the number of coffee houses leapt from 1,328 in December 1997 to 7,100 in January 2001 (*Leisure and Hospitality Business*, 25 January 2001). Unbranded coffee houses dominate in Europe and in Japan (where there has, however, been a sharp fall in numbers, from 154,630 in 1981 to 101,945 in 1996 [Wheeler 1998]).

A distinctive feature of these coffee houses is that coffee represents only a small share of their business. The 'product' they are offering is not coffee. It is the ambience, the image associated with costly coffee consumption, co-products (such as snacks), relief from the bustle and traffic, and so on. In these markets, the coffee content of the cost of cappuccino is less than 6 per cent (Figure 3.1).

Figure 3.1 Percentage components of the retail price of a coffee house cappuccino



Source: Interviews

A final 'market' for coffee is that arising from *ethical trade initiatives*, a niche in both the roasted ground and instant sectors. Fair-trade products target consumers who are prepared to pay a premium to ensure that producers get a 'fair' price, in this case guaranteed minimum prices paid to farmers of more than double

the global price in May 2001 (*see below*). Whilst still small, the share of fair-trade coffee has grown steadily in some countries, particularly in Europe.

In each of the major market segments (we exclude the third category, ready-to-drink canned coffees, which are largely a characteristic of the Japanese market and where we have less information), there are indicators of differentiation in final product markets. The data we give in Tables 3.2 and 3.3 is specific to the UK market, but similar trends can be found in virtually all markets in the major consuming countries. This data is essentially static, that is, it shows price spreads at a single point in time. However, we have interviewed buyers in major supermarkets, and some of the largest instant coffee producers in the world, and all confirm that the degree of differentiation in coffee blends and prices, in both the instant and roasted ground markets, has been growing significantly. They also anticipate that this process of differentiation will continue to expand in the future, and are indeed basing their marketing strategies on this expectation. In part this is because of the income elasticity of coffee such that, as incomes grow, so will the demand for differentiated and higher quality coffee (Table 3.3).

Table 3.3 Penetration of hot drinks by income group in the UK (% female housewives, 2000)

Social grade	Tea bags	Leaf tea	Instant coffee	Ground coffee
AB	94	20	91	52
C1	94	15	91	37
C2	96	12	93	24
D	94	14	91	18
E	93	18	86	18

Source: Key Note 2000

3.2 What is the character of taste?

Given this increasing differentiation in all major product groupings in the coffee value chain, what factors characterise 'taste'? Is it possible here to distinguish 'organoleptic' factors which are intrinsic to coffee varieties?

Taste is of course a complex phenomenon, and is characterised by significant personal and cultural differences. But underlying the variety of coffee observed by the Nestlé vice-president (*see the Introductory chapter*) is a large number of factors which consumers recognise in controlled testing. A rigorous study of consumer tastes was conducted in 8 different European countries, using 11 panels and 16 varieties of coffee. In each country a sample of unskilled consumers was identified, and identical procedures were utilised. 'The most frequently mentioned attributes were bitter taste, burnt flavour, acid taste, astringent, earthy, caramel, woody, floral and fruity flavours and sweet taste ... The terms body mouthfeed, chemical flavour, chocolate flavour, grass flavour, rancid flavour, rubber flavour, salt taste, malty flavour, roast flavour, smoky flavour, spicy flavour and tobacco flavour were [also widely recognised].' (European

Sensory Network 1996: 67). These more commonly recognised attributes clustered from a total number of 148 different taste factors. On this basis, a total of 13 attributes were identified as being core constituents of continent-wide tastes (ibid: Table 5.6, p 93). (We provide a glossary of taste terms in Appendix 1.)

In addition to these organoleptic factors, coffee tastes are also increasingly defined in 'positional good' terms, as they are, for example, in the case of bottled mineral waters. Here, the act of consumption also defines the social position of the consumer, who not only buys a product for its intrinsic properties, but also for the image which the conspicuous consumption provides. This is of course the primary factor upon which advertising plays. But it also affects the social context in which consumption occurs. Purchasing coffee in an upmarket coffee bar not only buys a distinctive refreshment and a rest from the hustle and bustle of urban life, but it can also help the consumer to position him/herself in the crush of other consumers. Thus, as one UK coffee house executive puts it, 'gourmet coffees require not only good taste but "a good story" '. Employees in the coffee houses are referred to as '*baristas*' or '*el mano*' and work in 'the theatre of actually doing it'. The coffee house makes a point of employing 'attractive foreigners', all of whom pass through two-day residential courses at three UK training sites.

These different factors have important implications for the distribution of surplus in the coffee value chain, as we shall see below. In particular, insofar as coffee tastes are defined by environmentally determined organoleptic factors, they can be traced back to specific producers of raw beans. But insofar as they reflect the positional good attributes of taste, they may relate more directly to the efforts of blenders and marketing firms.

Keeping the focus on intrinsic organoleptic factors for the moment, what determines the attributes which define the taste of the final product?

3.3 The determinants of coffee taste and quality

Nine sets of factors are widely recognised as affecting the 'quality' of coffee:[11] species; cultivars; climate and altitude; soil; cultivation, harvesting and ex-farm processing; transit; roasting; retailing; and the means of coffee preparation.

Species

As we have seen in Chapter 2, although there are between 25 and 100 species in the genus *Coffea*, only two (*C. arabica* and *C. robusta*) are grown commercially. While *C. arabica* produces the best tasting coffees and *C. robusta* plants produce low quality beans with harsh, dry, astringent flavours, the latter can be grown at altitudes below 1000 m, have a higher yield and are more resistant to disease.

[11] Amongst other sources, see www.coffeeresearch.org, and Illy (1980).

Cultivar

The cultivar used to produce an 'estate's' coffee determines the basis of taste in a similar way to the grape variety for wine.[12]

Climate and altitude

Altitude affects the flowering period of the plants and the growth rate of the cherries. High-grown slow maturing cherries yield richer and better quality coffee. There is a direct and positive relationship between extremes of daytime and night-time temperatures and coffee quality.

Soil

The soil type and quality determine the 'oligo' elements in the beans. These elements are involved in the roasting process when the bean's bitter chlorogenic acids react to form the pleasant acidic coffee flavours. Some of the best coffees are grown on rich volcanic soils. As there is great variety in soil types and composition, coffee flavour has a similar variation.

Cultivation, harvesting and ex-farm processing

There are a range of farm practices which affect the quality of the bean. Irrigation helps to reduce stress in the plant, as does the degree of shade during growing. Hand picking and stripping is key since it allows beans to be used only when they are ripe, whereas mechanical harvesting is indiscriminate. This selectivity also applies during the ex-farm processing stage, as does the extent to which the washed beans are sun- or mechanically-dried. But it is also important that care be taken during the processing stage to avoid damaging the bean, to control the acidity of the water used and the heat and speed of the drying process, that bacteria are inhibited during the fermentation process, and that bean death and fungal and bacterial infection are minimised during drying.

Transport

The taste of the coffee can be heavily influenced by the bag in which it is transported, as well as the degree of ventilation during transit.

Roasting

A key determinant of taste during roasting is the extent to which the coffee comprises a number of different beans (that is, it is a blend), or whether it is a 'single-origin' or 'limited origin' bean. Many roasters 'engineer' distinctive tastes, through specific tweaks to roasting, grinding, storage and preparation. As we have seen, companies such as Starbucks deliberately char their product to ensure that the taste pushes its way through the milk-based products which their customers prefer (hence the acronym 'Charbucks' in the industry). But each roaster will have its distinctive 'footprint': Nestlé, for example, adds

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[12] For a list of cultivars and environmental conditions, see www.coffeeresearch.org/agriculture/varietals.html

a small dose of coffee essence just before the jar is sealed to make the instant coffee seem 'fresh' when it is first opened.

Retailing

Coffee beans have a virtually unlimited shelf life (as long as they are kept free from fungal infection). But once roasted, shelf life becomes more important. Roasted beans have a shelf life of two weeks, but vacuum and valve packs have increased storage life to about a year. Instant coffee has a longer shelf life of several years. However, experts insist that coffee begins to lose its flavour as soon as it is roasted, whatever the method of storage.

Coffee preparation

A critical factor affecting the quality of coffee and distinguishing it from products such as wine and mineral water is that the method of final preparation has an important influence over the final taste. This is determined by factors such as the nature of water utilised (the European Sensory Network therefore used Evian to neutralise the impact of this factor), the temperature of the water (coffee should not be made with boiling water), the type of milk (a special 'coffee milk' is being produced in Norway) and the length of the brewing process. Companies such as Nestlé are therefore seizing on this factor by marketing espresso machines; this is essential if they are to move into more discriminating roasted ground and single-origin markets since it ensures the consistency of product which underlies their global brand names.

3.4 Brands and blends versus single-origin coffees

Drawing these various strands together, there are unambiguous signs of growing differentiation in the coffee market. This shows up in the instant market, in the roasted ground market, in the growth of more up-market coffee houses, and in all of the major markets. Before going on to discuss the extent to which this differentiation is showing up in price spreads to different links in the coffee value chain (Chapter 4), it is helpful to draw the discussion together by distinguishing four major clusters of 'quality' characteristics.

The first of these is the *brand*. This is the name which defines an image, a 'position' and, very importantly, a guarantee of consistency to the customer. As we have seen, although Nescafé, for example, will have a different blend for its coffee in different markets (even within a single country), the customer is assured of the consistency of its product in each of these markets. Firms spend significant sums on branding. In the UK in 1999, advertising expenditure was £47 million, of which 52 per cent was Nestlé, 27 per cent Kenco and 11 per cent Douwe Egberts (Key Note 2000). The major global roasters spend approximately 15 per cent of sales on marketing (Interviews).

The consistency delivered by a brand is not the same as the subtleties of taste which an informed coffee drinker might recognise. This will be affected by the nature of the *blend* provided. In almost all cases, the major coffee branders will sell blends of mixed beans, whether these be in instant or roasted ground form. In some respects these blends are produced in order to balance the taste of different types of beans, each of which may only provide a spectrum of the taste characteristics that most consumers are

said to prefer. The major branding companies insist that this is a necessary condition for marketing coffee. On the other hand, blends perform another vital function. They allow the branders to assemble a product from a portfolio of substitutable beans. This protects them from shortages (due to environmental or political factors), poor quality crops in particular years and, critically, from price variations. The closer their blends are to a recognisable specific coffee input, the more difficult the brander will find it to minimise costs by substituting low-cost for high-cost beans.

The third cluster of coffee 'quality' is that which arises from the *intrinsic characteristics* of specific coffee varieties, soils, climates and farming practices. These are referred to as 'single-origin coffees'. A nuanced coffee palate will be able to recognise these variations, just as with wine. There is no intrinsic reason why 'estate coffee' should not be consumed in the same way that a discriminating wine consumer will favour a specific estate wine.

The fourth and final cluster of factors affecting 'quality', which distinguishes coffee, for example, from mineral water and wine (where 'consumption technology' is less important), lies in the hands of the *consumer*. How the coffee is prepared – the water used, the temperature of the water, the length of brewing, the strength of mix – plays a major role in the taste of the final product.

4 Who gains in the coffee value chain?

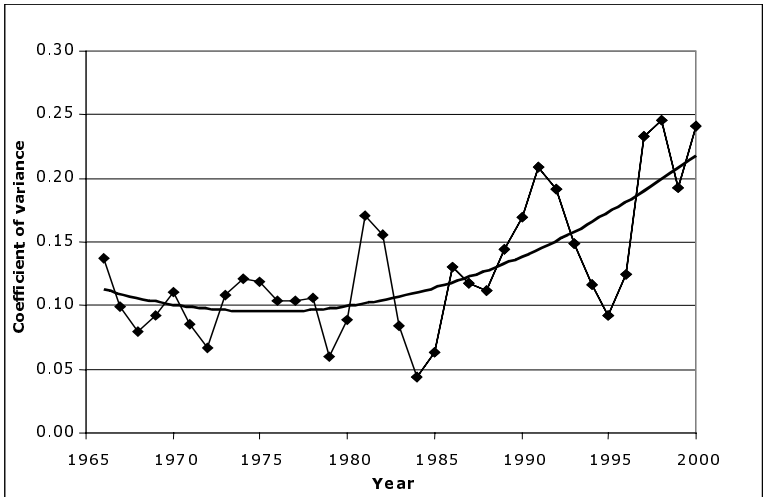
Final coffee product markets are thus becoming increasingly differentiated as consumers become more aware of the variety of tastes that are available. In this chapter we address two questions. The first is whether this increasing variety in final product markets is reflected in prices, and if so, how far down the value chain is this price spread reflected? And secondly, a related but broader question, is how are the incomes accruing in the coffee value chain distributed amongst the chain's different participants?

4.1 How far down the value chain is coffee decommodification going?

Given the observed (and growing) differentiation in final product markets, how much of this is finding its way back down the value chain? Figure 4.1 shows the spread of prices between the four major types of coffee traded on the New York Coffee Exchange.[13] It plots the (parabolic) slope of the coefficient of variance in these coffee prices between 1965 and 2000. (The coefficient of variance is the standard deviation over the mean; the larger its value, the higher the variation in the prices of different types of coffee.) The slope of this line has significantly increased over the past decade. In other words, whilst the price spread in global markets was essentially static between 1965 and 1985, it has grown rapidly, at an increasing pace, since then. From this it is evident that as final product markets have begun to differentiate and to display a greater degree of price variation, so too has the price of coffee traded on global markets.

[13] The calculations in Figures 4.1 and 4.2 utilise two-year moving averages to iron out annual price fluctuations.

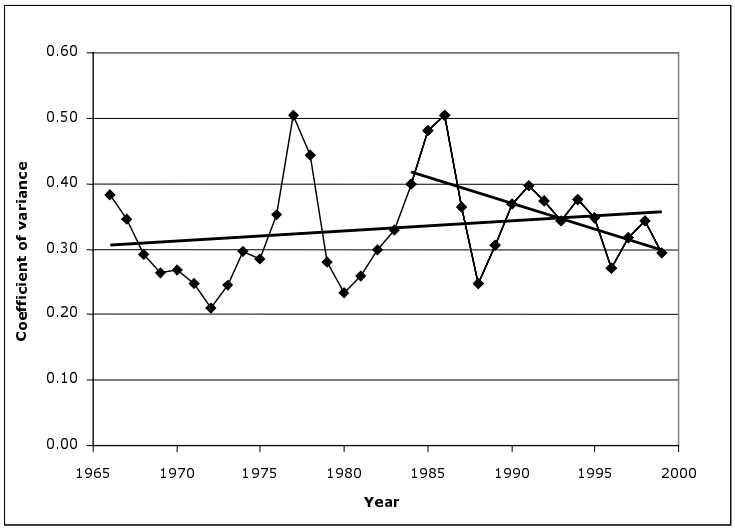
Figure 4.1 Coefficient of variance: global bean prices (two-year moving average)



Source: Calculated from ICO data

But is this growing differentiation of coffee prices – in final product markets and as traded in global commodity markets – also reflected in a similar process of price differentiation to farmers, reflecting the quality of different types of coffee? Figure 4.2, reflecting the two-year moving average prices paid to producers in the ten major exporting economies, shows that the answer to this question is mixed. On the one hand, in 1999 the absolute value of the coefficient of variance at the producer price level was not dissimilar to that in global commodity markets. But on the other hand, the *direction of change* – which is the phenomenon which we are exploring – indicates that the spread of coffee prices paid to producers since 1985 has *fallen* in the same period during which it was rising on the New York Coffee Exchange. This suggests that just as final consumers and global traders are beginning to pay more for better quality coffees, farmers are experiencing few of these benefits. This macro-level data analysis is confirmed by micro-level observations in Tanzania (Ponte 2001: 22).

Figure 4.2 Coefficient of variance: producer prices (two-year moving average)



Source: Calculated from ICO data

4.2 Spreading the gains?

This asymmetry in the way in which the increasingly differentiated final coffee market is filtering down in the prices accruing to different parties in the value chain allows us to address the question of how the gains from coffee production are being spread. In principle, value chain analysis allows us to chart this spread in a number of different dimensions (Kaplinsky and Morris 2001), including between the following:

- different links in the chain
- different countries (producing and consuming)
- different classes (employers and employees)
- different types of producers (large and small farms and firms)
- different regions
- different genders and ethnic groups.

At this stage our data does not allow us to provide a comprehensive overview of these distributional issues. But we are able to throw some light on the complex ways in which the gains in the coffee value chain are being spread between the first two dimensions of inequality, that is between links and countries.[14]

Distribution between different links in the chain

Seven major links in the coffee value chain can be identified: these are the farmers, farm-level processing, export agents, international transport, global coffee traders, coffee roasters and the retailers. (We have excluded from this the coffee-house sector. If included, it would drown out the participation of other links in the chain since, as we saw in Figure 3.1, the coffee content of final products in this market is less than 6 per cent.)

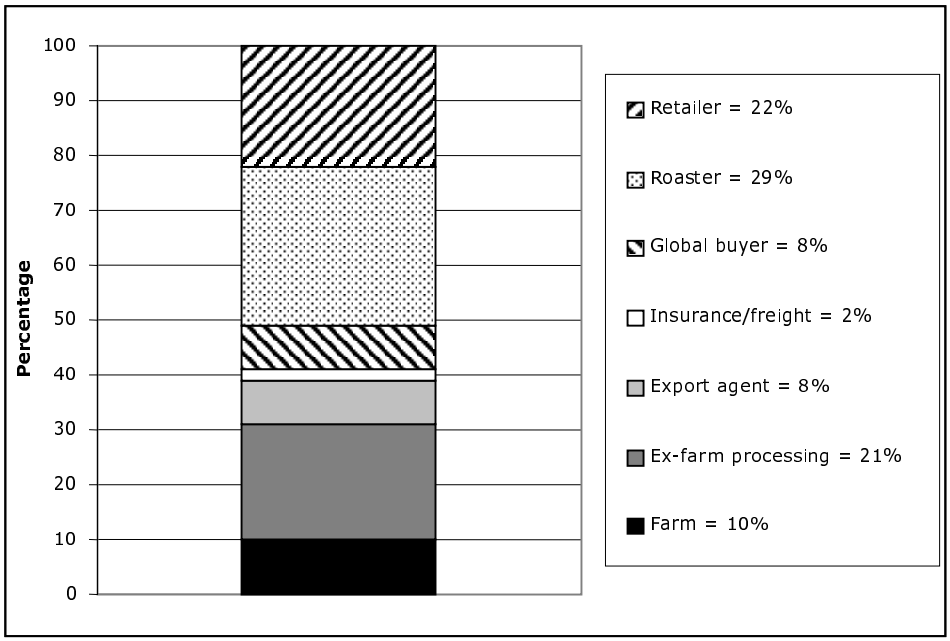
Figure 4.3 displays how the share of final retail price was distributed between these links in the chain in the mid-1990s. The bar chart is constructed for the dry-cherry process, where on-farm processing is minimal. If the wet-process is used, on-farm processing costs increase at the expense of off-farm processing. However, in both routes, the value of the bean available for sale is constant, at about 30 per cent of the final product price.

From this data it is evident that the roasters receive almost one-third of the final retail price. The post-farm processors and the retailers receive about 20 per cent each, and the balance is spread between

[14] Talbot (1997a) also provides an illuminating analysis of the functional distribution of income (also including between growers and the state [through the use of export taxes in the 1970s]), and a less illuminating discussion of the functional distribution of income in the US coffee processing sector.

other links in the chain. The farm activity itself only accounted for 10 per cent of total product price in the mid-1990s, and this had fallen to 7 per cent in 2001 (Oxfam 2001).

Figure 4.3 Share of final sales value accruing to different links in the coffee value chain (1994)



Source: Calculated from data supplied by M. Wheeler reflecting the cost structure in 1994

But this share of total sales value does not tell us anything about the relative incomes which these returns support. For example, the numbers of people involved in farming exceed 25 million, and they only receive 10 per cent or less of total returns. By contrast, the much smaller numbers involved in firms buying coffee at a global scale will receive almost the same share. Roasters may account for almost one-third of final product prices, but their operations involve very capital-intensive technologies and they invest significant sums in marketing. Retailers, too, absorb a high proportion of final product prices, yet have extensive working capital costs, invest heavily in marketing, and are labour intensive in nature.

So it is important to identify the profitability, as a ratio of capital employed, rather than the share of total revenue if we are to be able to say anything sensible about the spread of gains between different links in the coffee value chain. This is difficult for two major reasons. First, most coffee is produced by small farmers, whose records cannot be accessed. And secondly, both the global roasting companies and the global coffee trading companies participate in a number of different product markets, as do the supermarkets. They do not distinguish coffee from other products in their product portfolios, so that it is not possible to identify the profitability of their coffee operations.

Despite these limitations it is possible to draw the following conclusions:

- Clearly, incomes are higher in the importing, roasting and retailing links than they are in the growing and coffee processing stages, even if account is taken of different costs of living (for example, by using PPP $ rates). This is evidenced by the incomes which are supported. In May 2001, almost no coffee farmers in the world were able to cover their production costs, even when labour was costed at near to zero. By contrast, in most of the roasting, trading and retail activities in the major consuming countries, minimum incomes exceed $15,000 per year. White collar incomes are much higher than these, and many traders can earn more than $100,000 annually.
- The profit rates of entrepreneurs in these activities are more difficult to assess. There is a widespread prejudice that retailers appropriate most of the surplus which is generated in the chain. However, a recent UK Monopolies and Mergers Commission Report (1991) on the retail sector distinguished between the (high) absolute levels of profit earned (on very large scale operations) and their rate of profit (which was not high, due to the competitiveness of this sector). Similarly, an earlier UK Monopolies and Mergers Commission Report into why soluble coffee prices did not respond downwards to a fall in green bean prices in the early 1990s concluded that '[i]n our view ... the soluble coffee market is characterised by an exceptionally wide range of price and quality … and by effective competition both from other brands of coffee, and from retailers' own-label coffee' (MMC 1991: 1).
- The unknown factor is the profitability of global coffee traders. Here the roasters and retailers both believe that profit rates are abnormally high. The views of Nestlé, as evidenced in a publication which it commissioned and disseminated, are particularly striking, not least because of their criticism of the functioning of global coffee markets and the implicit criticism of the role played by global coffee traders:

> disagreements between the producing countries themselves on the one side and between the producing and importing countries on the other, have pushed the market back to one *governed by the primitive laws of supply and demand* [emphasis added]. Nothing that has happened between 1989 and 1993 has had any effect in correcting the situation, and the international coffee price has continued on its merry way to decline and ruin. Producer countries have pushed sales with a vengeance, in spite of the lower prices, in a keen competitive effort among themselves to win market share, and to maintain or even increase their foreign currency income. With only a minimal increase in coffee consumption on the other side to balance this, green coffee reserves in the importing countries have automatically increased, further accentuating the downward trend in the price paid to the producers. And, finally, in spite of falling prices, coffee production worldwide has not declined. If anything, in key countries such as Colombia and Indonesia, it has even increased. (Montavon 1994: 16–17. Published by Nestlé with an introduction by their CEO)

> It is significant that the 'buyers' and 'sellers' on the commodities market are mainly speculators, who invest astronomic amounts of money every day in the futures market. They 'play' the market in the hope of making a profit. Their 'purchase' is a simple contract on paper which they own for a short period of time until they decide to sell. In comparison to this type of 'paper' sales of coffee, contracts for the 'physical' sale of purchases of coffee are few and far between. This is amply demonstrated, if demonstration is required, by a brief analysis of the operations in 1992 on the New York Coffee, Sugar and Cocoa Exchange. Over a year, a grand total of 621 million 60 kg bags were traded. In the same period, total world exports mounted to 55 million bags – only 8.8% of the 621 million bags traded on the Exchange….[15] Without a doubt, such speculation determines to a large degree the international coffee price, and in consequence the price paid to the producer. (ibid: 20)

In conclusion, therefore, what can be said about the spread of gains between the links in the coffee value chain? It would appear that *profit rates*, socially defined by the context in which the various firms operate, are not extravagantly high in either the retailing or roasting links in the chain (although they may be in coffee trading, which is a subject for future analysis). They are, however, much higher than the (negative) rates being earned in farming. But this is only one measure of distribution. Another measure is the incomes which are supported in each link in the chain, and here there is unambiguous evidence of an unequal spreading of the gains between the different links in the coffee value chain.

Distribution between different countries

A second distributional characteristic is that which emerges between different countries: in this case developing countries who export coffee beans, and the high-income countries who import and roast the beans. (Almost no roasting for export occurs in developing countries. This is partly because, once roasted, coffee has a shorter shelf life. Moreover, instant coffee production is capital intensive. But, most important are protectionist measures, since duties are higher on processed coffee. An attempt by Brazilian producers to enter this market in the early 1970s was quashed by a battery of protectionist measures in the USA [Talbot 1997a].)

Figure 4.4 shows the inter-country distribution of coffee proceeds, from which it is evident that since 1985 a growing share of total incomes in this chain has accrued to economic agents in the importing countries. A particularly striking aspect of this data is that the margins which formerly went to intermediaries in the producing countries, notably marketing boards, have been eroded. In large part this follows from the pressure emanating from multilateral and bilateral agencies designed to eliminate what were seen to be surplus-extracting and parasitic intermediaries. However, not only does recent evidence suggest that growers are suffering from the absence of the extension which these marketing boards once

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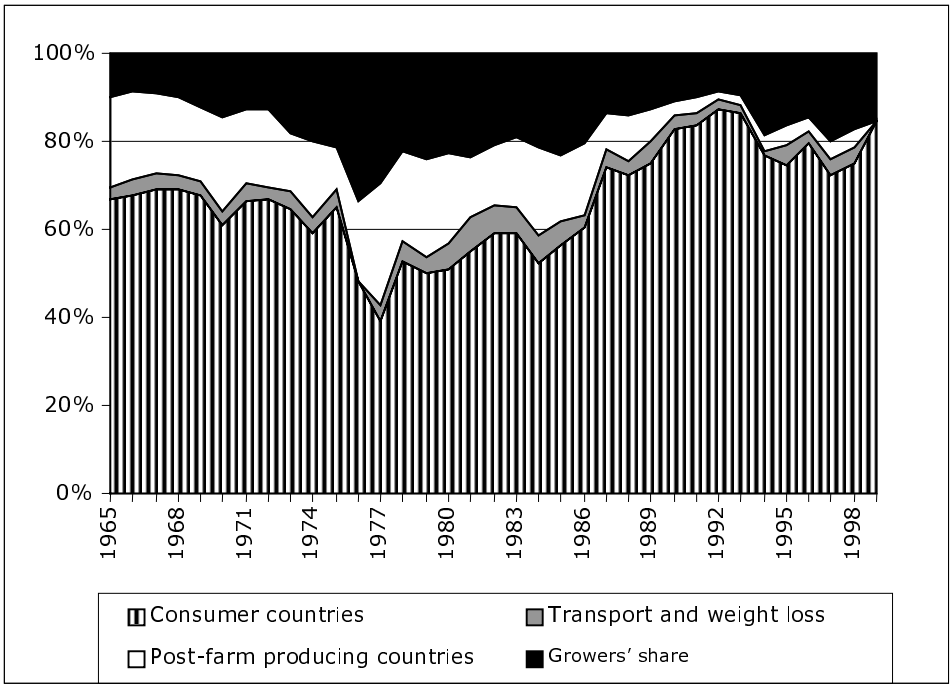
[15] This ratio of 12:1 in 1992 represented a sharp rise in speculative activities, since the 1980 ratio was only 4:1 (van Dijk *et al.* 1998: 45, cited in Ponte 2001: 12).

provided (Gibbon 2001), but more importantly that instead of their share having gone to the producers, it has almost entirely been appropriated by chain participants residing in the high-income consuming countries.

Figure 4.4 Distribution of income: share of final retail price



Source: Update of data in Talbot (1997b)

A major reason for the inter-country distributional outcome observed in Figure 4.4 is the producing structure in global coffee production. Seventy per cent of global coffee is grown on farms of less than five hectares. The abolition of the marketing boards proposed (or perhaps, more accurately, imposed) by multilateral agencies on developing countries through structural adjustment programmes has meant that producers sell atomistically into commodity markets. It has also meant that one form of governance, agricultural extension, has been removed from the bottom end of the chain. These atomistic producers lack the capacity to combine (as do their governments, although the reasons for this are more problematic).

Contrast this with the market power at the importing end of the value chain. As Table 4.1 shows, the top five importers account for over 40 per cent of total global trade, and the top ten for more than 60 per cent.[16] Moreover, there is evidence that in some producing countries, buyers collude to ensure that they do not compete with each other when purchasing at the farm/cooperative level, and hence push up prices

[16] Concentration has intensified since 1995. In 1998, the top five companies accounted for 46 per cent of total global imports (Ponte 2001), up from 41.5 per cent in 1995.

(Interviews). So powerful are these trading companies in the coffee market, that even the largest retailers and roasters source their beans from them. As Morisset observes, '[s]urprisingly, policymakers, economists, and consumers seem to remain largely unaware of these companies, even though they are often bigger than developing economies and play a determinant role in most commodity transactions worldwide' (Morisset 1998: 520).[17]

Even greater levels of concentration are found at the roasting link in the chain (Table 4.2), as well as in the retailing link. For example, in the UK, Nestlé has a market share of 55 per cent and Kraft has 25 per cent of the instant market; in roasted ground coffee, one supermarket's own brand is estimated to account for more than one-third of all retail sales; and in the coffee house market, Starbucks and Costa Coffee account for 43 per cent of total sales (*Daily Express*, 9 January 2001). The pattern in Europe is not dissimilar. In France and Italy the top five roasting companies account for 90 per cent and 70 per cent of their respective markets, and for Europe as a whole, the top five companies produced 52 per cent of the coffee in 1995, increasing to 58 per cent three years later (Wheeler 1998).

Table 4.1 Market concentration in global coffee bean trade

	Turnover in millions of bags			
Company	1989	1991	1993	1995
Rothfos	9.0	9.0	12.0	9.0
E.D. & F. Mann	5.0	4.5	6.0	5.0
Volcafe	4.0	4.0	7.0	6.5
Cargill	4.0	4.0	5.5	3.5
Aron	4.0	4.5	3.5	3.5
World total	71.4	70.6	72.6	66.3
Total of top 5	26.0	26.0	34.0	27.5
% World total:				
Top 5 firms	36.4	36.8	46.8	41.5
Top 10 firms				62.2

Source: Wheeler 1998

[17] Morisset also observes that the behaviour of the global coffee market is not dissimilar to other commodity markets in that prices in final markets are sticky downwards when commodity prices fall, but flexible upwards when commodity prices rise. It is not clear whether this generalised trend reflects the same causal factors (the growing asymmetry of concentration in buying and selling markets) in these various commodity markets.

Table 4.2 Market concentration in European roasting sector

	1995	1995	1998	1998
Company	**Millions of bags**	**% Euro market**	**Millions of bags**	**% Euro market**
Kraft General Foods Jacobs Suchard (US/German)	8	19.4	7.5	19.1
Nestlé (Swiss)	5.2	12.6	5.5	14.0
Douwe Egberts (Dutch)	4.5	10.9	4.5	11.5
Tchibo (German)	2	4.9	3.8	9.5
Eduscho (German)	1.8	4.4		
Lavazza (Italian)			1.7	4.3
Top 5 firms	21.5	52.2	23	58.4
Top 10 firms		67.8		

Source: Wheeler (1998) and updated

5 Are alternative distributional outcomes possible?

Crudely speaking, it is possible to bifurcate the global coffee value chain between producing countries and consuming countries. In the former group, returns show a long-run decline in real terms, and declining terms of trade. In the very recent period (2000–1), producer prices have fallen in nominal terms to their lowest level since data became available in 1963, resulting in widespread poverty and emigration to urban areas. Prices being received at the farm level have fallen below the cost of non-labour inputs in many cases. A particularly worrying element is that much of global coffee production occurs in regions of intense conflict and/or drug growing (notably Central America and East Africa). If these farmers are unable to realise a legitimate income from coffee, they are likely to either diversify into cocaine or to revert to armed warfare.

By contrast, in the richer countries, incomes in the coffee value chain are holding up. Trading companies, roasters and retailers are able to sustain income growth amongst their employees and have remained profitable throughout the past four decades of falling input prices. Some companies (such as Nestlé) have been able to sustain profit margins which are above industry averages, and it is also possible that the coffee trading companies may have been able to sustain a relatively high rate of profit over a long period of time. There is little sign that consumers have gained from falling coffee bean prices, but this is not dissimilar to other primary materials (Morisset 1998).

In the face of these developments what solutions can be identified which might realise a different outcome, and one in which a greater share of returns accrue to the growers? A number of possible developments might realise this outcome; they are not exclusive, but require different policy responses.

The first is almost certainly beyond human control and planning and arises from the possibility that natural and environmental factors will intervene to restrict supplies. These exogenously-determined events – usually a frost or a drought in a major producing country such as Brazil – have punctuated the global coffee market at odd intervals (particularly in the late 1970s), leading to a sharp rise in prices for a three-

to-four year period until new coffee trees planted at the time of high prices bear fruit and once again flood the market.

The second price-rising factor is subject to policy interventions and reflects attempts to withhold coffee from the global market. The primary instrument here is an agreement between producers to restrict coffee supplies. This worked most effectively during 1965–75, and for a long time the various attempts at controlling supplies had the agreement of the consuming countries as well (until the collapse of the International Coffee Agreement [ICA] economic provisions in 1989 and subsequent US withdrawal from the ICO in 1993). But the extent of coffee availability and the entrance of new producers without historical quotas (notably Vietnam, whose exports have grown from virtually nothing ten years back to 11 per cent of global trade) has made it difficult to sustain these attempts at cartelisation. An interesting feature of these cartels is that the fissures tend to show themselves in good times as well as bad, as producers take the opportunity of high prices to evade quota limits or to sell on the black market. In May 2001 the World Coffee Council met yet again to try and reach agreement on limiting coffee releases, but this plan has little chance of working effectively.

An additional reason why these attempts at cartelisation do not work is the role played by multilateral agencies such as the World Bank, which has, for example, promoted coffee production in Vietnam. Coffee roasters have also played a role in promoting new suppliers. For example, in an attempt to enter the Chinese market (China has historically been a tea-drinking country, and hence is considered 'ripe' for instant coffee), Nestlé has aided coffee production by creating the first coffee nurseries ('from which they distributed young plants of the right varieties, either free of charge or at cost price' (Montavon 1997: 26)), and defining what fertilisers and pesticides farmers should use. Chinese coffee production in the early 1980s was a mere 1,000 tonnes, but was expected to rise to 10,000 tonnes in 2000.

A variant of this supply-constraining strategy is the physical destruction of coffee stocks, a measure proposed by Oxfam in May 2001. Their plan includes:

- the destruction of 15 million bags of low grade coffee which will cost $250 million, to be funded by a windfall tax on roasters;
- the retention of 20 per cent of global exports for three years;
- bringing an end to coffee expansion programmes, by multi- and bilateral aid programmes and by governments;
- the promotion of labour and environmental standards;
- assisting coffee farmers to diversify.

This is an ambitious programme and strikes at the important issue of limiting coffee supplies. Its unique and innovative features are the attempt to promote the physical destruction of crops, and to fund this through a windfall tax on roasters. However, it is unlikely that this tax will be accepted by the roasters, and the attempt to limit coffee exports suffers from the same drawbacks as previous attempts at cartelisation (*see above*).

If neither of these supply-limiting factors is likely to have a big impact on coffee prices, what will happen? In the short-to-medium run (three to five years) it is likely that producer prices will revive somewhat. The reason for this is that there are already uncoordinated occurrences of crop destruction: for example, in Central America farmers are burning coffee beans for fuel. Moreover, low prices are forcing farmers off the land and this, too, will limit supplies. But even so, at best, all this will do will be to spike coffee prices marginally to cover the marginal costs of production in the low-cost countries, and the likely entry of China into global markets suggests that this floor may be lower than that which has prevailed in the past. So in developmental terms, the combination of free market forces (referred to in a Nestlé study as 'a market … governed by the primitive laws of supply and demand', *see above*) and supply programmes backed by governments and aid agencies is not a particularly attractive option.

More attractive are attempts to educate high-income country consumers about the ethics of consumption. The FairTrade movement, through companies such as Café Direct, has been playing an increasingly important role. It has appealed directly to the conscience of consumers, invoking them to pay higher prices for their coffee. The current world market prices (October 2001) range from US cents 62.88/lb for Colombian milds, to just US cents 23.24/lb for robustas. This translates into a farm gate price for arabica of less than US$0.40/lb and as little as US cents 23/lb for robusta growers.[18] By contrast FairTrade's guaranteed minimum price is $1.26/lb for arabicas and $1.06/lb for robustas; if market prices are higher than this, the farmer is paid a 10 per cent premium (and a 15 per cent premium for organic coffee).[19]

FairTrade products have been surprisingly successful. In 1998, FairTrade-labelled coffee accounted for 1.6 per cent of sales; in some countries such as Switzerland it has been as high as 3 per cent (Table 5.1). As the ethical consumer market grows this provides an important floor to production.

A final policy option available to enhance producer incomes arises directly out of the analysis which we have conducted in this paper. It is based on the premise that as consumer tastes grow in sophistication, coffee markets will begin to segment further, and the price spread will continue to grow. We have seen that so far the gains to this price spread have accrued to retailers, roasters and traders, and the trick is to find a way to ensure that they filter down to producers. For this to happen, it is necessary that coffee tastes grow to reflect the location of origin, rather than the blend of a particular brand. Whether this will occur depends upon how consumers come to recognise 'quality' as their palates (and their 'positional' consumption) become more nuanced. Figure 5.1 shows the trade-off between the two major participating groups in this value chain from different determinants of taste. The more taste is defined by intrinsic organoleptic factors, the more likely the developing country growers will benefit from more discriminating

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[18] Farmers will continue selling coffee at below cost, partly because once the crop is planted they are interested only in marginal costs, and partly to sustain their coffee production in the hope that prices will rise in the future. However, the destruction of beans in various countries, and their use as ballast for fires in 2001, suggests that a price of less than $0.45 is below even the marginal costs of harvesting the beans.

[19] It is not clear to what extent this FairTrade price premium is due to higher final consumer prices or to the exclusion of global and/or local traders from this value chain.

consumer tastes. On the other hand, the greater the role played by brands in determining 'quality', the greater the benefit reaped by the roasters and retailers located in the high-income consuming countries.

Table 5.1 Share of FairTrade coffees in total market in 2000 (%)

	Share of FairTrade coffee
Austria	0.7
Belgium	1.0
Denmark	1.8
Finland	0.3
France	0.1
Germany	1.0
Ireland	0.5
Italy	0.1
Luxembourg	3.0
Netherlands	2.7
Norway	0.3
Sweden	0.8
Switzerland	3.0
UK	1.5

Source: Personal communication, Max Havalar, FairTrade Labelling Organisation

Figure 5.1 Who gains from different determinants of coffee taste?

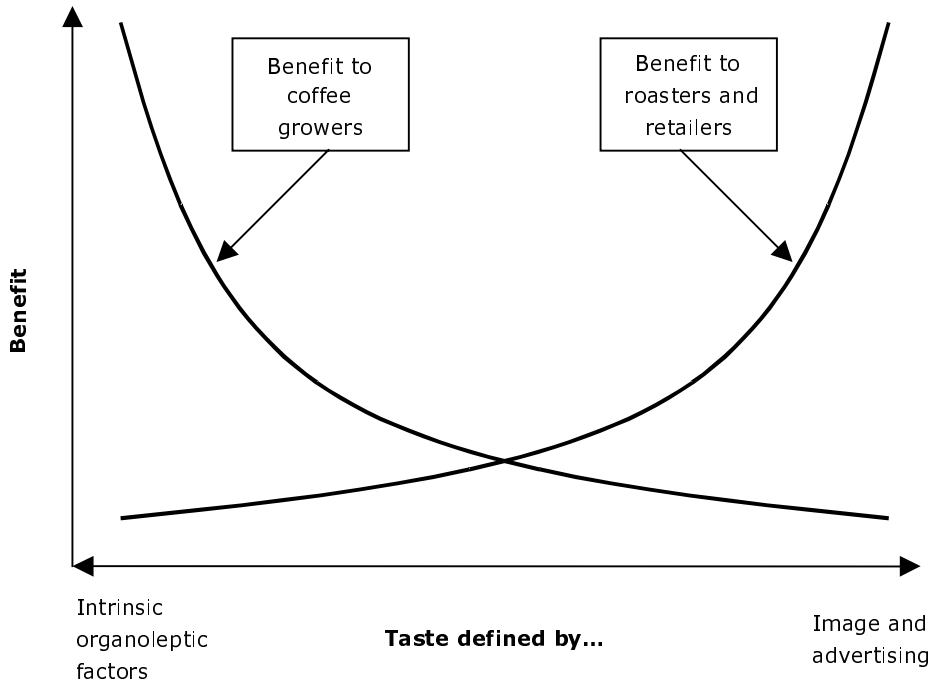

Table 5.2 summarises the clusters of factors determining coffee 'quality'. It distinguishes between four clusters of quality determinants: brands, blends, location of origin, and method of preparation. Each of these advantages producers and consumers in different ways; each is delivered by different policy actions. The key conclusions are that:

- Consumers gain from one of three attributes: the social status which 'quality' coffee provides; the consistency offered by brands; and the intrinsic properties delivered by farming practices and cultivars.
- Roasters gain from brands and blends. They define the specific taste for the final consumer by explicitly diluting the power of specific coffee beans, and in so doing not only ensure consistent taste, but also minimise costs by allowing for the substitution of bean types.
- Farmers gain from the ability of consumers to recognise and appreciate the varied tastes provided by cultivars, soils, and farming and processing practices.

Table 5.2 The characteristics of four clusters of coffee quality

	Advantage to consumers	**Advantage to roasters and retailers**	**Advantage to growers**	**Delivered by**
Brands	Consistency of product Guarantee of minimum quality Identification with marketing image	Compensates for uneven quality and availability of beans Allows cost minimisation due to bean substitution	Increases final demand for coffee	Selection of beans Roasting process Advertising spend
Blends	Balances taste of different beans	Compensates for uneven quality and availability of beans Allows cost minimisation due to bean substitution	None, unless blends are country-specific	Selection of beans Roasting process
Single-origin coffees	Allows for nuanced appreciation of varieties of coffee	Little, since identifies customer with the farmer, not the roaster	Very high for qualifying farmers, particularly if specification goes to the estate level	Species; cultivars; climate and altitude; soil; cultivation, harvesting and ex-farm processing Marketing
Consumer practices	Allows for nuanced appreciation of varieties of coffee	A potential disadvantage since poor preparation can undermine coffee quality	A potential disadvantage since poor preparation can undermine coffee quality	Nature of inputs Practices in brewing

The key issue which lends itself to a development-focused policy agenda is how consumer tastes will evolve. One possibility is that this evolution of tastes will be a 'natural' process, as consumers gradually learn to appreciate the subtleties and nuances of coffee varieties. But this is unlikely: tastes are more likely to be moulded as customers are 'taught' to appreciate particular qualities. Left to market forces, the likely outcome is that tastes will be fashioned either as branded blends (the current pattern) or as generic blends ('Colombian coffee'). But the closer the consumer specification can get to the precise point of origin, ideally to the 'estate', the greater the likelihood of producers gaining a share of emerging product rents. For example, Jamaican Blue Mountain Coffee escaped the collapse in coffee prices in 2001. A representative of the Jamaican Coffee Industry Board observed 'Blue Mountain coffee prices are not subject to the factors of supply and demand that affect other commodities. The price is fixed.' (*Financial Times*, 18 October 2001).

A similar story can be told of developments in the European alcoholic drinks industry. During the 1960s, the producers of sparkling wine in the Champagne region of France took action to enforce intellectual property rights over the name 'Champagne', limiting it to grape growers resident in the Champagne region. More recently, in trade negotiations with South Africa, European negotiators exercised these 'geographical indicators' to prohibit South African producers using what were thought to be generic names such as 'ouzo' (reserved for Greek producers), 'grappa' (reserved for Italian producers) and 'port' (reserved for Portuguese producers). There is no legal reason why the same geographical indicators could not be used to allow specific coffee-growing regions or estates to register property rights over their coffees.[20] The key obstacle will lie in the enforcement of these property rights which are very costly to establish and can be difficult to enforce in developing country environments where smuggling is rife.

Who might promote such a policy outcome (for example, through television documentaries) which tries to mould consumer tastes to recognise the key importance of location of origin? Developing country producers, increasingly squeezed by falling prices, have a reduced capacity to do so. After 40 years of investment in a global advertising campaign featuring a mythical farmer 'Juan Valdéz', the Colombian Federation of Coffee Growers has retrenched 300 of its staff of 1,800 and has drastically cut its advertising budget, 'retiring' Señor Valdéz (*Financial Times*, 24 April 2001).

However, in the consuming countries we were surprised to find in our interviews a broad coalition of potential partners. These of course include the ICO, but they also comprise very large retail chains. One of these has commissioned market research which shows a lack of consumer knowledge: consumers don't know what they are buying; they don't know what to do with it to prepare a good cup of coffee; and they have difficulty in recognising the taste variety. In response this chain is re-laying its shelves, providing leaflets for customers, and introducing new microprocessor-controlled in-store blending and roasting equipment to allow consumers to tailor the product to meet their tastes. At least one of the very large UK coffee houses also believes it has much to gain from more discerning coffee palates and indeed one of

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[20] We are grateful to Paul Eden for his advice on this issue.

these houses already offers FairTrade coffee at a small price premium (of 5 per cent per cup).[21] (Whilst only a small mark-up on the price a consumer pays for a cup of coffee, this provides a significant mark-up to the grower.)

But, in addition to the blenders, who else might lose from this strategy of moulding tastes towards location of origin? Here we run into the perennial problem of oversupply of coffee. Those producers who are able to take advantage of differentiating coffee tastes – access to better soils, using organic farming, better cultivars and improved farming and processing techniques – will gain. However, it is an opportunity which is not open to everyone, since climate, altitude and soil all influence the taste of the final product. This will leave many 'outsiders'. But one of the key lessons emphasised in recent decades of globalisation is that not everyone gains in conditions of oversupply. For many, globalisation means a race to the bottom as producers compete with each other in markets where barriers to entry are low (Kaplinsky, Morris and Readman 2001). Coffee is no exception to this and insofar as some coffees remain a commodity, so they will be continually subject to the pressures of declining terms of trade.

[21] The fact that the coffee content in the final product is less than 6 per cent means that a 20 per cent increase in bean costs will have only a small impact on final product prices.

Appendix 1. Tasting terms

Acidity: Acidity is a desirable characteristic in coffee. It is the sensation of dryness that the coffee produces under the edges of your tongue and on the back of the palate. The role acidity plays in coffee is not unlike its role as related to the flavour of wine. It provides a sharp, bright, vibrant quality. Without sufficient acidity, the coffee will tend to taste flat. Acidity should not be confused with sourness, which is an unpleasant, negative flavour characteristic.

Aroma: Aroma is a sensation which is difficult to separate from flavour. Without our sense of smell, our only taste sensations would be: sweet, sour, salty and bitter. The aroma contributes to the flavours we discern on our palates. Subtle nuances, such as 'floral' or 'winy' characteristics, are derived from the aroma of the brewed coffee.

Body: Body is the feeling that the coffee has in your mouth. It is the viscosity, heaviness, thickness or richness that is perceived on the tongue. A good example of body would be that of the feeling of whole milk in your mouth, as compared to water. Your perception of the body of a coffee is related to the oils and solids extracted during brewing. Typically, Indonesian coffees will possess greater body than South and Central American coffees. If you are unsure of the level of body when comparing several coffees, try adding an equal amount of milk to each. Coffees with a heavier body will maintain more of their flavour when diluted.

Flavour: Flavour is the overall perception of the coffee in your mouth. Acidity, aroma and body are all components of flavour. It is the balance and homogenisation of these senses that create your overall perception of flavour. The following are typical flavour characteristics:

General flavour characteristics

Richness: refers to body and fullness

Complexity: the perception of multiple flavours

Balance: the satisfying presence of all the basic taste characteristics where no one overpowers another

Typical specific desirable flavour characteristics

Bright, Dry, Sharp or Snappy: (typical of Central American coffees)

Caramelly: candy-like or syrupy

Chocolaty: an aftertaste similar to unsweetened chocolate or vanilla

Delicate: a subtle flavour perceived on the tip of the tongue (typical of washed New Guinea arabica)

Earthy: a soily characteristic (typical of Sumatran coffees)

Fragrant: an aromatic characteristic ranging from floral to spicy

Fruity: an aromatic characteristic reminiscent of berries or citrus

Mellow: a round, smooth taste, typically lacking acid

Nutty: an aftertaste similar to roasted nuts

Spicy: a flavour and aroma reminiscent of spices

Sweet: free of harshness

Wildness: a gamey flavour which is not usually considered favourable but is typical of Ethiopian coffees

Winy: an aftertaste reminiscent of well-matured wine (typical of Kenyan and Yemeni coffees)

Typical specific undesirable flavour characteristics

Bitter: perceived on the back of the tongue, usually a result of over-roasting

Bland: neutral in flavour

Carbony: burnt charcoaly overtones

Dead: see 'flat'

Dirty: a mustiness reminiscent of eating dirt

Earthy: see 'dirty'

Flat: lack of acidity, aroma and aftertaste

Grassy: an aroma and flavour reminiscent of freshly cut lawn

Harsh: a caustic, clawing, raspy characteristic

Muddy: thick and dull

Musty: a slight stuffy or mouldy smell (not always a negative characteristic when in aged coffees)

Rioy: a starchy texture similar to water in which pasta has been cooked

Rough: a sensation on the tongue reminiscent of eating salt

Rubbery: an aroma and flavour reminiscent of burnt rubber (typically found only in dry-processed robustas)

Soft: see 'bland'

Sour: tart flavours reminiscent of unripe fruit

Thin: lacking acidity, typically a result of under-brewing

Turpeny: turpentine-like in flavour

Watery: a lack of body or viscosity in the mouth

Wild: gamey characteristics

Source: www.coffeeuniverse.com/university_taste.html

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