V

INTERNATIONAL TRADE, THE BALANCE OF PAYMENTS AND DEVELOPMENT

15

TRADE THEORY, TRADE POLICY AND ECONOMIC DEVELOPMENT

Introduction

In Chapter 14 we discussed the important role of foreign borrowing and foreign resources inflows in the development process. Using dual-gap analysis, it was shown that foreign borrowing can be used to bridge a domestic investment–savings gap or a foreign exchange gap, whichever is the larger. We saw that the policy issue is deciding how far borrowing should go without leading to unmanageable international debt.

The empirical evidence indicates a serious conflict in many poor countries between maintaining an adequate growth rate and a sustainable balance of payments on current account. The ultimate solution must lie in improving the balance of payments through trade and faster export growth.

In this chapter, we do a number of things. First, we discuss the general relation between trade and economic growth, and establish the precise nature of the benefits from trade, including the formation of customs unions and regional trade agreements (RTAs). The static and dynamic gains from trade are distinguished, and the role of trade as a vent for surplus commodities.

We go on to outline the enthusiasm for trade liberalization in the modern era, the way the process of trade liberalization is measured, and the empirical evidence of the impact of trade liberalization on export growth, import growth, the balance of payments, and overall economic performance of developing economies. There are separate sections on trade liberalization, poverty and domestic inequality, and on trade liberalization and international inequality.

The disadvantages of free trade for development are then explored. We examine critically the underlying assumptions of the comparative advantage doctrine and free trade theory, and ask whether developing countries might fare better in a more protected environment. This leads on to the theory of protection, the debate over import substitution versus export promotion, and the use of tariffs and subsidies as protective devices.

We then turn to the issues originally raised by the well-known Latin American economist Raúl Prebisch, concerning the terms of trade between primary commodities and manufactured goods and the balance of payments consequences of free trade for developing economies. The empirical evidence of trends and cycles in terms of trade of primary commodities and the case for international commodity agreements to stabilize the price of primary commodities are documented.

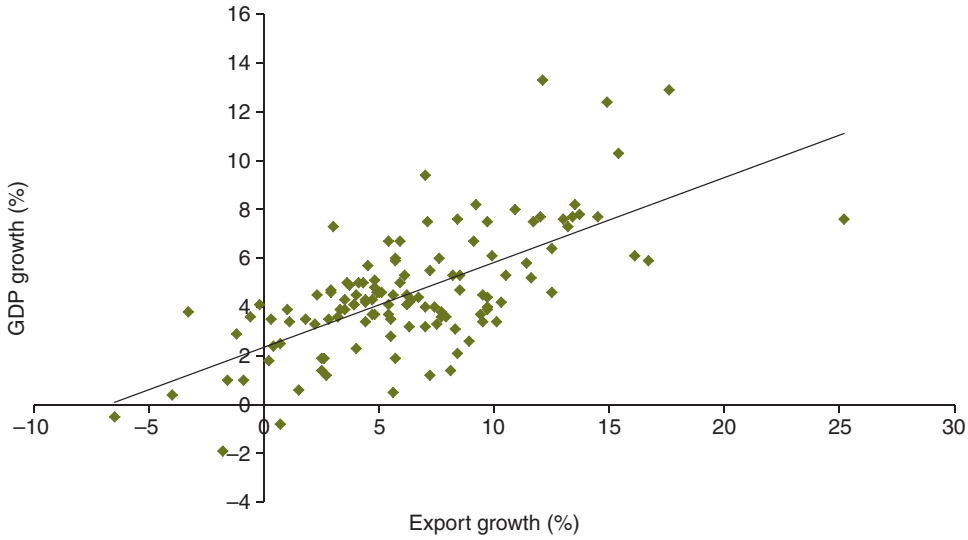
We conclude that what developing countries need is ‘fair trade’ not free trade, and that the slogan ‘trade not aid’ may be misleading from an economic point of view.

Trade and growth

The growth rates of individual developing countries correlate better with their export performance than with almost any other single economic indicator, and there is a strong correlation across countries between the growth of exports and the growth of GDP, as shown in Figure 15.1, taking 124 countries over the period 2000–14. For much of the period since 1950, the export performance of developing countries lagged behind that of developed industrial countries, with their share of world trade falling, but in recent years, there has been a reversal of fortunes for some developing countries as trade barriers have come down, and with a switch in the composition of exports towards manufactured goods.

Table 15.1 shows developing countries’ share of world manufacturing exports in 2013, distinguishing between resource-based (RB), low-tech (LT), medium-tech (MT) and high-tech (HT) exports. It shows how poorly low- and lower middle-income countries fare with regard to their

Figure 15.1 The relation between export growth and GDP growth across 124 countries, 2000–14



Source: Data from World Bank, 2015.

share of manufactured exports as a whole – only 6.4% of the total. The share of low-income countries in all types of manufactured exports is less than 1%. The Asian and Pacific region fares best, with 24.5% of total manufactured exports, and a 30.6% share of high-tech exports. Africa, by contrast, has a share of only 1.9% of high-tech exports. Latin America also fares relatively badly. The export trade of many poor countries, particularly in Africa, is still dominated by primary commodities.

Taking the developing countries together, however, it is not true that the world as a whole is neatly polarized into two camps: developing countries, producing and exporting *solely* primary products in exchange for manufactures from developed countries, and the developed world, producing and exporting *solely* manufactures in exchange for primary commodities from developing countries. In practice, a good deal of trade in both manufactures and primary products goes on among the developed and developing countries alike, with developed countries exporting substantial quantities of

Table 15.1 World market shares of manufactured exports by region and income level, 2013

	World market share (%)				
Region	**Total**	**RB**	**LT**	**MT**	**HT**
Asia and Pacific	24.5	15.9	38.7	18.1	30.6
Latin America	5.4	7.5	5.2	5.3	3.1
Africa	1.1	1.1	1.9	1.0	1.9
Low income	0.3	0.4	0.5	0.1	0.2
Lower middle income	6.1	8.9	8.0	3.5	6.1
Upper middle income	29.2	19.9	36.3	24.1	43.3
High income	64.4	70.8	55.2	72.3	50.4

Source: UNIDO, 2015.

primary commodities (especially temperate zone foodstuffs) and developing countries exporting a variety of manufactured goods. Developed countries, in fact, account for about 50% of the world's supply of primary products, and developing countries just over 30% of world trade in manufactures. In short, the distinction between developing and developed countries is not wholly synonymous with the distinction between primary producers and producers of manufactured goods. This needs to be borne in mind later when we discuss the terms of trade – the ratio of export to import prices. There is a distinction to be made between the terms of trade for developing and developed countries and the terms of trade for primary products and manufactured goods.

Historically, trade has acted as a powerful engine of growth, not only by contributing to a more efficient allocation of resources within countries, but also because it transmitted growth from one part of the world to another. In the nineteenth century, the demand in Europe, and in Britain in particular, for food and raw materials brought prosperity to countries such as Canada, Argentina, South Africa, Australia and New Zealand. As the demand for their commodities increased, investment in these countries also increased. Trade was mutually profitable. As Alfred Marshall (1890) wrote in the nineteenth century: '**the causes which determine the economic progress of nations belong to the study of international trade**'.

Not all countries benefited equally, however, and today the situation is somewhat different. Most world trade takes place in industrial commodities, in which many poor developing countries find it difficult to compete, and the demand for developing countries' traditional exports grows slowly relative to the demand for industrial goods. Except for spasmodic commodity booms, trade does not seem to work to the equal advantage of both sets of countries.

Three distinct factors have slowed the growth of developing countries' traditional exports:

1. The pattern of demand has shifted to types of manufactured goods with a relatively low import content of primary commodities.
2. Technological change has led to the development of synthetic substitutes for raw materials.
3. Developed countries have pursued protectionist policies that have retarded the growth of their imports of primary commodities and low value-added manufactured goods from developing countries, particularly textiles.

In view of these trading developments, and the emergence of a foreign exchange gap as a constraint on growth in developing countries, there has been a rethinking by some economists in recent years about the basis on which the gains from trade should be evaluated. The slow growth and balance of payments difficulties of developing countries has led to a shift of emphasis from viewing the effects of trade solely from the traditional classical standpoint of efficient resource allocation to viewing the impact of trade on growth and foreign exchange earnings. It is balance of payments difficulties, necessitating foreign borrowing if growth is to be sustained, that have led to the cry in recent years of **trade, not aid**. The relevance of this slogan is examined later in this chapter. The problem facing developing countries is not so much *whether* to trade but *in what commodities* to trade, and to ensure that the terms on which they trade with developed countries are favourable. There is no dispute that there are static and dynamic gains from trade. The issue is whether the overall gains would be greater, and the distribution of gains between countries fairer, if the pattern of trade were different from its present structure, and if developed countries modified their trading policies towards the developing world.

So what should developing countries do? The answer would appear to be structural change in favour of the production and export of manufactured goods, which have more favourable demand characteristics in world markets, in particular, a higher income elasticity of demand.

These dynamic considerations and the need for diversification out of primary products do not diminish the case for international specialization. What is involved is a recognition of the distinction between **natural comparative advantage** (the classical, static basis for trade) and **acquired comparative advantage**, and whether developing countries can acquire new comparative advantage on the basis of free trade. If not, what form of protection would be welfare-enhancing? Before considering these controversial and highly topical issues, let us first establish more firmly the static and dynamic gains from trade that are stressed by traditional theory.

The gains from trade

The benefits from trade in traditional trade theory are measured by the increase in the value of output and real income from domestic resources that international specialization and trade permit. This is quite distinct from the balance of payments' effects of trade. The resource gains from trade can be divided into static and dynamic gains:

- **Static gains** accrue from international specialization according to the doctrine of comparative advantage.
- **Dynamic gains** result from the impact of trade on production possibilities at large. Economies of scale, foreign investment and the transmission of technical knowledge are examples of dynamic gains.

In addition, trade can provide a **vent for surplus** commodities, which brings otherwise unemployed resources into employment. It also enables countries to purchase goods from abroad, which can be important for two reasons: first, if there are no domestic substitutes, the ability to import can relieve domestic bottlenecks in production, and, second, imports may simply be more productive than domestic resources.

The static gains from trade

Ricardo

The static gains from trade are based on the **law of comparative advantage**, first outlined by David Ricardo (1772–1823), English classical economist, in his *Principles of Political Economy and Taxation* (1817). What Ricardo showed in his remarkable theorem is that even though a country may have an absolute productivity (cost) advantage in the production of *every* good, it will still pay a country to specialize in those commodities in which it has a *comparative* advantage – that is, in those commodities in which *relative* labour productivity is the highest or for which the *opportunity cost* of production is lowest. Ricardo is not explicit about what determines relative differences in productivity and costs, but, clearly, resource endowments will be the major determinants: natural resources, labour and human capital and the level of technology.

To illustrate the gains from trade, according to the law of comparative advantage, Ricardo used the example of England and Portugal, both with the capacity to produce cloth and wine, but with England having a comparative advantage in cloth and Portugal in wine. Suppose, for example, with its given resources, England can produce 10,000 yards of cloth or 2,000 bottles of wine. The opportunity cost ratio of cloth to wine is 10:2. Portugal, on the other hand, with its resources can produce 10,000 yards of cloth and 8,000 bottles of wine. The opportunity cost ratio is 10:8. England has to sacrifice 5 yards of cloth to produce one bottle of wine, whereas Portugal only has

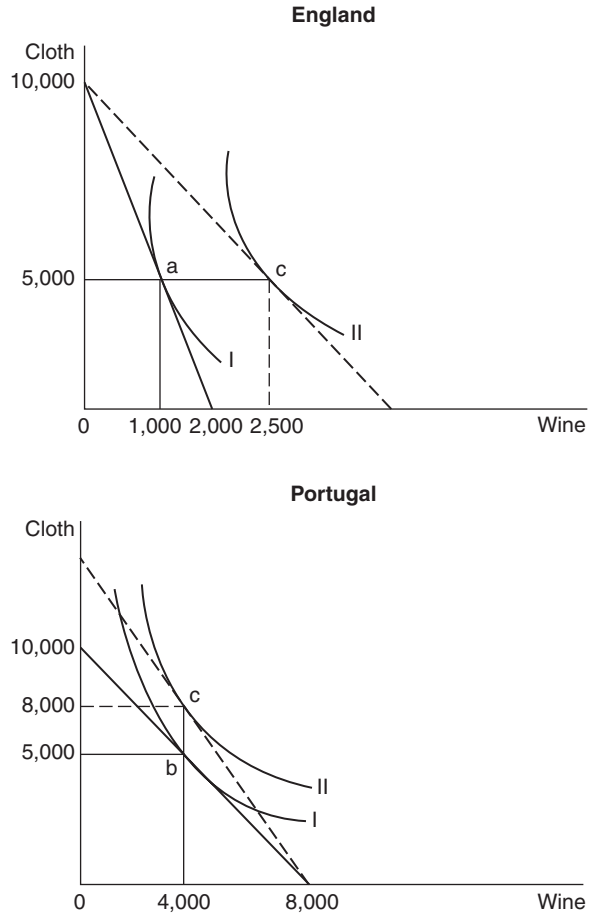
to sacrifice 1.25 yards of cloth. Clearly, the opportunity cost of producing wine in Portugal is less than in England. However, England has to sacrifice one-fifth of a bottle of wine to produce 1 yard of cloth, whereas Portugal has to sacrifice four-fifths of a bottle of wine. The opportunity cost of producing cloth in England is lower.

What we can now show is that if there is an international rate of exchange between England and Portugal, which is between the two domestic rates of exchange of 10:2 and 10:8, both countries can benefit by specializing in what they are best at producing in an opportunity cost sense, and exchanging goods at a more favourable rate of transformation internationally than domestically. Consider Figure 15.2. The solid linear lines show the production possibility curves (or the marginal rate of transformation between the two goods) in the two countries: 10,000 yards of cloth and 2,000 bottles of wine in England, and 10,000 yards of cloth and 8,000 bottles of wine in Portugal. Before trade, each country produces combinations of cloth and wine that give the maximum utility represented by indifference curve I. The two countries produce at a and b, respectively, where the slope of the production possibility curve is tangential to the slope of the indifference curve. Now assume that with the opening of trade, there is an international price ratio of 10:5, shown by the broken line. England, if it specializes in cloth, can now exchange cloth for wine more favourably, and likewise Portugal can exchange wine for cloth more favourably. For example, in trading 5,000 yards of cloth, England can now consume 2,500 bottles of wine instead of 1,000, while Portugal, trading 4,000 bottles of wine, can now consume 8,000 yards of cloth instead of 5,000. Both countries move to higher levels of welfare at point c on indifference curve II. As a result of the international division of labour, world production increases (in this example, wine production increases from 5,000 to 8,000 bottles and cloth production stays the same) and world welfare increases.

Ricardo's theorem is a powerful one, and has been extremely influential because it lies at the heart of the free trade doctrine that countries will always benefit if they liberalize trade. There are four important caveats, however, that need to be remembered in discussing the merits of free trade:

1. There is nothing in the comparative cost doctrine that ensures equality in the distribution of the gains from trade. This depends on where the international price ratio lies between the two opportunity cost ratios. One country may lose absolutely if a decline in its terms of trade (the ratio of its export price to its import price) offsets the efficiency resource gain from specialization. This is the concept of **immiserizing growth,** first proposed by Jagdish Bhagwati (1958).
2. The gains from trade are 'once and for all'. They do not recur. Once the process of resource reallocation through trade has taken place, there are no further gains. The law of comparative advantage, therefore, has nothing to say about the growth effects of trade. **The law is static**. The growth effects of trade will depend on the types of goods countries specialize in – whether they are subject to increasing or diminishing returns, and whether they are income elastic or inelastic in demand.
3. The law of comparative advantage assumes continuous full employment, namely, that those thrown out of work in one industry (as a result of countries specializing) can find work in others. This may not be so easy for countries specializing in the production of land-based activities subject to diminishing returns where there is a limit to employment set by the point where the diminishing marginal product of labour equals the wage. If there is not continuous full employment, the real resource gains from specialization and trade may be offset by the real resource (and welfare) losses from unemployment.

Figure 15.2 Gains from trade



4. There is nothing in the doctrine of comparative advantage that guarantees balanced trade. Ricardo was fully aware of this, and relied on the gold standard mechanism to produce an equilibrium – with the relative price of goods rising in the surplus countries with gold inflows and falling in the deficit countries with gold outflows, with no income adjustment. But the international gold standard never worked this way, and today there is no sure mechanism that guarantees trade equilibrium. If a particular pattern of trade specialization leads to payments deficits, and the economy has to be contracted to save imports and foreign exchange, the resulting unemployment may again offset the static resource gains.

The Heckscher–Ohlin theorem

In the early twentieth century, Ricardo's doctrine of comparative advantage was developed by Eli Heckscher (1919) and Bertil Ohlin (1933), two Swedish economists who attribute differences in labour productivity and relative costs of production specifically to differences in relative factor endowments – that is, to differences in the amount of capital per unit of labour. The Heckscher–Ohlin (H–O) theorem states that poor countries with an abundance of labour and scarce capital should find it relatively cheaper to produce and export labour-intensive goods, while rich

countries with more capital and a relative shortage of labour should find it cheaper to produce and export capital-intensive goods. This should not only produce welfare gains from trade, but also greater wage equality in poor countries because the demand for unskilled labour will rise relative to skilled labour. The wage gap between poor and rich countries should also narrow. As with Ricardo's theorem, however, there are a number of caveats to be made:

- Abundant labour in poor countries is not necessarily cheap labour in an economic sense, if the productivity of labour is correspondingly lower. It is the **efficiency wage** (the money wage divided by labour productivity) that determines the combination of factors used in production. Labour-abundant economies may, therefore, still export relatively capital-intensive goods and capital-abundant economies may export relatively labour-intensive goods (the so-called **Leontief paradox**, named after Wassily Leontief, 1953, who first discovered that contrary to the H–O theorem, US exports were relatively labour-intensive compared with import substitutes).
- The theorem takes only two groups of countries – poor developing countries and rich developed countries – but poor countries not only trade with rich countries but also with each other. As the demand for labour-intensive exports from poor countries rises in rich countries, wages in poor countries may rise, but may also fall as a result of competitive imports from other poor countries. Mexico, for example, benefits from exporting labour-intensive products to the USA, but suffers from labour-intensive imports from China. What happens to the wages of unskilled labour in poor countries is the outcome of a balance of forces.
- The theorem ignores the flow of capital from rich to poor countries as trade takes place. The inflow of FDI into poor countries may increase the demand for skilled labour relative to unskilled labour, and increase the degree of wage inequality, contrary to the predictions of the H–O theorem.

The dynamic gains from trade

The major dynamic benefit of trade is that export markets widen the total market for a country's producers, thereby allowing greater specialization, or division of labour. Specialization, in turn, stimulates capital accumulation and 'learning by doing'. Historically, Adam Smith recognized this benefit of trade in his famous book *An Inquiry into the Nature and Causes of The Wealth of Nations* (1776), as did John Stuart Mill in his *Principles of Political Economy* (1848), in which he wrote: 'a country which produces for a larger market than its own can introduce a more extended division of labour, can make greater use of machinery, and is more likely to make inventions and improvements in the process of production'. Mill also stressed the role of trade as a conduit for the international dissemination of ideas and technology through a number of mechanisms: first, a domestic buyer of an imported good may imitate the production technique, or adapt the new technique if it is patented, and second, there may be a direct exchange of ideas for further varieties of goods that increase welfare. 'New' growth theory (see Chapter 4), which incorporates trade, as pioneered by Grossman and Helpman (1991a, 1991b), encapsulates many of these original ideas of Mill.

Mill also recognized that the growth effects of trade depend on what a country specializes in: natural resource activities or manufacturing industries. It is the production of industrial goods, particularly research-intensive goods, that produces technical dynamism and rapid growth. Stiglitz (2006) makes the same enduring point:

> a country whose static comparative advantage lies in, say, agriculture, risks stagnation … with limited growth prospects; … the industrial sector is almost everywhere the source of

> innovation, [and] many of these advances spill over into the rest of the economy as do the benefits from the development of institutions, like financial markets, that accompany the growth of an industrial sector.

As alluded to above, there is a close association between the size of markets and the accumulation of capital. The larger the market, the easier capital accumulation becomes. For a small country with no trade, there is very little scope for large-scale investment in advanced capital equipment. Trade offers some escape, but a minimum size of domestic market in the first place is important to make trade viable. In this respect, larger countries such as China and India are in a more favourable position than smaller countries such as Fiji, Mauritius or the Gambia. India and China's large populations offer the basis for the establishment of capital goods industries and the production of manufactured goods, since production can take place on an economic basis before trade. The smaller country may need substantial protection for a commodity before it can be produced economically and compete in world markets. At least 60 countries classified as 'developing' have populations below 15 million. In terms of Figure 15.2 above, the dynamic benefits of trade are represented by an outward shift of the production possibility curves of both countries, leading to a higher level of community welfare.

Dynamic gains from trade are at the heart of **new trade theory** pioneered by Paul Krugman (1979, 1980, 1986), with its emphasis on increasing returns and positive externalities associated with the geographic concentration of production for trade (also providing an argument for strategic protection).

Paul Krugman

Born 1953, New York, USA. Taught at the Universities of Yale, the Massachusetts Institute of Technology, and California (Berkeley), and now Professor of Economics at Princeton University. Made many important contributions to economics; best known for his pioneering work on the role of increasing returns in explaining trade patterns (new trade theory) and the spatial concentration of industrial activities (new economic geography). Also an influential *New York Times* columnist. Awarded the Nobel Prize for Economics in 2008.

Trade as a vent for surplus

Another important potential gain from trade is the provision of an outlet for a country's surplus production, which would otherwise go unsold and represent a waste of resources. This is the so-called 'vent for surplus' gain from trade, first articulated by Adam Smith in his *An Inquiry into the Nature and Causes of Wealth of Nations* (1776). He writes:

> when the produce of any particular branch of industry exceeds what the demand of the country requires, the surplus must be sent abroad and exchanged for something for which there is a demand at home. Without such exportation a part of the productive labour of the country

> must cease, and the value of its annual produce diminish … between whatever places foreign trade is carried on, they all of them derive two distinct benefits from it. It carries the surplus part of the product of their land and labour for which there is no demand among them, and brings back in return something else, which may satisfy part of their wants and increase their enjoyment.

In Figure 15.2 above, this vent for surplus argument is represented by a movement from a point inside the production possibility frontier to a point on the frontier, which represents a higher level of welfare. The gain implies that the 'surplus' export resources have no alternative uses and cannot be switched to domestic use. This is not an unreasonable assumption in many natural resource-rich countries. Oil wells, mines and fishing grounds, for example, have no alternative uses, and the market for their products would soon become saturated if demand was confined to domestic consumption alone. The vent for surplus theory is a much more plausible explanation for the start of trade than the comparative cost doctrine of specialization.

Theory of customs unions and free trade areas

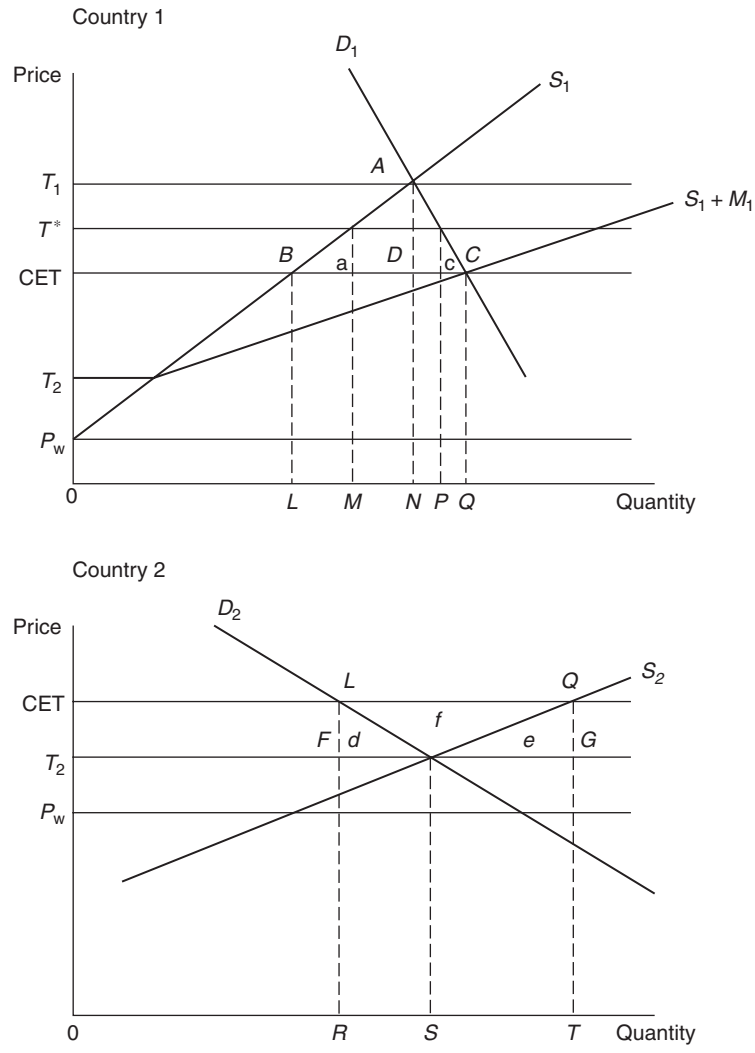
Because of the various gains to be had from trade, **regional trade agreements (RTAs)** have become fashionable in recent years, in the form of **customs unions** and **free trade areas**. The World Trade Organization (WTO) lists over 100 that have been established or modified since 1948. The major ones are: the EU; NAFTA (the North American Free Trade Agreement); MERCOSUR (Southern Common Market), comprising Argentina, Brazil, Paraguay, Uruguay and Venezuela; APEC (Asia-Pacific Economic Cooperation); ASEAN (Association of Southeast Asian Nations); and SACU (Southern African Customs Union), comprising Botswana, Lesotho, Namibia, South Africa and Swaziland.

The essence of a customs union is that it frees trade between members and imposes a *common* external tariff (CET) on imported goods from the rest of the world. In a free trade area (FTA), by contrast, barriers to trade are brought down within the area, but there is no CET. Countries are free to impose their own specific tariffs on goods from outside the area, although often subject to agreement over the proportion of goods that must be purchased from within the area. Customs unions therefore *create* trade, but also *divert* it from lower cost suppliers outside the union. The interesting question is always whether the benefits of trade creation exceed the costs of trade diversion. FTAs also create trade, but the extent of trade diversion is likely to be much less, with the presumption that on narrow economic grounds, at least, FTAs are superior. For the same reason, customs unions are likely to be inferior to a policy of unilateral tariff reductions, and therefore need to be justified on other economic or non-economic grounds.

Before we look at the empirical evidence on these matters, however, let us consider theoretically the gains and losses of customs unions. The analysis makes the same assumptions as orthodox trade theory: perfect competition, prices reflect opportunity cost, factors of production are immobile between countries, trade is balanced (i.e. no balance of payments problems), and the full employment of resources:

- The **trade creation** effect of a union has two parts: first, a production effect, which consists of the substitution of cheaper 'foreign' goods for domestic goods from within the union, and second, a consumption effect – the gain in consumer surplus from cheaper goods.
- The **trade diversion** effect also has two parts: first, the substitution of higher priced goods from within the union for goods outside the union, and second, the loss of consumer surplus that this entails.

Figure 15.3 Gains and losses within a customs union



The gains and losses for two partner countries within the union are illustrated in Figure 15.3. To simplify the analysis, scale economies and terms of trade effects are ignored. The analysis that follows relies heavily on Robson (1988).

In Figure 15.3, D_1 and D_2 are the demand curves for a good in the two countries; S_1 and S_2 are the domestic supply curves; $S_1 + M_1$ is the supply curve in country 1 consisting of the domestic supply curve and the supply of the good from the partner country, which is assumed to enter duty free; and P_w is the world price. Now, suppose that before the union of the two countries, a tariff of P_wT_1 was imposed in country 1 and P_wT_2 in country 2. In this case, it can be seen that demand equals supply in both markets; there are no imports from the rest of the world, and we can focus first on the process of trade creation. A customs union is now formed with a CET that balances supply and demand of the two partners (equal to P_wCET). The CET is lower than OT_1 in country 1 and higher than OT_2 in country 2. This has consumption and production effects in the two countries.

In country 1, domestic consumption increases from *N* to *Q*, and domestic production decreases from *N* to *L*. In country 2, domestic production increases from *S* to *T*; domestic consumption decreases from *S* to *R*, and the difference between supply and demand is exported to country 1. For country 1, there has been a cost saving equal to the area *ABD*, and an increase in consumer surplus equal to the area *ADC*. The total gain of trade creation is equal to *ABD* + *ADC*. In country 2, there has been a loss of consumer surplus equal to area *d* and an increased production cost equal to area *e*, but this is more than offset by the increased export revenue of *LFGQ*, so country 2 is also better off.

Now let us consider the case where there is also trade diversion from the rest of the world. Suppose that, in country 1, the initial tariff level was lower than P_wT_1 – say, P_wT^*, so that demand exceeded supply and the excess demand was filled by imports from the rest of the world, *MP*, at price P_w. If a CET was now introduced of P_wCET, demand would increase from *P* to *Q* with an increase in consumer surplus of area *c*. Production would fall from *M* to *L* with a reduction in production cost equal to area *a*. There would be trade creation gains equal to *a* + *c*, but now there is also trade diversion. Imports, previously from outside the union, would now come from the higher cost partner. *MP* imports from abroad would be replaced at the increased cost of *MP* + P_wCET. This is the cost of trade diversion.

In evaluating the net gains from a customs union, trade creation needs to be compared with trade diversion. In general, trade creation is likely to predominate over trade diversion, the larger the union and the lower the CET. The larger the union, the greater the scope for trade creation, and the lower the CET, the less trade diversion there is likely to be. It is possible, however, even if the union as a whole is, on balance, trade-creating, that at least one country may lose. Likewise, it is possible for at least one country to gain even if the union as a whole is, on balance, trade-diverting. Everything depends on circumstances. A customs union can be devised, however, which raises the welfare of all members. This requires, first, that the union's CET is set so that the level of post-union trade with the rest of the world does not fall below its pre-union level, and, second, that lump sum compensatory taxes and transfers are imposed to offset individual country losses.

Apart from trade creation and trade diversion, customs unions may have other important effects associated with the enlargement of the market, which are neglected by the static analysis presented above:

1. The larger market may generate economies of scale. If there are economies of scale, the supply curves in Figure 15.3 above will slope downwards, and the CET can be lower than the original tariff in *both* partner countries. There will be a normal trade creation effect and a cost saving in both countries.
2. Integration is likely to promote increased competition, which is likely to favourably affect prices and costs, and the growth of output.
3. The widening of markets within a customs union is likely to attract international investment. Producers will prefer to produce within the union rather than face a CET from outside.
4. If the world supply of output is not infinitely elastic, there are terms of trade effects to consider. Specifically, if there is trade diversion, the world price of the good will fall, moving the terms of trade in favour of the customs union.

This terms of trade effect represents a welfare gain, which may partly offset the welfare loss of trade diversion. It was mentioned earlier, however, that because customs unions impose a CET, they are likely to be inferior, in terms of welfare improvement, to a policy of *unilateral* tariff reductions (continuing to make the standard assumptions, of course, of trade balance and full

employment). We can now illustrate this using Figure 15.3 above. Suppose country 1 has an initial tariff level of P_wT*. It enters a customs union with country 2 with a common external tariff CET, and trade creation takes place equal to $a + c$ (as before). Country 1 could also, however, reduce its tariff to P_wT* on a non-discriminatory basis. It would enjoy the same trade creation gains, but now would be able to obtain imports cheaper from the rest of the world. This means an additional gain equal to the difference between the total expenditure on imports from the union compared with the rest of the world.

At a simple level, the conclusion from this theoretical analysis is that the formation of customs unions represents a movement towards free trade, but even freer trade (i.e. no trade diversion) is better. Venables (2003) has considered theoretically which countries are likely to be winners and losers from RTAs (regional trade agreements). Outcomes depend on the comparative advantage of members relative to each other and relative to the rest of the world. In general, countries with 'extreme' comparative advantage in particular products do worse than those with comparative advantage between partners and the rest of the world. Integration between low-income countries tends to lead to divergence of per capita incomes, while agreements between high-income countries cause convergence. Venables argues that low-income countries would be better served by integration with high-income countries than other low-income countries. For poor countries, north-south agreements would be better than south-south agreements. The empirical evidence seems to bear this out.

The general experience of RTAs in developing countries has been disappointing because they have been inward-looking and protectionist, with trade diversion exceeding trade creation. Typically, the existing ratio of trade to GDP has been high in member countries, and the ratio of trade with the rest of the world has also been high, so that the scope for trade creation has been minimal and the potential for trade diversion has been great. In ECOWAS (Economic Community of West African States), founded in 1975, the amount of interregional trade is still less than 15% of total exports. Forouton (1993) concludes his study of regional integration in sub-Saharan Africa by saying:

> the structural characteristics of the SSA [sub-Saharan Africa] economies, the pursuit of import-substitution policies, and the very uneven distribution of costs and benefits of integration arising from economic differences among the partner countries, have thus far prevented any meaningful trade integration in SSA.

Of the various groupings in sub-Saharan Africa, only SACU (formed in 1910) has achieved any noticeable degree of integration in the market for goods. Otherwise, intragroup trade has remained limited. This conclusion is echoed by many of the authors' papers in Oyejide et al. (1997), which examine the experience of regional integration and trade liberalization in sub-Saharan Africa.

Research by Vamvakidis (1999) across developing countries as a whole supports this pessimistic conclusion. He takes 109 cases of participation in 18 RTAs over the period 1950–92, and regresses the growth of per capita income of countries on the growth of world income, the initial level of per capita income, education level, trade openness, plus a dummy variable if a country belongs to an RTA. The dummy variable is significantly negative. He also finds that membership of an RTA lowers the share of investment in GDP.

In related work, Vamvakidis (1998) and Arora and Vamvakidis (2005) also try to estimate the effect on a country's growth rate of the size, income and growth of neighbouring countries. They find, perhaps not surprisingly, that it pays to have neighbours that are relatively rich, open to trade and growing fast. A 1 percentage point change in the growth of a country's trading partners is

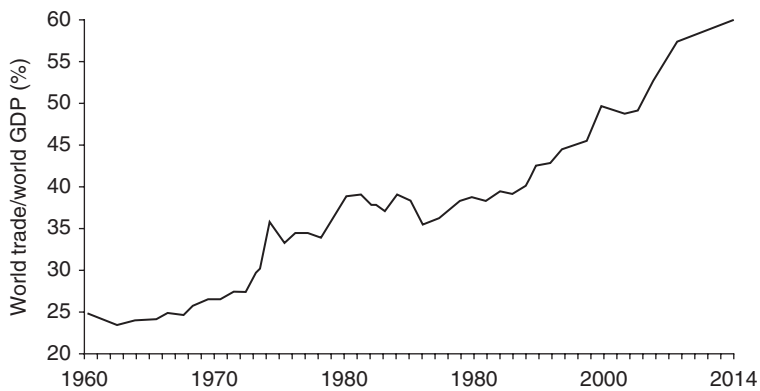
associated with a 0.8 percentage point increase in its own domestic growth. In a customs union, the countries swim or sink together.

Free trade enthusiasm in the modern era

Despite the arguments for free trade laid down by classical economic theory, it was never seriously practised by countries (except by Britain post-1850) until after the Second World War (see Chang, 2002, 2005, 2007; Reinert, 2007), with the establishment of the **General Agreement on Tariffs and Trade (GATT)** in 1947 and the general commitment by developed countries to the freeing of international trade in the wake of the protectionism and 'beggar-thy-neighbour' policies practised in the interwar depression years, 1919–39. Even so, the process of liberalization took a long time to gather momentum. Many developed countries maintained quite high tariff levels, and non-tariff barriers, until the early 1970s, and many developing countries, freed from their colonial past, adopted protection, particularly in Latin America and parts of Asia. It is only since the 1970s that both developed and developing countries have made a concerted effort to liberalize trade between themselves under various pressures from GATT (and the World Trade Organization (WTO) since 1995 – the successor to GATT), the World Bank, the IMF and other international organizations, and in view of the alleged poor economic performance of countries pursuing protection.

Overall, the liberalization of trade has led to a massive growth of world trade relative to world output. Container ships have also played their part. The first container ship was launched in 1956 and the share of countries with container ports rose rapidly to 90% within 30 years. Container ships and container ports hugely facilitate the shipment of goods and reduce the cost of handling freight. While world output (or GDP) has expanded sevenfold, the volume of world trade has grown 25 times at an annual compound rate of nearly 8% per annum. In some individual countries, notably in Southeast Asia, the growth of exports has exceeded 10% per annum, and in China, 20% per annum. The evolution of world trade as a proportion of world output is shown in Figure 15.4, rising from 25% in 1960 to over 60% today.

Figure 15.4 The share of world trade in world output, 1960–2014



Note: Trade is measured as the sum of exports and imports of goods and services.

Source: World Bank, 2014.

Measurement and process of trade liberalization

To measure the degree and process of trade liberalization, it must be borne in mind that there are many different measures and types of protection, such as tariffs, quotas, licences, technical and environmental restrictions, and many different measures and concepts of trade liberalization and trade openness. The first thing to make clear, however, is that trade liberalization is not the same thing as trade openness. For example, a country may be very open, in the sense that it has a high ratio of trade to GDP because it has abundant natural resources that it can only export, but may operate a very illiberal trade regime, which makes trade difficult in other activities. Equally, a country with a low ratio of total trade to GDP, because it is a large country and relatively self-sufficient, may be very liberal in its trading practices.

The most common measure of trade liberalization focuses on what is happening to tariffs and non-tariff barriers (NTBs) to trade, whether trade is biased against exports in favour of import substitutes, and the general micro- and macro-environment of a country in which trade takes place, including the level of the exchange rate, whether the state has a monopoly of major exports, and monetary and fiscal conditions. Average tariff rates, export taxes, total taxes on international trade and indices of NTBs are all obvious measures of protection, but there are difficulties in using any one of these indices as a measure of trade liberalization:

1. A country may substitute one type of protection for another. For example, it may reduce NTBs, but raise tariffs to compensate, and vice versa.
2. *Nominal* tariffs on goods are not the appropriate basis for assessing the restrictive effect of a tariff structure on trade. The nominal rate does not measure how inefficient (or costly) producers can be without incurring competition and losing market share. This is measured by the protection of value-added. This is the so-called *effective rate of protection* (see below).
3. Average tariff rates are often measured in empirical work by the ratio of tariff revenues to the value of imports, but this is not a measure of the official tariff rate, but of the collected rate. In the extreme, if a very high tariff discouraged imports completely, there would be no imports, and the measured tariff rate would be zero.

It is more useful to devise measures of trade regimes that can then be ranked from illiberal to liberal, or from protectionist to liberalized, and to look at the various indices through time. One approach is to measure the extent to which the structure of protection and incentives is biased against exports. The easiest way to measure this, outlined by Krueger (1998), is by the extent to which the ratio of domestic price of import competing goods (P_{md}) to their international (world) price (P_{mw}), relative to the ratio of the domestic price of importables (P_{xd}) compared with their international price (P_{xw}), deviates from unity, that is:

$$B = \frac{p_{md}/p_{mw}}{p_{xd}/p_{xw}} \tag{15.1}$$

If we assume that $P_{mw}/P_{xw} = 1$, then if $P_{md}/P_{xd} > 1$, the trade regime is biased against exports in favour of import substitutes, and if $P_{md}/P_{xd} < 1$, the trade regime favours export promotion.

Greenaway et al. (1998), in their major study of trade liberalization and growth across 73 countries, construct a similar index to Krueger's, which also measures the relative distortion (D) of the price of exportables to importables. It is calculated as:

$$D = \frac{(1 + t)}{(1 + s)} \tag{15.2}$$

where t is the tariff on imports and s is the rate of subsidy to exports. A ratio of unity implies trade neutrality; $D > 1$ implies anti-export bias in favour of import substitution, while $D < 1$ implies an export-oriented trade strategy.

David Greenaway was very influential in the first World Bank (1987) classification of trade regimes in its *World Development Report 1987*. Four categories were identified:

1. **Strongly outward-oriented** countries, where there are very few trade or foreign exchange controls and trade and industrial policies do not discriminate between production for the home market and exports, and between purchases of domestic goods and foreign goods.
2. **Moderately outward-oriented** countries, where the overall incentive structure is moderately biased towards the production of goods for the home market rather than for export, and favours the purchase of domestic goods.
3. **Moderately inward-oriented** countries, where there is a more definite bias against exports and in favour of import substitution.
4. **Strongly inward-oriented** countries, where trade controls and incentive structures strongly favour production for the domestic market and discriminate strongly against imports.

Many investigators and international organizations devise their own measures of protection and liberalization, using multiple criteria. One is the **Sachs and Warner Openness Index**. Countries are classified as 'open' or 'closed' according to five criteria. A country is regarded as 'closed' if at least one of the following criteria is satisfied: an average tariff rate higher than 40%; non-tariff barriers covering more than 40% of imports; a socialist economic system; a state monopoly of major exports; or a black market exchange rate premium in excess of 20% (Sachs and Warner, 1995). The criteria are arbitrary, of course, but nonetheless many investigators have used this index to classify countries, and to measure the timing of liberalization (although, as we said above, openness and liberalization are not the same).

Another measure is the **Index of Economic Freedom** published since 1995 by the Heritage Foundation in Washington, which considers a broad array of institutional factors, one of which is trade policies. A trade policy score of 1–5 is given to countries based on their average tariff rate, the extent of non-tariff barriers, and the degree of corruption in the customs service. Five broad levels of protection are distinguished: very low (free), low, moderate, high, and very high (repressed). Countries can be classified according to category, and their economic performance analysed.

The process of trade liberalization can take many forms, but as Michaely et al. (1991) say in their massive volume of case studies of trade liberalization in developing countries: 'very little is known about essential attributes of a change from one [trade] regime to another; of a move away from a distorted trade policy regime towards a more neutral one'. On the other hand, we know that the issues of timing, phasing and sequencing are likely to be important in the design and implementation of a successful trade liberalization policy (see Rodrik, 1996, 2001).

Often the first stage of liberalization is the dismantling of non-tariff barriers to trade in the form of quotas and licences, not necessarily the reduction of tariffs. In fact, tariffs often rise to compensate for the removal of quantitative restrictions on imports. This makes protection more transparent and reduces rent-seeking behaviour. When protection is removed from an industry, production is likely to decline and unemployment rise. Capital is specific and will be left unutilized, and labour may not be mobile enough to be employed in other activities. This is a serious worry and can undermine the static welfare gains from trade liberalization. It is certainly an argument against liberalizing imports too rapidly. As the relative prices of factors of production and goods change, there are also likely to be considerable redistribution effects, which need taking account of in the process of liberalization (see below).

The other big worry is the effect of trade liberalization on the balance of payments. If imports rise faster than exports, balance of payments difficulties may arise, which have negative growth

consequences. This has implications for the sequencing of trade liberalization. Imports should not be liberalized before the export sector has had time to adjust or respond in order for foreign exchange to be available to meet the higher import bill. In terms of policy, it means that anti-export bias needs removing, or export subsidies given, before serious import liberalization takes place (as was the case in Japan and South Korea, for example). East Asia provides an interesting case study of how countries should proceed, where the process of trade liberalization was gradual and export-oriented, in contrast to many Latin American countries, where the process of liberalization was sudden and no attention was paid to the sequencing.

Another message from the experience of liberalization is that liberalization is much more likely to be successful in an environment of internal and external stability. It is particularly important not to allow the exchange rate to appreciate, which otherwise worsens the balance between export and import growth. This means that countries need to retain control of the capital account of the balance of payments, and not to liberalize capital flows at the same time as trade. Unfortunately, many Latin American countries, such as Mexico, Argentina and Peru, when they liberalized in the 1980s and early 1990s, allowed their exchange rate to appreciate, which damaged the trade balance and impacted negatively on growth.

In short, if trade liberalization is to be successful in promoting economic development, it needs to avoid adjustment costs as a result of the poor timing and sequencing of liberalization, and it needs to avoid inegalitarian distributional consequences. See Case example 15.1 for a general assessment of trade liberalization in eight countries.

Case example 15.1

Trade liberalization in eight countries

After decades of highly interventionist trade regimes, Bangladesh, Brazil, Bulgaria, India, Jamaica, Malawi, Philippines and Zambia initiated major trade reforms in the 1980s and 1990s. There was a considerable reduction in the average tariff rates and their dispersion, and a number of quantitative restrictions on imports were eliminated or converted into their tariff equivalents. There was also the elimination of export/import licences.

What were the results? All told, it is difficult to gauge the overall legacy of the reforms. No doubt the reforms moved in the right direction, but except for India and Brazil, there was significant and painful overshooting. It would have been wiser and less costly to move gradually. Most of the countries had a shallow industrial base at the beginning of the reforms. The supply response has been extremely poor in Malawi and Zambia in particular, while neglect of the social implications in the planning of the adjustment process has had serious social welfare consequences. Government efforts to deal with economic dislocation and job losses have been at best reactive and marginal. Threatened workers and communities have had virtually no policy options other than to plea for protection after they are already in serious trouble. Even in countries that opted for a more gradual pace of liberalization, reforms have been so deep and extensive that it is no longer possible to envisage a reversal. Unemployment can no longer be addressed through a return to old-style protectionism, even if, in many cases, the economy has not yet adjusted to its full potential because of inflexible markets. In Bangladesh, Jamaica and the Philippines, emigration first provided labour markets with safety valves, and, subsequently, remittances provided financial flows for offsetting trade deficits and balance of payments disequilibria. New behind-the-border practices, be they related to competition or the labour markets, must now come into play.

Source: Tussie and Aggio, 2005.

Models of export-led growth

The impact of trade liberalization on economic performance works mainly through improving the efficiency of resource allocation, allowing greater scope for specialization, and stimulating exports, which have powerful effects on supply and demand within an economy. Before examining the empirical evidence on the relation between trade liberalization, trade performance and the economic growth of countries, it is first important to understand why exports are so crucial for economic development.

There are three main models of export-led growth:

- The neoclassical supply-side model
- The balance of payments constrained growth model
- The virtuous circle model.

The first is the orthodox model, which fits neatly into mainstream neoclassical growth theory. The latter two models are rarely articulated in the trade and growth literature, and yet may be of greater importance for understanding growth rate differences in open developing economies, especially if most developing countries are constrained in their economic performance by a shortage of foreign exchange. Moreover, orthodox growth and trade theory predicts the convergence of per capita incomes across countries (see Chapter 4), which is at variance with what we observe in the real world. What appears to happen in practice is that once a country gains an advantage through the capture of export markets, it tends to sustain that advantage through the operation of various cumulative forces, which generate 'virtuous circles' of success for favoured countries (and regions), and 'vicious circles' of slow growth and underemployment for those countries that are left behind (see Chapter 10). When studies are conducted of the relation between exports and growth, either across countries or over time, it is not always clear whether the relation found is picking up supply-side factors, demand-side influences, cumulative forces interacting with each other, or a combination of all three.

The neoclassical supply-side model

The neoclassical supply-side model of the relation between exports and growth assumes that the export sector, because of its exposure to foreign competition, confers externalities on the non-export sector, and also that the export sector has a higher level of productivity than the non-export sector. Thus, the share of exports in GDP and the growth of exports matter for overall growth performance. Feder (1983) was the first to provide a formal model of this type to explain the relation between export growth and output growth. The output of the export sector is assumed to be a function of labour and capital in the sector; the output of the non-export sector is assumed to be a function of labour, capital and the output of the export sector (to capture externalities); and the ratio of respective marginal factor productivities in the two sectors is assumed to deviate from unity by a factor δ. These assumptions produce an augmented neoclassical growth equation of the form:

$$G = a(I/Y) + b(dL/L) + [\delta/(1 + \delta) + F_x](X/Y)(dX/X) \qquad (15.3)$$

where I/Y is the investment ratio; dL/L is the growth of the labour force; dX/X is the growth of exports; X/Y is the share of exports in GDP; $\delta/(1 + \delta)$ is the differential productivity effect; and F_x is the externality effect. Feder originally tested the model by taking a cross-section of 19

semi-industrialized countries and a larger sample of 31 countries over the period 1964–73. First, he tested the model without export growth, and then with the growth of exports included. The inclusion of dX/X considerably improves the explanatory power of the equation, and the effect of export growth is always statistically significant. The coefficient on export growth, however, is an amalgam of an externality effect and a productivity differential effect. To decompose the two, equation (15.3) can be fitted excluding the export share term (X/Y), which then isolates the externality effect. The difference between the total effect of export growth and the externality effect is the productivity differential effect. When this is done, Feder (1983) found substantial differences in productivity between the export and non-export sectors and also evidence of externalities. The results should not surprise. The export sector is likely to be more 'modern' and capital-intensive than the non-export sector, which, to a large extent, consists of low productivity agriculture and petty service activities. The externalities conferred are part of the dynamic gains from trade discussed at the beginning of the chapter, associated with the transmission and diffusion of new ideas from abroad relating to production techniques and efficient management practices.

The Feder (1983) model is a pure supply-side argument, which has plausibility, but there are other (non-neoclassical) supply-side arguments, and also demand-side considerations, which would also be consistent with finding export growth and GDP growth positively correlated over the long term. From the supply side, export growth may raise output growth through externalities, but also faster export growth permits faster import growth. If countries are short of foreign exchange, and domestic and foreign resources are not fully substitutable, more imports permit a fuller use of domestic resources. In particular, more foreign exchange allows the greater import of capital goods, which may not be produced domestically.

The balance of payments constrained growth model

The major weakness of the orthodox supply-side model of the role of exports is that it doesn't go far enough; it neglects the importance of demand for the growth of output. All components of domestic demand – consumption, investment, government expenditure and exports themselves – have an import content that must be paid for. Exports are unique in this respect, because exports are the only component of demand that provide the foreign exchange to pay for the other components of demand, which otherwise would be constrained. It is important to stress this, because this insight lies at the heart of demand-oriented theories of growth and development in an open economy.

Most factors of production in the growth and development process are *endogenous* to demand and not exogenously determined as neoclassical growth theory assumes. Capital is a produced means of production and is as much a consequence of the growth of output as its cause. The demand for labour is a derived demand from output. Labour input responds to demand in a variety of ways through reductions in unemployment; increases in labour force participation; increases in hours worked; shifts of labour from low productivity to high productivity sectors; and, in the last resort, through international migration. In labour surplus economies, such as most developing countries, it stretches credulity to assume an exogenously given supply of labour that determines output in a *causal* sense. Productivity growth is also largely endogenous to output growth, working through induced capital accumulation, embodied technical progress, and static and dynamic returns to scale. To understand growth rate differences between countries, it is necessary to understand why demand growth differs between countries, and the constraints on demand that exist within countries.

In most developing countries, the major constraint on the growth of demand is the current account of the balance of payments and the shortage of foreign exchange. Export growth relaxes a balance of payments constraint on demand and allows all other components of demand (consumption, investment and government expenditure) to grow faster without running into balance of payments difficulties. This is the simplest of all explanations of the relationship between export growth and output growth. The fact is that, in the long run, no country can grow faster than that rate consistent with balance of payments equilibrium on current account, unless it can finance ever-growing deficits, which, in general, it cannot. Ratios of payments deficit to GDP of more than 2–3% start to make the international financial markets nervous (witness the experience of Mexico, Brazil and the countries of East Asia in recent years), and *all* borrowing *eventually* has to be repaid. We will show in Chapter 16 that if relative price (or exchange rate) changes do not act as an efficient balance of payments adjustment mechanism, the rate of growth of output of a country (g) can be approximated by the simple formula:

$$g = x/\pi \tag{15.4}$$

where x is the growth of export volume (determined by the growth of 'world' income and the income elasticity of demand for exports) and π is the income elasticity of demand for imports. The correlation between g and x is immediately apparent.

The virtuous circle model of export-led growth

Finally, it needs to be recognized that exports and growth may be interrelated in a cumulative process. This raises the question of causality but, more important, such models provide an explanation of why growth and development through trade tends to be concentrated in particular areas of the world, while other regions and countries have been left behind. These models provide a challenge to orthodox growth theory and trade theory, which predict the long-run convergence of living standards across the world. In neoclassical growth theory, capital is assumed to be subject to diminishing returns so that rich countries should grow slower than poor countries for the same amount of investment undertaken (see Chapter 4). Neoclassical trade theory predicts convergence through the assumption of factor price equalization. The empirical evidence is at odds with the theory: there is no evidence that living standards across the world are converging. A simple cumulative model, driven by exports as the major component of autonomous demand, was outlined in Chapter 10. Output growth is a function of export growth; export growth is a function of price competitiveness and foreign income growth; price competitiveness is a function of wage growth and productivity growth; and productivity growth is a function of output growth – the so-called Verdoorn law working through static and dynamic returns to scale, including learning by doing. It is this induced productivity growth that makes the model 'circular and cumulative', since if fast output growth (caused by export growth) induces faster productivity growth, this makes goods more competitive and therefore induces faster export growth. The Verdoorn relation not only makes the model 'circular and cumulative', but also gives rise to the possibility that once an economy obtains a growth advantage, it will tend to keep it. Suppose, for example, that an economy obtains an advantage in the production of goods with a high income elasticity of demand in world markets, such as high-tech goods, which raises its growth rate above other countries. Through the Verdoorn effect, productivity growth will be higher and the economy will retain its competitive advantage in these goods, making it difficult, without protection or exceptional industrial enterprise, to

establish the same commodities. In such a cumulative model, it is the difference between the income elasticity characteristics of exports (and imports, if balance of payments equilibrium is a requirement, as argued earlier) that is the essence of divergence between industrial and agricultural economies, or between 'centre' and 'periphery'. This simple model can go a long way in explaining differences in the level of development between countries and the forces that perpetuate divergences in the world economy. The forces are *structural*, relating to the production and demand characteristics of the goods produced and traded.

What you export matters

The argument that what a country exports matters for its growth performance can be formally tested using a procedure developed by Hausmann et al. (2007). First, they measure what is called the 'productivity' (PRODY) of each commodity (i) exported to see what country income level the good is associated with. Second, they calculate an EXPY for each country, which is the weighted sum of all the PRODYs that the country exports. If a country is specializing in high-income goods, it will have a high EXPY, and if it is specializing in low-income goods the EXPY will be low. Cross-country analysis shows a high correlation between a country's EXPY and its growth and export performance.

The calculation of PRODY is:

$$\text{PRODY}_i = \sum_j \left(\frac{(x_{ij}/X_j)}{\sum_j (x_{ij}/X_j)} \right) Y_j$$

where x_{ij} is the export of commodity i from country j, X_j is the country's total exports, x_{ij}/X_j represents a country's specialization in commodity *i*, $\sum_j (x_{ij}/X_j)$ is the share of commodity *i* in total world exports, and Y_j is the income per capita of each country exporting the good *i*. PRODY_i will be low if low-income countries specialize in that good, and high if high-income countries specialize in that good.

The calculation of EXPY is:

$$\text{EXPY}_j = \sum_i \text{PRODY}_i (x_{ij}/X_j)$$

This is simply the weighted average of the PRODYs for that country where the weights are the value shares in the country's total exports. As would be expected, the relationship between the level of per capita income of countries and EXPY is strong, but, more significantly, there is a strong relation between EXPY, output growth and export growth across countries (controlling for the other determinants of GDP growth). Some developing countries such as China have an EXPY higher than would be expected on the basis of their level of per capita income, indicating that they are producing and exporting sophisticated goods more associated with high-income countries. This is one reason why China is so successful (see also Felipe, 2009). A 10% higher level of EXPY gives a country extra growth of about 0.4 percentage points. The calculations are picking up the higher income elasticity of demand for more sophisticated goods, and this is why the structure of exports matters for economic performance.

Trade liberalization and export growth

What is the empirical evidence on the relation between trade liberalization and export growth? Because various forms of trade restrictions, including export duties, cause anti-export bias, the presumption must be that trade liberalization will raise the growth of exports, but by how much?

There are two broad types of empirical work on the relationship between trade liberalization and export performance. First, there are large multicountry studies that examine in detail the process of trade policy reforms within individual countries and its consequences. Pioneer studies of this type include Little et al. (1970), Balassa (1971) and Michaely et al. (1991). Second, there are econometric studies using time-series, cross-section or panel data analysis (pooling time-series and cross-section data). The evidence gives mixed and conflicting results, which suggests that the context in which trade liberalization takes place is of primary importance, particularly world economic conditions and domestic economic policies being pursued at the same time, especially with regard to the exchange rate.

Individual country (or industry) case studies that show a positive effect of liberalization on export performance include Joshi and Little's (1996) analysis of India's trade reforms in 1991, Ahmed's (2000) study of Bangladesh, Jenkins' (1996) study of manufactured exports from Bolivia, and Pacheco-López's (2005) study of Mexico after the trade reforms of 1985–86. Multicountry case studies that show a positive impact of liberalization on export growth include the cross-section analysis by Thomas et al. (1991), Helleiner's (1994) collection of theoretical and empirical studies, and Bleaney's (1999) panel data study of manufactured exports for ten countries of Latin America.

One of the most comprehensive studies is that by Santos-Paulino and Thirlwall (2004) (see also Santos-Paulino, 2002a), who take a panel of 22 countries that have adopted trade liberalization policies since the mid-1970s. A dummy variable for the year(s) of liberalization is included in an export growth equation using between 350 and 500 observations (depending on the method of estimation), and the central conclusion is that, controlling for other variables, liberalization has raised export growth by nearly 2 percentage points compared with the pre-liberalization period. The impact appears to have been the greatest in Africa (3.6 percentage points, p.p.) and the least in Latin America (1.6 p.p.). There is also evidence that liberalization has increased the sensitivity of export growth to world income growth; that is, liberalization has increased the income elasticity of demand for exports by inducing structural change.

The high-performance Asian countries are perhaps the most spectacular examples of economic success linked to export performance, but, interestingly, this has not always been based on free trade. The economies of Japan, South Korea, Taiwan, Singapore, Hong Kong, Malaysia, Indonesia and Thailand have recorded some of the highest GDP growth rates in the world since 1965 (averaging as a group nearly 6% per annum) and also some of the highest rates of growth of exports (averaging more than 10% per annum). While some of the countries have been very laissez-faire, however, others have been very interventionist, for example Japan and South Korea, pursuing relentless export promotion but import substitution at the same time.

Another interesting case study is China, which still restricts trade, but is now the world's second-largest exporter after Germany. Since China launched its 'open door' policy in 1978, after three decades of inward-oriented trade, its exports have been growing at over 10% per annum and its average GDP growth rate has been 8%. This is another classic example of export-led growth deliberately promoted by the government through the establishment

of special economic zones and 'open cities' (originally in the provinces of Guangdong and Fujian), which act as magnets for investment and provide incentives for exporters. Typical incentives for exporters in all export-orientated economies consist of:

- Exemption from duties and tariffs on inputs that go into exports
- Investment grants
- Tax holidays
- Favourable retention rights over foreign exchange if exports are in certain sectors
- Favourable treatment of foreign investment.

In China, a 25% investment share was enough to give joint venture status to foreign investors, who then qualified for tax incentives, and no limit was placed on foreign equity investment in Chinese companies.

For a country's overall economic performance to improve, however, it is not enough for export growth to accelerate. Export growth must be shown to outpace import growth, otherwise balance of payments difficulties will arise.

Trade liberalization, import growth and the balance of payments

The main function of tariffs and non-tariff barriers, such as quantitative import controls, quality standards and government procurement policies, is to control the level and growth of imports in order to protect and promote domestic industry. If tariffs are reduced, and quantitative restrictions are lifted, imports can be expected to increase. There will be an 'autonomous' increase, and also imports are likely to become more sensitive to income and relative price changes domestically. If the income elasticity of demand for imports increases, this tightens the balance of payments constraint on growth (see equation (15.4); and Chapter 16). Country studies by Melo and Vogt (1984) for Venezuela, Mah (1999) for Thailand, and Bertola and Faini (1991) for Morocco all show a significant impact of trade liberalization on import growth and the sensitivity of imports to domestic income growth.

The most comprehensive study to date is by Santos-Paulino and Thirlwall (2004) (see also Santos-Paulino, 2002b), who take the same 22 countries as for export growth, discussed previously, and find that trade liberalization, by itself, controlling for other factors, has increased the growth of imports by 5–6 p.p. (more in countries initially highly protected and less in others), and also increased the income elasticity of demand for imports by 0.2–0.5 p.p. Pacheco-López and Thirlwall (2006) have also examined the direct effect of liberalization on the income elasticity of demand for imports in 17 Latin American countries over the period 1977–2002 and find a rise from 2.08 p.p. in the pre-liberalization period to 2.63 p.p. in the post-liberalization period.

If trade liberalization raises the growth of imports by more than exports, or raises the income elasticity of demand for imports by more than in proportion to the growth of exports, the balance of trade (or payments) will worsen for a given growth of output, unless the currency can be manipulated to raise the value of exports relative to imports. The consequence is that the growth of output may have to be constrained to avoid balance of payments crises.

The first major studies of this topic were by Parikh for UNCTAD (1999) and for WIDER (Parikh, 2002). The first study examined 16 countries over the period 1970–95, with the main conclusion that trade liberalization seems to have worsened the trade balance by 2.7% of

GDP, which is substantial. The second study extends the analysis to 64 countries with the general conclusion:

> the exports of most of the liberalizing countries have not grown fast enough after trade liberalization to compensate for the rapid growth of imports during the years immediately following trade liberalization. The evidence suggests that trade liberalization in developing countries has tended to lead to a deterioration in the trade account.

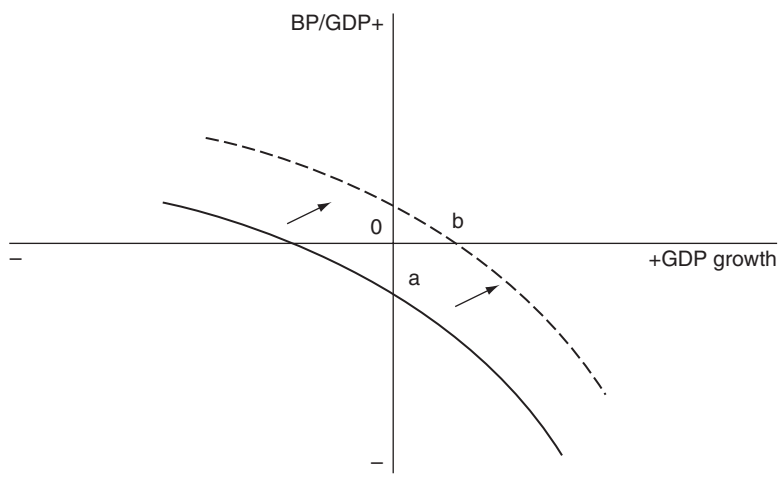
Santos-Paulino and Thirlwall (2004) take the same sample of 22 developing countries as for the impact of liberalization on export and import growth previously discussed and find that the switch to a more liberal trading regime worsened, on average, the trade balance by 2% of GDP (which is similar to the Parikh estimate), and the current account by 1% of GDP. For a separate group of 17 least developed countries, Santos-Paulino (2007) finds a deterioration in the trade balance ratio of 4% of GDP. For a sample of 17 Latin American countries over the period 1997–2002, Pacheco-López and Thirlwall (2007) find a deterioration in the trade balance of 1.3–2.3% of GDP (depending on the method of estimation used).

Ju et al. (2009) at the IMF take a sample of 39 countries over the period 1970–2004 to estimate the effect of trade liberalization on the trade balance. They find that liberalization raised the export/GDP ratio, but raised the import/GDP ratio by more, and using the Wacziarg and Welch (2008) dates of liberalization, calculate a negative effect on the trade balance/GDP ratio of –1.3%.

All these results show that trade liberalization has impacted unfavourably on the trade balance and current account balance of liberalizing countries. Such a deterioration, if it cannot be financed by sustainable capital inflows, may either trigger a currency crisis or necessitate a severe deflation of domestic demand (and therefore growth) to control imports. As UNCTAD (2004) argues in its *Least Developed Countries Report 2004* on the theme of linking international trade with poverty reduction: 'this critical [balance of payments] constraint on development and sustained poverty reduction is conspicuously absent in the current debate on trade and poverty'.

Indeed, the ultimate test of successful trade liberalization, at least at the macro-level, ignoring distributional effects, is whether it lifts a country on to a higher growth path consistent with a sustainable balance of payment; in other words, whether it improves the trade-off between growth and the balance of payments, as illustrated in Figure 15.5.

Figure 15.5 The trade-off between growth and the balance of payments



The ratio of the current balance (or trade balance) to GDP (BP/GDP) is measured on the vertical axis, and the growth of GDP on the horizontal axis. The solid line curve gives the negative trade-off curve, showing how the balance of payments deteriorates as growth accelerates. The curve is deliberately drawn here to represent a serious situation where the balance of payments is in deficit (point a) even at zero growth. The objective of trade policy should be to shift the curve upwards to, say, point b on the horizontal axis so that some positive growth is possible without running into payments difficulties. It is possible to estimate such a trade-off curve and see whether liberalization has shifted it favourably. Pacheco-López and Thirlwall (2007) do this for 17 Latin American countries using pooled time-series/cross-section data over the period 1977–2002 and find that trade liberalization *worsened* the trade-off by 3.6 percentage points. Before liberalization, the curve cut the vertical axis at a deficit of 1.39%; after liberalization, it cuts the curve at a −4.99 deficit/GDP ratio. This may be one of the reasons why it is difficult to find robust results showing that trade liberalization has improved the growth performance of countries.

Trade liberalization and economic performance

It is fairly clear that trade liberalization has improved export performance, but liberalization and export growth are not the same and should not be confused in the discussion of trade liberalization and economic growth. As Stiglitz (2006) notes:

> Advocates of liberalization cite statistical studies claiming that liberalization enhances growth. But a careful look at the evidence shows something quite different … It is exports – not the removal of trade barriers – that is the driving force of growth. Studies that focus directly on the removal of trade barriers show little relationship between liberalization and growth. The advocates of quick liberalization tried an intellectual sleight of hand, hoping that the broad-brush discussion of the benefits of globalization would suffice to make their case.

The early work of Edwards (1992, 1993, 1998) and Dollar (1992) showed a positive relation between the outward orientation of countries, the removal of trade distortions and the growth of countries. This work, however, has been heavily criticized by Rodriguez and Rodrik (2000) on methodological grounds and for lack of robustness. They themselves find no significant relationship between either import duties or the percentage of imports covered by non-tariff barriers and the growth of per capita income (controlling for other variables).

The work of Dollar and Kraay (2004) has been highly influential, especially with the World Bank. They take a sample of 73 developing countries from the 1970s to the 1990s and rank them according to their share of trade (exports plus imports) in GDP. The top one-third of countries are called 'the post-1980s globalizers', and these countries (24 in all) are compared with the rest of the sample. Per capita income in the 'globalizer' countries is shown to have grown much more rapidly decade by decade compared with the 'non-globalizers'. The influence of Dollar and Kraay on the views of the World Bank can be vividly seen in its report, *Globalization, Growth and Poverty* (2002), in which it claims:

> Some 24 developing countries – with 3 million people – have doubled their ratio of trade to income over the past two decades. The rest of the developing world trades less than 20 years ago. The more globalizing developing countries have increased their per capita growth rate from 1 percent in the 1960s to 3 percent in the 1970s, 4 percent in the 1980s and 5 percent in the 1990s; … much of the rest of the developing world – with about 2 billion people – is becoming marginalized.

Dollar and Kraay's results need to be treated with some care, however. Dowrick and Golley (2004) show that the faster growth of the 'globalizing' countries is entirely due to the fast growth of China and India. If these two countries are excluded from the sample, the remaining 22 'globalized' countries grew slower over the period 1980–2000 than the 'non-globalized' ones. They also show that the 'globalizing' countries were not the most open or liberal. Their share of trade in GDP rose the most, but the countries started from a low base and were still less open economies than the 'non-globalizers', at least until the 1990s.

Another major influential study of trade orientation and growth is that by Sachs and Warner (1995), which takes 79 countries over the period 1979–89. They find that open economies (see before for the definitions of 'open' and 'closed') grew on average 2.44 percentage points faster than closed economies. Rodriguez and Rodrik (2000) argue, however, that it is not tariffs and non-tariff barriers that distinguish the two sets of countries but a combination of the black market exchange rate premium and the state monopoly of exports. The black market exchange rate is highly correlated with turbulent macroeconomic conditions – debt, terms of trade deterioration and wars – and this was the major cause of their slower economic growth. Wacziarg and Welch (2008) extend the Sachs and Warner study into the 1990s when 78 countries are classified as open and 27 closed (compared with 31 open and 74 closed during the period studied by Sachs and Warner), and find that there appears to be no significant effect of openness on economic growth.

Greenaway et al. (1998, 2002) examine the relationship between trade liberalization and growth within a 'new' growth theory framework (see Chapter 4) using panel data analysis for up to 73 countries over the period 1975–93. Different measures of liberalization are used, and they also look for lagged effects. What they find is that in the first year of liberalization, the impact is negative (although not significantly so); in the second year, it is positive but not significant; but in the third year, it is positive and significant. This suggests a J-curve effect of liberalization on growth, with the effects taking time to come through. On the other hand, there is no indication of whether the positive impact lasts.

In conclusion, there is some evidence that trade liberalization promotes growth and a higher growth of living standards; on the other hand, the results are not always robust, and depend on the measure of liberalization used, the time period taken and the estimation method. Rodriguez and Rodrik (2000) conclude their evaluation of trade orientation and economic growth by saying that the indicators of openness and liberalization used are either poor measures of trade barriers or are highly correlated with other determinants of domestic performance. They are particularly concerned that the priority given to trade policy reforms has generated expectations that are unlikely to be met, and may preclude other institutional reforms, which would have a greater impact on economic performance. In other words, trade liberalization cannot be regarded as a substitute for a comprehensive trade and development strategy. To quote Rodrik (2001): 'deep trade liberalization cannot be relied upon to deliver high rates of economic growth and therefore does not deserve the high priority it typically receives in the development strategies pushed by leading organizations'.

Trade liberalization, poverty and domestic inequality

Poverty

There may be static efficiency gains from trade liberalization and a greater volume of trade, but there will also be welfare losses if domestic firms cannot compete as trade barriers fall and those thrown out of work cannot find alternative employment. In other words, the gains from trade to a country may not be equally distributed between people within a country, and some may lose

absolutely. George (2010) cites production losses of more than 20% in some poor countries as a result of liberalization.

If more trade leads to faster economic growth, this should lift more people out of poverty and reduce the poverty rate, depending on the elasticity of the poverty rate with respect to growth (see Chapter 2), but as we saw earlier, trade liberalization does not guarantee faster economic growth, and even if the poverty rate declines, the income distribution may still become more unequal if the richest in the country gain relative to the poorest.

The impact of trade liberalization on poverty depends mainly on its effects on employment and prices. Two main groups in society need distinguishing: workers (or wage earners) and producers (or profit earners). Profit earners include not only firms and enterprises, but also the self-employed who are consumers as well as producers, such as peasant farmers in rural areas, and those working in the petty service sector in urban areas.

Wage earners will be affected by trade liberalization in three main ways: by what happens to the wage rate, to employment and to the prices of goods they consume. There are many possibilities. If liberalization increases productivity, and real wages rise, workers will benefit. Increased competition in import-competing activities, however, may destroy jobs and lower wages. In Kenya, cotton farming and textile production have been badly hit by liberalization. Cotton production fell by 70% between the mid-1980s and the mid-1990s and textile employment fell from 120,000 to 85,000 in ten years (Christian Aid, 2005). Two million Mexican maize farmers have lost their jobs since the NAFTA was signed in 1994 because they cannot compete with subsidized maize from the USA. Case example 15.2 discusses the impact of trade liberalization on employment and poverty in Africa.

Case example 15.2

Impact of trade liberalization in Africa

Trade liberalization has cost sub-Saharan Africa US$272 billion over the past 20 years. Had they not been forced to liberalize as the price of aid, loans and debt relief, sub-Saharan African countries would have had enough income to wipe out their debts and have sufficient left over to pay for every child to be vaccinated and go to school. Two decades of liberalization have cost sub-Saharan Africa roughly what it has received in aid. Effectively, this aid did no more than compensate African countries for the losses they sustained meeting the conditions attached to the aid they received.

When trade is liberalized, imports climb steeply as new products flood in. Local producers are priced out of their markets by new, cheaper, better marketed goods. Exports also tend to grow, but not by as much. Demand for the kind of things sub-Saharan African countries export, such as raw materials, doesn't change much, so there isn't a lot of scope for increasing exports. This means that, overall, local producers are selling less than they were before trade was liberalized.

It is often poor farmers who suffer most when trade is liberalized. The fall in domestic demand that results from increased imports hits them particularly hard. Poor farmers have little access to capital or technology to increase their productivity or improve the quality of what they sell in response to more competition. They are also competing in an extremely unequal market, where imports from developed countries are often heavily subsidized. Manufacturing industries have not grown up to employ people who are no longer able to make a living from farming. Instead, manufacturing has also been hard hit by trade liberalization.

continued overleaf

Case example 15.2 **Impact of trade liberalization in Africa** – *continued*

Trade liberalization, therefore, means a 'double whammy' for poor people, stifling the development of industry that would replace lost jobs in agriculture. Export trends bear this out. Although exports did increase in most cases following trade liberalization, most countries simply exported more of the same – they did not start to export more manufactured goods, or more higher value-added agricultural goods

It is clear that trade liberalization is not driving the development of a more dynamic diversified or pro-poor pattern of development. On the contrary, it is locking Africa into greater dependence on a few agricultural products whose prices have been declining for 50 years. Liberalization is hitting manufacturing hard, and it is the development of manufacturing that Africa needs if it is ever to trade its way out of poverty.

Source: Christian Aid, 2005.

Real income also depends on the price of consumption goods. Price changes will have distributional effects depending on the weight of each good in each worker's basket. If the price of food falls, the poor will gain more than the rich because they spend a higher proportion of their income on food. If liberalization raises the price of food, however, because of the removal of subsidies for example, the poor are likely to suffer severely.

Producers will also be affected in a variety of ways, in particular by what happens to output prices, to input prices, and to the prices of the basket of goods bought for consumption in the case of self-employed producers. Producer prices are likely to fall with trade liberalization. In Senegal, after liberalization, the price farmers received for their tomatoes fell by 50%, and tomato production fell by 70%, leaving many farmers without a cash crop (Christian Aid, 2005). But the price of inputs is also likely to fall, so whether producers gain or lose depends on the prevailing protective structure of their output and inputs.

If any generalization can be made from case studies, it seems that when all price and wage effects are taken into account, rural families tend to lose and urban households tend to gain, at least in circumstances where workers retain their jobs. Ravallion (2006) concludes, on the basis of his micro-case studies of trade liberalization in Morocco and China, that: 'the most vulnerable households tend to be rural dependent on agriculture, with relatively few workers, and with weak links to the outside economy through migration'. He also looks at the relationship between trade liberalization and the poverty rate across 75 countries in which there have been at least two household surveys on poverty (giving 178 cases in all), and finds no significant relation, positive or negative. Ravallion (2006) concludes: 'it remains clear that there is considerable variation in the rates of poverty reduction at a given rate of expansion of trade volume'. Equally, however, he says: 'based on the data available from cross-country comparison, it is hard to maintain the view that expanding trade, in general, is a powerful force for poverty reduction in developing countries'.

Likewise, Winters et al. (2004) conclude their major survey on trade liberalization and poverty by saying:

> there can be no simple relationship between trade liberalization and poverty. Theory provides strong presumption that trade liberalization [should] be poverty-alleviating in the long run and on average … equally, however, it does not assert that the static and microeconomic effects of liberalization will always be beneficial to the poor. Trade liberalization

necessarily implies distributional changes; it may well reduce the well-being of some people (at least in the short term) and some of these may be poor.

See also Thorbecke and Nissanke (2006) on the transmission mechanisms through which trade liberalization can affect poverty.

To protect the poor as trade liberalization takes place, countries need to consider a number of policy issues:

- **Sequencing of liberalization**: To ameliorate the costs of adjustment, great care needs to be taken with the sequencing of liberalization, so that vulnerable sectors are given time to adjust.
- **Provision of social safety nets**: For those already poor and adversely affected by liberalization, governments need to put in place social safety nets in the form of, for example, unemployment and income insurance. These could be supported by World Bank programmes.
- **Labour mobility and training**: Improved worker mobility and worker training can help those who lose jobs to find new ones.
- **Development of markets**: To take advantage of new market opportunities, the poor and other disadvantaged groups require training and technical assistance in traditional and non-traditional activities. Access to credit is particularly important for the start of new businesses.
- **Infrastructure development**: In agriculture, improved and cheaper transport is important to allow poor farmers to take advantage of new market opportunities. They should be a core component of 'aid for trade' programmes.
- **Poverty Reduction Strategy Papers**: A conscious effort needs to be made to integrate pro-poor trade strategies into Poverty Reduction Strategy Papers (see Chapter 14) that have to be prepared by countries for international organizations, such as the World Bank, to qualify for debt relief (see UNCTAD, 2004).

Income inequality

Let us now turn specifically to the issue of the impact of trade liberalization on wage and income inequality within countries, which is not necessarily the same as the impact on poverty or the poverty rate. Poverty can fall, but wage and income inequality can rise because the share of income going to the top income recipients rises by more than the share going to the bottom. In general, what will happen to the income distribution as trade liberalization takes place will depend on how the wage distribution is affected, how the distribution of assets changes, and what happens to the rate of return on assets. Goldberg and Pavcnik (2007), in their survey of the distributional effects of globalization in developing countries, say: 'while inequality has many different dimensions, all existing measures of inequality for developing countries seem to point to an increase in inequality which in some cases is severe'. Table 15.2 gives the Gini ratios (as a measure of distribution – see Chapter 2) for a selection of developing countries in the 2000/2010s. Gini ratios are generally higher in Latin America than in Asia or Africa, and in most countries in the past decade, inequality has increased.

The major cause of income inequality is wage inequality between skilled and unskilled workers. Orthodox trade theory (e.g. the Heckscher–Ohlin theory) predicts a narrowing of wage inequality in poor countries because their comparative advantage lies in the production and export of goods using abundant unskilled labour, which should raise wages of unskilled workers relative to skilled. But this narrowing has not happened. Robbins (1996), Freeman and Oostendrop (2001), Zhu and Trefler (2005) and Anderson (2005) all give extensive evidence of a worldwide trend

Table 15.2 Income inequality in selected developing countries measured by the Gini ratio

Country	Latest date in the 2000/2010s	Gini ratio
Bangladesh	2010	32.0
Bolivia	2013	48.1
Brazil	2013	52.9
Chile	2013	55.5
China	2011	30.7
Colombia	2013	53.5
Dominican Republic	2013	47.1
Egypt	2008	30.8
Ghana	2006	42.8
Honduras	2013	53.7
India	2012	33.6
Indonesia	2010	35.6
Jamaica	2004	45.5
Mexico	2012	48.1
Nigeria	2009	43.0
Pakistan	2010	29.6
Peru	2013	44.7
Philippines	2012	43.0
Sri Lanka	2012	38.6
Thailand	2012	39.3
Venezuela	2006	46.9

Source: World Bank, 2015.

towards greater wage inequality between skilled and unskilled labour in poor countries. There are four major reasons for this:

1. The competition between poor countries themselves. Orthodox theory takes a two-country world – rich and poor. But poor countries trade with each other, for example Mexico and China. Mexico's trade with the USA may raise the wages of unskilled relative to skilled labour in Mexico, but trading with China may reduce the wages of unskilled labour in Mexico.
2. The flows of FDI to poor countries, and rich developed countries shifting the production of intermediate inputs to poor countries, or outsourcing (see the model of Feenstra and Hanson, 1997). This increases the demand for skilled labour in poor countries. Foreign-owned plants in Mexico that export pay wages 60% higher than plants that do not export.
3. The trade-related, skill-biased technical change in poor countries, either as a result of increased competition and trying to 'catch up', or the increased import of machinery from rich countries, which increases the demand for skilled labour (see Wood, 1993, 1995, 1997).
4. If trade liberalization causes balance of payments problems and the economy has contracted, this depresses the demand for unskilled labour and reduces relative wages (see Arbache et al., 2004 for a case study of Brazil).

Wage differences between skilled and unskilled workers are not the only source of income inequality, although according to Goldberg and Pavcnik (2007), income inequality tends to move in the same direction as wage inequality. Greater trade openness may alter the gap in earnings between men and women, between regions within a country and between rural and urban areas, and also change the rate of return on assets – all of which affect a measure of income inequality such as the Gini ratio. What is the evidence?

The most highly publicized and 'rose-tinted' view that trade openness has not worsened the income distribution and that 'growth is good for the poor', is found in the studies by Dollar and Kraay (2002, 2004). First, they plot changes in the Gini ratio against changes in trade shares for more than 100 developed and developing countries, and find no relation. Second, they take 80 countries over 40 years and regress the growth of per capita income of the poorest 20% of the population on the growth of average income per head, and find the relation is 1:1, that is, an elasticity of unity, and that the level of openness makes no difference to the coefficient. Dollar and Kraay express some surprise that they do not find a negative effect of openness on the poor, given all the assertions and adverse publicity of the anti-globalization movement. They do various tests of robustness and stick with their original conclusion, which is that: 'openness to trade increases the income of the poor to the same extent that it increases the income of the other households in society'.

This is not the general consensus, however, of most other studies in this field. One directly contrary study is by Edward (2006), who uses world consumption data and finds that for roughly 1 billion people between the 50th and 70th percentile of the consumption distribution, consumption hardly changed between 1993 and 2001, and among the $2 a day poor, the ratio of their consumption growth to average growth was not 1:1 but 1:2. He concluded that: 'growth is good for the poor but much better for the rich'.

The most detailed study of the impact of trade liberalization on the distribution of income is by Milanovic (2005). In his introductory survey of the existing literature, Milanovic remarks:

> The conclusions run nearly the full gamut, from openness reducing the real income of the poor to openness raising the income of the poor proportionately less than the income of the rich to raising both the same in relative terms. Note, however, that there are *no* results that show openness reducing inequality; that is, raising the income of the poor more than the income of the rich – let alone raising the absolute income of the poor by more.

Milanovic's (2005) own research takes 321 household income surveys from 95 countries in 1988, and 113 countries in 1993 and 1998 covering 90% of the world's population. The income is divided up into deciles, and inequality is measured by the income of the ith decile ($i = 1–10$) of the population relative to the mean level of income of the whole population. For each decile, income inequality is then related to trade openness measured by the ratio of total trade to GDP, and also to openness interacted with the level of income, to test whether the effect of openness on inequality varies with the level of income. Two striking results emerge. First, increased openness *reduces* the income share of the bottom six deciles. Second, the adverse effect of openness on inequality is greater the lower a country's per capita income. The poor only start to benefit relative to the rich at an income per capita of about $7,500 at 1990 prices. Barro (2000) and Spilimbergo et al. (1999) also find that openness worsens income inequality up to a certain point, and then the effect diminishes. Milanovic (2005) concludes: 'openness would therefore seem to have a particularly negative impact on poor and middle income groups in poor countries – directly opposite to what would be expected from the standard Heckscher–Ohlin framework'.

Trade liberalization and international inequality

In Chapter 2, we documented the historical widening of the international and global distribution of income, and the recent slight fall. Bourguignon (2015), in his book *The Globalization of Inequality*, argues that falling inequality between nations and rising inequality within nations (where it exists) can both be explained by globalization, because the process of freeing trade has allowed some populous poor countries to grow fast and catch up with richer countries, while free trade and flows of foreign direct investment have widened the gap between skilled and unskilled wages within rich and poor countries.

How much of the persistent inequality across the world is due to trade liberalization? Is freer trade equilibrating or disequilibrating? These are not easy questions to answer, but attempts can be made. One methodological approach is to interact a measure of trade openness with the level of per capita income (PCY) to test whether the impact of openness varies with the level of development. This is what Dowrick and Golley (2004) do, taking over 100 countries for two separate time periods, 1960–80 and 1980–2000. For the first period, a higher trade share of one percentage point (p.p.) is associated with 0.11% faster growth, and the poorer the country, the slightly greater the benefit from openness, meaning that trade liberalization was a force for convergence. But for the second period, this result is reversed. The impact of the trade share on the growth of PCY is now negative, and poor countries suffered more than rich countries, leading to divergence. Dividing the 1980–2000 sample of countries into 30 poorest countries and the rest shows no significant effect of the trade share on growth in the poorest countries, but the richer countries gained about 0.012% growth for a 1 p.p. increase in the trade share. Specialization in primary products had a strong negative effect on growth in the 1980–2000 period, reducing it on average by nearly 1% and the impact was even stronger in the poor country group, a difference of 1.7%. Dowrick and Golley's conclusion is that 'trade has promoted strong divergence in productivity [between countries] since 1980'. A new study of the period since 2000 is badly needed.

Ghose (2004) has also examined this issue, and reaches a more neutral conclusion. He takes 96 countries over the period 1981–97, and examines the relationship between the rate of change of the trade/GDP ratio (as a measure of trade liberalization) and both the level of PCY in 1981 and the size of population. Overall, he finds that the effect of trade liberalization on growth performance has been much the same for poor and rich countries, and that, therefore, trade liberalization has had no discernible effect on international inequality. On the other hand, there seems to be a positive relationship between trade performance and population size, and this may have contributed to the decline in the population-weighted Gini ratio mentioned above. The result is heavily influenced by China and India, the two most populous countries in the world, both of which started with a very low trade base in 1981. In both cases, however, export growth has been the driving force, not trade liberalization per se.

All we can say with some confidence is that there is little evidence that free trade has contributed to a narrowing of the income gap between countries, as predicted by orthodox trade and growth theory. Despite growing trade between countries, income disparities continue to persist.

Disadvantages of free trade for development

Even if trade-liberalized countries did perform (on average) better than non-liberalized countries, this does not mean that all developing countries should liberalize as quickly as possible, and that there is no role for protection and government intervention to improve trade and growth

performance. Indeed, we have seen that this is exactly what many successful East Asian countries have done. It is also worth remembering that historically no country developed on the basis of free trade. The countries of Europe, North America and Scandinavia all developed their industrial sectors with the aid of tariff and non-tariff protection (see Chang, 2002, 2005, 2007; Reinert, 2007). Trade liberalization is not a substitute for a trade and development strategy.

Let us consider, therefore, the potential disadvantages of free trade and the weaknesses of the comparative cost doctrine that underlies it. Like most micro-welfare theories, the comparative advantage/free trade argument is a *static* one based on restrictive and often unrealistic assumptions. The doctrine assumes, for example, the existence of full employment in each country (otherwise there would be no opportunity cost involved in expanding the production of commodities), that the prices of resources and goods reflect their opportunity cost (that is, that perfect competition exists), and that factor endowments are given and unalterable. Moreover, the doctrine ignores the effect of free trade on the terms of trade (movements in which affect real income) and the balance of payments consequences of free trade. As a result, it can be argued that the principle of comparative advantage is not very useful in the context of developing countries, which are in need of rapid structural change and are as much concerned with long-term development as short-term efficiency. As many economists have commented, the doctrine of comparative advantage is more useful in explaining the *past* pattern of trade than in providing a guide as to what the future pattern of trade should be as a stimulus to development.

The question is not whether there should be trade but whether there should be *free trade*, as the doctrine of comparative advantage implies. Perhaps the long-run needs of developing countries would be better served, at least initially, by various forms of protection.

The development considerations that the doctrine of free trade overlooks are numerous. First, it ignores the balance of payments' effects of free trade, and the effect of free trade on the terms of trade. If the demands for different commodities grow at different rates owing to differences in their price and income elasticity of demand, free trade will work to the benefit of some countries and to the relative detriment of others. In classical theory, Torrens, J.S. Mill, Marshall, Edgeworth and Taussig all conceded that unilateral substitution by a country of free trade for protection would move the terms of trade against the country. But most 'free traders' ignored the issue. In general, the implicit assumption was that moving from protection to free trade would not alter the commodity terms of trade, or if it did, the gains from trade would more than offset any unfavourable terms of trade effect. If the terms of trade effect does offset the gains from trade, this is a valid argument for protection (see below).

A second factor that the free trade doctrine tends to overlook is that some activities are subject to increasing returns while others are subject to diminishing returns. The commodities most susceptible to diminishing returns are primary products, where the scope for technical progress may also be less than in the case of manufactured goods. This being so, one might expect a rise in the ratio of primary to manufactured goods prices, and diminishing returns would not matter so much if the goods were price inelastic. In practice, however, there has been a substitution of synthetic alternatives for primary products, and the terms of trade have deteriorated (see below), partly because of substitution and partly because the demand for primary commodities in general, in relation to supply, has expanded much less than for manufactured commodities. But whatever the movement in the terms of trade, it would surely be perverse to base a trade and development strategy on activities subject to diminishing returns, particularly in light of the theory of cumulative causation (see Chapter 10).

A third disadvantage of adherence to the comparative advantage doctrine is that it could lead to excessive specialization in a narrow range of products, putting the economy at the mercy of outside influences. The possibility exists of severe balance of payments instability arising from specialization, which could be damaging to development.

Fourth, static comparative cost analysis ignores the fact that comparative advantage can be altered by deliberate policies to promote certain activities. There is no reason why countries should be condemned to the production and export of the same commodities forever. No country was endowed with the *natural* ability to produce industrial goods. Now that technology and capital accumulation, rather than natural resources, are the basis for trade, comparative advantage is no longer predetermined or predictable. Hausmann and Rodrik (2003) document how countries somehow stumble on lucrative niche markets almost by accident: hats in Bangladesh, cut flowers in Colombia, footballs and bed sheets in Pakistan and software in India, to give just a few examples. If there is any explanation at all, it is entrepreneurial trial and error. If comparative advantage is not given by nature but can be altered, the case for initial protection is strengthened (the classic infant industry argument).

It should also be remembered that the concept of comparative advantage is based on calculations of private cost. But we observed in Chapter 9 that social costs in developing countries may diverge markedly from private costs, and that social benefits may exceed private benefits because of externalities. If private costs exceed social costs in industry (because wage rates are artificially high, for example), and social benefits from industrial projects exceed private benefits, there is a strong argument for protecting industry in order to encourage the transfer of labour from other activities into industry to equate private and social cost and private and social benefit.

Finally, the export growth of some activities has relatively little secondary impact on other activities. Primary commodities fall into this category. There is abundant evidence that the export growth of primary commodities has not had the development impact that might have been expected from the expansion of industrial exports. The reasons for this are not hard to understand. Primary production has very few backward or forward linkages, and historically it has tended to be undertaken by foreign enterprises, with a consequent outflow of profits. The secondary repercussions of the pattern of trade are overlooked by the free trade doctrine.

Theory of protection: tariffs versus subsidies

We have seen that trade can bring substantial benefits, but it does not follow that the freer the trade the better. There are many disadvantages that the doctrine of free trade overlooks when trade is considered in a long-run development context, as opposed to the static short-run context of the doctrine of comparative advantage. Furthermore, free trade does not guarantee an equal distribution of the gains from trade, and this is an important consideration for countries that naturally look to their relative position compared with others, and not only at their absolute performance.

We can summarize the **arguments for protection** as follows (see Johnson, 1964). First, there are purely **economic arguments** that comprise all arguments in favour of protection as a means of increasing real output or income above what it would otherwise be. These include the following:

- The infant industry argument – allowing industries to reach their optimum size in terms of minimum average costs of production.
- The existence of external economies in production, where the social cost of production is less than the private cost.

- Distortions in the labour market that make the social cost of using labour less than the private cost.
- International distortions that cause the domestic rate of transformation between goods to diverge from the foreign rate of transformation, due, for example, to monopoly power in international trade. This argument for protection is often referred to as the **optimum tariff argument**.

This category of economic arguments might also include two factors previously stressed: terms of trade deterioration and balance of payments difficulties arising from the pattern of trade. Johnson (1964) and others of neoclassical persuasion have argued that these are non-arguments because in the case of the terms of trade, the restriction of imports will not reduce import prices for a small country; and in the case of the balance of payments, equilibrium can be achieved automatically by letting the exchange rate float freely.

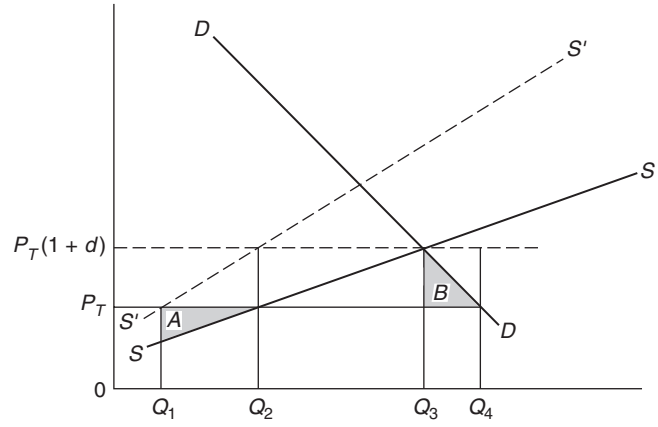
The terms of trade argument may be correct, but the balance of payments argument suffers from confusion between a balance of payments equilibrium on the current account, which affects the real economy, and balance in the foreign exchange market. The two are not the same. A floating exchange rate, by definition, will equilibrate the foreign exchange market, but will not necessarily equilibrate the balance of payments on current account. If terms of trade deterioration and balance of payments difficulties constrain growth and lead to unemployment, the social cost of labour will be less than the private cost, which is a domestic distortion and an economic argument for protection.

Second, **non-economic arguments** for protection tend to be arguments in favour of protection for its own sake rather than to increase output or income above what it would otherwise be. Industrialization at any price and self-sufficiency for strategic reasons are examples of this type of argument.

Having summarized the arguments in favour of protection, the question then is: What is the best means of protection? It can be shown that tariffs are appropriate only under special circumstances: when the distortions are international (the optimum tariff argument) and when self-sufficiency is the objective. All other arguments for protection are arguments for subsidies, the reason being that when distortions are domestic, a tariff will introduce further distortions, and according to the **theory of the second best**, there is no way of knowing *a priori* whether the situation will be made better or worse.

The argument can be illustrated with a diagram. Consider Figure 15.6, where a good that is producible domestically is subject to a domestic distortion such that the private cost of production S′S′ is *d* per cent above the social cost (*SS*). The demand curve is *DD* and the good is also

Figure 15.6 Welfare gains and losses from protection



importable at the international price, P_t. Under free trade, domestic producers will produce up to Q_1 and Q_1 to Q_4 will be imported. Q_1 to Q_2 imports could be replaced, however, by additional domestic production, with real savings equal to the shaded area *A*, if domestic producers were given a subsidy of *d* per cent. The same real income gain could be achieved by a tariff of the same percentage, but because the domestic price rises to P_T $(1 + d)$, there will be a loss of consumer surplus equal to the shaded area *B* owing to the restriction of consumption by Q_3Q_4. The loss of consumer surplus may be greater than the real income gain, reducing total welfare. The balance of advantage depends on the relative slopes of the supply and demand curves. In these circumstances, a subsidy to labour is unequivocally first best.

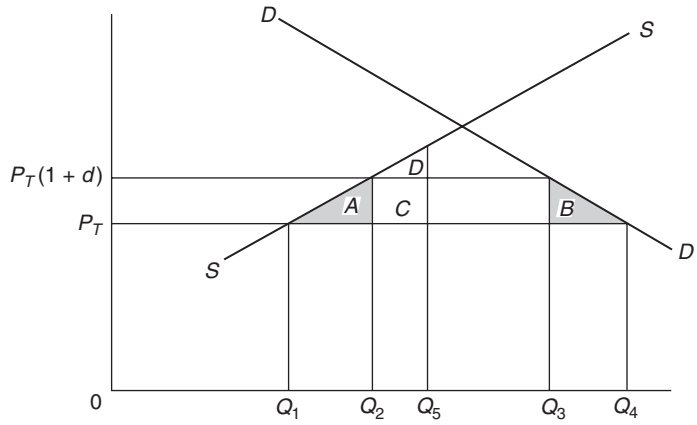
Now let us consider the relative merits of tariffs and subsidies where the arguments in favour of protection are non-economic. Suppose, for example, the objective of protection is simply to increase domestic output. Here, subsidies are also superior to tariffs because tariffs impose a consumption cost and add nothing more to the achievement of increased production. Consider Figure 15.7. We assume that there is no domestic distortion, so the *SS* curve represents both the private and the social cost of production. Now suppose that the object is to raise domestic production from Q_1 to Q_2. This can be done with a tariff or subsidy of *d* per cent that uses extra resources equal to the shaded area *A*. The tariff, however, imposes an extra consumption cost equal to area *B* as a result of a rise in the price from P_T to P_T $(1 + d)$.

On the other hand, if the objective is self-sufficiency and to cut back imports, we can show that tariffs are the least costly. The reason for this is that it is more efficient to reduce imports by jointly restricting consumption and increasing domestic production, than by doing either of these on their own. Consider Figure 15.7 again. A tariff of *d* per cent reduces imports to Q_2Q_3 at a cost of $A + B$. To get the same reduction with a subsidy requires a subsidy in excess of *d* per cent in order to induce extra domestic production Q_2Q_5 (equal to the cutback in consumption through the tariff of Q_3Q_4). This involves an extra cost equal to the area $C + D$. Since $C > B$, the cost of the subsidy policy is obviously greater than the cost of the tariff.

If subsidies are first best, they may be effectively granted by exemption from taxation. If this exemption is from existing taxes, it will have revenue implications for the government budget. In the long run, however, subsidies can be 'self-financing' by the increased output they stimulate.

A further argument against tariffs and in favour of subsidies is that tariffs are very inward-looking, whereas protection through subsidies is much more outward-looking. Tariffs adjust the

Figure 15.7 Tariffs and subsidies



internal price structure to the (high) internal cost structure. This may lead to inefficiencies and make it difficult for exports to compete when the effects of import substitution policies cease. Subsidies, in contrast, adjust the internal cost structure to the (low) external price structure and make it possible for exports to compete more easily in world markets.

Effective protection

In assessing the restrictive effect that a tariff structure has on trade, however, it is not enough just to look at the nominal tariff on finished goods. For one of the original theoretical expositions, see Corden (1966); see also the pioneering work of Balassa (1971). The nominal rate does not measure how inefficient (or costly) producers can be without incurring competition and losing their market. This is measured by the protection of **value-added**, which is the difference between the value of output and the value of inputs. The protection of value-added is the so-called **effective rate of protection**. Since value-added is the difference between the value of output and inputs, not only is the tariff on output important when measuring the degree of protection, but also the tariff on inputs.

Formally, the effective rate of protection is measured as the excess of domestic value-added over value-added at world prices, expressed as a percentage of the latter. Thus, the effective rate of protection of industry *X* may be defined as:

$$EP_x = \frac{V_x' - V_x}{V_x} = \frac{V_x'}{V_x} - 1$$

where V_x' is domestic value-added under protection and V_x is value-added under free market conditions (at world prices). Domestic value-added is equal to the sale of the industry's product minus the sum of intermediate inputs, all valued at domestic market prices; that is, including the effect of tariffs on the finished good and on the inputs into the finished good. The free market value-added can be defined identically, but with the final product and input prices measured exclusive of tariffs on them. It is clear that the height of the effective tariff rate depends on three variables:

- The level of nominal tariffs on output
- The proportion of value-added to total output
- The level of nominal tariffs on the industry's inputs.

The higher the nominal tariff, the lower the tariff on imported inputs, and the higher the proportion of value-added to total output, the higher the effective rate of protection. If the tariff on finished goods is very high and the tariff on inputs is low, domestic value-added can be very high; in turn, world value-added may be very low, giving enormous rates of effective protection, sometimes in excess of 1,000%.

Let us now give a practical example. Suppose Indian textiles have a world price of $5, of which $3 represents raw material costs and $2 represents value-added. Suppose that imports of Indian textiles into a developed country are subject to a tariff of 20%, while domestic producers must pay a tariff of 10% on textile raw materials. To remain competitive, the domestic producer must produce the commodity for not more than $6. The value-added can be $6 minus the cost of raw materials plus the tariff on raw materials, that is, $6 − ($3 + $0.30) = $2.70. The effective rate of protection is the difference between domestic value-added and Indian value-added (that is,

value-added at world prices), expressed as a percentage of Indian value-added, that is, (2.70 – 2)/2 = 35%. This is the effective rate of protection, equal to the difference between the gross subsidy on value-added provided by the tariff on the final product ($(1/2) = 50%) and the implicit tax on value-added as a result of the tariff on raw materials ($(0.30/2) = 15%). This is the extent (35%) to which production can be more costly in the developed country without losing competitive advantage; in other words, it is the degree to which Indian textile producers would have to be more productive to compete in the developed country market.

Effective rates of protection almost always exceed nominal rates. At one extreme, if a country obtains raw material inputs that are duty free (at world prices) but puts a tariff on the final good, the effective rate must be higher than the nominal rate. At the other extreme, if a country puts a tariff on inputs but no tariff on the finished good, the effective rate of protection is negative. Students might like to prove these propositions for themselves, using the formula for the effective rate of protection.

Calculation of the effective rate of protection also depends on the exchange rate. If the exchange rate of a country in the protected situation is overvalued, the price of imported inputs measured in domestic currency will be undervalued, and this will affect the calculation of the domestic value-added and the value-added at world market prices. Without adjustment for this factor, effective rates of protection are described as 'gross'; with adjustment, they are referred to as 'net'.

Our example of the effective rate of protection also assumes that all inputs are traded. Some inputs will be non-traded, however, and their price enters into the value of total output and total inputs. If the effect of protection on the price of non-traded goods is ignored, the rates of effective protection will be overestimated. In practice, it is not easy to estimate the effect of protection on the price of non-traded goods.

The theory of effective protection suggests that the same *nominal* tariff cuts mean different degrees of change in effective rates of protection, and thus it may be unwise for developing countries to press for across-the-board tariff cuts on all commodities. **Reductions in tariffs against their primary products will increase the effective rate of protection against their manufactures**, which, we have argued, are the more important exports as far as long-run development prospects are concerned. The average nominal level of protection in developed countries is about 4%, but effective protection against the goods of developing countries may well be in the region of 30% or more. Developing countries themselves may give their own producers very high rates of effective protection.

Import substitution versus export promotion

In the early stages of production, the protectionist strategy of import substitution using tariffs is undoubtedly the easiest and many countries have pursued it, particularly in Latin America in the 1950s to the 1970s. However, there are different stages of import substitution, and some are easier than others. The first easy stage involves the replacement by domestic production of imports of non-durable consumption goods such as clothing, footwear, leather and wood products. Countries in the early stages of industrialization are naturally suited to these products and relatively little protection is required. Once this stage is over, the maintenance of high growth rates then requires the import substitution of other goods if the strategy is to be continued.

The problem with this second stage of import substitution is that relatively high rates of protection are required, because intermediate goods such as steel and producer durables are subject

to substantial economies of scale, internal and external, so that unit costs are very high if output is low. The problem with high rates of protection is that they breed inefficiency and, more importantly, act as a tax on exports by keeping costs and the exchange rate high. The catalogue of costs and distortions introduced by protective import substitution policies is formidable. Import substitution tends to shift the distribution of income in favour of the urban sector and higher income groups with a higher propensity to import, thereby worsening the balance of payments. Protection taxes agriculture since it raises the price of industrial goods relative to agricultural goods. Furthermore, since protection maintains an artificially high exchange rate, it reduces receipts in terms of domestic currency from a given quantity of agricultural exports, which may discourage agricultural production. Import substitution may also worsen unemployment by encouraging capital-intensive activities.

Despite the dangers of the second stage of import substitution, this is the strategy that many Latin American, Southeast Asian and Eastern European countries adopted in the immediate postwar years. The consequence was that the export of manufactures was discouraged and the terms of trade turned against agriculture within the countries, discouraging agricultural output and reducing the growth of demand for industrial products internally. In the 1960s, reforms were undertaken in several countries, but there was a distinct difference in emphasis and approach between Latin America and Southeast Asia. In Latin America, policies became more outward-looking but still favoured production for the domestic market. Although subsidies were given to exports, exporters were still required to use domestic inputs produced under protection, and the subsidies were generally insufficient to provide an incentive to export that was comparable to the protection of domestic markets; thus, there was a continued bias in favour of import substitution. In East and Southeast Asia, in contrast, the policy has always been one of relentless export expansion – in Japan, South Korea, Singapore, Taiwan and other countries, as outlined earlier. Now, most developing countries are attempting to follow this route with varying degrees of success.

The Prebisch doctrine: an alternative approach to trade in developing countries

Raúl Prebisch (1901–86) was one of the first development economists to question the mutual profitability of the international division of labour for developing countries on existing lines. Prebisch was executive secretary of the Economic Commission for Latin America, 1950–63, and secretary-general of UNCTAD, 1963–69 (for a biography of Prebisch, see Dosman, 2008). He looked at the relation between trade and development from the standpoint of the balance of payments rather than the augmentation of real resources. His major claim was that the unfavourable impact of unrestricted trade on the terms of trade and balance of payments of developing countries can far outweigh any advantages with respect to a more efficient allocation of resources. His concern was with two distinct, but not unrelated, phenomena. One is the transference of the benefits of technical progress from developing to developed countries through terms of trade deterioration. The second is the balance of payments' effects of differences in the income elasticity of demand for different types of products. He divided the world into industrial 'centres' and 'peripheral' countries, and then conducted his analysis within the framework of the traditional two-country, two-commodity case of international trade theory – equating developing countries with primary producers (the 'periphery') and developed countries with industrial producers (the 'centre').

Technical progress and the terms of trade

As stated earlier, in theory, the barter terms of trade might be expected to move in favour of developing countries. For one thing, primary product production tends to be subject to diminishing returns, and for another, technical progress tends to be more rapid in manufacturing industry than in agriculture. If prices are related to costs, one would expect that, in theory, the ratio of primary product prices to industrial good prices would rise. According to Prebisch (1950), however, the ratio had shown a long-run historical tendency to fall. He advanced two explanations of this and hence why the benefits of technical progress tend to flow from developing to developed countries and not the other way round. His first explanation concerns the relation between incomes and productivity. He suggested that whereas factor incomes tend to rise with productivity increases in developed countries, they rise more slowly than productivity in developing countries owing to surplus labour. Thus, there is a greater upward pressure on final goods' prices in developed than in developing countries, causing the ratio of prices to move in the opposite direction to that suggested by the pace of technical progress. All this is on the supply side.

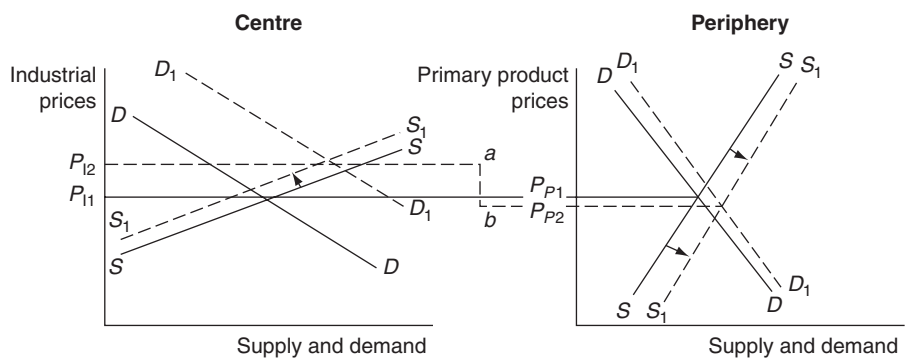
On the demand side is the fact that the demand for primary products grows more slowly than that for industrial products as world income grows, for two major reasons:

1. Many primary commodities have an intrinsically low income elasticity of demand because they are necessities.
2. Many primary commodities have been substituted by synthetics, for example natural rubber.

Putting these demand and supply factors together gives the picture in Figure 15.8, which shows what is likely to happen to the terms of trade of primary commodities through time.

In the centre, the supply and demand curves for industrial goods are relatively elastic, and in the periphery, the supply and demand curves for primary products are relatively inelastic. Assume initially that the supply and demand curves intersect at the same point in both sectors, so that the prices of industrial and primary products are 'equal' (that is, the terms of trade = 1). In the centre, technical progress will first shift the supply curve (*SS*) outwards, but let us assume that increases in wage costs push it back inwards to S_1S_1. In the periphery, in contrast, technical progress shifts the supply curve outwards to S_1S_1, but there is no inward shift due to rising wage costs. In the centre, the demand for industrial goods grows strongly from *DD* to D_1D_1, while in the periphery, the demand for primary products grows only slowly. The price of industrial goods rises to P_{I2}, while the price of primary products in this example has actually fallen to P_{p2}. The terms of trade of primary products has deteriorated by the amount *ab* for fundamental economic reasons associated with the characteristics of products and the institutional structures of the countries that produce them.

Figure 15.8 Movements in the terms of trade



The income elasticity of demand for products and the balance of payments

According to Prebisch, the second factor working to the disadvantage of developing countries is the balance of payments' effects of differences in the income elasticity of demand for different types of product. As mentioned, it is generally recognized and agreed that the income elasticity of demand for most primary commodities is lower than that for manufactured products. On average, the elasticity is probably less than unity, resulting in a decreasing proportion of income spent on those commodities (commonly known as **Engel's law**). In the two-country, two-commodity case, the lower income elasticity of demand for primary commodities means that for a given growth of world income, the balance of payments of primary producing, developing countries will *automatically* deteriorate vis-à-vis the balance of payments of developed countries producing and exporting industrial goods. A simple example will illustrate the point (see also Chapter 10).

Suppose that the income elasticity of demand for the exports of developing countries is 0.8 and that the growth of world income is 3.0%: exports will then grow at 2.4%. Now suppose that the income elasticity of demand for the exports of developed countries is 1.3 and the growth of world income is 3.0%; exports of developed countries will then grow at 3.9%. Since there are only two sets of countries, developing countries' exports are the imports of developed countries and developed countries' exports are the imports of developing countries. Thus, developing countries' exports grow at 2.4% but imports grow at 3.9%; developed countries' exports grow at 3.9% and imports at 2.4%. Starting from equilibrium, the balance of payments of developing countries automatically worsens, while that of developed countries shows a surplus. This has further repercussions on the terms of trade. With imports growing faster than exports in developing countries, and the balance of payments deteriorating, the terms of trade will also deteriorate through depreciation of the currency, which may cause the balance of payments to deteriorate even more if imports and exports are price inelastic.

It is easily seen that the price of balance of payments equilibrium is slower growth for developing countries. If their exports are growing at 2.4%, import growth must be constrained to 2.4%, which means that with an income elasticity of demand for imports of 1.3, income growth in developing countries must be restrained to $2.4/1.3 = 1.85\%$ for balance of payments equilibrium. In the absence of foreign borrowing to bridge the foreign exchange gap, or a change in the structure of exports, the result of different income elasticities of demand for primary and manufactured products is slower growth in the primary producing countries – perpetuating the development 'gap'.

For terms of trade and balance of payments reasons (which are connected), Prebisch therefore argued for import substitution and the protection of certain domestically produced goods. Prebisch's balance of payments argument reinforces the classical infant industry and optimum tariff (terms of trade improvement) argument for protection.

There are several benefits that Prebisch expected from protection:

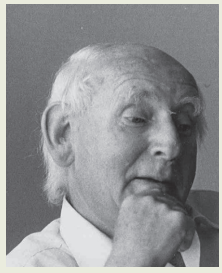
- Protection would enable scarce foreign exchange to be rationed between different categories of imports, and could help to correct balance of payments disequilibrium resulting from a high-income elasticity of demand for certain types of imports.
- It could help to arrest the deterioration in the terms of trade by damping down the demand for imports.
- It could provide the opportunity to diversify products and to start producing and exporting goods with a much higher income elasticity of demand in world markets.
- Following our earlier analysis, however, protection by tariffs is only appropriate if the arguments for protection do not arise from domestic distortions.

Recent trends in the terms of trade

Primary commodities

Whether the terms of trade have moved unfavourably against primary commodities and developing countries is an empirical question. Prebisch originally suggested an average deterioration of the terms of trade of primary commodities between 1876 and 1938 of 0.9% per annum. Work by Hans Singer at the UN in 1949 also suggested a trend deterioration of 0.64% per annum over the same period, and thus the **Prebisch–Singer thesis** of the declining terms of trade for primary commodities was born (see Singer, 1950). In a detailed reappraisal of Prebisch's work, Spraos (1980) confirmed the historical trend deterioration, but at the lower rate of approximately 0.5%, having corrected the statistics for the changing quality of goods, shipping costs and other factors. Extending the data to 1970, however, Spraos concluded that there had been no significant trend deterioration. Sapsford (1985, 1988), however, shows that it is the wartime structural improvement (1940–51) that makes the whole series look trendless. If the series is divided into two subperiods – prewar and postwar – there is a trend deterioration in both subperiods and the estimated trend deterioration over the whole period 1900–82 is 1.2% per annum, allowing for the wartime structural break.

Hans Singer



Born 1910, Elberfield, Germany. Died 2006. In 1933, came to England as a refugee to work on his PhD with Keynes at Cambridge. Joined the UN in 1947; was instrumental in the establishment of bodies such as the International Development Association of the World Bank, the United Nations Development Programme, and the World Food Programme; and taught at the New School for Social Research in New York. Joined the Institute for Development Studies at the University of Sussex in 1969, and travelled and lectured widely, advising several countries and development institutions. Championed the world's poor in his prolific writing, and was a passionate advocate of international aid. Linked with the name of Prebisch and the thesis of a declining terms of trade of primary commodities.

Since the original Spraos and Sapsford evaluations of the Prebisch–Singer thesis, there has been an outpouring of further studies using different time periods and different statistical estimating techniques. Grilli and Yang (1988) at the World Bank constructed their own series of the terms of trade and also looked at individual commodities, but reached similar conclusions to Sapsford. Over the period 1900–83, they put the percentage terms of trade deterioration of all primary commodities at 0.5% per annum, and 0.6% per annum for non-fuel commodities (allowing for a wartime structural break). For individual commodities, the trend deterioration is estimated as follows: food, –0.3% per annum; cereals, –0.6% per annum; non-food agricultural commodities, –0.8% per annum; and metals, –0.8% per annum. Only tropical beverages registered an improvement of 0.6% per annum. Bleaney and Greenaway (1993) updated the Grilli–Yang series to 1991 and estimated a trend deterioration of 0.8% per annum, with a big structural break in the early

1980s associated with world recession and the supply response of developing countries attempting to export themselves out of debt difficulties. Ocampo and Parra (2003) take the same 24 commodities as Grilli and Yang and estimate the decline in the real terms of trade over the whole of the twentieth century. They estimate a cumulative decline of 0.8% per annum, the same as Bleaney and Greenaway. The estimates of decline for each commodity by subperiods is shown in Table 15.3. Only six commodities experienced an improvement over the whole period.

Another study is by Cashin and McDermott (2002) at the IMF, who look at trends and cycles in both the nominal and real price (i.e. the terms of trade) of non-food commodities over the period 1862–1999. The graphs of both indices are shown in Figure 15.9.

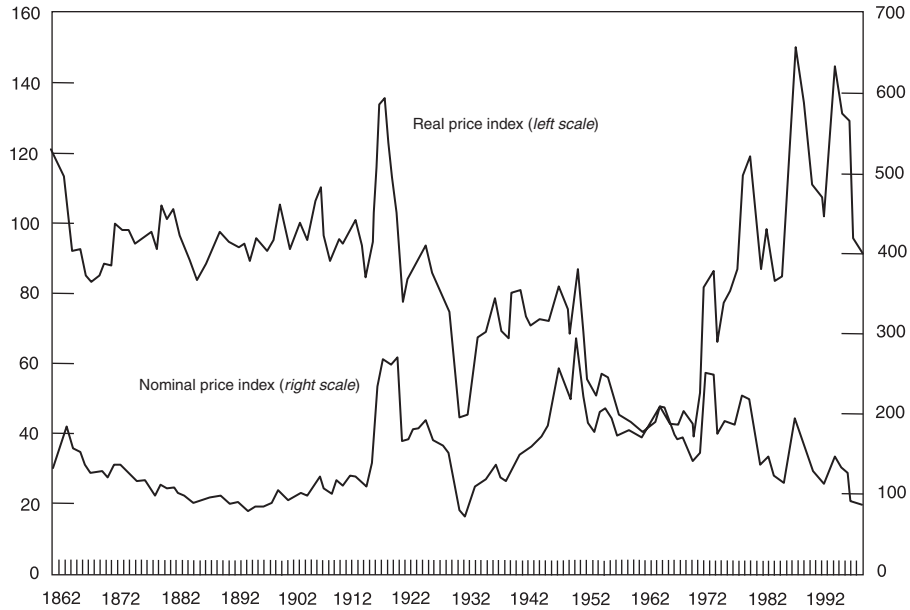
Nominal prices were relatively stable from 1862 to 1932 (except during the First World War), but since then have been very volatile around a rising trend. The real price index, however, or the terms of trade of primary commodities, has always been very volatile around a generally declining trend. The average trend decline over the whole period 1862–1999 is 1.3% per annum. From an index of 120 in 1862 to an index of 20 in 1999, real commodity prices lost 85% of their value. Or,

Table 15.3 Changes in the real terms of trade for commodities (annual average percentage growth rates)

	1920–30	1980–90	1900–2000	1900/04–1996/2000
Aluminium	1.8	2.8	−1.1	−1.3
Bananas	5.8	0.1	0.0	−0.1
Beef	−0.2	−6.6	1.0	0.9
Cocoa	−0.7	−9.5	−1.3	−1.0
Coffee	0.4	−8.3	−0.1	0.4
Copper	1.4	−1.1	−0.7	−0.6
Cotton	−3.0	−6.1	−1.0	−1.1
Jute	−0.9	0.6	−0.4	−0.7
Lamb	−0.1	−3.9	1.6	1.7
Lead	0.7	4.2	−0.8	−0.3
Leather	4.7	1.3	−0.8	−1.1
Maize	−1.2	−5.3	−0.8	1.2
Palm oil	−2.3	−2.8	−0.3	0.0
Rice	3.7	−6.9	−1.3	−1.2
Rubber	−9.5	−7.6	−2.8	−2.8
Silver	−5.3	−16.2	−0.3	−1.0
Sugar	−16.8	−10.5	−1.3	−1.1
Tea	7.6	−4.0	−0.7	0.7
Timber	−2.2	−1.5	1.1	−1.5
Tin	0.1	−10.2	0.1	0.2
Tobacco	−2.7	−0.4	0.8	−0.7
Wheat	4.5	−3.1	−0.6	−0.9
Wool	−3.1	−5.5	−1.2	−0.4
Zinc	−0.9	4.7	0.3	0.1

Source: Ocampo and Parra, 2003.

Figure 15.9 Nominal and real price indices of non-food primary commodities, 1862–1999



to put it another way, in 1999, primary commodities could only buy 20% of the industrial goods that they could buy in 1862. This represents a substantial real income loss. The estimated trend decline is even more serious if the commodity boom years of 1951 or 1973 are taken as the starting point for analysis.

Cashin and McDermott (2002) also focus on the magnitude and length of the cycles in real commodity prices, which they believe to be more serious than the trend decline. They find 13 occasions since 1913 when the annual price change was more than 20% in one year. This is serious volatility. They also find that average price slumps last longer than price booms (4.2 years compared with 3.6 years).

Cashin and McDermott (2002) conclude their study by saying:

> Although there is a downward trend in real commodity prices, this is of little policy relevance, because it is small compared with the variability of prices. In contrast, rapid, unexpected and often large movements in commodity prices are an important feature of their behaviour. Such movements can have serious consequences for the terms of trade, real incomes, and fiscal positions of commodity-dependent countries, and have profound implications for the achievement of macroeconomic stabilisation.

Erten and Ocampo (2013) have identified four supercycles of real commodity prices over the period 1865–2010 ranging between 30 and 40 years, with an amplitude 20–40% higher or lower than the long-run trend. The mean of each supercycle of non-oil commodities is generally lower than that for the previous cycle, supporting the Prebisch–Singer hypothesis. The cycles are 1894–1932, peaking in 1917; 1932–71, peaking in 1951; 1971–99, peaking in 1973, and post-2000, when real commodity prices rose to 2012 and then started to dip.

Blattman et al. (2007) have looked historically at the relationship between terms of trade volatility and growth, taking 35 countries over the period 1870–1939 and find a negative relationship,

and this is one of the major reasons why the income gap between the 'periphery' primary producing countries and the industrial countries widened during this period. One major adverse effect of volatility was the deterrent to foreign direct investment.

The most comprehensive historical study to date of the commodity terms of trade is by Harvey et al. (2010), who look at 25 commodities over the past four centuries from 1650 and find that in the 'very long run, a secular deteriorating trend is a relevant phenomenon for a significant proportion of primary commodities', particularly for aluminium, coffee, hides, jute, silver, sugar, tea, tobacco, wheat, wool and zinc. For other commodities, no significant trend can be detected – either up or down – and Harvey et al. (2010) conclude: 'there is simply no statistical evidence that relative commodity prices have ever trended upwards'.

Developing countries

As already indicated, the terms of trade of primary commodities relative to manufactures is not necessarily the same as the terms of trade of developing countries relative to developed countries, because both sets of countries export and import both types of goods (albeit in different ratios), but, in practice, there is likely to be a close overlap and parallel movement between the two. Sarkar (1986) has looked at the export prices of developing countries relative to those of developed countries, and also at the prices of exports from developing to developed countries relative to the prices of imports from developed countries into developing countries (both excluding fuel). In the first case, the trend deterioration was 0.51% per annum; in the second, the relative deterioration was 0.93% per annum.

Bleaney and Greenaway (1993) find that over the period 1955–89, a 1% deterioration in the terms of trade of primary products translated into a 0.3% deterioration in the terms of trade for developing countries as a whole, although this would have been substantially greater for Africa and Latin America, which are more commodity-dependent than Asia.

Sarkar and Singer (1991) have also looked at the terms of trade of *manufactures* exported by developing countries relative to those of developed countries over the period 1970–87, and find a deterioration of approximately 1% per annum. If this is the case (this result has been challenged by Bleaney, 1993, and particularly by Athukorala, 1993, who show that the result apparently depends on the inclusion of non-ferrous metals in the manufacturing export price series), it would appear that developing countries suffer double jeopardy. Not only do the prices of their primary products decline relative to those of manufactured goods, but also the prices of their manufactured exports decline relative to those of developed countries; reflecting, no doubt, the commodity composition of these exports – their lower value-added and lower income elasticity of demand in world markets. This is confirmed by Erten (2011), who has carefully examined the terms of trade for different groups of developing countries using UNCTAD data (e.g. countries exporting mainly primary commodities, countries exporting mainly manufactures, the least developed countries and the highly indebted countries), and finds in all cases a decline in their terms of trade from 1960 to 2006 of between 1 and 3% per annum, with a severe structural break in the mid-1970s.

Finally, there is a distinction between the **barter (or commodity) terms of trade**, which measures the ratio of export to import prices, and the **income terms of trade**, which is the ratio of export to import prices times the quantity of exports, that is, $(Px/Pm) \times Qx$. The income terms of trade is thus a measure of the total purchasing power of exports over imports. From the point of view of development, measured by per capita income, the income terms of trade is perhaps the more relevant concept to consider than the barter terms of trade. It may well be, for instance, that the prices of exports fall relative to those of imports owing to increased efficiency in the exporting

country, and this releases resources for further exports, which subsequently expand more than proportionately to the fall in price. The barter terms of trade will have worsened, but the country will be better off. It is also worth remembering that when a country devalues its currency, it deliberately worsens its barter terms of trade in the hope that the balance of payments will improve, providing scope for a faster growth of real income through a rapid improvement in the income terms of trade. On the other hand, if the demand for a country's exports is price inelastic, then a decline in the barter terms of trade will also mean a deterioration in the income terms of trade.

In the long run, if world trade is buoyant, all countries can experience an improvement in their income terms of trade. The question is not who are the gainers and who are the losers, as in the case of the barter terms of trade, but what are the *relative* rates of improvement in the income terms of trade?

Fair trade not free trade: trade policies towards developing countries

Developed countries, supported by multilateral institutions such as the IMF, the World Bank and the WTO, preach the virtues of trade liberalization and free trade for developing countries, but fail to practise it themselves. In particular, rich countries still protect their agricultural sectors with subsidies and tariffs, which make it difficult, and sometimes impossible, for poor developing countries to compete in world markets. The case of cotton is highlighted in Case example 15.3. Agricultural subsidies in the EU and the USA amount to over $100 billion per annum. Developed countries also impose tariffs on agricultural imports from developing countries, and subsidize exports. The average tariff against agricultural imports into developed countries is 23%. US rice farmers receive a 72% subsidy. The dumping of artificially cheap crops from rich country agribusiness has destroyed thousands of small farmers in developing countries.

Case example 15.3 **Unfair trade in cotton**

The USA spends $3.3 billion a year on subsidies to 25,000 cotton farmers, which profoundly affects the livelihoods of 10 million cotton farmers in the west and central African countries of Burkina Faso, Benin, Chad and Mali. This subsidy to US cotton producers is three times the US aid budget to the whole of Africa. The tragedy is that the World Bank has encouraged these African countries to produce more cotton on the pretext of comparative advantage, but they find it impossible to compete against such subsidies. The US trade representative at the Doha Round of WTO trade negotiations in 2002 had the audacity to tell the cotton farmers of Africa that 'they should do something else'.

The protection afforded to agriculture is also given to many low value-added manufactured goods in which developing countries have a static comparative advantage – particularly for a wide range of textile goods. Trade barriers against the exports of developing countries cost these countries approximately $100 billion a year, which is almost equal to the amount they receive in official development assistance.

When it comes to the reality of free trade, as opposed to the rhetoric, there appears to be one law for rich developed nations and another for the poor. As long as the terms of trade of primary

products continue to decline, and developing countries' agricultural products are discriminated against in world markets, trade between the developed and developing countries cannot be fair. The playing field between rich and poor countries is not level, and the rich countries seem to want to keep it that way. What developing countries want is fair trade not free trade. See Oxfam's (2002) compelling indictment of the world's unfair trading system.

The **World Trade Organization (WTO)**, established in 1995 (formerly the General Agreement on Tariffs and Trade, GATT, founded in 1947) is the major international body that negotiates multilateral tariff reductions between countries. Up to now, however, it has been singularly unsuccessful in freeing trade in agricultural commodities. The **Kennedy Round** (1964–67), the **Tokyo Round** (1973–79) and the **Uruguay Round** (1986–94) of world trade negotiations all focused mainly on reducing tariffs on trade in manufactures (with some preferential treatment for developing countries). It was in Seattle in 1999 that developing countries began to raise their voice concerning agricultural protection, but the talks ended in failure. The rich countries refused to make any concessions over agriculture, and the trade round collapsed amid recriminations and violent street protests. In November 2001, the **Doha Round** was launched. This was supposed to be a 'development' round (to help poor countries), but in 2009, the talks ended with no agreement being reached because of the insistence by rich countries that they will only cut farm subsidies and trade barriers if developing countries allow them access to their markets for manufactured goods and the financial services sector, and enforce stricter competition rules and transparency in government procurement. The US reaction to the breakdown of the Doha Round has been to start bilateral trade deals with countries that it favours politically.

The main multilateral pressure group for a fairer trading deal between developed and developing countries is the **United Nations Conference on Trade and Development (UNCTAD)**, which was first convened in Geneva in 1964, with Raúl Prebisch as secretary-general. The organization exists as a continuous pressure group with the aim of assisting developing countries through fairer trade, and also aid. Among its stated objectives are:

- Greater access to the markets of developed countries through the reduction in trade barriers
- More stable commodity prices
- Raising the level of aid from developed countries to the UN target of 0.7% of donors' GNI
- Compensation to developing countries for fluctuations in export earnings and terms of trade deterioration.

It has had some limited success in persuading developed countries to grant preferential access to the exports of developing countries, but mainly in the field of manufactured goods, benefiting the larger and more advanced developing countries.

Perhaps the most significant trade agreement negotiated to date to help poorer developing nations is the **Lomé Convention**, which was signed in 1975 by the European Economic Community (EEC, now the European Union, EU) and 46 (now 77) developing countries in Africa, the Caribbean and the Pacific (the so-called ACP countries). The Lomé Convention provides for free access to the European market for all developing countries' manufactured goods and 90% of their agricultural exports. In addition, agreement was reached to stabilize the foreign exchange earnings of 12 key commodities (the so-called **Stabex scheme**). The Lomé Convention also dispenses aid to the ACP countries through the **European Development Fund (EDF)**. Since 1975, the Lomé Convention has been renegotiated five times. The latest agreement reached in Cotonou (Benin) in 2000 is designed to last for 20 years, with revisions

possible every 5 years. In 2000, the Stabex scheme was discontinued. Instead, support for fluctuations in export earnings will come from the EDF as part of a **Country Support Strategy** drawn up for each ACP state.

In the voluntary sector, the **fair trade movement** is gathering widespread support, and is making a difference to the lives of poor farmers in many developing countries. The movement was founded in 1979 with the main objective of guaranteeing a price to producers above the world price with a sufficient premium above the cost of production to allow producer cooperatives to invest in community projects such as housing, healthcare and public utilities. More than 7 million farmers and their families in over 60 countries participate and benefit. Importers of fair trade products such as coffee, tea, chocolate, sugar, bananas, fruit juices and so on must buy directly from Fairtrade-certified producers, and agree to establish long-term, stable relationships with them. This cuts out the middleman, or monopsonist – often a large multinational corporation in the case of many primary commodities. The fair trade movement has encouraged farmers to join cooperatives, which have much greater bargaining power in dealing with buyers. Many supermarkets and other retail outlets now stock a range of Fairtrade products.

The value of retail sales is still a drop in the ocean – £1.8 billion in the UK in 2015 and £4.4 billion globally. Unfortunately, however, the fair trade movement cannot alter fundamental economic forces, which drive down the price of commodities relative to the prices of manufactured goods and services. The only long-run solution to this dilemma is structural change, which requires the protection of new industries, and this is what rich, developed countries do not like. They want access to poor developing countries' markets, while continuing to protect their own. The fair trade movement can, however, make a major contribution to raising public awareness of the inequities in the global trading system, which, in turn, can exert pressure on rich developed countries' governments for fundamental reform of the terms on which developed and developing countries trade with each other.

Trade strategy for development

So what trade strategy should poor developing countries pursue? The overriding objective must be to acquire dynamic comparative advantage. For this, the private sector of an economy needs government support in the form of incentives and various types of 'protection' to mitigate investment risks. It is one thing to argue against anti-export bias; it is another to argue that poor developing countries should abandon all forms of protection of domestic industry. Improved market access to developed countries for poor developing country exports merely perpetuates static comparative advantage. As Rodrik (2001) argued in the lead-up to the Doha Round of trade negotiations: 'the exchange of reduced policy autonomy in the South for improved market access in the North is a bad bargain where development is concerned'. Poor developing countries need time and policy space to nurture new (infant) industrial activities as developed countries did historically, and as many newly industrializing economies still do today. As Hausmann and Rodrik (2003) say in their important work on the concept of 'self-discovery':

> the fact that the world's most successful economies during the last few decades prospered doing things that are most commonly associated with failure (e.g. protection) is something that cannot easily be dismissed.

Dani Rodrik

Born 1957, Istanbul, Turkey. Professor of Political Economy, Harvard University; one of the foremost development economists of his generation, working on the importance of institutions for economic development and the relation between trade and development. Strong critic of free trade orthodoxy and the WTO in his book, *The Global Governance of Trade: As if Development Really Mattered* (2001). Also pioneered, with Ricardo Hausmann and others, new thinking in development economics relating to 'self-discovery' and 'growth diagnostics', and important work on the analysis of 'growth accelerations'. His latest books include *The Globalization Paradox* (2012) and *Towards a Better Global Economy* (2014).

Hausmann and Rodrik's (2003) argument is that there is much randomness in the process of a country discovering what it is best at producing, and a lack of protection reduces the incentive to invest in discovering which goods and services they are. Poor, labour-abundant economies have thousands of things they could produce and trade, but, in practice, their exports are highly concentrated. Sometimes, over 50% of exports are accounted for by less than ten products. Bangladesh and Pakistan are countries at similar levels of development, but Bangladesh specializes in hats and Pakistan in bed sheets. This specialization is not the result of resource endowment; it is the result of chance choice by enterprising entrepreneurs who 'discovered' (*ex post*) where relative costs were lowest. Other 'chance' investments include cut flowers in Colombia for export to North America, camel cheese in Mauritania for export to the EU, high-yield maize in Malawi, and squash in Tonga. The policy implications of the Haussmann and Rodrik observation and model are that governments need to encourage entrepreneurship and invest in new activities *ex ante*, but push out unproductive firms and sectors *ex post*. Intervention needs to discriminate as far as possible between innovators and imitators. Normal forms of trade protection turn out not to be the ideal policy instruments, because they do not discriminate, and earn profits only for those selling in the domestic market. Export subsidies avoid anti-export bias, but still do not discriminate between the innovators and the copycats and are, in any case, illegal under WTO rules. The first best policy is public sector credit or guarantees, which can discriminate in favour of the innovator and be used as a 'stick' if firms do not perform well.

There is much that the international community can also do to promote trade for development, as opposed to pursuing trade liberalization for its own sake. The whole world trade system works against the majority of poor developing countries, because:

1. They depend on primary commodities (the 'curse' of natural resources) and low value-added manufactures.
2. The 'rules of the game' governing trade between rich and poor countries are biased in favour of the rich.
3. The agenda for trade reform is largely set by the rich developed countries.

The only permanent solution to primary commodity dependence is structural change, which requires the establishment of new, non-traditional industries; but the rich developed nations are hostile to this move. They want free access to poor developing countries' markets while continuing to protect their own. The most recent example of this is the ongoing debate between the EU and the African, Caribbean and Pacific (ACP) countries over **Economic Partnership Agreements (EPAs)** to replace the trade preferences that the ACP countries used to enjoy under the Lomé Convention. The EU is insisting that poor developing countries reduce restrictions on imports of manufactured goods and service activities in return for continued access to the EU market for their agricultural products. The EU is refusing to look at alternatives to free trade EPAs, but concedes that EPAs could lead to the collapse of the manufacturing sector in many poor countries. As Stiglitz (2006) remarks in his powerful book *Making Globalization Work*: 'the US and Europe have perfected the art of arguing for free trade while simultaneously working for trade agreements that protect themselves against imports from developing countries'. If developed countries really wanted to help poor developing countries, they could reduce and eliminate tariffs and barriers against all their goods. In addition, developing countries might be allowed 'infant *country* protection', which would be equivalent to a currency devaluation, but has the advantage of raising revenue for spending on public goods. One of the severe drawbacks of tariff reductions in poor countries is a loss of tax revenue.

If trade is to promote development, the WTO, which now governs world trade, needs radical reform and rethinking (Wade, 2003). *The Agreement Establishing the WTO* (WTO, 1995) lists as one of its purposes:

> Raising standards of living, ensuring full employment and a large and steady growing volume of real income and effective demand, and expanding the production of, and trade in, goods and services, while allowing for the objective of sustainable development, seeking both to protect and preserve the environment and to enhance the means of doing so in a manner consistent with their respective needs and concerns at different levels of development.

The aim is laudable, but unfortunately there is a divorce between rhetoric and reality because the WTO treats trade liberalization and economic development as synonymous. As we have seen, however, the historical and contemporary evidence is that domestic economic policy, institution-building and the promotion of investment opportunities are far more important than trade liberalization and trade openness in determining economic success in the early stages of economic development. Rodrik (2001) reminds us (see also Chang, 2002, 2005, 2007; Reinert, 2007) that:

> No country has [ever] developed simply by opening itself up to foreign trade and investment. The trick has been to combine the opportunities offered by world markets with a domestic investment and institution-building strategy to stimulate the animal spirits of domestic entrepreneurs.

But now, under WTO rules, all the things that, for example, South Korea, Taiwan and other East Asian countries did to promote economic development in the 1960s, 1970s and 1980s are severely restricted. Some countries that break the rules are succeeding spectacularly. China is one obvious example, but another would be Vietnam, which, while promoting FDI and exports, also protects its domestic market, maintains import monopolies and engages in state trading. The WTO should shift away from trying to maximize the flow of trade to understanding and evaluating what trade regime will maximize the possibility of development for individual poor developing countries.

A new world trade order is required that acts on behalf of poor developing countries, and poor developing countries need a louder voice in any reformed structure.

International commodity agreements[1]

Developing countries in particular, and the world economy in general, suffer several problems from the uncontrolled movement of primary commodity prices. First, there is the gradual trend deterioration in the prices of primary commodities relative to industrial goods, which directly reduces the real income and welfare of developing countries. Second, the prices of primary products are much more cyclically volatile than those of industrial goods.

This volatility has a number of detrimental consequences. First, it leads to a great deal of instability in the foreign exchange earnings and balance of payments position of developing countries, which makes investment planning and economic management much more difficult than would otherwise be the case.

Second, because of asymmetries in the economic system, volatility imparts inflationary bias combined with tendencies to depression in the world economy at large. When the prices of primary products fall, the demand for industrial goods falls but their prices are sticky downwards. When the prices of primary products rise, prices of industrial goods are quick to follow suit and governments depress demand to control inflation. The result is stagflation.

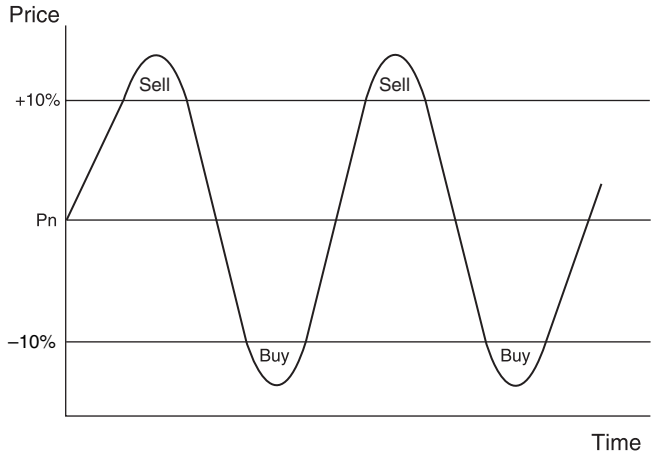
Third, the price volatility of primary products leads to volatility in the terms of trade, which may not reflect movements in the equilibrium terms of trade between primary products and industrial goods in the sense that supply and demand are equated in both markets. In these circumstances, world economic growth becomes either supply constrained if the prices of primary products are 'too high', or demand constrained if they are 'too low' (see Chapter 5). On all these macroeconomic grounds, there is a *prima facie* case for attempting to introduce a greater degree of stability into markets for primary commodities (including oil).

Price falls can, however, be dramatic and persistent. Cashin et al. (2000) look at shocks to the prices of 60 commodities over the period 1957–98 and find them typically long-lasting and not just temporary blips: 17 of the commodities experienced price shocks that persisted for longer than five years. This means depressed prices for a long time, and makes price stabilization and income compensation schemes more difficult and costly to manage (see below).

The issue of primary product price instability is not something new. It preoccupied Keynes before and during the Second World War. In 'The International Regulation of Primary Commodities', Keynes (1942) remarked: 'one of the greatest evils in international trade before the war was the wide and rapid fluctuations in the world price of primary commodities … It must be the primary purpose of control to prevent these wide fluctuations'. Keynes (1942) followed up his observations and proposals with a more detailed plan for what he called **commod control** – an international body representing leading producers and consumers that would stand ready to buy 'commods' (Keynes' name for typical commodities), and store them, at a price (say) 10% below the fixed basic price and sell them at 10% above. Figure 15.10 illustrates how the scheme would operate.

In Figure 15.10, P_n is the fixed basic price. When the price rises outside the 10% upper range, the commod control scheme would sell, pushing the price downwards towards the 'normal' price. Similarly, when the price falls outside the 10% lower range, the commod control scheme would buy, pushing price upwards within the range. The basic price would have to be adjusted according to whether there was a gradual run-down or build-up of stocks, indicating that the price was

Figure 15.10 Keynes' commod control scheme



either 'too low' or 'too high'. If production did not adjust (at least downwards), Keynes recognized that production quotas might have to be implemented. Commodities should be stored as widely as possible across producing and consuming centres.

This proposal is of some contemporary relevance as a means of responding quickly to conditions of famine. For example, there could be a system of granaries strategically placed across the world under international supervision to store surpluses and release them in times of need. The finance for the storage and holding of 'commods' in Keynes' scheme would have been provided through his proposal for an international clearing union, acting like a world central bank, with which 'commod controls' would keep accounts.

The finance for storage and holding could now be provided through the issue of Special Drawing Rights (SDRs) by the IMF (see Chapter 16). A commod control scheme could make a major contribution to curing the international trade cycle, with all its attendant implications. Over 70 years have passed since Keynes' wartime proposal, but primary product price fluctuations still plague the world economy. The world still lacks the requisite international mechanisms to rectify what is a major source of instability for the world economy.

In the recent past, there have been five main international commodity agreements in operation – for sugar, tin, rubber, coffee and cocoa, and accounting for some 35% of non-oil exports of the developing countries – but all have had their difficulties and broken down. Maizels (1992) and Gilbert (1996) both provide a comprehensive discussion of international commodity agreements and commodity problems in general. The basic problem with all agreements is getting suppliers to abide by quotas to restrict output in the face of declining prices. Participants must share a common purpose. The most successful 'commodity agreement' of all is the EU's Common Agricultural Policy, but this does not help developing countries.

Small fluctuations in the export earnings of developing countries, arising from falling prices, are capable of offsetting the entire value of foreign assistance to developing countries in any one year. A 10% fall in export earnings is approximately equivalent to the annual flow of official development assistance. Stable export earnings, it would appear, are at least as important as foreign assistance. For a summary of the measures of instability and the empirical evidence of the effects of instability on developing countries' economies, see Lim (1991) and Love (1987).

In general, unstable export proceeds are the product of variations in both price and quantity. Large fluctuations in earnings may be causally related to four factors:

1. Excessive variability of supply and demand
2. Low price elasticity of supply and demand
3. Excessive specialization in one or two commodities
4. A concentration of exports in particular markets.

If the source of instability does come from the supply side, stabilizing prices will not, of course, stabilize earnings. It will reduce them in times of scarcity and boost them in periods of glut. If there is a tendency towards perpetual oversupply and demand is price inelastic, price stabilization will maintain earnings, but price stabilization will further encourage supply, which may then necessitate production quotas and lead to inefficiency in production, if producing countries are allocated quotas to satisfy equity rather than efficiency.

This is not to argue that there is not a case for compensation, but that methods should be avoided that encourage overproduction or inefficiency. It may be better to let prices find their own market level and for producing countries to be compensated by the beneficiaries under long-term agreements, the compensation being used to encourage some producers into other activities. Alternatively, income compensation schemes could be worked out, especially in cases where export instability results from variations in domestic supply. Several alternative methods of price stabilization have been tried or recommended, including buffer stock schemes, export restriction schemes and price compensation schemes. These are examined briefly below.

Buffer stock schemes involve buying up the stock of a commodity when its price is abnormally low and selling the commodity when its price is unusually high. The success of such schemes rests on the foresight of those who manage them. Purchases must be made when prices are low relative to future prices and sold when prices are high relative to future prices. Clearly, buffer stock schemes are only suitable for evening out price fluctuations. They cannot cope with persistent downward trends in price without accumulating large stocks of the commodity, which must be paid for – and presumably sold in the future at still lower prices. Storage schemes are only appropriate for goods that can easily be stored, and for which the cost of storage is not excessive. Apart from internationally managed buffer stock schemes, governments of individual countries often take an active role in stabilizing prices via commodity boards. Again the problem arises, however, that if there is excess supply, the government will acquire large stocks of the commodity and the budgetary burden of maintaining the price becomes prohibitive.

Restriction schemes are concerned with maintaining prices by restricting supply to the market. The essence of a restriction scheme is that major producers or nations (on behalf of producers) get together and agree to restrict the production and export of a good whose price is falling, thus maintaining or increasing (if demand is inelastic) revenue from a smaller volume of output. In practice, it is difficult to maintain and supervise schemes of this nature, because it becomes extremely attractive for any one producer or nation to break away from, or refuse to join, the scheme.

The disadvantages of restriction schemes are, first, that demand may not be inelastic in the long run, so that raising the price by restricting supply may reduce export earnings in the long run. Restriction schemes may ultimately lead to substitution for the product and falling sales. Second, restriction schemes can lead to serious resource allocation inefficiencies stemming from the arbitrary allocation of export quotas between countries and production quotas between producers within countries, unless the quotas are revised regularly to take account of changes in

the efficiency of production between producers and between regions of the world. Restriction schemes are often operated by producer cartels, the classic example being the oil-producing countries belonging to OPEC (Organization of the Petroleum Exporting Countries), which managed to raise the price of crude oil by 800% between 1973 and 1980 (although it has not been so successful since then at stabilizing prices at a consistently high level).

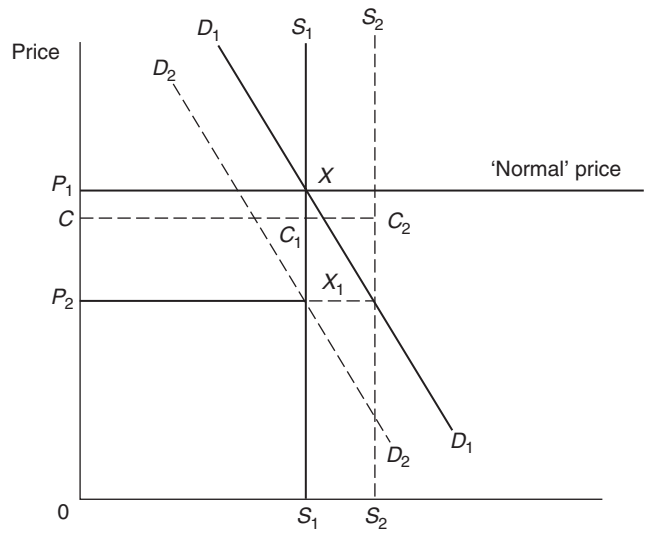
Developing countries are not only producers of raw materials, however; they are also consumers, and what some countries gain with respect to the production and exportation of one commodity they may lose with respect to the importation and consumption of another. Developing countries that are poor in all raw materials may not benefit at all. It is not clear, except in the case of a few special commodities such as oil, that cartelization and monopoly pricing of the product will necessarily redistribute income from developed to developing countries taken as a whole. If this is so, bilateral commodity agreements between developing country producers and developed country users are probably preferable as a means of ensuring that all developing countries benefit.

Price compensation agreements lend themselves to the above form of bilateral arrangement. For example, if the price of a commodity falls, two countries could agree on a sliding scale of compensation such that the importing country pays an increasing sum of money to the exporter as the price falls below a 'normal' price specified in advance. The sliding scale of compensation could be applied to deviations of the actual price from the 'normal' price. Since restrictions on output and quotas are not part of the scheme, arrangements of this kind have the beauty of divorcing the efficiency aspects of pricing and commodity arrangements from the distributional aspects. The commodity would be traded at world prices, and the lack of full compensation would ensure that, if world prices were falling, some countries would decide to shift resources, so maintaining some degree of allocative efficiency.

There is no reason why price compensation schemes should not run concurrently with other types of international commodity agreement. Indeed, if the price of a commodity continually declines, it may be necessary to couple a restriction scheme with a price compensation scheme, otherwise importing countries will be *persistently* subsidizing the exporting countries. There is also the danger in this case, and also in the case of price support schemes, that one form of assistance will replace another. If developed countries continually have to pay more than the market prices for their primary products, and argue at the same time that the major constraint on financial assistance to developing countries is their balance of payments, they might use price compensation agreements as an excuse for cutting other forms of assistance. If so, what primary producers gain in the form of higher prices or higher export earnings than if the market were free, they lose in other ways.

If fluctuations in price emanate from the supply side and not from changes in demand, price compensation will operate perversely on the stabilization of *export earnings*. This is illustrated in Figure 15.11. Price in the market is determined by the intersection of the supply and demand curves, D_1D_1 and S_1S_1, giving equilibrium price, P_1. Now suppose that there is a decrease in demand to D_2D_2, causing price to fall to P_2. Earnings before the price fall were $0P_1XS_1$; after the price fall, they are $0P_2X_1S_1$. Assume that P_1 is the 'normal' price agreed under the price compensation scheme, and that P_2C represents the appropriate amount of price compensation in relation to the deviation from the 'normal' price following the decrease in demand. Total revenue under the price compensation scheme will be $0CC_1S_1$, which is not far short of total revenue before the fall in price. Consider, however, an equivalent fall in price from P_1 to P_2 as a result of an increase in supply from S_1S_1 to S_2S_2. Under the same price compensation scheme, total revenue is now $0CC_2S_2$, which is greatly in excess of the original total revenue (before the price fall) of $0P_1XS_1$. Conversely, if the supply falls and the price rises above the 'normal' price, revenue will be less than before the

Figure 15.11 Price compensation and export earnings



price rise, since the exporting country will presumably be compensating the importing country – unless the scheme works only one way.

The only way to overcome the induced instability of price compensation schemes is to formulate an **income compensation scheme** that takes account of both price and quantity changes. The practical difficulty is reaching agreement on a 'normal' level of income. If the trend rate of growth of output is positive for most commodities, to settle for a fixed level of 'normal' income would be unjust.

The way most income compensation schemes work is that each year's compensation is based on deviations of actual export earnings from the moving average of a series of previous years. The IMF's Compensatory and Contingency Financing Facility used to operate along these lines. The Stabex scheme – once operated by the EU under the Lomé Convention – was another example of an income compensation scheme. But there must be sufficient funds available. Furthermore, the compensation is paid to governments, so producers do not necessarily reap the benefits.

For stability and a greater degree of certainty over export earnings, producers and governments are increasingly looking to **futures markets** for risk management. To be able to sell forward in futures markets guarantees the producer a price and therefore earnings, depending on supply. Futures markets are not well developed, however, and very often cover is not available for more than one year in advance. Where private risk management is not available, there is a case for publicly subsidized agencies to increase the access of commodity producers in developing countries to insurance against price volatility – perhaps offering price floor guarantees to producers. This may be cheaper in the long run than compensating countries for commodity price fluctuations.

Trade versus aid

'Trade not aid' has become a popular slogan in developing countries in recent years. Let us now consider whether a unit of foreign exchange from exports is really worth more than a unit of

foreign exchange from international assistance, or whether the slogan is more an understandable reaction to the debt-servicing problems arising from *past* borrowing (the benefits of which may have been forgotten) and to the political interference and leverage that may accompany international assistance.

If the meaning of aid is taken literally (that is, a free transfer of resources), Johnson (1967) showed a long time ago that a unit of foreign exchange from exports can never be as valuable as a unit of foreign exchange from aid. The reason for this is that exports do not provide additional resources for investment directly, only indirectly by the opportunity provided to transform domestic resources into goods and services more cheaply than if the transformation had to be done domestically. Aid, on the other hand, not only provides resources directly, but also indirectly by *saving the excess cost of import substitution*. The relative worth of exports compared with pure aid can therefore be expressed as:

$$\frac{cX}{(1+c)A} \tag{15.5}$$

where X is the value of exports, A is the value of pure aid and c is the proportional excess cost of import substitution. The relative worth of exports will rise with the excess cost of import substitution, but it is clear that the worth of exports can never match the worth of an *equal* amount of pure aid ($X = A$), since $c < (1 + c)$. The fact that aid may be tied to higher priced goods makes some difference to the argument, but it can be shown that the excess cost of import substitution and the excess cost of tied goods would have to be relatively high for the worth of aid not to exceed the worth of trade. Let r be the ratio of the price of tied goods to the price of the same goods in the free market. The relative worth of exports may then be written as:

$$\frac{cX}{(1+c)A} \times r \tag{15.6}$$

Now exports will be worth more than aid if $cr > (1 + c)$. Different combinations of c and r could be thought of to satisfy this condition, but both c and r would have to be quite high, for example $c = 2.0$ and $r = 1.5$.

The more important consideration, however, is that the term 'aid' in the slogan 'trade not aid' should probably not be interpreted literally. The comparison that developing countries are making is not between trade and pure aid, but either between trade and the aid component of an equal amount of foreign assistance, or simply between trade and an equal amount of foreign assistance. If these are the comparisons being made in practice, two interesting questions arise: Under what circumstances will trade be more valuable? Which is the most appropriate comparison to make?

Consider first the comparison between exports and the aid component of an equal amount of foreign assistance. If this is the comparison that is being made by developing countries, the Johnson formula can be modified by letting $A = Fg$, where A is the aid component of assistance (see Chapter 14), F is the nominal amount of foreign assistance and g is the aid component as a proportion of nominal assistance (that is, the grant element). Substituting Fg for A in equation (15.5) gives the relative worth of exports compared with the aid component of an equal amount of foreign assistance:

$$\frac{cX}{(1+c)Fg} \tag{15.7}$$

or, if the aid is tied:

$$\frac{cX}{(1+c)Fg} \times r \tag{15.8}$$

From equation (15.7) the value of exports will exceed the value of the aid component of an *equal* amount of foreign assistance ($X = F$) if $c > g(1+c)$, and, from (15.8), if $cr > g(1+c)$. The relative worth of exports is the greater, the higher the excess cost of import substitution, the higher the excess cost of tied aid and the lower the grant element of assistance. It is still the case, however, that c and r would have to be quite high and g relatively low for the worth of exports to exceed the worth of the aid component of an equal amount of foreign assistance.

But even if a comparison of exports with the aid component of an equal amount of foreign assistance showed exports to be worth more, it is not clear that this is the correct comparison to make when justifying the slogan 'trade not aid'. Equations (15.7) and (15.8) assume that only the aid component of assistance saves the excess cost of import substitution. In fact, foreign borrowing *on any terms* saves the excess cost of import substitution. This being so, there are strong grounds for arguing that the comparison that should underlie the slogan 'trade not aid' is a comparison of the worth of exports with the worth of an equal amount of foreign assistance, which provides resources directly equal to Fg and indirectly equal to Fc. The relative worth of exports compared with foreign assistance can thus be expressed as:

$$\frac{cX}{Fg + Fc} = \frac{cX}{(g+c)F} \tag{15.9}$$

or, with tied assistance:

$$\frac{cX}{(g+c)F} \times r \tag{15.10}$$

The conditions for the worth of exports to exceed that of foreign assistance are clearly more stringent than for the worth of exports to exceed the worth of the aid component of an equal amount of foreign assistance. Now, ignoring the potential excess cost of tying, foreign assistance is always worth more than an equal value of exports as long as some grant element is attached to the assistance (that is, as long as $g > 0$).

The values of g, c and r give a practical guide to any country of the relevance of the slogan 'trade not aid', ignoring the secondary repercussions and the side effects of the two resource flows. For some illustrative calculations, see Thirlwall (1976). Morrissey and White (1993) argue that only the face value of assistance should be deflated by the excess cost of tying and not the repayments, but this makes little practical difference. The values of g, c and r for most developing countries are probably not such as to justify the slogan 'trade not aid' on narrow economic grounds. As far as secondary repercussions are concerned, however, there is the question of the productivity of resources from abroad compared with those released by exports, and of the additional saving generated by the two means of resource augmentation. There is little evidence on the first point, but on the second, it is sometimes claimed, as we saw in Chapter 14, that foreign assistance discourages saving, while export earnings contribute positively to saving. There is no disputing

that some foreign assistance may be 'consumed', but this is not the important consideration. The question is: Which resource flow leads to the most investment? If 50% of the foreign assistance is 'saved' and the propensity to save of the export sector is 50%, the contribution of the two sources of foreign exchange to growth is exactly the same.

There is no evidence to suggest that the propensity to 'save' out of foreign assistance is less than the propensity to 'save' out of exports. Given that export income may be highly concentrated in the hands of the government or multinational firms, the propensity to save out of export income could be high. If the propensity was, say, 0.6, then 40% of foreign assistance would have to be 'consumed' for foreign assistance not to contribute as much to saving as exports. This is unlikely. If anything, therefore, the secondary economic repercussions of exports and assistance favour assistance.

Summary

- Trade (or more accurately export growth) has been the 'engine' of growth for many countries, both historically and in the contemporary world economy since the Second World War.
- There is nothing in the theory of free trade, however, to guarantee an equitable distribution of the gains from trade between rich and poor countries. This depends on the terms of trade and the balance of payments consequences of different patterns of specialization.
- There are static gains from trade based on the law of comparative advantage, dynamic gains from trade from wider markets and the flow of knowledge, and gains by allowing surplus production over domestic consumption to be exported (e.g. many natural resource products).
- There has been extensive trade liberalization and growth in trade since 1945, under the auspices of GATT since 1947 and the WTO since 1995.
- Trade liberalization in developing countries has boosted export growth, but raised import growth by more and worsened the balance of payments.
- The overall effect of trade liberalization on developing countries' performance has been disappointing. Positive growth effects are hard to discern, the impact on reducing poverty has been minimal, and the income distribution within countries has worsened.
- There are many disadvantages of free trade for development. The law of comparative advantage is static and does not consider the supply and demand characteristics of goods produced and traded, which affect the future growth performance of countries. There are several respectable economic arguments for protection, including the infant industry argument.
- Structural change is important for developing countries to acquire new comparative advantage in non-traditional goods. *What* you export matters.
- Ideally, import substitution and export promotion should be pursued together, as happened in most successful Southeast Asian countries, and now in China.
- The long-run deterioration in the terms of trade of primary commodities (first outlined by Prebisch and Singer in 1950), and the cyclicality of primary product prices, damages the economies of many developing countries. There is a case for international commodity price stabilization schemes.
- What developing countries need is fair trade, not free trade.
- Trade is not necessarily more beneficial than 'aid' in providing resources for development. It depends on the terms of capital inflows, and the excess cost of import substitution.

Chapter 15 **Discussion questions**

1. What is the essence of the distinction between static and dynamic gains from trade?
2. What fundamental assumptions of free trade theory may be violated in the context of developing countries?
3. Why might there be a tendency for the terms of trade to move against primary products and primary producing countries, and what does the empirical evidence show?
4. Outline the various arguments for protection.
5. Under what conditions are tariffs a first best policy of protection?
6. Discuss the relative merits of import substitution versus export promotion.
7. Why are regional trade agreements (RTAs) inferior to the generalized freeing of trade?
8. What has been the impact of trade liberalization on exports and economic growth in developing countries?
9. To what extent do you think that the 'East Asian miracle' has been based on export-led growth?
10. Why do some economists argue that the gains from trade should be looked at more from the point of view of the effect of trade on the balance of payments than from the traditional viewpoint of real resource augmentation?
11. In what ways is trade not 'fair' between developed and developing countries?
12. What do you understand by the concept of 'effective protection', and how is it measured?
13. What problems do unstable commodity prices pose for a country and for the world economy?
14. What are the theoretical and practical difficulties of stabilizing the price and export earnings of primary products?

Note

1. For a discussion of the issues involved in this section, see Maizels (1987) and Gilbert (1996).

Websites on trade

Trade negotiations

WTO www.wto.org
International Trade Centre www.intracen.org

Fair trade

Oxfam www.oxfam.org.uk
Fairtrade Foundation www.fairtrade.org.uk
New Economics Foundation www.neweconomics.org

Trade agreements

MERCOSUR www.mercosur.int/msweb/portal%20intermediario/es/index/htm
NAFTA www.naftanow.org
Regional Trade Agreements Information System http://rtais.wto.org/UI/PublicMaintainRTAHome.aspx