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Foreign trade: competition and the expanding international economy

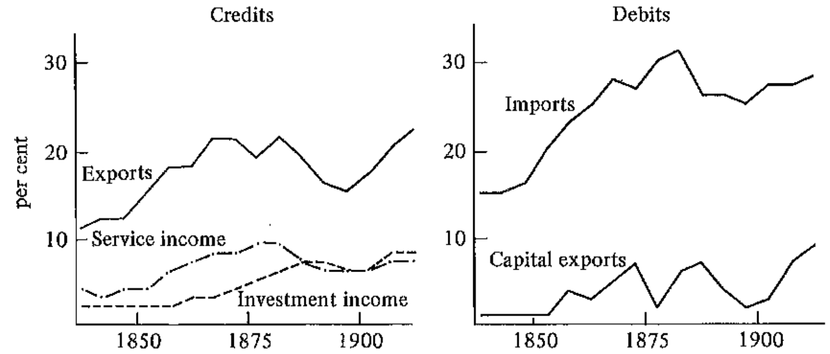
C. K. HARLEY & D. N. McCLOSKEY

The dimensions of trade

In the century before the First World War international trade developed a greater complexity and sophistication than it had possessed in the eighteenth century. By the middle of the nineteenth century Britain had moved to free trade, and many other nations followed the British example in this, though briefly. Industrialisation elsewhere, particularly in the United States and on the Continent, gradually eliminated Britain's lead as workshop of the world. Falling transportation costs, migrations of Europeans unequalled since the dark ages, and the consequent exploitation of new places transformed the supply of raw materials to Europe. Especially after 1870, British lending overseas and a great expansion of Britain's role as carrier, banker and insurer to the world added new dimensions to Britain's international accounts. Multilateral settlements became commonplace, and triangular trades were ordinary facts rather than pleasing myths: American imports of tea from India (say) were financed by exports of cotton to Britain, financed in turn by British loans of money and exports of rails to India. As never before the world was tied together in one great marketplace, with Britain as its centre.

The usual understanding of these events divides neatly at 1870. From 1820 to 1870 the questions asked by the historian of British trade are variants of 'How did foreign trade make us rich?' From 1870 to 1914 they are variants of 'How did foreign trade make us poor?' For fifty years after 1820, and especially during the mid-Victorian boom of the 1850s and 1860s, trade is viewed as the engine of economic growth; after 1870 it is viewed as a brake.

Whether engine or brake, it is viewed now as the activity on which the nation 'depended', just as it was by contemporaries. Wherever one looks in recent summaries by economic historians of the issue of British trade and growth the nineteenth century speaks. John Stuart Mill would find little with which to disagree in the recent assertion by Phyllis Deane and W. A. Cole that 'from the beginning to the end of this story...the British people have depended for their



3.1 Components of Britain's balance of payments as percent of GNP, 5-year averages 1836–1913

Sources: Balance of payments: Imlah (1958: pp. 95–8); GNP: Deane (1968: p. 106), and Feinstein (1972: T 18).

standard of living largely on their ability to sell their products in the overseas markets'; nor would Alfred Marshall in their assertion that 'by the end of the nineteenth century the British economy was heavily dependent on world markets and the rate and pattern of British economic growth was largely conditioned by the responses of producers and consumers in the rest of the world' (Deane & Cole 1962: 39, 28). Cobden or Peel might have used Ashworth's recent formulation of the case in proposing free trade to the House of Commons – 'Britain's livelihood depended on international trade and the performance of international services' – as Gladstone or Asquith might have used W. H. B. Court's in defending it from later critics – 'In a century in which economic growth depended very much on international commerce, no country's development had benefited more from world trade' (Ashworth 1960: 256, cf. 138; Court 1965: 181–2).

The correlation between British exports and British incomes lends an air of verisimilitude to this tale of dependence, for as the rate of growth of exports declined after 1870 so too did the rate of growth of incomes. Exports of commodities per head grew 4.4 per cent per year from 1821 to 1873, almost three times faster than the growth of income per head of 1.5 per cent or so per year; but from 1873 to 1913 they grew at only 0.93 per cent per year, rather *slower* than the growth of income per head, itself much slower than its earlier pace. Little wonder, then, that economists of all sorts have assigned a causal role to British foreign trade (Robertson 1938: 501; Haberler 1959: 6; Cairncross 1961: 243; Meier & Baldwin 1957: 228, 257).

Other statistics appear to confirm the impression that trade was important (Crouzet 1979; Saul 1965). After a doubling of its share during the second third of the century, for example, imports supplied 25 to 30 per cent of national income

Table 3.1. *Approximate proportion of imports in domestic consumption of food and raw materials 1913 (per cent)*

Food	
Wheat	80
Meat	45
Dairy products	45
Raw materials	
Raw cotton	100
Raw wool	80
Iron ore	60
Tin	90
Lead	90
Copper	100*

Sources: These are ratios of retained imports to domestic utilisation. The import data are from *The Statistical Abstract of the United Kingdom for 1914*, pp. 126–61 and 214–37. Domestic wheat production and wool clip are from Mitchell & Deane (1962: 87 and 190). The meat data are from Hooker (1909: 332). The ratio for dairy products is composed of butter and cheese imports and the estimate of dairy output in Taylor (1976: 590). Data on the production of metals from domestic ores are from official statistics (*Stat. Abstract*, p. 336). In the case of iron the tonnage of pig iron produced from British ores has been compared with the sum of pig iron produced from foreign ores and the tons of iron and steel products imported. If the comparisons were based only on the pig iron produced in Britain imports would be just under half of inputs. The non-ferrous metals are calculated from the value of domestic output from British ores and the sum of the value of imported ores and metal

* Less than 0.5 per cent British ore

(see figure 3.1): at a minimum one out of every four pounds spent by Britons at the end of Victoria's reign was spent abroad, a higher share than in France or Germany, and much higher than in the United States. Some three quarters of all imports were foods and raw materials, frequently the only or the major source of British supply (see table 3.1). On the other side of the ledger, British exports consisted in the main of the products of a few major industries. Textiles of cotton, wool, and linen, which had contributed nearly three quarters of the value of exports at the beginning of the century, still contributed nearly 40 per cent by its end. Cotton alone, the prototypical industry of the industrial revolution, accounted for 25 per cent of all British commodity exports; iron and steel for 15 per cent and machinery another 7 per cent, smaller figures perhaps than one would expect from the metaphor of Britain as a nation of steam and steel, but nonetheless large. Coal became a major export during the century because industry and transport demanded fuel as they had not before, and Britain was well placed to supply it, earning thereby 10 per cent of all her exports. These 'old' industries of the industrial revolution – textiles, iron and steel, and coal – earned two thirds of British exports of commodities, and were themselves squarely turned towards the outside world. About 80 per cent of the cotton textiles made in Britain were exported, about half the iron and steel, and a third

of the coal. With such exports of commodities, not forgetting the growing exports of services, Britain was fed. Of the £530 millions-worth of domestic commodity exports in 1913, nearly 80 per cent were, in the language of the Trade and Navigation Accounts, 'Articles Wholly or mainly Manufactures'. Of the £660 millions-worth of net commodity imports, only 25 per cent were manufactured articles that Britain did not make as well as others did, 33 per cent were raw materials to make manufactures, and the rest, fully 42 per cent, were foods. By means of foreign trade, in other words, Britain produced far more manufactures than it consumed and consumed far more food than it produced. As Clapham put it, 'The countries which fed, or nearly fed, themselves all had a much more even balance of agriculture with manufactures and commerce. A balance – or lack of balance – such as that in Britain had not been known before in the record of great nations' (Clapham 1938: Vol. III, 2).

Furthermore, Britain bulked so large in the trade of the world that events in Britain affecting her trade, such as the move to free trade in the middle decades of the century or the alleged failure of entrepreneurship at its end, might be expected to react on the British economy for good or evil with special force. That Britain was the pivot of international trade in the nineteenth century is apparent in the statistics of world trade in manufactures. In the decade 1876–85, the earliest dates for which usable statistics on the matter are available, Britain's exports of manufactured goods, her chief exports, were about 38 per cent of the world's total, and in earlier years the share had no doubt been larger (Hilgerdt 1945: 157–8). By 1899 her share had fallen, but was still about 33 per cent of the exports of manufactured goods from the industrial countries (Western Europe, Canada, the United States, and Japan) and India (Maizels 1963: 430–1). This position of dominance is unique in modern economic history, approached but not equalled only by the United States, whose share in the manufactured exports of the industrial countries and India in the seven years of Maizels' statistics (1899, 1913, 1929, 1937, 1950, 1955 and 1957) reached its peak – only 27 per cent – in 1950. Only after the First World War did the United States exceed Britain in exports of all kinds (with American wheat and British coal included in the accounting) and only after the Second World War in total exports of manufactures (Maizels, place cited; and pp. 10–11 in his 'Corrections').

Why Britain did not 'depend' on trade

Britain and the world, then, appear to have been mutually dependent. But 'dependent' suggests that removing foreign trade would have impoverished Britain. In particular, the statistics of 'dependence' suggest that removing trade would have cut national income by 25 or 30 per cent and would have cut British wheat consumption (for example) by 80 per cent – after all, these were the shares of foreign supplies in national income and in wheat consumption. The volume of a trade, however, is a poor guide to how much the economy's prosperity depends on it. You may hire a professional house painter to paint your house, but were you denied his services you would not lose all their value, because you would paint your house yourself, or spend the resources on the next best project. A Britain denied imports of wheat, similarly, would grow its own, albeit at greater expense than wheat from the fertile plains of Illinois or the Ukraine, or would shift resources to other, homegrown foods. The loss to British happiness would not be the whole value of the wheat imported.

The reasoning here is characteristically economic, focusing as it does on the alternatives to acquiring imports by trade. The more usual reasoning is non-economic, making exports, not imports, the thing-to-be-desired. One hears it said, for example, that Britain had to import corn and timber and wine in order to give foreigners the wherewithal to buy British. A person or nation fully employed, however, yearns to acquire goods, not to get rid of them. Exports are an unfortunate sacrifice that people or nations must make to acquire imports for consumption. As Adam Smith remarked in his attack on the mercantilist doctrine that an excess of exports over imports should be the goal of policy, 'Consumption is the sole end of and purpose of all production... The maxim is so perfectly self-evident, that it would be absurd to attempt to prove it' (Smith 1776: 625). If Britain's foreign trade can (as it must) be viewed as a way of acquiring imports, then the question of the extent of British dependence on trade reduces to a question of how well Britain would have done had this way to imports been blocked.

The answer has little significance in itself, for no historical issue turns on the literal abandonment of British foreign trade. Finding it, however, is useful as background to more modest experiments in counterfactuals and as a check on exaggerated opinions of Britain's dependence on trade. The answer proceeds as follows. Foreign trade can be viewed as an industry producing imports, say wheat, in exchange for sacrifices of exports, say cotton cloth. The 'productivity' of this industry is the rate at which quarters of wheat exchange for yards of cloth, i.e. the 'terms of trade'. The price of Britain's exports of cotton cloth, iron, coal, shipping services, and so forth divided by the price of imports of wheat, lumber, tobacco, raw cotton, and so forth is the terms of trade, and has the same relevance for British welfare as does a man's real wages. His money wage for his hour of work (what he exports) divided by the price of what he consumes (what he imports) is his real wage, i.e. the physical amounts of consumable goods he can buy per hour of work. The effect on national income of a change in the productivity of Britain's foreign trade (the terms of trade) depends on the importance of the foreign trade 'industry' relative to other, domestic industries. That is, it depends on the ratio of exports (or imports) to national income, which rose from about 0.12 early in the century to about 0.30 by its end. If the terms of trade rose by 10 per cent early in the century, therefore, national income would rise on this account by (10 per cent) × (0.12), or 1.2 per cent.

Table 3.2. *The terms of trade 1820–1910: a price index of exports divided by a price index of imports* (10-year averages; 1860 defined to be 100; for United Kingdom).

1820	170
1840	130
1860	100
1880	110
1900	130
1910 (8-year average)	130

Source: Imlah (1958: 95–8); rounded after averaging

This matter of concept settled, the remaining question is the counterfactual one of how much in fact the terms of trade would have moved had Britain insisted on growing all its own wheat, and by the same token consuming all its own cotton cloth. Clearly the price of now-abundant exportables like cloth would have fallen relative to the price of now-scarce importables like wheat. In other words, the terms of trade would have deteriorated. How much? The actual course of the terms of trade over the nineteenth century, shown in table 2.2, gives some guidance. The massive fall from 170 in 1820 to 100 in 1860 was a consequence of Britain's own ingenuity in making exported cotton cloth cheaper and of the push of population in Europe against supplies of grain. The small rise thereafter was a consequence of the full application of steam and steel to the making and, especially to the shipping of imports to Britain. In view of these 70 or 30 per cent rises and falls in the terms of trade we should be wary of supposing that the change in the terms of trade for self-sufficiency in say, 1860, was much lower or higher. But where exactly is difficult to say. Not much of a rise in the price of German toys relative to British clocks, perhaps 10 per cent, would have been necessary to stop shipments of either into or out of Britain. But quite a large rise would have been necessary to stop wheat coming in or textiles going out, so powerful in these goods were the forces of specialization. A tariff of fully 40 per cent was necessary to stop foreign corn from entering Britain in years of good harvest under the Corn Laws; a doubling of the price of cotton cloth exports during the cotton famine caused by the American Civil War abated demand by only a third, although the experiment is inconclusive because the prices of Britain's competitors in this market went up as well. All in all it would appear that a prohibition of trade might have reduced the price of exportables relative to importables by, say, 50 per cent at most. The share of imports in income to multiply the 50 per cent would be half of the way from zero, under the prohibition, to the 25 per cent that actually occurred in 1860. Self-sufficiency in 1860, then, would have cost Britain only (50 per cent) × (0.125) or about 6 per cent of national income.

Six per cent of national income looks small beside the bold metaphor of

Britain's 'dependence' on foreign trade. Indeed, the calculation is worthwhile only to loosen the grip of the metaphor (for other attempts see Kravis 1970; Crafts 1973; Kravis 1973). It seems likely that the gains from trade increased as British population grew and limited agricultural resources strengthened the comparative disadvantage in food production but even if the gains were twice those suggested above the conclusion remains that even on the quite absurd premise of no foreign trade at all Britain would have survived. True, had Britain suddenly been denied all trade by strike or edict the immediate effects would have been larger (cf. Crouzet 1958 and 1964; Olson 1963). The experiment relevant to all the history of this period except for times of war and blockade, however, is not a sudden denial of trade but a failure of it to grow over a long term, because it is precisely the steady and rapid growth over the long peace of 1815 to 1914 that has led people to attribute to foreign trade great powers for good. Its power for good might have been larger than 6 per cent even in the long run if by chance the people enriched by the extension of foreign trade, such as coal owners and cotton manufacturers, saved or invested more than the people impoverished by the trade, such as timber owners and silk manufacturers. But there is no persuasive evidence that the chances especially favoured foreign trade. Britain was left with its 6 per cent – no trivial sum, to be sure, but measured against the whole rise in output per worker of roughly 80 per cent from 1855 to 1913 it is only one thirteenth of the story.

The move to free trade

The dominant event in Britain's trade in the first half of the century is the abandonment of protection, especially during the years 1841 to 1881. The event is important in itself for political history, and illustrates the limits of foreign trade as an element in economic history.

During the forty years from Peel's to Gladstone's second ministry, the commercial policy of the United Kingdom moved decisively from fettered to free trade. National income rose decisively as well; the income of labour with it. It was no surprise to free traders, of course, that the removal of a pernicious tax on enterprise, most particularly on the enterprise of industrial labourers and capitalists, brought with it greater wealth for all. They were even willing to concede that only a portion of the greater wealth, though a substantial portion, was attributable to free trade. After all, it was not the promise of material well-being alone that buoyed their spirits in the struggle against protection. Their spiritual leader, Cobden, saw far beyond cheaper corn and better markets for British cotton textiles; he saw, indeed, 'in the Free Trade principle that which shall act on the moral world as the principle of gravitation in the universe – drawing men together, thrusting aside the antagonism of race and creed, and language, and uniting us in the bonds of eternal peace' (Hirst 1903: 229). Such

cosmopolitan visions dimmed in later controversy, for, unlike the material promise, they had all too plainly not been fulfilled. Later critics of free trade, such as the 'fair trade' historian, William Cunningham, could in the 1900s emphasise the more selfish motivation for free trade, namely, the fixing of Britain's monopoly of manufactures on the rest of the world for a few more decades than its natural term (Cunningham 1910–11). Free traders could (and did) respond that great benefit accrued to Britain's trading partners as well. And in their more pragmatic moods the free traders were willing to make the selfish argument. In his testimony to the Select Committee on Import Duties in 1840, J. D. Hume argued that discouraging foreigners from supplying Britain with agricultural products encouraged them to turn instead to manufacturing. In a passage that foreshadows the gloom of many Englishmen half a century later, when the German and American threat had become plain, he argues that by protecting agriculture 'we place ourselves at the risk of being surpassed by the manufactures of other countries; and. . . I can hardly doubt that (when that day arrives) the prosperity of this country will recede faster than it has gone forward' (Parliamentary Papers, 1840, Q 1198, p. 206). But whether they believed free trade was merely a selfish policy or not, or as appropriate to the twentieth century as to the nineteenth, free trader and fair trader alike agreed that in the middle of the nineteenth century it could be justified if need be on selfish grounds alone: it had produced then, they believed, substantial material benefits for the nation.

Free trade had ideological and political effects, of course, and it would be idle to deny that these in turn may have had large effects on the economy: the constitution, for example, might not have survived the European revolutions of 1848 without the repeal of the Corn Laws in 1846. As we shall see presently, however, the direct economic effects have been exaggerated. Historians have naturally, if not always correctly, assumed that it matters economically how a great issue of economic policy such as this is resolved, the more so as the historical study of the issue has been left largely to political rather than economic historians. The history of economics itself has lent credence to this view of the importance of British commercial policy: since the inception of the discipline its best minds (many of them British) have put commercial policy at the centre of their thinking. The most impressive intellectual tools developed by Smith, Ricardo, Mill and Marshall were developed precisely for the examination of the effect of international trade and of government policy towards that trade on national income, and their practical motive was in large part the early encouragement and late defence of Britain's policy of free trade. The sheer weight of the intellectual achievement would incline an economist, like the historians, towards attributing great significance to free trade in the nineteenth century.

The first step in assessing the economic effects of the change in British commercial policy is to discover what it was and how it changed (Williams 1972).

The free trade movement began in earnest in the 1840s, the most dramatic event in its beginnings (although, despite its symbolic importance, not by itself constituting free trade) being the repeal of the Corn Laws on 26 June 1846. The 1840s are no exception to the historiographic rule that it is always possible to smooth the discontinuities of events by examining their preparations in the past. One can date the beginning of the ideological preparation, of course, at the appearance of *The Wealth of Nations* and the administrative preparation in the 1780s, with some tentative simplifications of a complex tariff inherited from an age in which as it has been put 'the British parliament seems rarely to rise to the dignity of a general proposition'. The Napoleonic Wars interrupted many trends in the British economy, among them these stirrings of a rational tariff policy. Every commodity or transaction within reach of the government was taxed and retaxed to fight the French, from dogs and attorneys to incomes and imports. One major tax alone, that on incomes – 'the oppressive and inquisitorial tax' as contemporaries knew it – was repealed with the peace, reducing the government to a policy of continuing other war taxes to meet payments on the national debt (over half of the budget down to the 1850s) and irreducible expenditures on the civil service. In 1820, Sydney Smith could write, after five years of peace, that 'the dying Englishman, pouring his medicine, which has paid 7 per cent, into a spoon that has paid 15 per cent, flings himself back upon his chintz bed which has paid 22 per cent, and expires in the arms of an apothecary who has paid a license of a hundred pounds for the privilege of putting him to death' (Smith, 1820).

What few changes were made during the next twenty years in the role of customs revenues in this mélange of taxes were accomplished largely by Huskisson's budgets of 1824 and 1825: obsolete duties were repealed on imports of manufactured commodities such as cotton textiles and iron (for which Britain had in any case a crushing comparative advantage), some duties on raw materials were reduced, many export bounties were abolished, and most prohibitions, except those on certain agricultural products, were abolished as well. The goal was rationalisation more than reduction – who, after all, could quarrel with a programme of removing contradictory or inoperative duties? – and even this modest programme was far from complete in 1840 (Clapham 1910). The Select Committee on Import Duties (filled with free traders, who had of late become a formidable political force) reported that, in 1839, 17 of 721 articles in the tariff schedule produced 94.5 per cent of the tariff revenue (Parliamentary Papers, 1840, p. 102). This was a Benthamite calculation: the tariff revenue, it argued, could be collected more efficiently even without a fundamental change in commercial policy. By 1840 the hard political decision to move to lower rather than merely simpler duties – involving as it did the reimposition of the income tax, the removal of duties discriminating in favour of the colonies, and, hardest of all, the abandonment of protection to agriculture – had yet to be made. Even with these rationalisations the tariff on the eve of the move to free trade was complex. It contained prohibitions on imports of live or dead meat, duties on 'slave-grown' sugar two or more times higher than those on sugar from British colonies, drawbacks on timber for use in the mines of Cornwall or in churches, 80-odd different specifications of skins, from badger to weasel, with associated duties, export duties on coal and wool, and over 2000 import duties on items ranging from agates to zebra wood.

Despite the bewildering detail, however, the thrust of the tariff is relatively clear. Its protective effect was felt primarily in land-intensive products, these being in any case the dominant products of importation: late in the nineteenth century, under a regime of free trade and of increasing foreign competition in manufactures, nearly four fifths by value of British net imports were land-intensive raw materials and food. In other words, the categories of the simple theory of trade – importables, exportables, and non-traded goods – correspond well in Victorian Britain with agriculture (including some mining), manufacturing, and the residual sector, services. The Navigation Acts (repealed in 1849) protected shipping services, to be sure, but it is doubtful whether the protection was by this time important for the industry, particularly for its more modern branches. A few manufacturing industries, notably silk manufacturing, received substantial protection in the tariff, but, for most, protection would have been superfluous. Indeed, by 1840 the effective rate of protection for factors of production specialised in manufacturing was slightly negative: as free traders pointed out, Britain's exports of manufactures contained raw materials made more expensive by tariffs, whether for revenue on warm-climate raw materials such as raw cotton, for the good of the empire and its land owners on cold-climate materials such as Canadian timber, or for the protection of British rents on metals such as copper and tin ore. The British tariff in the early 1840s, then, raised the price of land-intensive raw materials and food relative to manufactures and services. A tariff designed by committees of landlords in Parliament and imposed on the imports of a nation that required from the rest of the world little but raw materials and food could hardly be expected to achieve any other result (Fairlie 1965 and 1969).

The tariff in the early 1840s, furthermore, bulked large in British economic and political life: it was high and imports were substantial in relation to national income and the revenues from taxing them were a significant fraction of the revenues of the central government. The height of the tariff and the changes in its height may be measured by the ratio of tariff revenues to the value of imports, as in the first row of table 3.3. The rest of the table tells another story, of why and how free trade occurred: the fall in the tax requirements of the government (from 0.09 to 0.06 of income) and the rise in the ratio of imports to income (from 0.12 to 0.30), itself only partly due to falling tariffs, made it easy to charge low taxes on the larger imports. But the main point here is to have a measure of the

Table 3.3. *Tax rates and the ratio of imports to national income, UK 1841 and 1881*

	1841	1881
Rate of import duties	0.27	0.06
Ratio of imports to national income	0.12	0.30
Ratio of all tax revenues to income	0.09	0.06

Source: McCloskey (1979). The rate of import duties in 1841 is calculated using the shares of various products in total imports of 1881. This manoeuvre reduces the bias due to faster growth in the physical volume of low-duty imports (raw cotton especially).

decline in the tariff, namely, from 27 per cent of the value of imports in 1841 to only 6 per cent in 1881.

The first effect is obvious, in view of the weight of the protection to land-intensive goods that the early tariff gave: by abandoning high tariffs British landlords lost income relative to their countrymen. Political argument at that time took it as axiomatic that what landlords lost the workers would gain, because protection of British corn producers was a tax on the mainstay of the workers' diet. In the event the real wages of workers did rise sharply after the 1840s, but real rents of landlords did not fall. Neither event is strictly relevant, for the historical experiment was not a controlled experiment in which all factors except tariffs were held constant. It is doubtful that a controlled experiment would have produced the required symmetry between the incomes of landlord and of worker, because they were not in fact symmetrically located in the British economy. Landlords were located, of course, in agriculture. But workers were located everywhere: in the very agriculture made worse off by the fall of protection, in the manufacturing made better off, and what is most important in the vast sector of goods and (especially) services that did not cross Britain's borders on their way from producer to consumer. Rich countries in the nineteenth century and after spent roughly half of their income on such intrinsically domestic things as houses, police, beer, servants, schools, roads, railways, canals, and so forth. Workers were not committed to one, vulnerable sector. The consequence is that changes in the tariff could affect workers as a group mainly by way of the effect on the size of national income, not on its distribution among sectors. Most of the distributional consequence of the fall of protection was to shift income from wealthy landlords committed to agriculture to wealthy capitalists committed to manufacturing, and even this was no dramatic amount.

The second effect of the fall in tariffs from 27 to 6 per cent of the value of imports is the effect on the size of national income, and is less obvious. Even its

direction is in doubt, although free traders past and present have had no doubts whatever. Surely a man is made worse off if he artificially restricts his dealings with the rest of the world. So too, they argued for the nation. British landlords may be made better off by a tariff on corn, but because the nation as a whole must be worse off with less access to corn the worsening of the rest of the nation is necessarily larger. The argument implies that every extension of British trade, and therefore every reduction in tariffs, was good for Britain (Habakkuk 1940). The argument is flawed. If Britain bulked large in the world's work, as it most certainly did in 1841, then it would be in Britain's interest to somewhat restrict its trade, just as a monopolist will do. In such a case the move to free trade would sacrifice the advantages of monopoly. The case fits the facts: Britain was the world's largest consumer of raw cotton and producer of finished cloth; it was a larger if not the largest consumer of wheat and producer of machinery. Britain had a unique position of monopoly at mid-century, which by abandoning protection it magnanimously scorned to exploit. Paradoxically, it was only late in the century when the monopoly was gone forever that protection recovered its earlier political appeal. In the time of greatest enthusiasm for free trade the usual argument is probably the reverse of the truth: if anything, the move towards free trade in the 1840s and 1850s hurt Britain.

The hurt was not large. At the extreme Britain's monopoly was so powerful that the tariff of 1841 pushed the world price of British exports relative to British imports up by the full extent of the tariff. That is, a tariff of 21 per cent on the free trade price of wheat could at the most lower the world price of wheat by 21 per cent (21 per cent is the difference between the actual tariffs in 1841 and 1881), which is to say it could at most raise the relative price of British exports by 21 per cent. To abandon such an advantageous tariff in favour of free trade would reduce Britain's terms of trade by 21 per cent. By a familiar line of reasoning, then, the hurt would be at most this reduction multiplied by the share of imports in national income, which was 30 per cent at most. The hurt was at most, then, 21 per cent multiplied by 30 per cent, or about 6 per cent. Such a small gift to the rest of the world could easily be offset by the positive effects of free trade such as the reaping of economies of scale in export industries or employment of pools of unemployed labour or a raise in the savings rate consequent on redistribution. That none of these left clear evidence in the historical record is merely testimony to the small size, whether positive or negative, of the effects of free trade on income (cf. Church 1975a: 59–65). The conclusion must be that accumulation and productivity at home, not free trade, were the key to mid-Victorian prosperity.

Exports as an engine of decline

If we do not believe that Britain's rise to workshop of the world before 1870 depended on foreign trade then it is less easy to believe that Britain's relative decline after 1870 depended on foreign trade. Yet the belief is widespread, as we have seen. The rate of growth of industrial production and of income in Britain declined at about the same time that the growth of exports declined; Britain's growth on all scores was slower than that of her 'rivals' (as Germany and the United States came increasingly to be called). These two observations have led many to suggest that the one decline in exports *caused* the other decline in income and industry. In the 1890s especially the editorial pages and parliamentary debates spoke of 'defeat' in a German commercial 'invasion', or of the 'conquest' by Americans of another 'outpost' of British exports (Hoffman 1933). The military metaphor has proven irresistible to later students of the matter, the more so as the less colourful testimony of the statistics of foreign trade seems to agree. Suggestive though it is, that growth at home followed exports abroad does not mean that exports caused growth (nor, as we shall see in the next section, that growth caused exports). The brute fact is not enough. The interpretation of the fact depends on whether or not the British economy at its successive peaks of boom and bust in the late nineteenth century was fully employed. In a fully employed economy an increase in demand for, say, exported cloth does increase the output of cloth, but only by reducing the output of some other, domestic commodity. In the quaint language of economics, in such an economy there is no such thing as a free lunch. An increase in demand for exports can cause little increase in total output, merely a reallocation of resources and a restructuring of output. Under such a constraint, as we have seen repeatedly, events in the international sector can have little influence on the size of national income. The present case is no exception. If the late Victorian economy was fully employed it is no trick at all to show that the 'defeat' at the hands of Germans and Americans in export markets was a trivial cause of slower British growth (cf. McCloskey 1970–71).

If the economy was not fully employed, however, an increase in export demand would have increased the nation's income not only directly, by setting men and machines to work in making ships and coal and machinery for export, but also indirectly, by setting men and machines to work in making steel for the shipyards and pit props for the collieries and machine tools for the machine shops, as well as food, housing, transport, and so forth for the men now earning and spending incomes. Buoyant export demand gave the economy a free lunch; sagging export demand took it away. The assumption of less than full employment is well-suited to the understanding of an economy coming out of bust and moving into a boom, for it is plain in such a case that new workers are indeed being drawn out of involuntary idleness as the economy expands (cf. ch. 2). It is at least doubtful, however, whether the assumption is suited to understanding growth between peaks of the cycle of boom and bust (Matthews 1954a: 79). Doubts on this score have not deterred students of the late Victorian economy, especially economists (Rostow 1948; Coppock 1961), from trying it on. Meyer (1955), for example, noted the sequence of the deceleration of exports and of industrial production, and asked whether maintaining the mid-Victorian growth rate of exports would have maintained the growth rate of industry in late Victorian Britain. Generalising the notion that ships for exports require steel, which requires coal, which requires pit props, and so forth in a gradually diminishing ripple throughout the economy, Meyer constructed a so-called 'input–output table' from the First (1907) British Census of Production in order to measure what the indirect effects would have been of greater exports. He found them to be large. But the conclusion is unacceptable, on several minor technical matters, which need not detain us, and on one major substantive matter. The substantive matter is that the Meyer exercise, like others less explicit in their assumptions, assumes without evidence that the economy was not fully employed. As McCloskey argued (1970) the evidence suggests otherwise; there were simply no large reserves of unemployed resources that could have been set to work if export demand had been larger. The limits on the late Victorian economy, in other words, were limits of supply.

The argument linking export deceleration with late Victorian decline has not depended exclusively on the existence of unemployed resources. It has also been argued that sluggish markets for exports reduced the scope for investment in export industries at home and drove British savings (already low by international standards) overseas, to Indian railways or Brazilian plantations. The private return from such reallocation of resources, it is said, was satisfactory, but the social return was not (D. J. Coppock 1956: 2). Even if this last is true, however, it does not follow that the effects of misallocating savings were large. In the article critical of Meyer, McCloskey examined as well these alternative links in the chain from exports to economic growth in Britain and found them weak. His arguments have been criticised by Kennedy (1974), who contends that McCloskey underestimated the effects of reallocating savings and the labour force in response to more buoyant export demand, and by Crafts (1979), who contends that he underestimated the effect on capital formation of bringing savings home. Nonetheless, it seems clear at present that a simple connection of exports to income is untenable, and that, in short, 'it is implausible...to draw the lines of causation in late Victorian England from export demand to the output of the economy' (McCloskey 1970: 459).

Foreign trade as evidence of decline

Foreign trade, then, does not appear to have been an engine of growth and decline. It is nonetheless an important fact about the British economy, a large sector among a few illustrating the economy's strengths and weaknesses in plain form. The illustrative role of foreign trade in writings on British history is largest at the end of the nineteenth century, when its share in national income was largest.

In every year after 1822 the value of Britain's commodity imports exceeded the value of commodity exports. Both contemporaries and historians became aware that the growing deficit in commodity trade was more than covered by receipts from the international sale of shipping, commercial, and financial services, and by the interest and dividends from foreign assets (see figure 3.1). In fact there was a substantial overall surplus from these receipts to finance foreign lending. Many, however, have seen the slow growth of commodity exports and the rapid growth of imports as evidence of a competitive failure in Britain. Many studies of British industries have focused on the emergence of a foreign challenge in the late nineteenth century and the inability to maintain competitive positions in export markets. Mathias (1969: 315–16) summarised the prevailing view:

> The conclusion to be drawn from Britain's accounts with the rest of the world in 1913 is to see to what a great extent the economy was being protected, or cushioned from the failure of exports to pay for imports, by the £4,000 million of capital invested abroad... Even quite a marked degree of failure in the competitive standards of some British export industries might be tolerated without much strain, as long as the £200 million came in interest each year.

Although it is artificial to ignore in this way the spectacular successes in exporting services (the deficit of £130 million on British commodity trade in 1913, for example, was more than made up by a £190 million surplus on service trade), the fixation on commodity trade and its failures is usual. The impression of weakness in Britain's export performance and by inference its industrial performance is enhanced by the market and commodity structure of British exports. Britain's exports throughout the nineteenth century, as we have noted, were heavily concentrated in a few basic industries that had been at the forefront of the industrial revolution. Exports remained concentrated in these industries up to the war, with textiles, iron and steel, and coal – the 'old' industries – contributing two thirds of export earnings. To look at it another way, these few exporting industries were heavily oriented toward export markets. The dependence of export earnings on a few industries whose technology had been set during the industrial revolution and whose prosperity was dependent on export markets has been seen as a weakness in the British economy of the early twentieth century (Aldcroft 1965). 'Over-commitment', it is said, produced a

vulnerability to change in international conditions, for newly industrialising countries were protecting and attempting to stimulate domestically these very industries. Their predominance in Britain made adjustment of the economy toward the newer light engineering industries, emerging around 1900 as technological leaders, more difficult.

The British economy, in other words, appears to have maintained its traditional industries instead of taking advantage of the new technologies. When tariffs and domestic industrialisation severely curtailed sales to traditional markets in Europe and the United States, new export markets were found elsewhere. In the 1850s customers in Western and Central Europe and the United States had purchased over 40 per cent of Britain's exports. In 1870 these customers still took nearly 40 per cent of British exports, but by 1910 the proportion had declined to well under 30 per cent. In contrast, British exports found customers in Empire markets and in areas of Latin America and Asia where less formal but still important ties bound primary producing areas to Britain. The British specialisation in less sophisticated markets worried observers. Nor were foreign markets the only problem. By the early twentieth century, foreign manufactured goods were becoming increasingly evident in Britain. Shipbuilders and other users of steel were buying from German firms. American engineering products were finding British markets. Surely something had gone wrong. Many began to believe that the British entrepreneur had failed, or that the policy of free trade was a mistake.

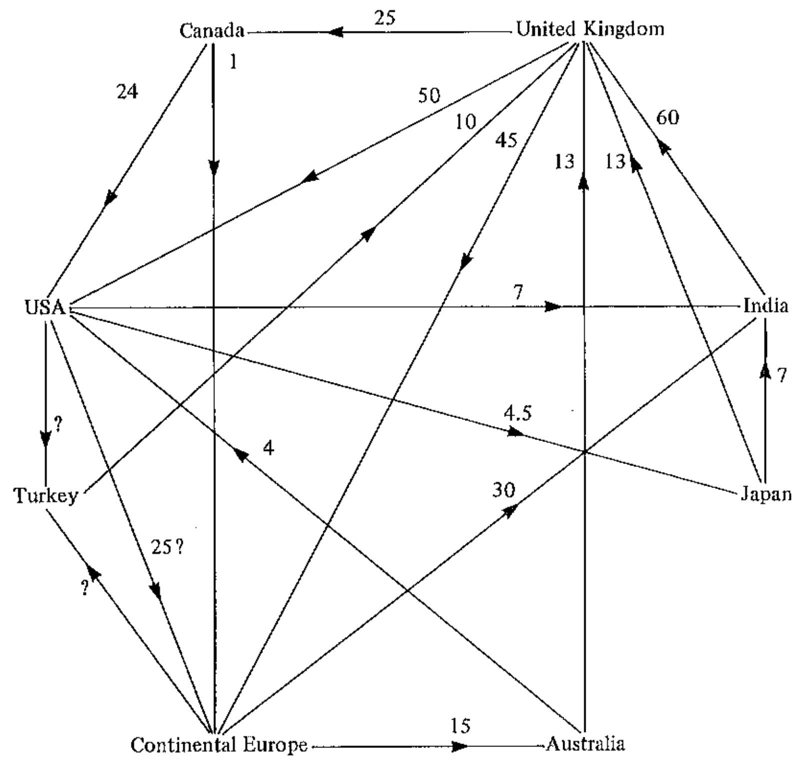
The exploration of the belief in British failure is the task of chapter 1. Here the point is that these conclusions do not necessarily follow from the observed patterns of trade. It seems more likely, in fact, that the primary cause of the late nineteenth century trade pattern was the emergence of the new staple exporters in Asia and the Americas. Falling transportation costs and the expansion of production in these areas drastically transformed the supply of primary products to Europe, and European trade patterns adjusted. These growing staple producing areas drew large amounts of British capital, which, in turn, generated the large inflow of interest and dividends to Britain; and the export of staple products required British shipping, financial and commercial services.

In this and in similar cases, then, conclusions about economic performance cannot be easily drawn from patterns of trade. Trade arises from comparative advantage, not absolute advantage. That is, Britain exported the things it could produce cheaply relative to the other things it could produce – cheap coal, cotton goods, insurance, shipping relative to food, timber, and in the end steel – not necessarily the things that it could produce with less labour or capital than could other nations. So efficient was British agriculture, for example, that Britain could have produced food using less resources than were used to produce it in Argentina or Illinois. But it would have been foolish to do so in 1900, as Britain's continued adherence to free trade then recognised. A better use for British resources was the making of machinery and insurance policies. The 'failure' of Britain to export food and the 'decline' in the size of agriculture (cf. Olson and Harris 1959; and chapter 8) and the 'invasion' of British markets by imports was no sign of technological inferiority in agriculture. So too elsewhere in the economy.

It is worthwhile to underline the conclusion. The pattern of British trade in the late nineteenth century reflected more the world that Britain dealt with than any peculiar new development in the British economic character. The increase in the supply of food and raw materials came from distant, often frontier, areas. By mid-century the innovations in steam power and metallurgy were applied to transportation, and the new railroads and steam-ships dramatically lowered transportation costs over the next half century. As transportation costs fell, a given Liverpool price meant a higher local price in many remote areas of the world. Now the production of staple foodstuffs and raw materials became profitable in areas that had previously been unattractive (Harley 1979; but see Olson 1974). The spread of specialised agriculture and raw material production into distant areas involved the movement of people and the construction of transportation and distribution networks. Because the investment required to build railroads and cities to serve such frontiers as the plains of North and South America far exceeded the resources available there most of the capital was drawn from older areas. British investors found the securities issued by overseas railroads and governments attractive investments and bought them in large amounts. Nearly 70 per cent of the foreign securities issued in London in the late nineteenth century were to finance railroads and other forms of overhead capital (see chapter 4). The staple production for markets in the industrialised regions of Europe and North America increased the demand for various mercantile and financial services. The staple products had to be marketed, financed, insured and transported. British firms already had experience in these fields and the large investments of British capital in the development of the exporting regions further directed this demand toward British firms. Because British-owned ships made up about half of the world's merchant marine the increase in demand for shipping also generated business for British firms.

The commodity composition and the markets of British exports and the bilateral payments patterns at the end of the nineteenth century also reflected the impact of the development of new areas of staple supply. Britain's surplus of imports from Europe and America and relatively large exports to the staple exporting areas – including, importantly, India – had their counterpart in the import surpluses that Europe incurred with all the primary exporters and the United States with the tropics (Saul 1960: chs. III, IV; Hilgerdt 1942). The pattern of multilateral trade balances around 1910 is presented in figure 2.2.

Britain's deficits with the industrial economies and surpluses with the primary producing economies were part of a world settlement pattern. Other industrial



3.2 World pattern of settlements 1910 (£m)
Note: The arrows point to the country of each pair having a surplus with the other, indicating therefore the direction of the flow of settlement. Thus the United Kingdom had a surplus of £60m in trade and payments with India.
Source: Saul (1960: 58).

economies balanced deficits with the primary producing areas by running surpluses with Britain. Interpretation of this pattern is not obvious for it could have emerged and been maintained in more than one way. Those who see weakness in the British economy see the trade pattern emerging because British firms had lost the ability to compete in the markets of developed countries. Ties of formal and informal empire, it is said, allowed increasingly non-competitive British firms to sell in primary producing countries. Imperialism supported the sale of non-competitive exports.

Saul (1960: 62) and Hilgerdt (1942 and 1943) in their studies of world trade see the pattern quite differently. '[The] world-wide interconnecting network of trade [emerged] in the last three decades of the nineteenth century mainly from the rapid growth of primary producing countries and the demand for their products arising in Europe and America.' As imports of primary products increased Europe and America had to develop exports to finance new imports. Since the means for effecting multilateral settlement existed, these countries exploited comparative advantage multilaterally rather than bilaterally. Germany and America's competitive advantage lay not in the products demanded by the primary producers, but in the products of new industries in demand in developed economies.

British exports remained the products of the old industries of the Industrial Revolution and sold outside the industrial nations while Germany and America gained markets in new industrial products and exported increasing amounts to industrial markets. This pattern appears to have emerged from three characteristics of the late nineteenth century. First, tariffs on industrial products inhibited British manufacturing exports to the industrial countries; but with British free trade there was no symmetrical disincentive on exports to Britain. Second, many of the areas of primary production had expanded with the aid of British capital and commercial expertise. The import trades of these areas were, thus, orientated towards Britain. Third, when British industries were compared with their German and American counterparts it was clear that Britain's competitive position was strongest in certain old industries – textiles, shipbuilding, heavy engineering, and even some branches of ferrous metal production. This advantage appears to have been based on the skills that the labour force had developed over a century of industrial experience. Even though British firms appeared old fashioned in their use of skilled labour and comparative shunning of new machine processes, they produced at a lower cost than they could have achieved with more mechanised methods, or than was achieved elsewhere. In newer branches of industry Britain did not enjoy the advantage of existing skills. Here mechanised production was the rule in Britain, as elsewhere, and Britain had no advantage (Harley 1974). In short, because it industrialised first Britain's comparative advantage lay in the old industries while its rivals' comparative advantage lay in the newer industries. And notice again that this finding about comparative advantage provides no insight into the relative technological or economic efficiency of production in the various countries. Investigation of that issue requires detailed investigation of the technological choices that the industries faced (see chapter 5). The multilateral settlement pattern, then, reflected the process of economic expansion outside Europe and the accident of precedence in industrial growth.

Britain's concentration on exporting products of the old industries to primary producing countries appears to have been part of the working of the international economy. But were there not costs of 'over-commitment'? The concentration in a few industries was the legacy of the lead that Britain had achieved in the industrial revolution. Britain's technological precocity allowed her industries to supply a substantial portion of world industrial demand in historical circumstances where that demand was highly concentrated in a few commodities.

With the benefit of hindsight we can see that twentieth century Britain has paid a considerable price for the industrial concentration that led to the large exports of a few commodities to relatively few markets by the eve of the First World War. Unemployment in the inter-war economy was concentrated in these old industries, because labour that had been drawn to these industries in the pre-war period could not be moved costlessly to other employments. The loss to the economy was enormous. This does not, however, imply that the industrial structure prior to the war was necessarily wrong. Even if we leave aside the issue of the management of the international value of the British pound in the inter-war period – perhaps no small leaving aside – it is not clear that hindsight is appropriate for historical judgement. To be sure, adjustment would have had to occur even without the trauma of the war and the associated disruption of an international system in which Britain was so much involved; but it would have been a slower adjustment. The British economy was beginning to adjust long before the war. Traditional industries were becoming less important as a proportion of national income and of foreign earnings. It is of course unfortunate that much of the shift went into international services that depended on a stable international economic environment, shaken by the war and its aftermath. And it is an irony of history that the interests of these service industries heavily influenced the suicidal exchange rate policy of the inter-war years.

Perhaps an appropriate question to ask is: Would an omniscient, but not prescient, planner have made a different choice than the British economy actually made through the workings of atomistic markets? That question surely does not demand an affirmative answer. Britain's international specialisation conformed to her comparative advantage: there were gains from trade that would have been lost by some alternative structure. The newer industries that expanded relatively slowly in Britain were the wave of the future and were industries where technological change was developing most rapidly. But that does not imply that the economy should have shifted to its future structure more rapidly. The concentration of export markets and the concentration in industries certainly increased the risk to the economy – as the inter-war period dramatically revealed – and a cautious planner might have chosen to forego present gains from trade to reduce this risk. But it certainly turns most of the historical literature on its head to suggest that the structure of the British economy before the First World War was inappropriate, not because of excess caution being exhibited through the market decisions, but rather paucity of caution.