Much of the activity between the mid-seventeeth century and the mid-eighteenth century may have been in response to a price–cost squeeze on the cereal enterprises, inducing their close linkage with the livestock enterprises. When cereal prices began to rise steeply, agriculturists may have begun to reap an economic rent. Arthur Young, who constantly reported the wide dispersion in technological level among regions and farms, wrote of Norfolk farmers that 'for 30 years from 1730 to 1760, the great improvements of the north western part of the county took place... For the next 30 years to about 1790 they nearly stood still; they *reposed upon their laurels*' (Young 1804: 31). Incentive to adopt further novelties was reduced when rising prices tumbled extra profits into the laps of farmers whose mixed farming systems were established. What followed tended to be capital-consuming improvements like enclosure, to ease the transition of laggard areas into the world of mixed farming. The central productivity gains of the century still relied of course on introducing and improving and operating systems of mixed farming. By the end of the century they had only the very heavy clays to colonise.

5

Overseas trade and empire 1700–1860

R. P. THOMAS & D. N. McCLOSKEY

In attempting to explain the upturn in the rate of growth of the British economy in the middle of the eighteenth century economic historians have often searched for a pre-eminent factor, a determining cause – one factor that caused all the others. Overseas trade has received more than its proper share of attention for several reasons. Foreign trade during the century expanded more rapidly than did the economy as a whole; export industries in particular grew more rapidly than the industrial sector; the statistics of the growth are relatively easy to collect; and many of the external signs of economic growth during the century were closely associated with the expansion of foreign commerce. H. J. Habakkuk and Phyllis Deane (1963) and Ralph Davis (1954, 1962a) have investigated the role played by the growth of foreign trade and given it pre-eminence as the cause of the growth of the British economy. The assertion of pre-eminence is disputed by Deane and Cole (1967), Hartwell (1965), and Thompson (1973). There is, however, no dispute among historians over the importance of foreign trade to the growth of certain industries, textiles for instance. And there is little doubt that the expansion of foreign trade was to some extent important for rapid economic growth in the eighteenth and early nineteenth centuries (Thompson 1973: 94). Deane and Cole, for example, state, 'There can, of course, be no doubt of the central importance of overseas trade in the expansion of the economy during this period' (1967: 83). We shall see.

The expansion of British overseas trade during the eighteenth century did not take place within a free trade world, but within an imperial system designed to direct trade to the benefit of the mother country. There are two important questions to be asked about overseas trade during this century: (1) did the elaborate and complex regulations that governed trade actually contribute to the wealth of the mother country, and (2) how and by how much did the expansion of trade contribute to the growth of the British economy during the eighteenth century? It is best to begin by considering the overall evidence.

The evidence: statistics of trade

One of the reasons that the growth of the foreign trade sector has been accorded a leading role in explanations of the English industrial revolution is that

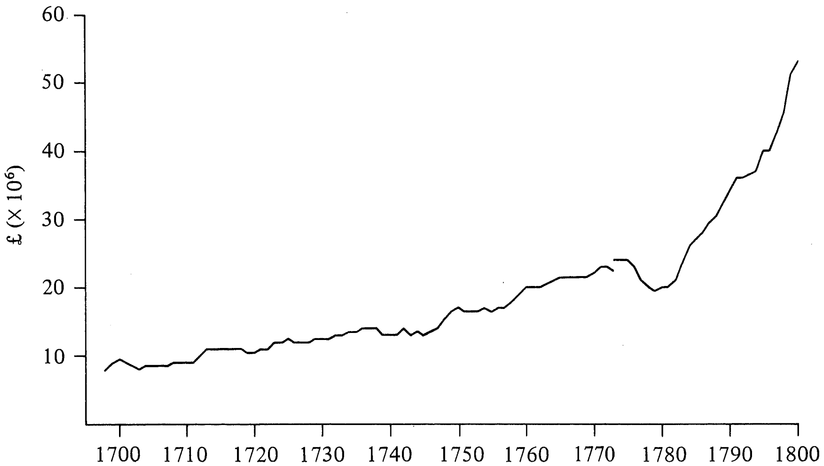

Figure 5.1 English foreign trade in the eighteenth century (net imports plus domestic exports; official values). Notes: (1) The statistics on which this figure is based are taken from Deane and Cole (1967: 48 and appendix 1). (2) The statistics are for official values of imports and exports, as explained in the text. They are therefore a rough approximation to a series of the volume of trade. (3) The statistics are for England, 1697–1774, and for Great Britain, 1772–1800. A three-year moving average has been computed from the original series.

reasonably reliable statistics of foreign trade are available annually for the eighteenth century. Indeed, the foreign trade statistics are the only annual series available for the entire century. These statistics show dramatic increases, especially for the last half of the century. The temptation is great to attribute to so well-documented a sector a causal rather than a dependent role.

Records of English overseas trade from 1696 onwards (of Scotland from 1755) give an annual record of English imports, exports and re-exports (re-exports are goods first imported into England and then exported to be consumed elsewhere). These statistics are not the usual modern foreign trade statistics recording the annual value of trade. The quantities traded were entered annually, but the entries were valued at fixed prices selected at the beginning of the century . Such statistics therefore approximate a quantity index of the physical volume of foreign trade rather than a value index. The existing foreign trade statistics depict fairly accurately the course of the foreign trade of England (and after 1772 of Great Britain: Shumpeter 1960; Davis 1954, 1962a; Deane and Cole 1967; Minchinton 1969); the detailed statistics have recently been reworked by Davis, who also provides a detailed guide to this complicated subject and a valuable discussion of trends in trade (Davis 1979).

The statistics show that between 1700 and 1800 imports expanded 523 per cent

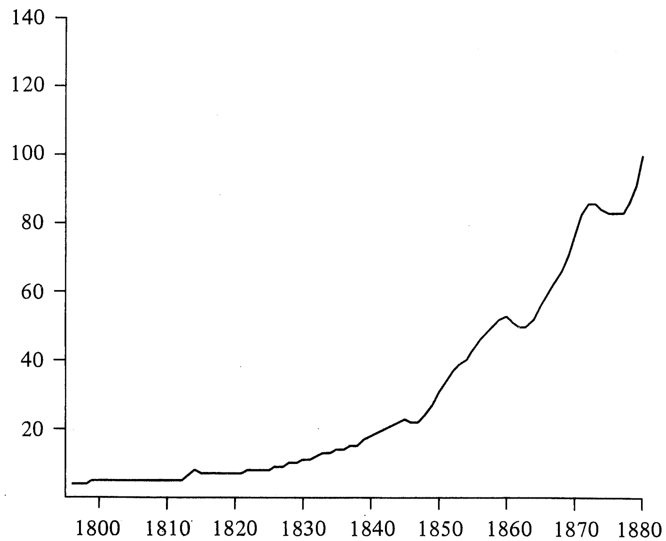

Figure 5.2 English foreign trade 1800–60 (domestic exports; index of trade volume, 1880 = 100). Notes: (1) The statistics on which this figure is based are taken from Mitchell and Deane (1962: 328) and are themselves based on a series given in Imlah (1958: 94–8 and 205–7). (2) The statistics are an index, with base of 100 in 1880, of the volume of exports of the United Kingdom. A three-year moving average has been computed from the original series.

and the exports and re-exports used to pay for the imports 568 per cent and 906 per cent (Deane and Cole 1967: 46). Since the population of England increased by only 257 per cent, it is clear that foreign trade became increasingly important on a per capita basis. There is little doubt that foreign commerce over the century became a more important component of national income.

The growth of English foreign trade is shown in figures 5.1 and 5.2. Although these statistics have not been rigorously analysed, Deane and Cole have discerned that the century can be divided, like Gaul, into three parts. In terms of exports and imports the period 1700 to 1740 reflected relatively slow growth. The pace of expansion picked up between 1740 and 1770 and between 1770 and 1800 rapidly expanded. Summing exports and imports (see figure 5.1) in order to look at the rate of expansion of the foreign trade sector as a whole shows that the rate of growth between 1700 and 1740 was 0.8 per cent annually, that between 1740 and 1770 it was almost twice as great (1.7 per cent annually, and that for the years between 1770 and 1800 it was over three times the rate of the earliest period, or 2.6 per cent annually).

The foreign trade of England during the eighteenth century did not however, accelerate in a smoothly continuous manner. The major interruptions were foreign wars (John 1955; Wilson 1965), over half of the century being years of war. Foreign trade was particularly susceptible to interruption: the dips in trade for the years 1702–13, 1739–48, 1756–63 and 1775–83 and from 1793 to the end of the century can be explained in this way. Likewise, part of the subsequent expansion in foreign trade following the wars may be accounted for by catching-up. Yet despite the interruptions it is clear that foreign trade was expanding much more rapidly at the end of the century than at the beginning.

The growth of foreign trade reinforced the redistribution of the English labour force. In 1700 substantially more than half of the English labour force was in agriculture (68 per cent according to one estimate); by 1800 only 36 per cent were. The expansion of the foreign trade sector coincided with this transition. Deane and Cole calculate that export industries grew from 100 to 544 over the century while the home industries grew from 100 to 152 (1967: 78). Furthermore, in calculating the total expansion of industry and commerce they give the export industries a weight of 60, suggesting that they felt that export industries, even in the base year 1700, were most of all industry. The expansion of foreign trade during the century induced the English economy to become more specialised in manufacturing and less dependent upon agriculture, beginning a process that was to continue until the late nineteenth century.

The geographical distribution of foreign trade

English foreign trade at the beginning of the eighteenth century was heavily concentrated on the European continent. England imported £3.9 million worth of goods from Europe or about £0.67 for each man, woman, and child on the island, two-thirds of all imports (Schumpeter 1960: 11), including linen, wine, timber, naval stores, and bar iron. Most of these came from areas north of the Netherlands. There was little legal trade with the French because of the high duties levied on goods from France and the intermittent wars. English imports were then paid for by exports of £3.8 million and re-exports of £1.8 million, both to Europe (especially Northern Europe). The English exported mostly woollens, the staple for centuries, but also a miscellany of processed and manufactured goods. The English re-exported tropical produce, such as tobacco, sugar, and dyes, imported from her colonial possessions. Europe at the beginning of the century received 85 per cent of both English exports and re-exports.

A notable fact about England's trade in the eighteenth century is that Europe's relative importance as a source of imports to England or as markets for its exports declined (see table 5.1). By the end of the century, although most re-exports still went to Europe, only 29 per cent of English imports still came from Europe and only 21 per cent of English exports went there. The relative decline was due arithmetically speaking to the rapid growth of the colonial markets, particularly those bordering on the Atlantic Ocean. In 1700, English

Table 5.1. *The geography of British commodity trade* 1700–97 (*per cent distributions*)

	1700–01 England	1797–98 Britain
Retained imports from:		
Ireland	5	13
Europe	62	29
North America	6	7
West Indies	14	25
East Indies and other	14	26
Total	100 [£5820000]	100 [£23900000]
Domestic exports to:		
Ireland	3	9
Europe	82	21
North America	6	32
West Indies	5	25
East Indies and other	4	12
Total	100 [£4460000]	100 [£18300000]
Re-exports to:		
Ireland	7	11
Europe	77	78
North America	5	3
West Indies	6	4
East Indies and other	4	4
Total	100 [£2140000]	100 [£11800000]

Source: Deane and Cole 1967: 87; official values.

possessions in North America and the West Indies accounted for only 20 per cent of English imports, 11 per cent of re-exports, and 11 per cent of domestic exports. After a century of expansion (increasing by a factor of 6.5) they were the source of 32 per cent of English imports. English combined exports to the North American colonies and the West Indies expanded by an astounding 2300 per cent over the century. The Atlantic colonies at the end of the century took over half of all the goods exported from the mother country.

The rapid growth of its non-European markets allowed England to continue to import large quantities of European goods and to pay for them using re-exports of tropical produce, such as tobacco from Virginia and spices from Java, to cancel a substantial deficit. England throughout the century continued to import textile materials in large quantities from northern Europe. Linen yarn was the most important single commodity but substantial amounts of both flax and hemp and finished linens were imported from Holland as well as Ireland; timber and naval stores came throughout the century from the Baltic, wines (and gold) mostly from Portugal, and some brandy from France. The items imported remained remarkably similar throughout the century, as did the exported: England imported raw materials and semi-finished goods and exported in turn finished goods.

The presence of protective (often prohibitive) duties on many English manufactured goods in European markets severely limited the abilities of English merchants to export to the continent. The same was true for European goods in English markets. It was the growth of colonial possessions – North American and West Indian – that accounts for much of the growth in English exports. England was blessed with prosperous colonies, required by law to buy their hats and iron and the like from the mother country.

A significant detail in the picture was the change in England's position from an exporter of grains to a net importer. In 1772 only 0.7 per cent of imports (according to the official values) were grains, but by 1790 this figure had increased to 4.4 per cent and by 1800 to 8.7 per cent. The availability of colonial goods to re-export to Europe allowed English imports from Europe to continue at a high level despite the difficulties of exporting directly to that region: again, England became over the century increasingly specialised in producing and trading manufactured goods, depending on foreigners for some of its food supply (though not much by the standard of the late nineteenth century).

The growing volume of overseas trade and its shifting geographical pattern affected the relative importance of English ports. London at the beginning of the century accounted for 80 per cent of England's imports; 69 per cent of England's exports left from there as did 86 per cent of all re-exports. The absolute expansion in overseas trade coupled with the relative decline of Europe as England's trading partner and the relative rise of the colonies coincided with the rise to prominence of the outports: Whitehaven, Liverpool, Newcastle, and Bristol as a group expanded more rapidly than London (Schumpeter 1960: 9–10), with the result that by the end of the eighteenth century London's dominance was somewhat reduced.

The growth in foreign trade shown by the trade statistics measures directly the rapid expansion in goods exchanged overseas, but they also measure indirectly the services that someone must have been providing in connection with the exchange of goods. Shipping and the requisite merchant services (together called 'invisibles') must have grown at least as rapidly as did the exchange of goods ('visibles'). The issue of the seventeenth century – whether foreigners or Englishmen were to provide these services – was settled by the early eighteenth century. Encouraged by edict (the Navigation Acts) and by force of arms (the Dutch Wars), the English merchant fleet had become in the eighteenth century the most efficient in the world (Davis 1962b: 13). With the Dutch interlopers ruined, the English merchant fleet grew hand-in-hand with English trade. The size of the fleet measured in tons increased over 326 per cent between 1702 and 1788 (Davis 1962b: 27).

Along with the expansion of the merchant marine went the growth in numbers and size of the merchant houses that owned and managed them. The earnings in the invisibles trade were not trivial. In the tobacco trade, for instance, it was customary early in the century to estimate one penny for each pound weight for purchase, transport and petty charges (Gray 1933: 224). It was estimated in 1737 by a merchant in the Virginia trade that the normal purchase price of tobacco in Virginia was one and three-quarters pence per pound and the re-export price four pence (not including the duties). The difference between the two prices represents the payments for mercantile services including shipping. These charges, then, could easily be twice the amount received by the tobacco planter. Later in the century it was reported that the mercantile charges on sugar were only 38 per cent of the gross receipts on sales (Sheridan 1968: 51), indicating, perhaps, that markets were becoming more efficient as the volume of colonial commerce grew.

Government policy towards trade

Although it could hardly be called a nation of free trade, England in 1689 was not wedded to protection of interests at home. The importation of a few things, most notably wool cloth, was prohibited, but the prohibitions were minor compared with later practice. The tax on most goods was five per cent on the value of both exports and imports (compared with 30 per cent in 1840, at the end of the protectionist period). The value was calculated not on the true cost but on a book of official and unalterable rates, so that what appeared to be an 'ad valorem' duty (i.e. in proportion to value) was in fact a 'specific' duty (i.e. so many shillings per ounce or yard, regardless of its shifting value). Exceptions were wine and spirits and tobacco, which paid higher duties as luxury goods that could easily bear the weight. The colonial goods among these, such as sugar and tobacco, were in exchange given a monopoly of the home market assured by prohibitive duties on foreign sugar and tobacco, but such duties obviously aided colonials not Englishmen: there was little protection for English industry in the tariff structure inherited by William and Mary.

In short order, however, the new unity of purpose between monarch and Parliament led to a search for new revenue and to a jump in duties on foreign trade. Between 1690 and 1704 the average level on imports roughly quadrupled (Davis 1966: 306). These higher duties of the 1690s, designed merely to enrich the exchequer, exposed a number of specific trades to severe hardship and the government to vehement protests by the merchants involved. The protests were met by a series of modifications and exemptions, setting a disastrous precedent for future manipulation of the tariff in aid of special interests. The result during the course of the century was a list fascinating in its complexity of special prohibitions, duties, exemptions, drawbacks and bounties. The rise of protection, in short, was the accidental consequence of taxation for revenue.

So too was the other half of policy towards trade an accident – the tying by the 'Navigation Acts' of an enormous empire to the economy of England. The first British empire reached its height in 1763, the spoils of victory in the Seven Years' War. The empire included the kingdom of Great Britain and Ireland and the outlying islands, scattered trading forts around the world, and three major overseas regions: North America, the West Indies, and Bengal in India. The British North American colonies included the thirteen American colonies, the Eastern shores of the present day Canada, Florida, and the lands West of the American colonies to the Mississippi River. The possessions in the West Indies consisted of Antigua, Barbados, Dominica, Grenada, Montserrat, Nevis, St Kitts, St Lucia, St Vincent, Tobago, Tortola and, above all, Jamaica.

The Navigation Acts, dating from a century before, although repeatedly revised, consisted of four types of regulations, governing: first, the nationality of the crews and the ownership of vessels in which foreign trade could be carried; second, the destinations to which certain colonial goods could be shipped; third, an elaborate system of rebates, drawbacks, import and export bounties and export taxes in aid of particular industries at home; and, fourth, the manufactures in which the colonies were allowed to engage.

The laws regulating the nationality of crews and ownership of vessels were as mentioned earlier designed initially to exclude the more efficient Dutch from the colonial carrying trade. Colonial (e.g. North American) ships were considered to be English under these laws. By the eighteenth century, English shipping had become as efficient as the Dutch and would have won a large share of the carrying trade even in the absence of the laws. The laws, however, ensured that Englishmen as a whole held an unbreakable monopoly of the carrying trade and that the other more restrictive Navigation Acts could be more easily enforced.

The most restrictive laws from the colonial point of view, and the most valuable from the English, were those controlling the destinations of colonial goods. Specified ('enumerated') colonial goods could only be exported to the mother country. This list originally contained only tobacco, sugar, indigo, cotton, ginger, fustic and other dyewoods; later naval stores, hemp, rice, molasses, beaver skins, furs and copper were added; and still later, by the Sugar Act of 1764, coffee, pimento, coconuts, whale fins, raw silk, hides and skins, potash and pearl ash. The laws made England the first market of the colonies, and only if the goods could stand the costs involved would English merchants re-export them to other European countries or back to other colonies. Since the importation of non-British goods also had to come from England, they were more expensive for colonials to buy than if they had been imported directly. Furthermore, bounties were granted to English manufacturers of linen, gunpowder, silks and many non-woollen textiles to allow them to compete with foreign manufacturers in the colonial markets. In line with the desire to protect home industries, the colonials were prohibited from the manufacture of certain goods, such as wool, hats, and iron.

The Atlantic empire thus centred in the mother country. The Atlantic colonies produced food and raw materials that did not compete with domestic English agriculture and shipped them to England. Some of these imports were subsequently re-exported. England in turn provided manufactures and goods of foreign (i.e. neither British nor colonial) origin to the colonies, such as slaves to augment the colonial labour force. The first British empire, bound by the laws of trade, was a self-sufficient and expanding economy enriching its centre, surely, but also its periphery.

The economic effects of British trade policy

The question of whether or not trade policy actually contributed to the economic growth of Britain has received much attention from economic historians, most of it from Americans concerned with the causes of their Revolution. The Navigation Acts placed a burden on the thirteen North American colonies, and the task has been to measure it. A related task has been measuring the benefits and costs of the colonies to Britain, especially the West Indian possessions, which in the eighteenth century were viewed as the chief jewels of the empire.

American historians had long debated without conclusion the effects of the Navigation Acts on the North American colonies before Lawrence Harper in 1939 attempted to measure their effects quantitatively. Harper found that the Acts 'placed a heavy burden upon the colonies' (1942: 3); but nearly a quarter of a century later a similar but more sophisticated attempt to apply the tools of economic analysis to the problem came to the opposite conclusion (Thomas 1965). Subsequent contributions (Ransom 1968; Thomas 1968; McClelland 1969; Reid 1970; and Walton 1971) refined the techniques of measurement without substantially changing the conclusion.

The conclusion was that membership in the British empire did not impose a significant hardship on the American colonies, at any rate not from the strictly economic consequences of the Navigation Acts. Because of the doubtful quality of eighteenth-century statistics no attempt was made to estimate the actual costs or benefits to the last shilling. The strategy, a common one in the new economic history, was instead to obtain estimates admittedly crude but biassed against the conclusion. The costs imposed by the Acts, in other words, were deliberately overestimated and the benefits to the colonies from their colonial status (such as protection from Indians) deliberately underestimated. If the burden by this estimate was small, then one could state with some confidence that the true burden was smaller still.

All attempts at explanation or measurement require a standard of comparison. The comparative, or alternative arrangement – a world without British colonies in North America, say – is called a 'hypothetical alternative'or a 'counterfactual'. The very meaning of measuring the importance of colonial rule entails imagining the world without it: the tasks remaining are to select the most convincing counterfactual and to find some way of measuring its dimentions. Harper, Thomas, and others chose to compare what actually happened to what would have happened had the thirteen colonies in 1763–72 been outside the British or French or Spanish empires but still within an otherwise mercantilistic world. The Americans were in fact outside the empire after the War of Independence, making it possible to use facts from after the War to represent a world without British colonies in North America before.

The major burden of the Navigation Act, as Harper discovered, fell upon colonial exports of enumerated goods, such as tobacco, forced to travel through Britain on their way to their final destination rather than directly to the final market in, say, Holland. The increased costs involved in these trans-shipments had the effect of increasing the price of tobacco in Holland, reducing the quantity consumed, and reducing the price received for exports by its colonial producers. The question is, what would have been the price of tobacco in Virginia without the burdensome extra transportation imposed by the Navigation Acts? The answer is that the price can be inferred from prices in circumstances similar to the counterfactual; namely, the ratio of Dutch to Virginia prices after the Revolution can be imagined to apply before the Revolution. If one knows the Dutch price before (one does), then one can infer what the Virginia price would have been had the after-Revolution ratio – free of the Navigation Acts – applied in 1763–72. The result is that without the Navigation Acts tobacco prices would have been about a third higher in Virginia than they actually were. It is then a simple matter to calculate the total cost to Virginians. Roughly speaking, a planter earning £100 within the British Empire would have earned £133 outside, presuming (no obvious presumption) that the alternative to British rule in 1770 was independence, not Dutch or French rule. Enumerated commodities like tobacco were about half of commodity exports from the colonies, for the reach of mercantilism was limited; commodities were about three-quarters of all exports, for the colonists exported shipping services as well; and exports were about one-seventh of colonial income, for the colonists mainly ate what they produced. A gain of one-third on enumerated commodities, then, would have raised colonial income by only $(\frac{1}{3})(\frac{1}{2})(\frac{3}{4})(\frac{1}{7}) = 1.8$ per cent. Such were the burdens of empire.

The other aspects of the Navigation Acts – the burden upon colonial imports and the benefits of bounties granted to produce certain colonial goods – can be estimated in a similar fashion and a total burden calculated. The benefits derived by the colonies from membership in the British empire must be subtracted from the burden to arrive at the net effect. The final estimates suggest that once the benefits of protection and government are subtracted from the burdens the net cost to the colonies was very small, perhaps as little as one quarter of a per cent of income in 1770 and certainly not more than one per cent. And, to repeat, the conclusions can be stated with some confidence because the estimates were purposely biased against the hypothesis (the burdens overstated, the benefits underestimated).

The benefit to the home country corresponding to the burden on the North American colonies was still smaller. In fact, it was itself probably a burden, not a benefit. Requiring certain colonial exports and imports to pass through Britain had the beneficial effect of reducing the prices of such goods to British consumers. If, at the extreme, British consumers were enabled to pay as low a price for tobacco and so forth as did American consumers – namely, the one-third lower price assumed above – the gain would be at most a third of the value of the enumerated goods consumed in Britain. But Britain retained only about 15 per cent of the £1.5 million of enumerated goods imported in 1770 from North America (most was re-exported to Europe). The gain, then, was at most $(\frac{1}{3})$ (0.15) (£1.5 million) or about £75,000 annually. The cost to British taxpayers of defending and administering the North American colonies was, by contrast, some £400,000 annually, five times the maximum benefit. The net burden was no great cost to Britain relative to British income (roughly £130 million in 1770) – although defending it against first the French and then the colonists themselves in the Seven Years War and the War of Independence was in fact a very great if non-routine cost. But the North American colonies were, it is plain, no way to wealth for the home country.

What then, of the other and apparently more valuable component of the Old Empire, the West Indies? Did they contribute to the growth of the wealth of England? The question is as old as the colonies themselves. Adam Smith thought all the Atlantic colonies were 'mere loss instead of profit' (1776: 900), but his opinion has not been adopted widely. The more extreme view maintains in Leninist fashion that British prosperity depended entirely on her empire; R. B. Sheridan can stand as the representative of a more moderate view. He maintains that the British West Indies made a substantial contribution to the economic development of the mother country before 1800 (Sheridan 1965), contending that Jamaica in particular 'yielded an economic surplus which contributed in no small way to the growth of the metropolitan economy' (1965: 311). Sheridan estimated that eight to ten per cent of the income of the mother country came from the West Indies in the closing years of the eighteeenth century and probably a larger percentage before the War of Independence.

Sheridan's views have been strongly contested by new economic historians. Thomas (1965) used the data presented by Sheridan to test the proposition put forward by Adam Smith that colonies in practice were an economic drain on the mother country. The propostion was tested by constructing estimates of the income earned in the West Indies and of the capital investment required to earn the income. The estimates were biased against the proposition – the income account purposely overstated and the capital account underestimated – giving a high estimate of the rate of return on the capital invested. The resulting rate of return was compared with a hypothetical alternative: had the money instead been invested in the home country, what rate of return would it have earned? The rate of return on British government bonds at the time was 3.5 per cent. The overestimated social return on the British investment in the West Indies was a mere 2 per cent: in other words instead of being a source of profit for the mother country the West Indies generated a loss, in money terms a loss of over £600000 a year. Such were the rewards of empire.

Philip R. P. Coelho has investigated the same problem from a slightly different angle (1969, 1973). He asked, would British income have been higher or lower than it in fact was during 1768–72 had the West Indian colonies belonged to some other European power? Britain could have benefited from the possession of colonies if the colonial arrangements imposed by the mother country had allowed the importation of colonial goods at lower than the world market prices. Now the main commodities imported from the British West Indies were sugar, cocoa, coffee, cotton, ginger, indigo, molasses, pimento and rum, with sugar the most important, accounting for over two-thirds of the total. But the preferences accorded to sugar imported from the West Indies meant that the price of sugar in the mother country was higher, not lower than the world market price. Preferential duties were awarded other imports from the West Indies with much the same effect: West Indian landlords benefited at the expense of British consumers. Coelho was able to find only one West Indian import, ginger, for which Englishmen paid less than the world price. The result was that instead of providing a benefit in the form of lower import prices, imports from the West Indies cost the English consumer over £1.5 million a year.

Imports from the West Indies, then, were no bargain. Likewise Coelho could find no evidence that Britain benefited from a monopoly of exports to the West Indies, since the export industries were sufficiently competitive within Great Britain that only competitive returns could be earned in the trade. The British government was required to pay significant amounts for protecting and governing the colonies, only a part of which was offset by a $4\frac{1}{2}$ per cent tax levied on exports. The net result was that the possession of West Indian colonies cost England over £1 million annually, over ten per cent of the total revenues of the British government. Sheridan had found the colonies to have been marginally profitable and Thomas had found that they were marginally unprofitable; Coeloho found that British national income would have been considerably higher 'if the West Indian colonies had been given away' (1973: 254).

If the West Indian colonies, not to speak of the colonies of the mainland, were a net economic drain on the economy of the mother country, why were they retained? The answer is that the estimates measure the social not the private

profitability. It is obvious that the colonial plantations and farms were privately profitable to their owners. The costs of the sugar preferences were borne by the British consumer and the costs of administration and protection by the British tax payer. The costs were widely diffused, but the benefits accrued to a small group of owners who happened to be well represented in Parliament. British mercantilism during the eighteenth century was not a consistent national policy designed to maximise the wealth of Britain; nor was it a preview of the alleged enrichment of capitalist nations by nineteenth-century empires. It was instead, as Ralph Davis suggests, a means to provide revenue to the government (1966: 313) and a device to enrich special interest groups. The truth of the matter is that what was in the interest of the Manchester textile manufacturer or the Bristol slave trader or the West Indian planter was usually not in the interest of the British economy as a whole. As Adam Smith remarked at the time:

> To found a great empire for the sole purpose of raising up a people of customers, may at first sight appear a project fit only for a nation of shopkeepers. It is, however, a project altogether unfit for a nation of shopkeepers; but extremely fit for a nation whose government is influenced by shopkeepers [1776: bk. IV, ch. VII, pt III].

Overseas trade and British economic growth

If public policy towards overseas trade and the empire had few effects on income, and those negative, perhaps the trade itself stimulated economic growth. England's treasure by foreign trade has long seemed a likely cause of enrichment, because England has long been unusually deeply involved with the rest of the world. In the late eighteenth century, especially, the parallel expansion of industry at home and trade abroad has lent credence to the view that trade was an engine of growth. The engine has been said to work in two ways: the first by way of providing markets for the products of industry.

Consider the first view, then, that certain of the overseas trades provided profits for the feeding of British industry. We have seen already that the colonies themselves are doubtful as a source of profit. An alternative, put foward by Eric Williams (1944) long ago but still persuasive to many minds, is the slave trade: it is said that the 'fabled' profits earned in the slave trade and in employing slaves in the plantation colonies provided the original accumulation of capital for the industrial revolution. The interpretation appears plausible enough on the surface, for a slave produced more than he ate and there were many slaves. The question is, however, who earned the profits? The Jamaican planter bought the slave from a Jamaican dealer, who in turn bought the slave from a shipper, who in his turn bought the slave from an African dealer. At each stage the competition of eager buyers would drive the price up to the point at which buying the slave earned only normal profits: if the profit were in excess of normal the competition to buy would intensify and the price paid would rise to capture the excess. The surplus of a slave's production over his consumption, then, was passed back along the line of dealers in men and reached the original source – the enslaver. Enslavement in African was a consequence of war or kidnapping among Africans themselves, that is, it was a fishing for men. And in the analogy with fishing lies the answer to the question: as in fishing in the sea, the profits were wasted encouraging too many Africans to do too much slave hunting. No one owned the right to hunt for slaves, as no one owns the sea fisheries, and therefore the resource (the populated regions of Africa; the sea) was overused. So long as the transatlantic slave trade was open – effectively until the 1830s and beyond, when the British themselves closed it by interposing their navy between Africa and the New World – the economic profits of the trade were merely wasted in Africa, not funnelled into industry in Britain (cf. LeVeen 1971 and 1975).

In like manner no single trade was crucial to the nation's prosperity. If imports of grain from Prussia were cut off by the fortunes of the war against Napoleon then the United States could supply much of the deficit. If France at long last, after many years of war, cut itself off from British exports of cotton textiles, no matter: other countries stood ready to buy a good that Britain made so well and, especially, so cheaply. Notice the bellicose nature of these examples. During the long eighteenth century, beginning in 1688 and ending in 1815, the shocks of war were occasions for frequent if unintended economic experiments in the essentiality of particular trading partners or particular trades. The experiments do exhibit the agility of the economy, but are otherwise misleading. One must not use the disruptive effects of a sudden closing of a market to demonstrate the long-term importance of the product marketed, because over the long-term one demander of cotton cloth or supplier of sugar is as good as another.

The same argument applies to foreign trade as a whole. Domestic demand or supply within limits, could replace foreign demand or supply. The case of exports of manufactures has been the most important. At first it seems odd to argue that without foreign markets for its output of cotton textiles – exports were a sixth of output in the mid 1780s, and in the nineteenth century were never below a half (Deane and Cole 1967: 185–7) – Britain would have been able to find markets at home. The result, it seems, would have been a land choked with cotton, from cotton nappies to cotton shrouds. In the long run, however, the men and money used to make the excess cotton could have been turned towards making beer, roads, houses, and other domestic things. As the demand shifted home (it did in the early nineteenth century, as we shall see in the next chapter) so too would the supply. The reasoning used here is characteristic of economics, and therefore of applications of economics to history: because all things are substitutes the actual division of British exports between (say) Europe and the New World, and even the division of British output between exports and domestic use, is an interesting fact but not one obviously significant for British economic growth.

It is possible that the significance of foreign trade, especially foreign demand

(exports) can be rescued by asserting that exports were a net addition to the demand facing Britain, that the nation of shopkeepers opened a new branch abroad. But many economists would be inclined to suppose, counter to much of the literature on trade as an engine of growth, that the possibility was remote. Two points are worth emphasising here. First, an export is not of itself a good thing. The end of economic activity is not production but consumption; exporting therefore is merely a lamentable sacrifice of resources consumable at home that is made worthwhile only by the importing it allows. More exports, in other words, are not to be identified with more income. Contrary to the hardy mercantilism of politicians and professors, exports are not economic growth.

Second, exports do not appear in the British case to have had even an initiating role in growth. The point is a factual not a logical one, and is controversial. It rests on evidence of the price of exports and imports, particularly their quotient, 'the terms of trade', which measures the amount of imports gained by each amount of exports shipped abroad. To take the most controversial example, if in the explosion of exports in the two decades after the end of the American War of Independence the price of exports had risen sharply relative to imports one would be justified in attributing the growth of exports to foreign demand. Simply put, the new eagerness of foreigners to buy British would reveal itself in a favourable move in the terms of trade (a rise in the price of exports divided by the price of imports). Less simply but more exactly put, the demand curve of exports would be moving out faster than the supply curve, and the price, therefore, would rise. But in fact – and here is the matter of controversy, for the statistics are uncertain – the terms of trade during the 1780s and early 1790s shows a tendency, if anything, to fall (Deane and Cole 1967: 85). The pattern is clearer in the nineteenth century, although the pattern must be seen against powerful trends that increased exports ten times over from 1800 to 1860 and cut the terms of trade in half (Imlah 1958: 94–8). Decades with the fastest growth in exports – the 1830s and the 1850s, for example – are also those with the fastest, not slowest, deterioration in the terms of trade. In the long and medium term, to put it another way, the British supply of exports from its more efficient factories and mines was more expansive than the foreign demand.

All this is not to say that foreign demand was bad for Britain. A nation, like a person, is made better off by greater demand, and if greater demand abroad was not a leading sector in British growth it is not on that account to be scorned. Like the dog that did not bark in *The Hound of the Baskervilles*, the demand that did not stagnate or decline can be considered significant. The extent to which Britain was made better off depends on how much the terms of trade improved (or how much they failed to deteriorate) and on the importance of foreign trade. An analogy is useful. Just as the output of steel requires a sacrifice of inputs of iron ore, coal and so forth, likewise an output from the foreign trade 'industry' of imports requires a sacrifice of inputs into it of exports. The efficiency with which exports of woollens, cottons, and coal were transformed into sugar, timber, and wheat is the terms of trade, the price of exports divided by the price of imports. The national importance of, say, the building industry is clearly the value of its output divided by national output. Likewise, the national importance of the foreign trade industry is the value of imports divided by national output, or in the decades around 1800 about 0.10 to 0.15. The terms of trade, recall, fell by some 50 per cent from 1800 to 1860. Had they fallen because of sluggish foreign demand as much as an additional 10 per cent, say, national income would have fallen on this account by 10 (0.10) or 10 (0.15), that is, only 1.0 or 1.5 per cent. The horsepower of trade as an engine of growth seems low.

The method is symmetrical for improvements in the terms of trade. Between the five years around 1780 and around 1785, moving from years of war to years of peace, the money price of Jamaican sugar fell 20 per cent, that of English broadcloth rose 4 per cent (Deane & Cole 1967: 84). If these two goods were representative of English imports and exports, then the terms of trade improved about 24 per cent (i.e. the price of exports rose 24 per cent relative to the falling price of imports) at a time during which imports were some 5 or 7 per cent of English national income, yielding a rise in income of 24 (0.05) or 24 (0.07), that is, a 1.2 or 1.7 per cent increase from the great boom in foreign trade after the Treaty of Paris. The moral of the arithmetic is plain: gains there were from increased demand abroad, but relative to the great increase in national income per head that began to accumulate in the nineteenth century – doubling in six decades – they were small. At no time did the gains from trade revolutionise the economic strength of the nation.

Britain experienced a commercial revolution before an industrial revolution. The inconsiderable little island of the sixteenth century, a mere dwarf beside the Spanish and Portuguese giants, had become by the last third of the eighteenth century the most powerful empire in the world. The loss of British North America gave in the end no lasting hurt to this power, for trade with the United States continued to grow. And in the century after the American War of Independence the trade of Britain reached a volume relative to all economic activity that would have startled an observer transported from 1700. By nineteenth-century standards the trade of the eighteenth century was no great matter. Britain's full involvement in foreign commerce – her unprecedented specialisation in manufacturing, her astonishing foreign investment and emigration – waited on the industrial revolution. The commercial revolution had some small role in industrialisation, very small if the calculations in this chapter are to be believed. As began to be apparent in the late eighteenth century, the strongest effect between commerce abroad and industry at home was from industrialisation to commerce, not the reverse. Trade was the child of industry.

6

The industrial revolution 1780–1860: a survey

D. N. McCLOSKEY

The quiet revolution and its historians

In the eighty years or so after 1780 the population of Britain nearly tripled, the towns of Liverpool and Manchester became gigantic cities, the average income of the population more than doubled, the share of farming fell from just under half to just under one-fifth of the nation's output, and the making of textiles and iron moved into the steam-driven factories. So strange were these events that before they happened they were not anticipated, and while they were happening they were not comprehended. In 1700 a percipient observer of Britain looking towards 1780 might have anticipated its enlarged foreign trade and more active workshops (as, in fact, Daniel Defoe had); in 1860 he might have anticipated the competition of new industrial nations or the application of science to factory and farm during the half-century to come, and by 1900 he would at least have comprehended these events happening (as, in fact, the economist Alfred Marshall and others did). Yet in 1776 Adam Smith predicted a Britain of merchants, farmers, and artificers increasing their incomes at a moderate pace through specialisation and trade (after which national income increased in eight decades by a factor of nearly seven); in 1817 David Ricardo predicted that landlords would swallow whatever the increase would bring (after which rents as a share of national income fell, 1801 to 1861, from about 17 per cent to about $8\frac{1}{2}$ per cent); and in 1848 Karl Marx, in the midst of economic events belying his prediction, predicted that monopoly capital would swallow all (after which the share of labour in income rose, and the real wages of the exploited classes increased in ten or fifteen years by some fifteen per cent and in fifty years by eighty per cent). The British economy from 1780 to 1860 was unpredictable because it was novel, not to say bizarre.

By analogy with the political revolution in France in the 1790s the transformation of economic life in Britain was called, after it had happened, an 'industrial revolution', although its impact on the way people lived was greater, if slower, than most political revolutions. True, its immediate impact on culture or politics was slight. Althought some novelists – sociologists before sociology – depicted industrial characters, poets and painters locked their gaze on mountains and