

Trade, 1860 - 1939: From globalization to fragmentation

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In 1870, Britain appeared to prosper from a dominating position in a dynamic international economy; in 1939 things looked very different as export industries suffered in a moribund international economy. Eighteenth century Britain became Europe's leading trading nation and, during the industrial revolution, industrialization and export growth went hand in hand to make Britain the "workshop of the world." The international economy grew rapidly in the late nineteenth century — an era of globalization that not rivalled until the late twentieth century — and although the dominance of British firms diminished as foreign (particularly American) firms increased their share of world export markets, British export industries continued to prosper. Furthermore, British shipping, banking and mercantile services remained at the centre of the world economy.

By 1939, Britain's relationship with the rest of the world was altogether gloomier. The First World War ended the era of a liberal expanding global economy. In Britain, as in other combatants, firms had turned their resources towards the war effort and foreign customers, ignored by usual suppliers, looked for alternatives. During the 1920s, Britain returned to the pre-war gold-based monetary standard at an exchange rate that made British exports expensive. At the end of the decade, strains from the war and the imperfect return to gold contributed to the Great Depression in the 1930s. As depression and monetary instability spread, governments circumscribed international trade to protect domestic workers and firms and to insulate the monetary system from international pressure. Between 1929 and 1937 total world trade declined about five percent and exports of manufactured goods declined nearly twenty percent. Britain's situation was worsened by loss of competitive position, particularly in industries that had dominated since the industrial revolution and which exported disproportionate shares of their production. These industries were geographically concentrated and their decline created intractable long-term regional unemployment between the wars. In 1931, in response to depression and the changed world, Britain abandoned both the gold standard and free trade.

Table 1 outlines Britain's position in world trade in manufactured good between 1899 and 1937. At the beginning British firms still held a disproportionate share, but that share was declining. In the inter-war years, trade contracted and Britain's share continued to contract. Nonetheless, Britain remained a major industrial exporter. Throughout the period trade was important to the British economy as Figure 1 illustrates. At the outbreak of the war about thirty percent of the economy's good and services were sold abroad. In the fragmentation of the inter-war years that proportion was more than cut in half.

Table 1 about here

Figure 1 about here

World trade in the nineteenth and twentieth centuries can be visualized, at the cost of some oversimplification, as four eras. The first arose from the industrial revolution and reflected British technological leadership. British firms developed new technologies in cotton and then other textiles, in iron production and in machine making. Costs fell dramatically while the Revolutionary and Napoleonic Wars hindered foreign emulation and lower British prices attracted foreign buyers. British firms maintained their technological advantage for much of the century, most strikingly in cotton textiles where British firms continued to dominate international trade in 1913.

Along with the industrial revolution's technology population pressure agricultural resources played an important role Britain's early nineteenth century trade, (Harley and Crafts, 2000 and Ch. , Volume 1). In the second half of the nineteenth century, the second era, transportation technology and population pressure drove change. Iron and steam technology, with their greatest impact on railroads and steam ships, dramatically reducing transportation costs. Population pressed on limited European resources at the same time that abundant agricultural resources of continental interiors became accessible. Together these forces generated an unprecedented growth of intercontinental trade in food and raw materials. With lower transportation costs, trade could exploit differences in factor endowments. In response,

transportation networks and settlement expanded into hitherto inaccessible regions. Growing specialization required investment, much of which Britain investors provided. It also required international transaction's services that British firms provided.

The great period of globalization driven by falling transportation costs and expanding settlement drew to a close early in the twentieth century. With hindsight, we can see beginnings of the trade pattern of the late twentieth century. Today, although trade of manufactured goods for raw materials remains important, the bulk of trade consists of the exchange of differentiated manufactured goods among developed nations. That sort of trade was beginning to develop in 1913, and Britain was deeply involved. Although we now see that advanced nations principally trade manufactured goods with one another, many contemporaries, and historians, were concerned that Britain — the mid-century “workshop of the world” — became the most important import market for the manufactured goods of the other advanced economies. However trade did not development smoothly to its late twentieth century pattern. The First World War savagely disrupted the international economy.

During the war, neutral firms (particularly American and Japanese) supplied goods Europeans no longer provided and import competing industries developed in Britain's customers. In the post-war years, tariffs and quotas protected threatened industries in many countries. Attempts to restore the pre-war *status quo* floundered on falling aggregate demand and the monetary disruptions of the Great Depression. In 1938, the total exports of industrial Europe in real terms (that is adjusted for inflation and deflation) were only just over three-quarters what they had been in 1913. Globalization had been reversed and Britain's traditional exports suffered. Only late in the twentieth century did globalization return.

Late Nineteenth Century Trade and British Performance

Early in the nineteenth century, Britain's trade had expanded rapidly because British firms had lowered the price textiles, iron and machinery. After mid-century, British firms retained

technological leadership in these industries for many more years, but innovation shifted to industries where British firms now shared technological leadership with American and Continental European rivals. Globalization replaced technological leadership as the primary engine driving trade expansion. Much of the growing trade involved exports of food and raw materials from newly settled regions, particularly, but not exclusively, in the Western Hemisphere. Falling transport costs, growing European population, an international policy regime of relatively free trade and the monetary stability that the gold standard provided also supported the expansion of trade (O'Rourke and Williamson, 1999; Irwin, 1996; Estevadeordal, Frantz and Taylor, 2002).

A densely populated industrialized core — Western Europe and the eastern United States — traded manufactured goods for the raw materials of a primary producing periphery. Much of the periphery was frontier brought into use during the globalization era by immigrants who responded to export opportunities. In the 1850s, the frontier stood in the American mid-west; in the following decades, it moved into the high plains of North America, the steppes of southern Russia and eventually into the Southern Hemisphere. Two forces unified the world into a single market. First, steam power and improved metallurgy revolutionized long-distance transportation; new railroads and steam-ships dramatically cheapened shipment. Second, population grew rapidly in Europe and older settled areas of the United States putting upward pressure on European food prices. Falling transportation costs meant that a given Liverpool price produced a higher local price in remote areas of the world. As local price rose, production of staple foodstuffs and raw materials for export became profitable where it had previously been unattractive (Harley 1980; 1986; 1992; but see Olson 1974; Latham and Neal, 1983; Sugihara, 1986; O'Rourke and Williamson, 1999). A global economy for tropical goods had existed since the eighteenth century, but until the second half of the nineteenth century, high transportation costs largely separated two trading networks of temperate goods. One centred on the industrial areas of north-western Europe extended into a Baltic hinterland for agricultural supply; the second, centred on the north-eastern

United States extended into the American mid-west. As transportation costs fell, these trading blocks integrated and extended their influence beyond the Black Sea in one direction and beyond the Mississippi in the other, finally to encompass the entire globe.

For approximately a generation between 1860 and 1890 the cost of shipment by rail and ship fell rapidly and the interior of North America, the Ukraine and central Asia, South America and Australasia and significant portions of South Asia entered a Europe-centred food economy. The general outlines of the developments of railroads and steamships are well known, but the extent of the change is often underestimated. The new transportation revolutionized spatial relationships; primary product prices rose in the frontier regions while they fell in Europe, despite an approximate doubling of Europe's population. The contrasting trends are illustrated by grain and meat prices in the American mid-west and Britain in Figure 2. British prices fell dramatically but the cost of shipment from Chicago to Liverpool fell (from equalling the Chicago price to insignificance in a half century) so much that prices rose gently in Chicago and more rapidly in newly settled exporting regions farther west.

European agriculture came under tremendous pressure (chapter ?). Seldom before had trade forced a fall in the prices of well-established activities on such a scale (although British textile's impact on foreign competitors earlier in the century provided some parallel). Globalization in the previous centuries saw dramatic increase in trade as new products — sugar, tobacco, tea and cotton — not produced in the importing region became international staples. From the late eighteenth century, Britain's timber imports had grown dramatically, but in response to domestic depletion and rising prices. The great late-nineteenth century expansion of trade in agricultural commodities, in contrast, generated dramatic declines in the price of food in the consuming regions.

Lower transportation costs and elimination of tariff barriers stimulated trade and caused the prices of traded goods to rise in exporting and fall in importing countries. In the process, factor prices also converged. Countries tend to export goods that used their abundant — and thus

cheap factors — intensively, while imported goods use scarce, and thus expensive, factors intensively. The growth of exports increased the demand and price of abundant factors while imports lower the price of expensive factor used in import competing industries. Rents on scarce British agricultural land had long been high, perpetuated after the Napoleonic War by the Corn Laws and maintained after their repeal by growing population. In the 1880s, however, rents declined dramatically in the face of growing food imports from distant frontiers. At the same time, exports increased British wages — over and above the benefits from cheaper food — although this effect was more restrained because only a minority of workers worked in exporting industries while all land competed with food imports (O'Rourke and Williamson, 1999).

In Continental Europe, governments responded to pleas from agricultural interests by imposed tariffs on imported food from the 1880s (Kindleberger, 1975; O'Rourke, 1997; Irwin, 1996). Britain's commitment to free trade, in contrast, remained unshaken. British agriculture was already a small sector with modest electoral impact. More importantly, with the repeal of the Corn Laws, the aristocratic land-owning classes had exchanged protection for continued political dominance. The effect was quick and decisive; British food prices fell from the 1880s until the end of the century.

The era of transportation improvement ended around the turn of the century and food prices began to rise slowly. Primary product prices soared during the First World War and stimulated the final geographical expansion of agriculture in distant Canadian prairies and Argentine pampas. Thereafter the primary product producers in the periphery suffered from declining prices that persisted until the Second World War. In the twentieth century, agricultural output continued to grow but now from biotechnology rather than geographic expansion and protective policies discouraged international trade in foodstuffs. By the First World War, the era of expanding trade based on the exchange of agricultural commodities for manufactured goods was ending. Already, particularly in Europe, the more modern pattern of trade dominated by the exchange of manufactured goods among advanced economies was emerging.

Globalization extended beyond the growing exchange of manufactured goods for raw materials. Settlement of continental interiors required people and capital. Transportation and distribution networks to serve frontiers in the plains of North and South America needed far more resources than were available locally and capital to build railroads and cities was drawn from older areas. The securities issued by overseas railroads and governments attracted British investors 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 (chapter ?).

In addition, long distance trade required extensive modification of age-old methods of distribution. Traditionally, for example, local butchers had slaughtered local livestock to provide meat. By late Victorian and Edwardian times, however, much of the British consumer's beef arrived in a much less direct manner. The calf may have been born in Texas; driven as a yearling to grass lands in Montana; shipped by rail to a feedlot in Iowa to fatten on mid-western American corn; and finally shipped to Chicago and slaughtered in Swift or Armour's mammoth packing house. From there, meat made its way thousands of miles to British tables. Meat, because it is valuable and highly perishable, must be shipped quickly and reliably, under refrigerated conditions. Special refrigerated railroad wagons moved the meat to East Coast ports where it was stored in specialized refrigerated warehouses. Then it was packed in refrigerated compartments on Atlantic liners and shipped to Liverpool or London and transferred again to specialized cold storage. Only then did it appear on the butcher's counter for housewives to buy. The story was similar for many other commodities. Frozen lamb and mutton from New Zealand, Australia and Argentina followed nearly identical distribution paths. Even less perishable goods like wheat and wool now travelled long distances, were graded, stored and traded at various points along the way. All this distribution needed transportation, co-ordination and finance.

British firms had acquired experience in the transaction services to market, finance, insure and transport goods on an intercontinental scale since the eighteenth century and they

expanded along with the world economy. British capital in the exporting regions further directed business toward them. As a result the world's commercial co-ordination and finance centred on London. In addition, British-owned ships made up about half the world's merchant marine so the increase in demand for shipping also generated business for British firms.

Lagging exports as an engine of decline?

In the late nineteenth century the volume of exports continued to grow more rapidly than national income (a considerable fall in the price of manufactured export goods relative to non-traded services resulted in the share of exports in income remaining roughly constant as Figure 1 illustrates) but, Britain appeared differently in the trading world than it had a half-century earlier when its technological leadership drove trade expansion. Export growth slowed and imports grew more rapidly than export. At the same time, other industrial countries, particularly the United States and Germany appeared to dominate trade in the latest technology, even capturing large markets in Britain (see Table 1). Britain lost its dominance as 'workshop of the world' and its economy grew distinctly more slowly than those of its foreign rivals. By the 1890s editorial pages and parliamentary debate spoke of 'defeat' in a German commercial 'invasion', or of the 'conquest' by Americans of another 'outpost' of British exports (Hoffman, 1933). Just as many see Britain's growth to international prominence in the industrial revolution as dependant on foreign trade and many also blame it for Britain's relative decline after 1870. We will see that this inference is probably unfounded for this period as it was for the industrial revolution (see chapter ? Volume 1), but examining the case helps us to understand the nature of the late nineteenth century international economy.

The seemingly common sense notion that demand caused growth underlies the belief that trade growth crucially influenced British growth, first for good and then for evil. Simple Keynesian income analysis in which the level of demand determines the level of national income reinforces this view. If the economy was not fully employed, an increase in export demand would

increase the nation's income. Higher income would come directly by setting men and machines to work in making ships and coal and machinery for export, and also indirectly by setting men and machines to work making steel for the shipyards, 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. In this situation, buoyant export demand gave the economy a 'free lunch' by productively using involuntarily idle resources; sagging export demand took it away. The assumption of less than full employment is suited to understanding an economy coming out of recession and moving into a boom, for then workers are escaping involuntary idleness as the economy expands. It is doubtful, however, that the assumption helps to understand growth between peaks of the cycle of boom and bust because a Keynesian interpretation depends on the British economy not being fully employed at the successive business cycle peaks in the late nineteenth century (Matthews 1959: 74). Doubts on this score did not deter students of the late Victorian economy in the heyday of Keynesian analysis from using a demand led model to explain growth (Rostow 1948; Coppock 1961; Meyer 1955). The evidence however, suggests there were simply no large reserves of unemployed resources that could have been set to work if exports had been larger. The limits on the late Victorian economy, in other words, were limits of supply (McCloskey, 1970; 1970-1).

In a fully employed economy an increase in demand for, say, exported cloth increases the output of cloth, but only by reducing the output of another domestic commodity. In the language of economics, in such an economy there are opportunity costs, or colloquially, no 'free lunch.' An increase in demand for exports does not increase total output, but merely restructures output by reallocating resources. In the absence of unemployed resources, events in the international sector may have large impact on economic structure but only modest influence on the size of national income. This was true when exports boomed after the industrial revolution and also in present case when export growth slowed.

The argument linking export deceleration with late Victorian decline has not depended exclusively on the existence of unemployed resources. Theoretically more promising connections explore ways in which Britain's international transactions may have limited the growth of capacity of the economy. Some have 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 returns from such reallocation of resources, it is said was satisfactory, but the social return was not (Coppock 1956: 2; Kennedy, 1974; 1987; Crafts, 1979; 1985, ch. 8). Even if this last is true, however, it does not follow that the effects of misallocating savings were large (McCloskey, 1970; 1981; Harley, 1989). In an important study of British long term growth, R.C.O. Matthews, C.H. Feinstein, and J.C. Odling-Smee presented a demand-influenced view that slower export growth seriously hurt late nineteenth century growth (1982: 445-465). They concluded that, although unemployment did not increase, the slower growth of exports depressed British activity by encouraging disguised unemployment and, most importantly, by slowing growth of total factor productivity. They presented no direct evidence for this conclusion but appealed to a supposition (the 'Verdoorn Law') that total factor productivity growth is caused by output growth in manufacturing. The conclusion, however, can hardly be regarded as established. The Verdoorn proposition is by no means generally accepted; the slowdown in exports and manufacturing growth that Matthews et. al. document occurred almost exclusively in textiles, where they point out there was little scope for total factor productivity growth.

It is hard to see how British manufacturing exports could have continued their earlier growth. Britain's share of world manufacturing at the middle of the nineteenth century was uniquely high and could only have been expected to decline. The manufacturing sector already employed modern proportions of the economy's resources and failure to continue to increase in its share is hardly surprising. In 1913, after all, Britain still produced nearly a third of internationally traded manufactured goods but produced only a little over a fifth. Britain's share

of world manufacturing declined from its peak early in Queen Victoria's reign as industrialization occurred elsewhere. Modern economic growth inevitable involves the economy readjusting its use of resources and the mix of goods it produces as technology and demand change; the late nineteenth century was little different. While it is conceivable that particular adjustments, towards the growing international service sectors and the continued exports of products from the now old industries of the industrial revolution in particular, hampered growth, a simple connection of exports to income is hard to support.

Critics have pointed to the pattern of British trade as evidence of failure. In every year after 1822 the value of Britain's commodity imports exceeded the value of commodity exports and the disparity increased as time went on. Peter Mathias (1983: 289) summarized a 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.

The fixation on commodity trade and its deficit is usual but it is inappropriate to denigrate spectacular successes in exporting services and the interest and dividends that past lending provided. The growing deficit in commodity trade was more than covered by receipts from international sale of shipping, commercial and financial services, and by the interest and dividends from foreign assets (see figure 1). 1913 accounts, for example, show a deficit of £82 million commodity trade that was more than made up by a £121 million surplus on services. This surplus, plus net property income from abroad of £200 million, financed enormous new overseas investment equal to more than eight and a half percent of GNP.

The market and commodity structure of British exports enhanced the impression of weakness. Exports throughout the nineteenth century came mainly from the few industries that had been in the forefront of the industrial revolution. Even on the eve of the war, textiles, iron and steel, and coal contributing two thirds of commodity export earnings and these exporting industries were heavily oriented toward foreign 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. 'Over-commitment', it is said produced vulnerability to change in international conditions, for newly industrialising countries were stimulating these very industries with tariff protecting. Their predominance in Britain hampered adjustment of the economy toward the newer light engineering industries that emerged as technological leaders. The difficulties of these industries between the wars reinforces this belief (Aldcroft and Richardson 1969; Richardson 1965; Crafts, 1985, Ch. 8).

The British economy apparently clung to its traditional industries and failed to take advantage of new technologies. When tariffs and industrialisation severely curtailed sales to traditional markets in Europe and the United States, British firms found less challenging export markets. In the 1850s customers in Western and Central Europe and the United States purchased more than 40 per cent of Britain's exports; in 1870 these customers still took nearly 40 percent; but by 1910 the proportion had declined to well under 30 per cent. Instead British exporters found customers in the Empire and in Latin America and Asia where less formal but still important ties bound primary producing areas to Britain. Specialization 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 steel users bought from German firms and engineering firms bought American machine tools. Surely something had gone wrong. Many began to believe that the British entrepreneur had failed, or that the policy of free trade was as mistake.

The conclusion of failure does not, however, necessarily follow from the observed patterns of trade. It seems more likely, in fact, that Britain's trade pattern emerged from globalization. Asian and American supplies revolutionized primary product markets in Europe, and European trade patterns adjusted. The growing staple-producing areas drew large amounts of British capital, which in turn, generated large return flows of interest and dividends; and the export of staple products required transactions services which British shipping, financial and commercial firms provided.

Conclusions about economic performance cannot be easily drawn from patterns of trade, because comparative, not absolute, advantage determines trade. Britain exported things it could produce cheaply relative to 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. For example, British agriculture was so efficient that it could produce food using fewer resources than were used in Argentina or Illinois. But, because it had little land, it would have been foolish to do so in 1900, as Britain's continued adherence to free trade recognised. British resources were better used making of machinery and insurance policies. The 'failure' of Britain to export food, the 'decline' in the size of agriculture and the 'invasion' of British markets by imports was no sign of technological inferiority in agriculture. So too elsewhere in the economy.

As world markets became integrated, Britain became the centre of the international economy. Other industrial economies were initially preoccupied by domestic industrialization and, after 1880, unlike Britain, insulated themselves from international forces with tariffs on both manufactured goods and agricultural imports to protect domestic interests (Bairoch, 1989; Irwin, 1996, 2002; Kindleberger, 1975). British trade in the late nineteenth century reflected more the world that Britain dealt with than any peculiar developments in British economic character. Food and raw materials came from distant, often frontier, areas. Britons migrated to these areas, and British firms and investors helped construction the transport and urban infrastructure needed to

support new production. Not surprisingly British firms traded actively with these regions, providing the consumer and investment goods the pioneers demanded — textiles, railroad iron and other heavy investment goods that Britain had long produced with such skill. Trade needed commercial services that Liverpool shipowners and London bankers provided. The commodity composition and the markets of British exports and the bilateral payments patterns at the end of the nineteenth century were imbedded in the multilateral globalization driven by staple supply. Figure 3 illustrates multilateral trade balances around 1910. Britain imported much more, including manufactured goods, from Europe and American than she sold to these countries — features that have been ascribed to British weakness. British exporters sold large amounts of manufactured goods to the staple-exporting areas — including, importantly, India — and generated surpluses there. These had their counterpart in the import surpluses Europe incurred with all the primary exporters and the United States incurred with the tropics. Britain's large overall commodity deficit, equalling more than a third of imports, was more than paid for by interest and dividends and by foreign purchases of British service (Saul 1960: ch. III, IV; Hilgerdt 1942; Harley 1995).

Britain's deficits with the industrial economies and surpluses with the primary-producing economies need to be seen within a world network. Other industrial economies balanced deficits with the primary-producing areas by running surpluses with Britain. The pattern could have emerged and been maintained in more than one way. Those who see weakness in the British economy believe that British firms 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. Those who studied world trade in detail see the pattern differently: (Saul 1960: 62) '[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 Continental Europe imported more

primary products it had to finance them. Since the means for multilateral settlement existed, these countries exploited comparative advantage multilaterally rather than bilaterally. Germany and America's competitive advantage did not lie in the products demanded by the primary producers, but in the products of new industries demand by richer consumers and more sophisticated firms in developed economies. Exports to the Britain market, where consumers and investors demanded new products and access was unhindered by tariffs, proved the best way for Germany and America to finance primary imports. In 1913, British importers spend nearly fifty percent more on manufactured goods from Continental Europe than British firms earned on sales to this region.

Earnings from foreign investment and transactions service that the international economy required were no artificial cushion but payments to British firms and investors for important contributions to the international economy but these receipts had repercussions on Britain's commodity trade. To the extent that the British were unwilling to invest abroad amounts equal to these earnings, the surpluses on the service and investment income accounts had to be balanced by deficits in commodity trade. International prices adjusted to support this equilibrium so service earnings resulted in a higher price level in Britain relative to her competitors (a higher 'real exchange rate') that would have been the case in their absence and retarded British export growth just as earnings from Dutch natural gas exports in the 1960s hurt Holland's other export industries — late nineteenth century Britain had a variety of what economists came to call 'the Dutch disease' (Matthews et al. 1982: 455-6, 526; Crafts 1985: 163).

British firms continued to export products of the old industries and sell outside the industrial nations while Germany and America gained markets in richer industrialized countries with new industrial product. This pattern emerged from three characteristics of the late nineteenth century. First, tariffs on industrial products inhibited the sale of British manufactured goods in industrial countries. Second, many areas of primary production had expanded with the aid of British capital and commercial expertise and their trade was naturally oriented 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 some branches of metal production. This advantage was still based on Britain's early lead and practical skills that the labour force had developed over a century of industrial experience. Although British firms appeared old-fashioned in their use of skilled labour and late adoption of new machine processes, they produced more cheaply than they could have with more mechanized methods and more cheaply than foreign competitors. In newer branches of industry Britain did not enjoy the advantages of an early start. Here mechanized production was the rule in Britain, as elsewhere, and Britain lacked advantage and thus was comparatively disadvantaged (Harley 1974; Broadberry, 2000). In short, because it industrialized first Britain's comparative advantage lay in the old industries while its rival's comparative advantage lay in newer industries. 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 study of the technological choices that industries faced.

The concentration of British exports in a few industries was the legacy of the lead that Britain achieved in the industrial revolution. Technological precocity led British industries to supply a substantial portion of world industrial demand in historical circumstances where demand was highly concentrated in a few commodities. The legacy of early leadership shaped British trade into the twentieth century: but were there not costs of 'over-commitment' and late adoption of new technology? Learning by doing appears to generate much of technological change, in Britain early in the century and in America and Germany late in the century. Britain's productivity growth may have suffered because trading opportunities concentrated resources in old industries where technological opportunities were meagre at the expense of new industries with potential for technological advance. Certainly British productivity growth appears to have slowed in the years before the War (Matthews et al. 1982: 229; Crafts and Thomas 1986; Crafts 1985: ch. 8; Crafts et al, 1989). Crafts and Thomas show that Britain's export industries did not

require skills imparted by formal education. In contrast German and American firms' comparative advantage lay in new industries that used human capital. British commitment to education and human capital formation may have lagged in consequence. The British provided less basic education to their general labour force and directed educational reform toward clerical skills, demanded by Britain's internationally dominant service sectors, rather than towards scientific skills. This left Britain relatively poorly placed to take advantage of new technology of the so called 'second industrial revolution' in fine chemicals, industrial equipment, electrical equipment, and cars and aircraft. A legacy that was to cause twentieth century difficulties; an efficient response to Britain's position as the first industrialized country, perhaps, but a restraint on future growth.

With the benefit of hindsight we can also see that twentieth century Britain paid a price for the industrial concentration caused by large exports of a few commodities to a few markets. Inter-war unemployment concentrated in the old industries. Labour drawn to these industries in the pre-war period did not move easily to other employment. The loss to the economy was enormous. Still this does not necessarily imply that the industrial structure prior to the war was 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 the international system in which Britain was so involved but it would have been slower. The British economy began to adjust long before the war. Traditional industries were declining as a proportion of national income and of foreign earnings. As the twentieth century unfolded, it was unfortunate that much of the shift went into international services that depended on the stable international economic environment that was so shaken by the war and its aftermath. And it is an irony of history that the interests of these service industries heavily influenced the 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 is hard but does not obviously demand an affirmative answer. Britain's international specialization conformed to her comparative advantage: there were gains from trade that would have been lost by some other structure. The newer industries that expanded slowly in Britain were the wave of the future where technological change was developing most rapidly. Perhaps dynamic gains, in learning by doing and human capital formation were overlooked, but those are hard to identify even now. Future advantage does not imply that the economy should have shifted immediately 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 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 instead paucity of caution.

The First World War: dramatically changed circumstances

The First World War irrevocably changed Britain's trading world although the full impact was not apparent until the 1930s. The war itself, of course, horrendously disrupted trade. Trade between belligerents ceased, but of longer-term significance, the war diverted European industrial capacity to military needs and customers used to purchasing European manufactured goods looked elsewhere. Alternatives became available from non-European exporters and from import-substituting domestic production. American and Japanese firms permanently increased their exports. Between 1913 and 1929, the United States' share of the world's exported manufactured goods increased from 13 percent to 21 percent and Japan's from 2.3 percent to 4 percent. The European exporter loss market share and none more so than Britain whose share of

trade in manufactured goods fell from 30 percent to 23 percent. (Maizels, 1963; Hardach, 1977, ch. 9)

The war also fundamentally altered international asset positions. Britain entered the war with international assets worth approximately half of the value of the domestic capital stock. Income from these assets, as we have seen, financed imports and new foreign investment. During the war, the government acquired and sold assets located in the United States to purchase war materials and other goods to aid the war effort. In addition, the government borrowed large amounts in New York. At the same time, the British followed their traditional policy of providing financial aid to its continental allies — in this case principally France and Russia.

The most important long-run economic effect of the war, however, was probably the destruction of the international monetary equilibrium under the gold standard that had supported the previous half-century of globalization. At the outbreak of war prudent investors sold assets in belligerent countries and demanded foreign exchange or gold in order to move their funds from the war zones. Governments responded to the threatened loss of gold by *de facto* (although usually not *de jure*) abandonment of the gold convertibility of national currencies. Of greater long run significance, the cost of war led governments to inflationary manipulate the monetary system to aid wartime finance that created post-war domestic and international monetary and fiscal problems and sowed the seeds of eventual collapse after 1929. Tax increases were insufficient to pay much of the war's cost and government borrowing, although quite successful in Britain, provided insufficient additional funds, at least at interest rates the state was prepared to pay. Governments met their bills with newly issued government currency or, more usually, by selling short-term debt to the central bank and the banking system, that increased the supply of bank money. The increased money supply caused inflation inconsistent with the gold standard. Prices rose much faster in the combatants, including Britain, than in non-combatant countries — most importantly in the United States until it joined the Allies in 1917. Restoration of the gold value of the pound after the war would result in British prices above those of American goods in

domestic and international markets. Exports sales would fall and imports increase. Maintaining the exchange rate would threaten British gold reserves (Hardach, 1977; Eichengreen, 1992; Temin, 1989).

Post-war adjustment: inflation, exchange rates and the return to gold

Armistice in November 1918 ended the immediate stress of war but many problems remained. Trade was no small issue since in 1913 Britain had sold goods and services worth thirty percent of national income to foreign customers and received an additional eight per cent of national income from overseas assets. The war jeopardised all this income. Markets had been lost and the war reinforced nationalism globally. A socialist state in Russia repudiated Czarist debts and largely withdrew from trading networks. New states created from the defeated Central Powers asserted sovereign rights to tariff protection. Elsewhere, firms created by wartime demand clamoured from protection from European imports. International assets had been liquidated and debts assumed to support the war. To be sure there were offsetting claims on allies and German reparations but the balance was uncertain.

Immediately the war ended exports boomed as firms and consumers world-wide placed orders to offset wartime privation. This sharp boom was accompanied by continued inflation. Private individuals and firms spent money accumulated, but not spend, during the war. At the same time governments faced continued fiscal difficulties and refinanced short-term wartime debt by direct or indirect money creation.

The boom, although it stimulated new investment, proved ephemeral for many British export industries. Initially problems arose from monetary adjustment. The post-war boom had been supported by American lending and monetary expansion that came to an abrupt end in 1921 when the newly created Federal Reserve took steps to bring prices down towards pre-war levels. Tighter money in New York curtailed American lending and caused contraction elsewhere. In Britain, the Bank of England and the Treasury initiated tight money to begin the process of

returning sterling to the gold standard at its longstanding value. Return to gold posed a challenge. The stability of domestic and international monetary arrangements that the gold standard had provided was widely seen as an indispensable foundation for prosperous pre-war international economy. Britain's international service industries — the City — in particular felt that success in finance and commerce required stable money both domestically and internationally. Consequently, there were strong pressures to restore the gold standard after the war, just as it had been restored in similar circumstances a century earlier after the Napoleonic Wars.

Return to gold involved both constraints on domestic money supply and a fixed exchange rate with other countries with a gold-based currency; in this case, particularly with the United States. The gold standard and fixed exchange rates had been abandoned under the pressure, initially, of capital flight and subsequently, of inflationary wartime finance. Market determined (or flexible) exchange rates prevailed immediately after the war and the value of sterling had fallen to less than eighty per cent of its pre-war dollar value. Fixed exchange rates lower the costs of international transactions but equilibrium at a specific fixed exchange rate between two currencies also require a specific relationship between price levels. If a country's price level is too high, imports will exceed exports and gold will leave the country to cover the deficit (and perhaps also in anticipation of the currency being forced from its gold basis). If the process is gradual, the loss of gold might reduce the money supply, lead to lower prices and bring about international equilibrium. In the years before the war, central banks acted to maintaining the convertibility of paper money to gold and the balance of payments equilibrium at fixed exchange rates that implied. As the world economy evolved long-term trends required modest changes in the price levels between countries but, at least from the perspective of Britain and other core industrial countries, these had generally occurred at a modest pace. In addition, with international confidence in the gold standard international lending eased transitions (Eichengreen, 1992, Ch. 2).

The situation after the war was more complex. Countries had different inflationary experiences. War debts and large reparations imposed on the Central Powers added additional disequilibrium and uncertainty to the international financial picture. A restored gold standard either had to adjust the gold value of domestic money and the exchange rate to reflect inflation and new financial obligations or there had to be large changes domestic price levels among countries to achieve consistency with the old gold value of currencies. Inflation in the United States had been the lowest of the major economies. Britain's inflation had been considerably above the American level, but by the standards of the other combatants, moderate. On the Continent, the currencies of most of the Central Powers collapse in hyperinflation in the early 1920s. The victorious Allies were in a happier situation and expected to receive reparations but inflation had been high and the fiscal situation was more difficult than in Britain. The Continental economies found themselves unable to control inflation, permitted the exchange rate to float and eventually resumed gold-based currencies at substantially lower gold values than had prevailed before the war. Despite this troubled post-war environment, it became clear that Britain would return to gold at the per-war parity of \$4.86 to the pound. However, British inflation had exceeded American by some 10 percent and the loss of overseas assets and the wartime erosion of British export markets suggested that the British price level need to be lower relative to that of the United States than before the war.

The return to gold with the domestic price level too high to correspond to the exchange rate placed enormous pressure on the British economy. Success of restoration required macroeconomic adjustment to lower the domestic price level. The export industries were particularly hard hit. Although most economists believe that the absolute level of prices has little or no effect on the real economy, they also agree that in the short-run, lowering the price level, as Britain's return to gold required, entails a period of depression and unemployment. John Maynard Keynes opposed the return to gold and outlined its costs in a brilliant 1925 polemic (Keynes 1925) — “The economic consequences of Mr. Churchill.” He pointed out that the initial impact

of the overvalued exchange rate would fall on export industries forced to sell at international (or dollar determined) prices that were now some ten percent lower in sterling while costs of production were still determined by British domestic prices. This situation, of course, would force losses on the export industries and some firms would curtail operations. Unemployment in the export industries would tend put downward pressure on wages but would initially have little effect on wages and prices (all of which needed to fall) elsewhere in the economy. In Keynes' view the coal industry was particularly vulnerable and the miners 'victims of the economic juggernaut.' Eventually, he pointed out, falling prices in the export industries, cheaper imports and unemployment would result in lower prices and wages in the economy overall. The cost in terms of lost markets and unemployment in the export industries, however, would be irresponsibly high. His foresight was good: high levels of unemployment, particularly in the export industries, accompanied the return to gold. However, the problems of the export industries and high levels of unemployment in the regions where they were concentrated persisted beyond a reasonable period of macroeconomic adjustment. There were longer run problems.

“Over-commitment”: coal, textiles and steel

The inter-war years saw the comparative advantage of Britain's old export industries collapse. By the early twentieth century, the technology in these industries had stabilized and was transferred around the world by British machine-making firms that sold complete factories to foreign competitors and provided advice to get it operating. Foreign firms, with a much cheaper labour, could compete. Some of the effect had been evident for sometime. British cotton textile firms, for example, had gradually concentrated on the finer yarns and fabrics in which their experience advantages had greatest impact (Kowakatsu, 1998). The war and protectionism in the uncertain post-war environment greatly accelerated the trend and British textile firms rapidly lost market share to low-wage producers in a market that grew only slowly. Japanese cotton mills, in particular, responded to wartime opportunities by expanding output and exports. In 1929, Japan

produced nearly twice the cotton goods it had produced before the war and exported 2.2 times as much. Textile firms expanded elsewhere as well and trade in textiles declined despite continued growth of world output; in India imports in 1929 had fallen to just over two thirds of those in 1913. Similar trends existed in steel, chemicals and capital goods. Britain's share of world exports shrank, but here the loss of markets was primarily to American exporters. British share of world exports of steel fell from 23 percent before the war to 14 percent in the late 1930s, of chemicals from 20 percent to 16 percent and of capital goods from 31 percent to 19 percent. Before the war Britain had also been the world's main exporter of coal — the principal industrial fuel. This market also contracted as low cost American mines expanded, wartime induced expansion in Europe continued to develop and petroleum became an increasingly important fuel. (Supple, 1987; Maizel, 1963).

It would be a mistake to see British industry entirely as failing in international markets for manufactured goods in inter-war years. British firms remained major exporters of capital goods and developed important positions in new consumer durable industries. Nonetheless, the old exporting industries of the industrial revolution went into decline from which they never recovered. The problems of these industries affected the economy disproportionately because many of them were highly geographically concentrated. Concentration had provided advantages of information, labour supply and complementarity during the industries' prosperity but in the inter-war years it created serious problems of regional unemployment and decline. New industries provided little compensation because they located in the Midlands and the Southeast close to consumer markets centred on London and away from the old industrial regions.

The distress that accompanied the loss of export markets was very real and regional unemployment was a major political and social issue. The problem began with the return to gold and intensified during the depression. Many firms failed and workers lost jobs in Lancashire, with its declining cotton industry, the Northeast, South Wales and parts of Scotland, where the coal mines and the steel works lost export markets. The regional economies adjusted very slowly

because local skills and resources had long been directed to the export staples and the new industries were locating elsewhere. The government policy attempted to preserve jobs. Initiatives ameliorated immediate distress, but also tended to support existing firms with little long-run prospects and delayed adjustment to new sustainable economic structures. Overall, attempts to save jobs probably distorted incentives and slowed long-term growth (Heim, 1986; Broadberry and Crafts, 1992a; Bowden and Higgins, 1998).

International finance and world depression

After 1928 the world economy slipped into depression with international trading and financial relations played an important role. Among the industrial countries, the large reparations obligations imposed on Germany by the peace, the war debts Britain had incurred with America and the other Allied powers had contracted with Britain and the United States complicated international economic relations. Although there was some pressure to negotiate reduction or elimination these obligations, America insisted on repayment of war debts and France on reparations. Through most of the 1920s borrowing in New York by German public authorities and private firms finance these financial flows.

Additional international financial complications arose in the periphery. High food prices during the war and its immediate aftermath stimulated agricultural expansion and agricultural supplies, like Canada, Argentina and Australia had financed expansion with foreign borrowing. In the 1920s, agricultural exporters faced sharply falling prices, which reduced foreign exchange earnings, as their new production came to compete with traditional sources that recovered from wartime disruption. Lower earnings from staple exports accompanied unchanging debt obligations from foreign borrowing and many primary product exporters confronted balance of payments deficit. During the 1920s additional borrowing in New York financed the shortfall (Eichengreen, 1992; Kindleberger, 1973).

International economic relationships thus rested heavily on borrowing from New York but in the late 1920s, an American boom and rapidly rising stock prices led the Federal Reserve Systems to a restrictive monetary policy. American financial market reacted by curtailing foreign lending. Primary product exporters whose economies that had relied on American lending to cover the shortfall of international receipts relative to obligations and to finance government expenditures that exceeded tax receipts now found themselves in very difficult positions. Without new loans from New York, demand for foreign exchange exceeded its supply at gold standard exchange rates. Maintenance of the gold standard required central banks to meet the excess demand with reserves of gold or foreign currency. Reserves, however, were limited so long-term equilibrium required that the price level in these countries fall relative to the rest of the world. Deflation is always difficult, as the British had found in the immediate post-war years. It requires monetary restriction and entails a period of adjustment characterized by bankruptcies and unemployment. The Latin American borrowers that depended on American finance to cover their public budget deficit as well as their balance of payments shortfall were particularly hard hit. With American loans curtailed, these governments financed budget deficits by money creation. The combination of reduced American lending and budget deficit was inconsistent with the gold standard. The situation quickly deteriorated as domestic wealth holders and international speculators rushed to sell the currency to avoid losses (or achieve gains) when the logic of the situation predicted devaluation. Reduced American lending and capital flight drove many primary exporters off gold in 1929. (Eichengreen, 1992)

Abandonment of gold by primary product exporters in the ‘periphery’ was inconvenient but not devastating to the system. Britain as a major creditor and exporter to these economies felt pressure on its own exchange reserves that reinforced existing deflationary pressure. However, in the heyday of the gold standard before the war, primary producers had experienced this sort of difficulty and been forced to abandon gold and devalue their exchange rates without systemic damage. In the late 1920s, however, the situation was much more precarious because weakness

also existed in industrial nations at the core of the world economy. Germany, Austria and other successor states of the Austro-Hungarian Empire also depended on borrowing from New York. In part this was a consequence of reparations obligations imposed by Versailles, but in part, also of a governmental policy choice (conditioned to be sure by reparations). (Ritschl, 1998; Eichengreen, 1992; Kindleberger, 1973; Temin, 1989).

International financial crisis occurred in 1931, triggered by depression-weakened Central European banking systems and large short-term borrowing by governments and banks in those countries. The crisis began in Austria in the spring, as it became apparent that the largest private bank, the Credit-Ansatt, was in serious difficulty from loans that the recession had made uncollectable. Domestic and foreign depositors prudently attempted to remove their deposits from the weakened bank. The bank turned to the Austrian central bank for assistance. The central bank followed normal central banking procedures of increased liquidity to aid the banking system by purchasing assets and extending loans to the banking system. In the process the central bank's own reserves fell. After more than two years of recession, investors' confidence had declined and the reduction in a central bank's reserves led many to question its ability to maintain a fixed exchange rate. Austrian and foreign investors lost confidence in the central bank's ability to maintain the gold standard and converted Austrian assets into foreign exchange, greatly intensifying the pressure on the central bank. Some international loans assisted Austria and President Hoover of the United States initiated a moratorium on intergovernmental debts. By the end of the summer, however, it was clear the international assistance was inadequate and Austrian authorities impose strict exchange controls and other restrictions on international transactions to limit the damage to the banking system, effectively leaving the gold standard.

The events in Austria presaged a similar loss of confidence in neighbouring countries. In Hungary, with close connections with Austria, depositors lost confidence in the banks and the currency only days after the crisis began in Vienna. By July the banks and the stock exchange were

closed to prevent loss of reserves. They only reopened when the government effectively left the gold standard by freezing foreign deposits and imposed exchange controls.

More serious problems for the international economy arose as the crisis spread to Germany. In June investors withdrew assets from German banks and convert them into foreign currency. The Reichsbank sought international support for the mark at its gold standard value but American distrust of European finance and French distrust of Germany's political situation and of attempts to end reparations inhibited international co-operation. The Reichsbank ran out of reserves in early July and restricted its discounts. A banking panic followed and the German authorities, too, instituted exchange controls that limited international transaction.

The Continental crisis spread to London. British overseas' earnings had been reduced by the primary producers' problems and further restricted by exchange controls in Central Europe. In addition, the minority Labour government faced a serious budget deficit in the face of growing unemployment insurance payments. In this situation, holders of sterling deposits questioned Britain's ability to stay on gold. During the summer, the Bank of England had to use reserves to maintain the gold standard. The Bank received some American assistance, but it was too little and too late. On August 23, the Labour government split on reducing the budget deficit and fell. A coalition National Government, composed of part of Labour party, Conservatives and Liberals under Ramsey MacDonald (the prime minister of the previous Labour government), took office and took difficult steps to reduce the government deficit but pressure on sterling continued. On September 19, 1931 Britain left the gold standard and allowed value of sterling to fall to market determined exchange rates. (Cairncross and Eichengreen, 1983)

Britain's abandonment of the gold standard did not end confusion in the international economy but moved it into a new phase. Many of Britain's trading partners, particularly in the Empire and in Scandinavia, allowed their currencies to follow sterling. The United States and most of Western Europe, however, maintained the gold value of their currencies. Abandoning gold and devaluing removed pressure from the British financial system. Unlike the United States

and much of Continental Europe no banking crisis intensified the depression. In addition, devaluation lowered the foreign price of British exports and increased the domestic price of imports providing some assistance to British firms, both exporters and those who competed with imports. A gradual recovery from the depression can be dated from the abandonment of gold.

The early thirties, however, were an inauspicious time for international economic transactions. The countries that remained on gold (most notably the United States and France) continued to face deflationary pressure from the need to defend their gold parity. In addition, the onset of the depression had strengthened political argument for protecting domestic markets for domestic producers and balance of payments pressure added additional arguments for restricting imports and financial flows. Tariffs increased in many countries. The financial crises of 1931 led to further tariffs and exchange controls. Britain's departure from gold and the depreciation of sterling put further pressure on those countries that remained on gold which responded with increased protection. The result was the downward spiral in world trade after 1929 illustrated in figure 4.

The rise of protection

The Abnormal Imports Act of November 1931 marked Britain's definitive abandoned free trade — another strong commitment of Britain's pre-war international economic stance — and quickly followed abandonment of the gold standard. Three months later, the Import Duties Act imposed duties (initially of ten percent, soon increased to twenty percent) on manufactured imports and stipulated preferential treatment for imports from the Empire. While the depression aided enactment of the tariff, political pressure had been developing since before the war. (Capie, 1983)

Although there are circumstances in which economic theory indicates that a country as a whole can benefit from a tariff — because restricting exports increases the price received from foreigners or because expansion of an industry generates technological advance — economists

usually argue that tariffs hurt the economy imposing them. This is true because with a tariff higher cost domestic sources replacement low cost imports. The overall costs may be quite small but a tariff's greater effect is to alter the distribution of domestic income in favour of those receiving protection. The political economy of the passage of tariffs rests on these distributional effects in a political context. In an election voters must weigh a range of issues and while ideology certainly plays an important role, voters are best informed and most active in lobbying and voting for issues that have the greatest impact on their personal situation. In contrast they pay little attention to issues that they personally find peripheral. Since production is concentrated and consumption is diffuse, policies that distribute income to well-defined groups of producers have political advantage over the interests of consumers. (Smith, 1776; Olson, 1965, 1982)

Britain in the nineteenth century was anomalous in this regard. As frontier expansion and transportation costs lowered food prices in Europe, agricultural interests — both landlords and peasants — suffered. On the Continent, landlords were the ruling elite and peasants an important source of conservative support for the established order. It is hardly surprising that soon after food prices started to fall in the 1870s that these groups succeeded in getting tariffs passed to maintain agricultural prices at home at the expense of urban workers. Britain differed in several ways. First, by 1870 only about a fifth of the male labour force was in agriculture compared to about a half in most Continental economies. Furthermore, unlike Continental peasants most British agricultural workers had little property stake in agriculture. Aristocratic landlords, of course, were the main losers from cheap American grain and meat and, as on the Continent, they still dominated political life. However, with the 1846 repeal of the Corn Laws (see Volume 1) the aristocracy traded protection of their agricultural interest for continuing political power. The repeal of the Corn Laws and then the fall in food prices had instilled in the industrial classes — middle class factory owners and urban workers alike — an awareness, which forcefully entered political debate, that free trade meant cheap food.

In the twentieth century some of these conditions changed. Even before the war, increasing imports of manufactured goods — most noticeably steel — had started to alter the interests of some of the manufacturing classes. Nationalism also entered the debate. Joseph Chamberlain's early twentieth century campaign for "Fair Trade" and for a self-sufficiency British Empire emphasized that Britain's economic and potential military rivals had promoted their industries with tariffs on British manufactured goods and urged that the Empire should do the same. When put to the voters the 1906 election Chamberlain's arguments lost decisively.

The war, however, gave protectionist politics a significant boost. After four years of total war, no one could deny the strategic importance of the iron and steel and machinery industries — 'heavy industry.' The steel industry quickly warned of the perils of Germany regaining a significant share of the British market and reducing in the size of their strategic industry. Post-war unemployment provided another protectionist argument: imports cost British workers jobs. Even Empire solidarity was strengthened by the war. The white dominions had made disproportionate contributions to the war effort. To be sure, they had instituted protective tariffs in the late nineteenth century to promote their own industrialization, but they had allowed British goods in at preferential rates. Should Britain not reciprocate?

The free trade tradition was breached during the war. Government control of the economy had been pervasive and shipping space was tightly rationed. In 1915, the so-called McKenna (after the Chancellor of the Exchequer) duties of thirty three per cent *ad valorem* were imposed on a limited range of manufactured goods as a temporary wartime measure. They were, however, renewed (with a brief lapse in 1924) through the inter-war years and remained as rates above the general tariff in 1932. The coverage of these duties was limited but included the important automobile industry (Foreman-Peck, 1979). In the chaotic years after the war, industrial groups, again most notable steel, argued for protection in the face of alleged German dumping (selling in Britain below the price in the home market) and argued that the depreciated German exchange rate gave their rivals unfair advantage. The Liberal and the Labour Parties,

however, successfully resisted, primarily by appealing to cheap food. The Depression gave protectionist arguments additional force. By the 1930s unemployment and excess capacity in established industries had become the major issue. It seemed only reasonable to guarantee the home market to domestic producers, particularly when foreign markets were contracting, in part at least, because of foreign protection. The deteriorating international political scene in Europe and pressure from the Dominions for preferential treatment also strengthened the case for protection. In any event, Britain joined the world-wide protectionist trend in the early 1930s. It is unlikely that the tariff made a major impact on employment and certainly helped to fuel the global climate of contracting world trade. The “deglobalization” of the inter-war years was only reversed with American leadership in the post-war years. (Capie, 1983; Drummond, 1974)

Conclusions

In the years covered by this chapter, the international economy underwent two major transformations. In the late nineteenth century, revolutions in transportation technology and liberal trade policies in Europe combined with largely unfettered movements of people and capital to produce a great era of globalization. This era ended with the First World War. The war disrupted trade. Equally important, war finance resulted in monetary expansion that severely disrupted domestic and international financial arrangements that had been based on the gold standard. Protectionist policies and financial disruption fragmented the international economy in the aftermath of the war. Attempts to restore the liberal pre-war regime failed to overcome the obstacles that the war had created. After 1929, depression and financial crisis led to the decade-long Great Depression. Seen as a whole the half-century after 1913 was one of deglobalization that contrasted sharply with the preceding half century of globalization.

By 1850 geography and history had enmeshed the British economy uniquely in the international economy. British firms had played important roles in the eighteenth century expansion of Europe's world trade. Then British firms responded to the industrial revolution by

developing extensive export trade in a few industries. After 1850, British manufacturing industry no longer enjoyed undisputed technological leadership, but trade continued to loom large in the economy. Firms in the industries of the industrial revolution — textiles, iron and steel and engineering — continued to serve world markets, which often took more of their production than domestic consumers. In the expanding world economy, British firms provided needed distribution services. Throughout the half century before the First World War, between twenty-five and thirty percent of the goods and services produced in Britain were sold to foreign customers. Export industries — both goods and services — were dynamic sectors of the economy. It is probably incorrect, however, to credit export expansion with much of the underlying growth or its variation. Certainly exports influenced the structure of production but the sources of growth were located in more fundamental characteristics of the economy.

Britain's heavy involvement in the international economy created difficulties in the troubled inter-war years. World trade faltered badly and technological transfer, low foreign wages and protection hurt British firms in textiles, metallurgy and engineering. In addition, Britain's specialization in old industries and services implied that fewer firms had experience in newer technologies such as electrical engineering and chemicals. The large service sector was hurt by the overall contraction of the international economy. International monetary problems added to the difficulties emanating from the international economy. The decision to return to gold at its traditional value in 1925 placed exporters at a disadvantage and necessitated tight money and deflationary pressure in the early 1920s. The collapse of trade that accompanied Great Depression after 1929 appeared to sound the death knell of the liberal international economy. Britain left gold and abandoned free trade in 1931 under pressure from international forces and turned inward for a generation.

Table 1: Britain and world trade in manufactures, 1899 - 1937

	British exports: to		World exports: to		British
	industrial	all	industrial	all	imports:
	countries	markets	countries	markets	
1899	479	1327	1923	3677	545
1913	624	1960	3248	6497	763
1929	537	1821	4212	8936	810
1929	1547	5176	11272	23841	2115
1937	1056	4034	8031	19895	1692
Annual rates of change:					
1899-1913	1.9	2.8	3.8	4.1	2.4
1913-1929	-0.9	-0.5	1.6	2.0	0.4
1929-1937	-4.7	-3.1	-4.1	-2.2	-2.8

Notes: 1899 - 1929 aggregated at 1913 prices; 1929 - 1937 aggregated at 1955 prices

Source: Maizels, 1955 table A4

Figure 1 : Balance of Payments as Percent of GNP

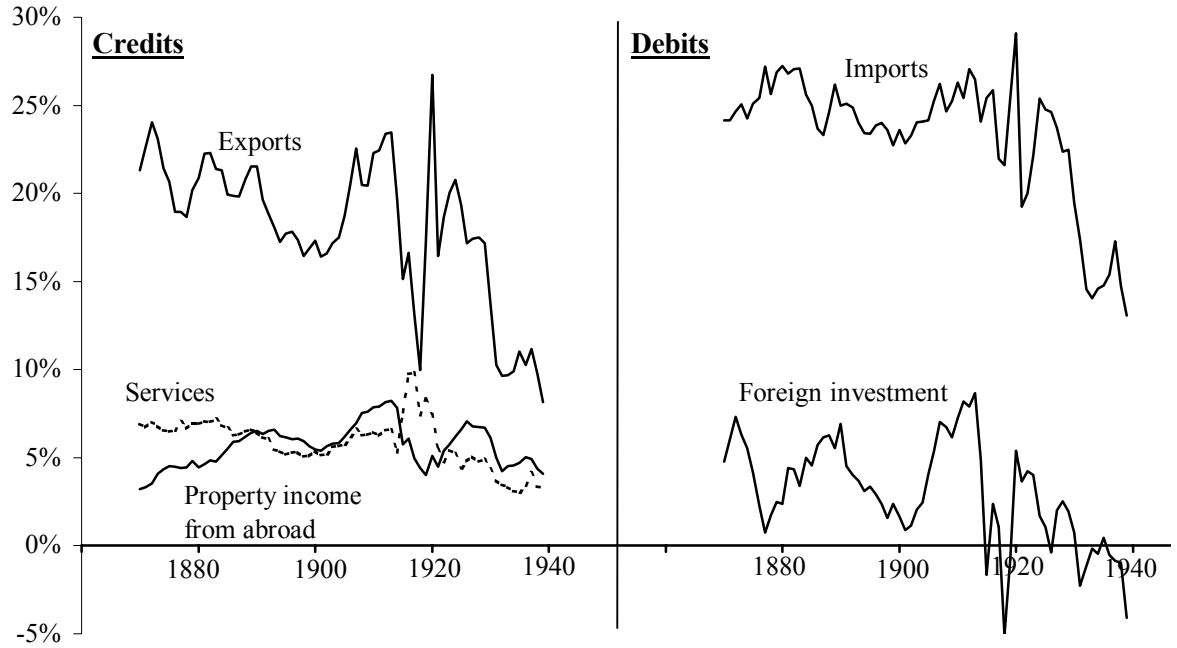


Figure 2: Wheat and Beef Prices: US and UK

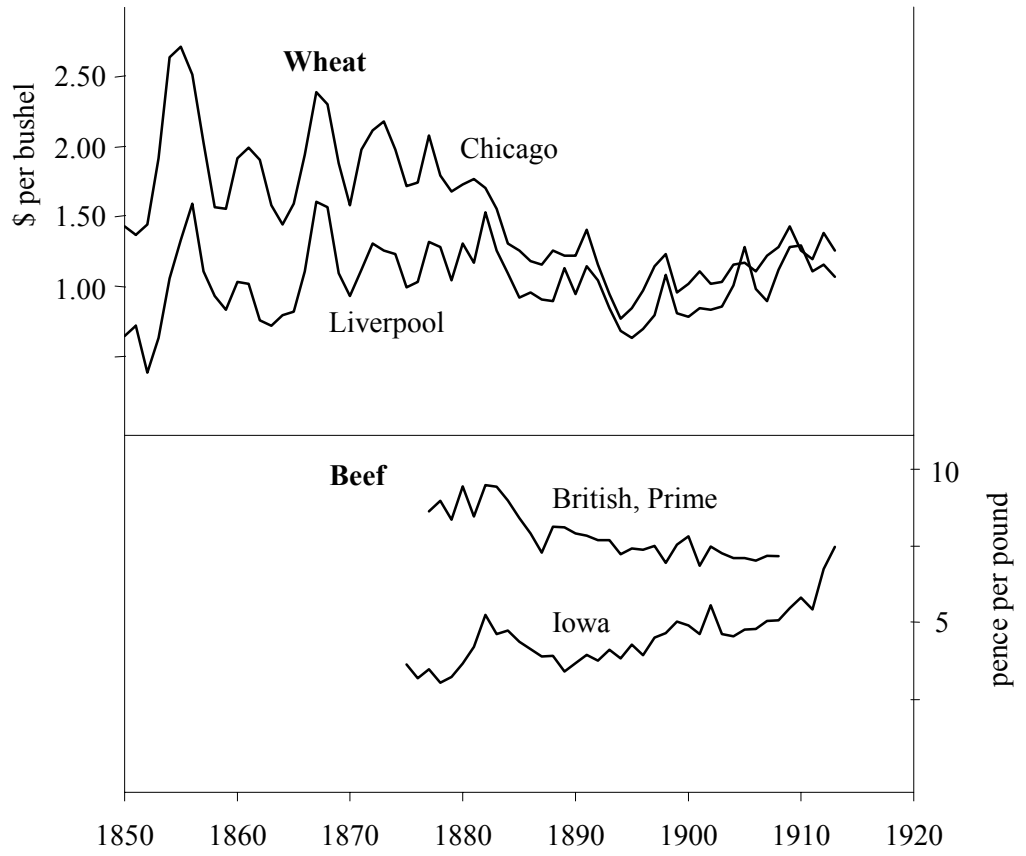
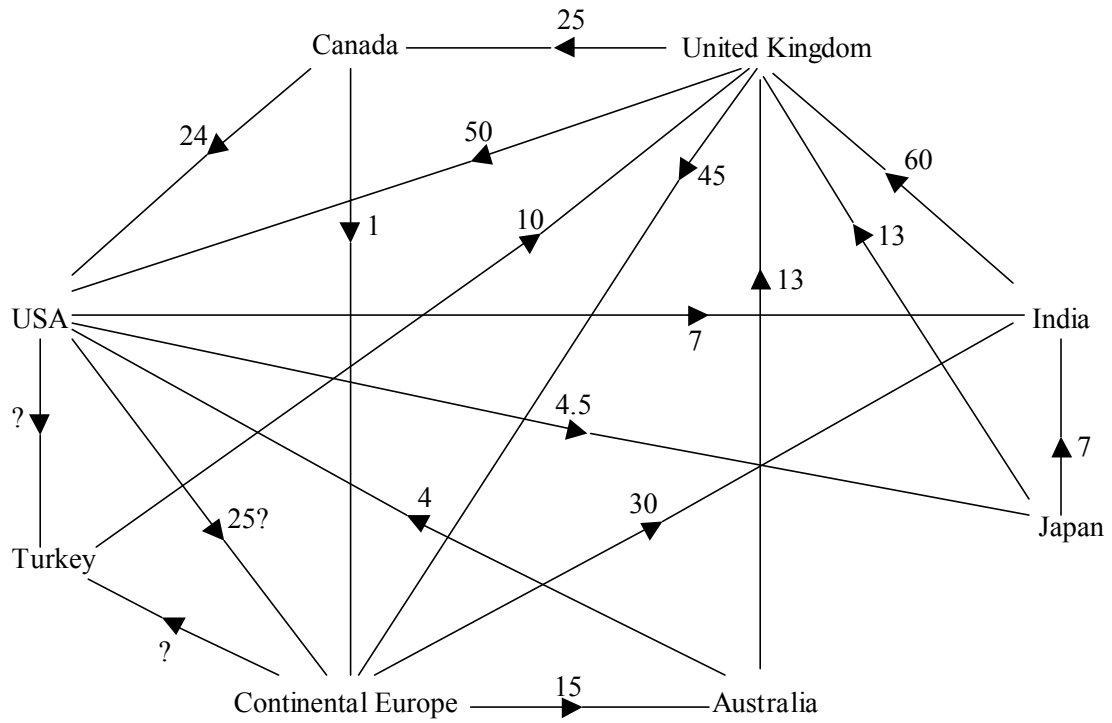
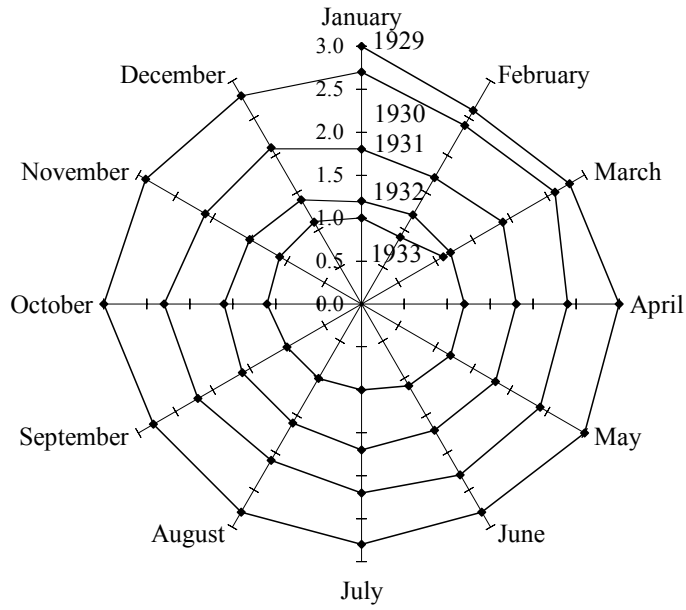


Figure 3: Patterns of world trade settlements, 1910 (£mn.)



Source: Saul (1960), p. 58.

**Figure 4: contraction of world trade, 1929-1933
(billions of gold dollars)**



Source: Kindleberger (1973), p. 172.

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