MONETARY POLICY AND THE BALANCE OF PAYMENTS

The Argument Presented

A recent study described foreign trade as "the controlling element of growth and fluctuations of the British economy between 1790 and 1850."[1] During the Industrial Revolution trade became a more important element. In 1770 perhaps about 7% of the national product was sold abroad; by 1812 this proportion had probably increased to 10%, and between 1688 and 1820 the ratio of retained imports to net national income increased from 5% to 20%. The country's dependence on overseas sources of supply for foodstuffs and raw materials has already been demonstrated.[2] Markets abroad were of particular importance to industry and foreigners probably purchased over half of British textile output, just under half the metallurgical production and significant proportions of the output of the pottery, glass and coal industries.[3] Finally, foreign trade contributed significantly to the war effort. Some part of the additional revenue required to pay for the war came from import duties.[4] Military supplies, including timber, hemp, iron and gunpowder were purchased abroad.[5] The Government made frequent calls on the gold and foreign exchange reserves in order to pay British and allied troops fighting overseas.[6] Since foreign trade was obviously of considerable importance to both the development of the economy and the war effort, the advantages and disadvantages of monetary policy with respect to foreign trade between 1793-1815 requires detailed consideration.

I propose to begin by reconsidering the contemporary comments on the subject. For two reasons the wartime discussion focussed upon the rate of exchange. First, because the depreciated exchange provided bullionists with a test for currency depreciation and secondly, no accurate information was

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1. Gayer, Growth & Fluctuations, vol.2, p.647.
2. Deane, 'The Implications of Early National Income Estimates', pp.21-23 compared with official values of exports for 1770 and declared values for 1812 and Robinson, 'Changing Structure of the British Economy', pp.444-445.
3. Crouzet, L'Economie Britannique, vol.1, pp.64-66.
4. See Table 9.
5. Crouzet, L'Economie Britannique, pp.90-96.
6. See pp. 274-275.

available of other indices now used to describe the country's external economic position. Balance of payment statistics were not recorded and the official balance of trade figures were inaccurate.[1] Only impressionistic statements could be made about movements in the nation's gold reserves.[2] For half the years of suspended cash payments the rate of exchange stood sufficiently close to par to preclude criticism and attention to monetary policy became sharp only in 1800-1801 and 1808-1815 when the exchange was depreciated by 10% and over.[3]

Before 1797 a persistent fall in the exchange would eventually have lead to a contraction of credit by the Bank of England. After Suspension the Bank allowed the exchange to find its own level and incurred the criticism of bullionists for not behaving as if convertibility still prevailed.[4] Most critics agreed with the pamphleteer who described the instability of the exchange as "an evil in itself" but Malthus, who realised that the merits of a fixed exchange rate should at least be argued, observed that Britain should not separate itself from the rest of the commercial world "in relation to our measure of value and resorting to an imaginary standard which no foreign nations would acknowledge, which might be subject, not only to all the variations which can be supposed to take place on gold, but to others beyond comparison more sudden and more extensive."[5]

Their opponents argued that the depreciated exchange encouraged exports, discouraged imports and would automatically correct itself without any contraction of credit.[6] Bullionists agreed that it conferred a "bounty on exports" but were not confident in its powers of self correction and insisted it simply raised the cost of imports.[7] Neither side followed the argument through. The degree of influence exerted by exchange depreciation on receipts from British commodities sold abroad depended on how far export prices lagged behind exchange depreciation. If export prices rose more rapidly than the exchange depreciated no advantages would accrue from the policy. Receipts from exports also depended on changes in the volume of goods sold abroad. Unless the volume increased more

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1. Imlah, Economic Elements, pp.20,21 & 42; Cttee. on Suspension, 1797, pp.59-60 and Bullion Cttee., 1810, p.138.
2. Horsefield, 'The Bank and Its Treasure', p.50 and Bullion Cttee.,1810, pp.144-46.
3. See Table 34.
4. Ricardo, 'Letters to the Morning Chronicle', pp.20-21 and 'High Price of Bullion', pp.72-80; Cannan, Paper Pound, pp.19,32,45 and 71; Parly.Debs., vol.19, pp.814, 815,898,915,1041-1042 and 1106; Malthus, 'Depreciation of Paper Currency', p.360 and Huskisson, 'The Question', 1810, p.16.
5. Woods, 'Observations',1811, cited Viner, Studies,p.215 and Malthus, 'Review of the Controversy Respecting the High Price of Bullion', p.450.
6. Baring, 'Observations on Boyd',1801, p.20; Atkinson, Thoughts,1802, p.73 and Bullion Cttee., 1810, p.67.
7. Boyd made these points to Pitt in 1794 - Pitt Papers, vol.115,dd.9.5.94; Cannan, Paper Pound, pp.20 and 29 and Bullion Cttee., 1810, pp.82-83.

rapidly than the decline in price (expressed in foreign currency) per unit exported again nothing would be gained from the policy. If we compare available indices of export prices and export volumes with deviations from par in the rate of exchange between 1796 and 1815 it can be observed that export prices lagged well behind the fall in the exchange rate and that exports grew in volume at a faster rate than the exchange depreciated.[1]

Foreign demand seemed elastic enough to more than offset the decline in aggregate receipts of foreign currency from the depreciated exchange. These statistics do not prove that exchange depreciation lead to increased receipts from exports. There might have been an autonomous shift in demand for British commodities abroad, and export prices fell steadily after 1802. But they do support the argument that exchange depreciation perhaps helped to increase receipts from exports, and cast doubt on the assertion that the risks and uncertainities of a floating exchange discouraged British exporters during the war years.[2]

On the import side of the balance of payments the advantages of the floating exchange were less felicitous. Exchange depreciation did not induce a decline in imports; in fact the volume of imports increased as the exchange declined.[3] The demand for imports was apparently inelastic, largely because most of the commodities purchased abroad consisted of essential supplies of foodstuffs, raw materials for domestic industry or military supplies purchased on Government account.[4] Thus the policy of allowing the exchange to depreciate cannot be defended on the grounds that it corrected adverse movements in the balance of trade.

Furthermore the policy might be criticised still further if it can be shown that fluctuations had been aggravated by exchange speculation; or that exchange depreciation hindered the country's ability to borrow abroad. The abandonment of the gold standard certainly gave more scope to exchange speculation, but it is impossible to gauge the influence speculators had on fluctuations in the rate of exchange after 1797. Although "the Continental merchant" examined by the Bullion Committee assumed that the effects must have been of a

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1. See Tables 26, 33 and 34.
2. Viner, Studies, p.217.
3. See Tables 26 and 34.
4. See Table 30.

disequilibrating character, there is no obvious reason to make this assumption.[1] Factors which caused an adverse balance of trade in 1800, 1801 and again between 1810 and 1812 were short run in character and a speculator could reasonably share the anticipations of British merchants that the exchange would appreciate with the return of good harvests and the re-opening of European markets.

A floating exchange does however increase the degree of uncertainty for foreign investors in British assets. During the war years, foreign capital mitigated the burden on British saving of heavy Government borrowing and may have been required to meet short-run deficits in the balance of payments.[2] It also played an important role in financing British military expenditure in Europe.[3] Monetary policy has been condemned by Viner and others who claimed the fluctuating exchange handicapped the country's ability to borrow abroad.[4] Certainly the official correspondence for the period is full of the difficulties encountered by Wellington's Commissariat in borrowing money in the Peninsular and of the attempts of the Treasury to obtain gold for the troops abroad.[5] But in general since many influences other than the rate of exchange operated on the decisions of investors to retain or transfer capital into British assets, it is impossible to prove the point either way. A marked rise in the rate of interest undoubtedly attracted foreign capital to London.[6] In 1801 the Monthly Magazine noted that the depreciated exchange encouraged foreigners to purchase British funds on advantageous terms.[7] Britain was not the only country to allow its rate of exchange to fluctuate. Other European countries and the United States also abandoned convertibility.[8] The risks of investment in British assets were relative to risks elsewhere, and the unrivalled political security of London as a financial centre may have offset any risks attendant on a floating exchange. For many years of the war the other great European financial centres (Amsterdam and Hamburg) were under French occupation and when the French invaded Hamburg in 1807

1. Bullion Cttee., 1810, pp.74-75 and 83-84 and Viner, Studies, p.132.
2. Unfortunately no balance of payments figures are available for the war years but Imlah's figures show that the U.K. balance of trade became steadily more adverse after 1796 - Economic Elements, p.36.
3. See pp.192-93 Commons Cttee. on Resumption, 1819, Appdxs. 43-44; Gray, Spencer Perceval, ch.18 and Herries Papers, vols. 10, 11 and 17.
4. Huskisson, 'The Question', 1810, p.148 and Viner, Studies, p.132.
5. Castlereagh, Memoirs and Correspondence, vol.8, pp.250-251; Windam Papers, vol.37844; Vansittart Papers, vol.31231 - Castlereagh, dd.17.10.14 and folios 57,69,113,117 and 126; Liverpool Papers, vol.38363; vol.38425 - Bank, dd.1.9.12, 5.9.12 and 21.12.14; vol.38251 - Harrison, dd. 6.12.10, 20.4.11, 17.6.12. and 21.7.12; Huskisson Papers, vol.38759 - dd.5.4.09; Herries Papers, vols.10,11 and 17; Walpole, Spencer Perceval, vol.2, pp.121-122,127,132,133 and 243 and Yonge, Life of Liverpool, vol.1, pp.330-331.
6. See Table 19.
7. Monthly Mag., 1801, p.101. The same point was made to Vansittart in 1811, see Castlereagh Memoirs, vol.8, p.251.
8. Hargreaves, Restoring Currency Standards, pp.26-72 and 73-92.

foreign capital flowed into London.[1] As diplomatic relations between Britain and the United States deteriorated between 1808-12, British capitalists repatriated over £4 million invested in the American national debt.[2] While trade between Britain and the United States continued American merchants invested considerable sums in Exchequer bills, despite fluctuations in the rate of exchange.[3] No movements figures of foreign capital in and out of Britain exist but foreign holdings in the national debt increased during the war years.[4] I studied a sample of foreign holdings in consols and observed no tendency for the withdrawal of capital to correlate with movements in the rate of exchange.[5] This evidence is too slender to make affirmative statements about overall movements on capital account. One could expect a floating exchange to discourage foreign lending, but just how serious a handicap it became to borrowing overseas is impossible to assess.

Contemporary commentators referred most of their attacks on monetary policy to the rate of exchange, but there were several other lines of criticism which bore directly on the balance of payments and which have had a more persistent influence on modern writings. To begin with Boyd, Henry Thornton and several others thought that rising prices, seen as a consequence of credit expansion, hindered exports, and encouraged imports.[6] Translated into modern terminology, the position of Ricardo and his followers in 1809 might be summarised as follows. The balance of payments was adverse because imports had increased. Imports had increased because domestic prices had risen, and domestic prices had risen because the supply of credit had increased.[7] More recently, Viner castigated supporters of the official monetary policy for failing to see "that a very important factor determining the relative demand for and supply of foreign bills was the relative level of prices in the two countries which in turn was determined largely by the relative amounts of currency.[8] Crouzet endorsed

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1. Monthly Mag., 1807, p.514.
2. Cttee. on Resumption, 1819, pp.164-165.
3. Orders in Council Evidence, 1812, pp.464 and 469.
4. From £13.5 million in 1792 to about £16 million in 1814-15 - Pitt Papers, vol.276/112 and Cttee. on Resumption, 1819, Appdx.43.
5. I took 100 accounts of persons with addresses in the Consols (Ledger Sets 9-12) for 1792 to 1812.
6. Boyd, 'Letter to Pitt', 1811, pp.37 and 54-55; Cannan, Paper Pound, pp.22, 29 and 45; Parly.Debs., vol.19, p.898.
7. Ricardo, 'High Price of Bullion', 1811, pp.61-62; Angell, The Theory of International Prices, pp.55-60; Wu, An Outline of International Price Theories, pp.113-116; Hoare, Possible Existence, 1811, p.42 and 'Examination', 1811, pp.34 and 101.
8. Viner, Studies, p.146.

Viner's condemnation and claimed that the flexible credit supply stimulated imports directly and indirectly through prices. He concluded that monetary policy exercised a particularly adverse influence on the balance of payments in 1809-10.[1]

Monetary policy also incurred a great deal of criticism for the encouragement it gave to "speculation, over-trading and speculators." Huskisson a leading proponent of this point of view believed there had occurred "a departure from the true character of commerce. Merchants anticipating a gain .... became of course anxious to procure credit to the greatest possible amount." The result was "over trading to a very great extent and that among the variety of recent commercial speculations many had failed and occasioned much individual calamity."[2] He asked Parliament if they did not "see the race of old English merchants who could never persuade themselves to go beyond their capitals superceded by a set of mad extravagant speculators who never stopped so long as they could get credit."[3] No doubt Huskisson had in mind those clerks described contempuously by Sir Francis Baring as "not worth a £100, establishing themselves as merchants and receiving ..... accommodation from the Bank."[4]

Even Malthus questioned "whether the late unusual facility of obtaining discounts though it has undoubtedly tended to increase the capital of the country may not have given it so unsafe a direction as to subject it to losses which more than counter balance its first gains," and whether the facility for procuring capital "had not obliged some of the most respectable mercantile capitalists, who, in the ways in which they were in the habit of carrying on their trade, scarcely ever failed of increasing national accumulation, to yield to the competition of a new and very different set of merchants who may be said to gamble in trade - who in the hope of great profits will risk any quantity of capital that they command and in whose hands, therefore, national accumulation is quite uncertain."[5] With so many eloquent quotations available it is perhaps not surprising to find similar views in the histories of the period and the tradition that monetary policy fostered a new breed of British merchants and encouraged a spirit of

1. Crouzet, L'Economie Britannique, vol.2, pp.544-547.
2. Parly.Debs., vol.19, p.340 and Huskisson, 'The Question Concerning Depreciation', 1810, p.133.
3. Parly.Debs., vol.19, p.340.
4. Bullion Cttee., 1810, p.132.
5. Malthus, 'Depreciation of Paper Currency', p.365 and see Lauderdale, 'The Depreciation', 1812, pp.43-47.

"imprudence", "adventurous enterprise", "gambling" and even "maniacal speculation" is now firmly established.[1]

Before examining this argument in the context of wartime trade it is necessary to be clear what is implied by terms like speculation and overtrading. Contemporaries held that overtrading occurred whenever supply exceeded demand in particular markets for exports or for commodity imports. Prices fell to a point where sales had to be made below cost and merchants incurred losses; many fell bankrupt and involved manufacturers, banks and other credit institutions in their failure. In brief the argument asserts that easy credit conditions had definite disadvantages because it encouraged investment which resulted ultimately in losses to the economy.[2]

In the wars against France the Government needed to promote increases in the national income in order to make more resources available for the war effort and to lighten the burden of taxation on society. On its external accounts the country required a surplus sufficient to pay for military expenditure abroad and to finance additional imports of military supplies. If monetary policy stimulated non-essential imports, encouraged overtrading and hindered exports it stands condemned, but the role played by monetary policy can only be appraised in the context of the international economy. But before passing to a survey of Britain's trade during the war years, the question of the indirect effects of prices upon exports and imports might be conveniently discussed at this point.

Not one of the contemporary or modern proponents of the view that monetary policy raised export prices collected statistics to substantiate it.[3] Prices of exported commodities in fact rose less than the general index of domestic prices.[4] Moreover, only Arthur Young took the trouble to find out anything about prices abroad. Young observed that Britain was not the only country to experience price inflation between 1790 and 1815.[5] On the contrary, inflation appears to have been common to several European countries and the United States.[6] Information on the prices of foreign commodities which competed with British exports in the world economy is meagre, but because the rate of technical progress

1. Parly.Debs., vol.19, pp.334, 336, 340, 346, 418, 419, 526 and 1050; Tooke, Thoughts and Details, 1824, pp.69,73 and 79; Macleod, Theory of Banking, vol.2., p.137; Andreades, History of the Bank, p.219 and Feavearyear, Pound Sterling, p.181.
2. McCulloch, Treatise on Commerce, pp.71-72 and Tooke, Thoughts and Details, 1824, pp.63-65.
3. Viner, Studies, p.146 and Morgan, 'Some Aspects of the Bank Restriction', p.221.
4. The domestic price index was dominated by agricultural commodities and exports consisted chiefly of textiles and metallurgical products - many from industries which experienced the introduction of cost reducing innovations between 1793-1815.
5. Young, 'An Inquiry into the Rise of Prices in Europe During the Last 25 Years', 1815. See also Lowe, The Present State of England, 1822, pp.53-56.

footnotes continued./

was probably more rapid in Britain than elsewhere it is doubtful if British goods were undercut by foreign products in international markets.[1] Receipts from exports may well have been higher if prices had risen less rapidly, but there is no evidence that British exports suffered seriously from the inflation. With the uneven distribution of income ; the lag of wages behind prices, and high taxation, exporters had only limited opportunities to increase sales in the home market.

Superficially there appears to be more in the argument that monetary policy pushed up domestic prices thus encouraging imports of cheaper substitutes. But a comparison, on a graph, of the indices of domestic wholesale and import prices shows that except for years of bad harvests import prices increased more rapidly over the war years.[2] The argument put by Boyd, Ricardo, Crouset and others, that the volume of imports had increased because as domestic prices rose it was cheaper to purchase overseas, does not receive strong support from the statistics. Of course correlations of this kind are always open to the objection that an even slower rise in domestic prices might have pushed down the volume of imports still further. Aggegate comparisons of this kind are often misleading and a breakdown of the import price index into its principal component commodities will show why the volume of imports was not highly sensitive to changes in domestic prices. Most imported commodities did not compete with domestic products but consisted of raw materials for British industry and foodstuffs not produced within the country.[3] Only a small proportion of retained imports can be regarded as competitive with domestic commodities. A significant exception was grain imports and Ricardo in his dispute with Thornton argued that imports of grain had increased because it was cheaper to purchase it abroad.[4] It may well be true that the supply of credit exerted some influence on the price of grain but the principal reason why grain prices had risen was simply because of a run of bad harvests. In years of normal harvest yield grain imports became insignificant.[5] There are other less important examples of imports which did in fact compete with domestic commodities, but the increased volume of merchandise imported can usually be explained by some

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6. Hargreaves, Restoring Currency Standards, pp.74-77; Warren, Wholesale Prices, pp.120-123; Hamilton, War and Prices in Spain, pp.165-167 and 173; Labrousse, Equisse du Mouvement des Prix, vol.1, pp.98,105 and 141; Seligman, Currency Inflation, pp.17,25,31,35,39 and Chabert, Essai sur les Mouvements, vol.1, pp.226-237.
1. Imlah's index of export prices 1796 to 1814 displays only a modest upward rise- Imlah, Economic Elements, pp.94-95.
2. See Table 33. I used the Gayer indices of domestic wholesale and import prices - Gayer, Growth and Fluctuations, vol.1, pp.469-470.
3. See Table 30.
4. Ricardo, 'High Price of Bullion', 1811, pp.59-63 and Mason, Ricardo's 'Transfer Mechanism', pp.111 and 115.
5. Tooke, History of Prices, vol.1, pp.179-188, 213-225, 258-276, 293-300 and 319-328.

deficiency in the domestic supply. In general foreign commodities did not compete in the home market for two reasons. First, it may well be that the price differential between commodities produced in Britain and in countries overseas was too narrow to encourage additional imports. Again I must emphasise that Britain was not the only country which experienced inflation and cost reducing innovations were introduced more rapidly in Britain than anywhere else in the world after 1793. Secondly, duties on competing imports rose to prohibitive levels during the war years. Probably unconsciously the Government implemented a complementary tariff and monetary policy and internal inflation probably did little to reduce the level of protection afforded to domestic production. Duties were not sufficiently prohibitive to discourage the import of certain luxury items and during the French Wars large quantities of wine, spirits and tobacco continued to be imported; which, though profitable to the revenue, were an added strain on the balance of payments. For this kind of commodity, domestic substitutes were not available and as luxury foodstuffs consumed in the main by the higher income groups their demand was probably highly inelastic.[1]

Total receipts from exports may of course have been higher and total expenditure on imports lower if the rate of change in prices had been less, but this kind of argument can neither be falsified nor verified. The statistics do not, however, lend any obvious support to the view that adverse movements in the balance of payments between 1793 and 1815 can wholly or even mainly be explained by changes in the price level.

Between 1793 and 1815 by far the most important problem which faced the foreign trade sector of the British economy was the war on all the world's sea routes. Monetary policy played such an important part in assisting merchants to overcome French and American attempts to disrupt British trade to more than outweigh all other disadvantages. It sustained both the export and re-export trades at a level which would not have been possible under the gold standard. Trade in turn encouraged a high level of industrial production. Credit helped merchants to provide the economy with imports in the face of enemy attempts to cut off necessary supplies of foodstuffs and industrial raw materials. The argument in support of an expansionary credit policy can be stated quite briefly. During the French Wars the risks involved in marketing and procuring goods overseas increased

1. See p. 453.

enormously. Enemy obstruction to the normal channels of trade and commercial intercourse involved the British merchants in the organisation of new and less direct routes for trade with traditional markets and sources of supply and the exploitation of new and more distant markets. The time between the despatch of commodities abroad and the flow of payment to Britain lengthened. At times the blockade became effective enough to compel merchants to invest heavily in commodity stocks. An expansionary and flexible monetary policy enabled British credit institutions to share the risks of trade in wartime; it relieved merchants from waiting for payment over a longer period and above all assisted merchants and manufacturers to invest in stocks when political circumstances made it imperative for the economy to stockpile. To elucidate the role played by credit during the French Wars involves a survey of international trade between 1792 and 1815. British trade with Europe the United States and South America will, therefore, be analysed in turn. No consideration need be given to trade with other parts of the world because only a small proportion of exports were sold in Asia and Africa, and credit played its most important role in assisting those merchants who traded with Europe and the Americas.

Trade with Europe

Europe purchased about 40 % of British exports and provided the economy with 30 % of its imports including most of its supplies of timber, hemp, flax, raw and thrown silk, wine and brandy.[1] Continental markets also absorbed the bulk of re-exports. British merchants held a monopoly of sale for most of their country's colonial products, and over the 18th century they had also assumed the functions of middlemen and carriers for a variety of goods produced by foreigners.[2] No measurement can be made of the "value added" of the re-export trade and perhaps its real significance lay in developing colonial and foreign markets for domestic commodities.[3] British industry had for example everything to gain by the promotion of multilateral trade. Foreign producers acquired sterling which could be used to purchase British manufactures and British ships were assured of return cargoes from markets where the balance of trade favoured Britain. The principal commodities

1. See Table 26 and Customs - vol. 10901.
2. Horsfall, 'West India Trade', p.159; Manning, British Colonial Government, pp.256-257 and Ashton, England in the 18th Century, p.161.
3. The re-export trade was of course of greater importance to the balance of payments. See Imlah, Economic Elements, p.200.

re-exported from Britain included Indian piece goods, sugar, coffee, tea, spices, indigo, rum, tobacco and raw cotton which shows that re-exports were of particular importance to trade with India, the West Indies and North and South America. Through their efforts in selling such things as Jamaican sugar, Brazilian coffee, American cotton or Indian piece goods British merchants created additional demand for British manufactures and the increased volume of exports to markets in Asia and the Americas.[1]

In the Revolutionary War the re-export trade flourished.[2] From the commencement of hostilities the Royal Navy interrupted the direct trade between enemy countries and their colonies and the sugar and coffee producing islands of Tobago, St. Lucia, Trinidad, Surinam, Guadeloup and Martinique came under direct British dominion.[3] Although neutral ships could carry colonial produce to the continent, during the Revolutionary War few neutral fleets were capable of taking a large share of this trade from the British mercantile marine. The Americans were possible competitors but French policy towards neutral shipping became overtly hostile and a "privateering war between France and the United States developed."[4] British ships on the other hand obtained protection from sailing in convoys policed by ships of the Royal Navy. Under such favourable circumstances British merchants financed and carried an increasing share of the coffee and sugar consumed in Europe at a time when home and foreign demand expanded and prices of colonial produce rose.[5]

Economic warfare implied attacking enemy trade and French attempts to exclude British commodities from Europe explain the failure of exports to maintain their peacetime rate of growth and also their marked fluctuations between 1793 and 1813.[6] The success of French policy depended upon the amount of territory under French control or European Governments sufficiently amenable to pressure to exclude British goods from their markets. The exclusion of British goods from Europe faced France with enormous administrative problems, and the diligence and honesty of customs officials varied considerably from time to time and place to place. Ports outside the orbit of enemy control or influence provided British merchants with alternative inlets for their goods and they exploited every

1. Marshall, A Digest of All the Accounts, p.74.
2. See Tables 26, 29 and 31.
3. Levy, History of Commerce, pp.107-108; Heckscher, Continental System, p.43; Ragatz, Fall of the Planter Class, p.217 and Gwynne-Timothy, Anglo-French Colonial Rivalry, p.85.
4. Heckscher, Continental System, p.48.
5. Tooke, History of Prices, vol.1, pp.105 and 190; Marshall, A Digest of All the Accounts, p.74; Cttee. on the Distillation of Sugar, 1808, p.167; McPherson, Annals of Commerce, 1805, vol.4. pp.523-524 and see Tables 29 and 31.
6. See Tables 26 and 27.

administrative weakness with commendable vigour.

The national markets closed to British goods in the Revolutionary War included France itself, the Netherlands, Spain and Italy, and the volume of British exports shipped directly to those countries declined markedly up to 1801.[1] French occupation of the Netherlands diverted British commerce northwards to Hamburg, Bremen and Emden from where goods could be sent overland to all parts of the continent, including Southern Europe. "No sooner had the French entered Holland," wrote Oddy, "than at once the commerce of Europe flew to Hamburg which became the focus through which the trade of the European continent passed to Britain as well as from there to other quarters." The same author described how from Bremen and Emden goods were carried overland to Frankfurt, Switzerland and Italy.[2]

Napoleon waged commercial warfare much more vigorously. At the resumption of war in 1803 his troops occupied Hanover and closed Hamburg and Bremen to British commerce, which diverted trade further north to the Danish and Prussian ports of Tonningen, Emden and Stettin.[3] But after the treaty of Tilsit in July 1807, these ports were also closed to British goods, and Gothenburg now became the principal inlet for British exports.[4] Heckscher provides us with a vivid picture of the commercial activity which characterised the port from 1807 to 1810. "The roadstead" as he described it, "presented an appearance such as it had never seen since creation, with 19 British men-of-war and 1,124 merchantmen lying at anchor."[5] Eventually even Sweden adhered to the Continental System but British goods continued to reach prohibited markets via Denmark and Norway. Not only were the ports of northern Europe used to supply central and southern Europe but merchandise passed the other way.[6] In the difficult years of 1811-12 merchants opened up a new route via the Black Sea and British products passed up the Danube, north to Vienna, Switzerland and Germany.[7] From the summer of 1812 the effectiveness of the Continental System in northern Europe declined with the Franco-Russian war.

1. McPherson, Annals, vol.4, 1805, pp.337 and 380; Oddy, European Commerce, 1805, p.2 and Heckscher, Continental System, pp.25-29, 57-58 and 78-79, and see Ts.27-29
2. Oddy, European Commerce, 1805, pp.415,441 and 447 and McPherson, Annals, vol.4, 1805, pp.462-463.
3. Oddy, European Commerce, 1805, pp.345,441,446 and 447; Heckscher, Continental System, p.82 and Cttee. on Trade with the West Indies, 1807, pp.165-166.
4. Daniels, 'The Cotton Trade During the Revolutionary and Napoleonic Wars', p.70.
5. Heckscher, Continental System, pp.236-237.
6. Crouzet, L'Economie Britannique, pp.236-237 and Heckscher, Continental System, p.152.
7. Ibid, p.230, and see Tables 27-29.

By the end of the year Russian ports along the Baltic reopened and at the beginning of 1813 Gothenburg resumed its role as the major entrepot for the introduction of British produce into Europe.[1] After the Battle of Liepzig the exclusion of British exports from Europe becameimpossible for Napoleon and he abandoned the policy.[2]

Professor Heckscher observed that, "Coercive measures in the sphere of commercial policy have at all times found a palliative in smuggling," and a considerable volume of British products were smuggled into Europe between 1793 and 1815.[3] Direct smuggling from British ports was not uncommon, but more frequently merchants shipped goods into an entrepot from where it could be more easily and expertly smuggled on to the mainland. By 1796 smuggling had become "one of the principal means of Anglo-French intercourse", and the Channel Islands served as a convenient entrepot for this traffic.[4] Direct trade with the Netherlands continued in small boats which sailed from Harwich to Katwijk or by the transfer of merchandise to Dutch fishing vessels in midsea.[5]

Smuggling on a large scale only became necessary with the intensification of economic warfare in the summer of 1807 when Heligoland became an important depot for British produce.[6] Two hundred British merchants and representatives of commercial houses settled there to manage the business of smuggling and the island "became at length a very considerable commercial establishment."[7] Similarly in southern Europe the islands of Gibraltar, Malta and Sicily also became important smuggling entrepots almost from the beginning of the war.[8] As Colquhon noted "During the war of usurpation in France, which shut up the ports of Italy against this country, great advantages have been derived from Gibraltar in a commercial point of view, which till then had never been contemplated. In fact it became a general mart for every kind of merchandise where all nations resorted for the purpose of supplying the ports of Africa and the Mediterranean."[9] Malta played a

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1. Crouzet, L'Economie Britannique, pp.657-8 and Baines, History of Liverpool, pp.738 and 842-852.
2. Heckscher, Continental System, p.252.
3. Ibid, p.187 and Evidence on the Orders in Council 1812, pp.396, 524 and 657.
4. Heckscher, Continental System, p.29 and Chatterton, Kings Cutters and Smugglers, pp.142 and 184-185.
5. Evidence on the Orders in Council 1808, pp.108,109 and 116 and Crouzet, L'Economie Britannique, vol.1, pp.138,171,226,298 and 448.
6. Evidence on the Orders in Council 1812, pp.157,204,297,396,524 and 586 and Daniels, 'The Cotton Trade During the Revolutionary and Napoleonic Wars', pp.72-74 and Fitton, 'Strutts', p.55.
7. Heckscher, Continental System, pp.178-179 and Colquhoun, 'Treatise', 1815, p.305.
8. Evidence on the Orders in Council 1812, pp.163,412,571,664 and 657.
9. Colquhoun, 'Treatise', 1815, p.303 and Fitton, 'Strutts', p.54.

similar role as "a medium through which colonial produce and British manufacturers were introduced by foreign vessels into the southern continent of Europe;" a role that was particularly important in the difficult years of 1810 and 1811 when goods from Malta passed up the Adriatic into "safe ports on the Italian Peninsular and from there across the Austrian Empire."[1]

Possibilities for exporting to Europe depended upon how efficiently and speedily British merchants developed alternative methods and channels of communication. It is not surprising to find that the flow of trade under such conditions fluctuated sometimes violently. Of course political factors do not entirely account for the amplitude of the fluctuations but there was a definite relationship between trade and production on the one hand and the tide of economic warfare on the other.[2] France and her allies at various times during the Revolutionary War interrupted the flow of raw silk, merino wool and timber into British ports.[3] Despite the risks and difficulties involved in transporting sugar, coffee and tobacco into Europe and in spite of the beginnings of serious competition with the United States the re-export trade experienced nearly a decade of expansion and exerted a favourable influence on the volume of British products sold in the Americas.

But for the first seven years of war the volume of British products exported to Europe fell below the annual average attained in the previous decade.[4] Perhaps most of the explanation for this decline can be found in the closing of several markets and the additional risks of trade with the continent. Penetration of "closed" markets by smuggling and by indirect export did not attain a sufficient scale to keep exports to Europe at the pre-war level. It took time to develop alternative channels of communication but by 1800 the transit trade of North Germany with France, the Netherlands, Spain and Italy encouraged increased shipments of British goods to meet the backlog of demand, and in the more favourable political environment of 1801-02 a full scale export boom developed.[5]

In May of 1803 war broke out again and over the following decade French attacks on British trade became much more serious and pervasive. France and the

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1. Colquhoun, 'Treatise', 1815, pp.304-305; Anon, 'A Few Facts', 1811, p.13 and Daniels, 'The Cotton Trade During the Revolutionary and Napoleonic Wars', p.80.
2. See Table 26 . Gayer and his associates attempted to fit the war years into a conventional trade cycle type of analysis, but most fluctuations can be more plausibly explained with reference to political factors which are often ignored or underestimated by Gayer - see Gayer, Growth and Fluctuations, vol.1, pp.7-140.
3. Monthly Mag. December, 1798, p.492; January, 1799, p.88; April, 1799, p.259; July, 1800, p.611; February, 1801, p.101 and Albion, Forests and Sea Power, pp.179-180.
4. See Tables 27-29.
5. See Table 28 and Gayer, Growth and Fluctuations, vol.1, pp.31-33 and vol.2, p.582.

Netherlands were closed to British goods from the outbreak of war and French troops immediately invaded Hanover and interrupted British trade on the Elbe and Wesser through Hamburg and Bremen.[1] In 1804 most of Italy passed under French control and in December of the same year the Spanish market was again closed. Prussia declared war in April 1806 and shut the ports of Stettin, Memel and Konnigsberg.[2] French control of the European coastline reached its apex at the Treaty of Tilsit in July 1807 when Russia and Denmark also blocked their ports and French troops occupied Lisbon.[3] French policy, while it failed to close the entire European market to British products, proved effective enough to prevent the volume of exports attaining the level reached in 1802 and contributed to an economic crisis in Britain during 1807 and 1808.[4]

Between 1803 and 1807 the combination of political circumstances which had worked to the advantage of British merchants in the re-export trade ceased to operate and the volume of colonial merchandise transhipped from Britain to Europe declined.[5] Napoleon permitted American ships to trade freely with markets on the continent provided they did not carry the merchandise of Great Britain or her colonies.[6] West Indian planters and merchants complained that planters in the British Carribean were compelled to send their produce to Britain in high freight British ships before it could be re-exported to Europe, while the Government also prevented domestic consumption from increasing at a rate fast enough to absorb the growing production of British plantations by its high taxes on sugar and coffee.[7] At the same time as British merchants found trade with the continent more and more difficult and risky they were undercut by Americans who sailed into enemy and neutral markets alike with complete impunity, selling their cargoes of sugar, coffee and rum from French, Dutch and Spanish colonies at lower prices than their British competitors.

In effect, if not in inspiration, the Orders in Council of November, 1807 represented a capitulation to the pressure of the West India and shipping interests for a blockade on neutral trade with Europe. The British decrees, which compelled neutral vessels trading with Europe to call at a British port and pay

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1. Heckscher, Continental System, p.82 and Oddy, European Commerce, 1805, p.440.
2. Crouzet, L'Economique Britannique, vol.1, pp.166-167.
3. Ibid, pp.248-49 and 265; Hill, An Inquiry, p.79 and Minutes of Evidence on the Orders in Council, 1812, p.396.
4. See Tables 26 and 27.
5. See Table 29 . Huskisson wrote a long memo on the problem in 1807 - see Huskisson Papers, vol.38738, dd.27.7.07.
6. Heckscher, Continental System, p.84.
7. Vansittart Papers, vol.31229 - Lord Sheffield, dd. 22.3.02; Cttee. on the Commercial State of the West Indies, 1807, pp. 251, 252 and 256; Cttee. on the Distillation of Sugar and Molasses, 1808, pp.262 and 297; Commons Jnls., vol.57, pp.857 and 942, vol.61, p.77 and vol.62, pp.668 and 674 and Spence, 'Radical Causes', 1807, pp. 4, 18 and 19.

customs dues, eliminated at one step the cost advantages enjoyed by enemy colonies in the West Indies and the differential freight rates between American and British shipping.[1] Naturally the United States Government retaliated against this interference with its ships, but the American embargo on all exports to Europe rebounded further to the advantage of both the British shipping interest and merchants engaged in the re-export trade.[2] Furthermore, after the Peace of Amiens British naval power successfully conquered one enemy colony after another. Santa Lucia, Tobago were captured from France in 1803, Surinam from the Dutch a year later. Between 1807-10 the enemy was entirely depleted of colonial possessions by the successive occupation of Curacao, Marie Galante, Desirede, Martinique, Cayenne and Guadeloupe. Trade followed in the wake of the Royal Navy and after 1808 Spanish and Portuguese colonies on the mainland of Latin America also became open to direct trade. British colonies monopolised the home market and in the years after 1806 increasing quantities of Brazilien coffee, cotton from La Plata, Guadeloupe, sugar and Surinam cocoa were found in warehouses at Glasgow, Bristol, Liverpool and London awaiting sale to continental markets.[3] With the termination of American competition and the conquest of enemy colonies British merchants assumed almost complete responsibility for supplying Europe with its colonial produce.[4]

While it profitted them and benefitted the export sector when British merchants assumed these functions, because they did so on a large scale at a time when it became difficult to tranship merchandise of any variety to Europe, it placed additional strains on the extended resources of the British economy. Napoleon's blockade was felt with particular severity by the re-export trades. During the closing months of 1808 the entrepots were full of coffee and sugar which could not be smuggled into Europe. The produce of British colonies which could not be introduced into Europe was sold in the home market and depressed the prices of sugar and coffee.[5] Under pressure from the West India interest Parliament compelled the distilleries to use sugar instead of grain and also prohibited the import of brandy in favour of rum.[6] The Government granted aid in the form of loans to the merchants of the East India and Hudson Bay Companies

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1. Heckscher, Continental System, Appdx.I.
2. See pp. 291-292.
3. Cttee. on Commercial Distress, 1811, pp.367-368.
4. See Table 29 and Bullion Cttee., 1810, pp.63-64 and Gwynne-Timothy, Anglo-French Colonial Rivalry, pp.370-371.
5. See pp. 300, 457-458 and Appdx.1.
6. 48 G.3.c.118; Cttee. on the Distillation of Sugar and Molasses, 1808, pp.322-32[illegible] and Galpin, Grain Supply, pp.55-65.

who were prevented by the blockade from selling their calicoes and furs on the continent.[1]

By the autumn of 1808, British merchants renewed their efforts to penetrate the blockade. Production in export industries had increased rapidly at a time when compensatory markets in the Americas became less secure and the backlog of European demand held out the promise of high profits.[2] British persistence and the relaxation of French control lead to an export boom in 1809-10.[3] Large quantities of coffee, sugar, rum and tobacco from South America and the Carribean were smuggled into Europe from Gothenburg and Heligoland and the sale of colonial produce reached record heights.[4]

A breakdown of the volume of British goods sold to continental markets reveals that an increased volume of goods entered through Sweden, Germany, Prussia and Holland in north Europe and Spain and Malta in the south.[5] Trade with Sweden developed because that country remained outside the Continental System until January, 1810 and not until August of that year did the Swedish Government make any serious attempt to interfere with the free passage of British goods.[6] Gothenberg was a politically secure transit port for their transport to Russia and the southern Baltic.[7] Prussia, Napoleon's unwilling ally, took full opportunity of his preoccupation with the Austrian campaign to relax the Continental System and at Memel and Konnigsberg systematic corruption of customs officials gave merchants "regular gates of entry".[8] Exports to Heligoland from where they could be smuggled into Hamburg, Bremen and other Baltic ports raised the value of trade with Germany.[9] While the brief trade boom with Holland in 1809 was associated with the expedition to Walcheren and the laxity of the Dutch Government which Napoleon noticed and corrected in July, 1810.[10]

French domination of southern Europe was challenged by Wellington's army in Portugal and the insurrection in Spain which provided British merchants with

1. Philips, East India Company, pp.154-155 and Parly.Debs., vol. 11, pp.71 and 74.
2. Bullion Cttee., 1810, pp.66-72 and Huskisson, 'The Question', 1810, pp.132-133.
3. Gayer, Growth and Fluctuations, vol.1, pp.87 and 94.
4. Heckscher, Continental System, pp.180-182 and 236.
5. See Table 28.
6. Crouzet, L'Economie Britannique, vol.2, p.652.
7. Heckscher, Continental System, pp.236-237 and Monthly Mag., February 1810, p.93.
8. Atkinson, 'A Letter', 1811, p.65; Heckscher, Continental System, pp.160 and 283 and Crouzet, L'Economie Britannique, vol.2, p.422.
9. See Table 28; Anon, 'Few Facts', 1811, p.13 and Evidence on the Orders in Council, 1812, pp.157, 204, 297, 396, 499, 524 and 586.
10. Crouzet, L'Economie Britannique, vol.2, pp.444-448.

fresh opportunities for trade with the Iberian Peninsular. Italians continued to buy British goods smuggled through Trieste from Malta.[1] Between 1806 and 1812 the number of English commercial establishments on the island increased six times, and the Committee of Merchants Trading to the Mediterranean informed Parliament that, "means are devised by which large supplies of articles are introduced into countries of the enemy on the Mediterranean through the medium of Gibraltar and Malta."[2] In 1809 their efforts were assisted by the defection of Austria which reopened ports along the Adriatic.[3]

French control of the European coastline was re-asserted early in the summer of 1810 and caused a sharp fall in the volume of British goods and colonial produce sold on the continent in 1810-12.[4] From November 1810 Sweden was at war with Britain and smuggling through Heligoland to German and Prussian ports became much more difficult, because Napoleon stationed two divisions of troops along the north German coast.[5] At Hamburg and Bremen customs courts severely punished infringements of the blockade and at Memel and Konnigsberg Prussian officials were also obliged to enforce Napoleon's decrees.[6] The official statistics record no exports for Prussia, Germany, the Netherlands and France in 1811 and 1812, but in southern Europe conditions remained more favourable.[7] Trade with Portugal depended upon Wellington's army and although Napoleon reimposed his control over Spain in 1811 merchants smuggled goods into the country through Gibralter.[8] During the difficult months of 1812, Malta also played an important role in maintaining the volume of exports to southern Europe.[9]

By the end of the year French power in Europe began to decline and obstructions to direct trade with the continent were gradually eliminated by the advance of the Russian and Austrian armies in the north and Wellington's troops from the south.[10]

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1. Crouzet, L'Economie Britannique, vol.2, p.458.
2. Evidence on the Orders in Council, 1812, p.657.
3. Crouzet, L'Economie Britannique, vol.1, pp.369-70 and vol.2, pp. 458-64.
4. See Table 27.
5. Heckscher, Continental System, p.160; Evidence on the Orders in Council, 1812, pp.297 and 398 and Daniels, 'The Cotton Trade During the Revolutionary and Napoleonic Wars', p.74.
6. Heckscher, Continental System, p.224.
7. Annual Register, 1811, p.131; Times, 23 and 31.10.11 and Evidence on the Orders in Council, 1812, p.412.
8. Evidence on the Orders in Council, 1812, p.74 and Monthly Mag., 1811, p.305.
9. Daniels, 'The Cotton Trade During the Revolutionary and Napoleonic Wars', p.80 and Evidence on the Orders in Council, 1812.
10. Daniels, 'The Cotton Trade at the Close of the Napoleonic Wars', p.12; Crouzet, L'Economie Britannique, vol.2, p.842 and Heckscher, Continental System, pp. 153-154.

Trade With the United States

After 1793, when continental markets failed to absorb the increasing volume of goods produced by British industry merchants found an alternative and more secure market in the United States, where trade, at least before 1806, remained free from political interference.[1] With the wartime demise of the Dutch and French mercantile marines, American ships captured a large share of the carrying trade in colonial produce and American merchants converted their additional earnings into British manufactures for sale in the United States.[2] London credit houses promoted the smooth flow of triangular trade and in the uncertain years after 1793 helped British merchants to sell more merchandise to the Americans.[3]

From the beginning of 1806 the incipient conflict between Great Britain and the United States over the rights of American ships to trade with European markets came to the surface.[4] For the next six years the American Government tried to coerce Britain into relaxing the blockade by a policy of closing and re-opening the American market. In five years of economic warfare the United States market was shut entirely to British goods for nineteen months, open for twenty four months and for seventeen months the market was closed an an enumerated list of British products.[5] Finally, in April 1812, the American Government declared war. Oscillations in American policy added considerably to the risks of trade and help to explain the fluctuations in the volume of exports to the United States after 1806 and in the imports of commodities such as raw cotton.

The resumption of war in 1803 revived British interest in the American market. American ships once again carried an enlarged share of colonial produce to Europe and from 1804 the volume of British products exported to the United States moves steadily upward.[6] As a reaction to interference from the Royal Navy the American Government threatened to exclude an enumerated list of British products in April 1806, but postponed the enforcement of this policy until

1. At least after the signing of Jay's Treaty in November 1794 - McPherson, Annals, vol.4, 1805, pp.313-320 and Stephens, War in Disguise, 1805, pp.20,32,33 and 157.
2. Hiddy, The House of Baring, p.26; Day, History of Commerce, pp.489-494; Robertson, History of the American Economy, p.200 and Stephen, War in Disguise, 1805, pp.78,161 and 176.
3. See Table 26 ; Evidence on the Orders in Council, 1808, pp.46,86,91,93,107-108 and 114; Evidence on Orders in Council, 1812, pp.323,327,354-355,464-465. and Hiddy, House of Baring, pp.30 and 37.
4. Heckscher, Continental System, p.129.
5. Heaton, 'American Trade', pp.215-226 and 'Non Importation', pp.179-197.
6. See Table 26 and Checkland, 'American versus West Indian Traders in Liverpool', p.146.

November of the same year.[1] Meanwhile American and British products were hurried across the Atlantic.[2] From mid November to mid December 1806 the United States was in fact closed to a long list of British products and American customs officials vigorously enforced the Congressional decrees.[3] Although the American Government suspended the Non-Importation Act in December, 1806 the threat of its re-imposition was present throughout 1807, but despite the worsening diplomatic situation many merchants sent large quantities of merchandise across the Atlantic.[4] Fortunately most of this produce was safely warehoused in the United States before the American market was again closed at the end of the year.[5] In 1808 and 1809 exporting to the United States became more difficult and British merchants did well to sell such a large quantity of goods, under such uncertain conditions, particularly as the complete embargo on American exports reduced the shipping space available for export and restricted the amount of sterling available to Americans for the purchase of British goods.[6] Moreover, vacillations in Government policy added considerably to the prevailing uncertainty. At the end of February 1808, the United States Government reopened the market to certain enumerated but not clearly defined categories of British goods.[7] But in March, 1809 they banned all British goods; in April the ban was lifted but revived again in August. It is hardly surprising to find that British merchants pressured Parliament in March 1808 to relax the blockade of Europe in favour of American shipping.[8] Merchants opposed their Government's Orders in Council because they prompted reprisals against British trade and also prevented the Americans from obtaining the means of payment for British goods.[9] Despite strong pressure the British Government remained firm in its resolve to blockade Europe.[10] American merchants were, however, more successful with their Government, and in May of 1810

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1. Heaton, 'Non Importation', p.179.
2. Heaton, 'The American Trade', p.215.
3. Heaton, 'Non Importation', pp.179-180.
4. Crump, Leeds, Woollen Industry, pp.245 and 247; Heaton, 'Non Importation', p.180 and Heaton, 'The American Trade', p.217.
5. See Table 26 and Heaton, 'Gott and the Anglo-American Cloth Trade', p.154.
6. Evidence on the Orders in Council, 1808, pp.86,91,93,107,108 and 114; Evidence on the Orders in Council, 1812, pp.323,327,344-345 and 464-465; Heaton, 'Gott and the Anglo-American Cloth Trade', pp.154 and 157 and Heaton, 'Non Importation', p.189.
7. Ibid, p.157.
8. Evidence on the Orders in Council, 1808, pp.85-357; Baines, Liverpool, pp.528 and 532; Brougham, Memoirs, vol.2, pp.2-8 and Checkland, 'American versus West Indian Traders', p.151.
9. Evidence on the Orders in Council, 1808, see testimony of Bell, Glennie, Mann, Mullett, Omley, Palmer, Phillips, Poole, Richardson, Ridout, Thornley, White, Wiggin and Wilson.
10. Brougham, Memoirs, vol.2, p.8 and Baines, Liverpool, p.548.

it reopened the home market on condition that the Orders in Council were repealed within a year.[1] In 1810 the volume of British goods sold in the United States rose to its 1807 level and large shipments of cotton reached Liverpool.[2] When the British Government failed to comply with American conditions the United States market was again closed this time for a prolonged period of three years.

Trade with the United States after 1806 became more risky and marine insurance premiums went up sharply. Communications across the Atlantic were slow and ships conveying British goods often sailed into American ports ignorant of the recent changes in American policy.[3] American customs officials were, naturally, well briefed on the intentions of Congress and unlike their European counterparts were apparently diligent administrators.[4] After the outbreak of war in April, 1812 British merchant shipping faced the additional hazard of privateers and according to one writer, "American marauders appeared on every sea and were particularly active where the lines of communication converged on Great Britain."[5] Smuggling as in Europe emerged to replace regular trade. From the increased volume of exports to Canada, Amelia Island and the West Indies it is apparent that British merchandise continued to reach the United States.[6]

From the beginning of 1806 British merchants and manufacturers selling abroad faced a hostile and risky world market. Many of them must have felt like George Broom who complained to Parliament that "we have been driven out of one country and then out of another and at last we have no confidence whatever."[7] Broom spoke from bitter experience for he had formerly sold on the European market. In 1808 he switched to the American market and in 1811 tried the domestic market where competition was most keen.[8] Driven out of one country after another many merchants were prompted to venture goods into the most uncertain markets of all, those of Latin America.

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1. Heckscher, Continental System, p.219 and Heaton, 'Non Importation', p.193.
2. Heaton, 'The American Trade', p.220 and Monthly Mag., 1810, pp.194,291-292, 486, 514 and 516.
3. Heaton, 'The American Trade', p.218; Evidence on the Orders in Council, 1812, p.68 and Checkland, 'American versus West Indian Traders', p.157.
4. Galpin, 'American Grain Trade', pp.72-87 and Heaton, 'Non Importation', p.185.
5. Day, History of Commerce, p.347; Evidence on the Orders in Council, 1808, p.88 and Daniels, 'The Cotton Trade at the Close of the Napoleonic Wars', p.12.
6. Evidence on Orders in Council, 1812, pp.230,239,297,426,337,340 and 426; Fitton, 'Overseas Trade', p.58; Heckscher, Continental System, pp.133-134; Galpin, 'American Grain Trade', p.96; Heaton, 'Non Importation', pp.196-198 and Graham, Sea Power and British North America, 1941, pp.201 and 216.
7. Evidence on the Orders in Council, 1812, p.73.
8. Ibid, p.53 and 74.

Trade With South America

Before 1809 markets in Latin America were probably unimportant but they became much more significant during the last five years of the war.[1] South American markets absorbed only a tiny share of British exports for several reasons.[2] Before 1808 British merchants were denied direct access to Spanish and Portuguese colonies in South America but British goods could, however, be sold to Spanish or Portuguese merchants for re-export to their colonies.[3] Indirect trade of this kind favoured merchants of the Imperial powers by giving them a share of the profits from the sale of all foreign merchandise throughout the Portuguese and Spanish Empires. An alternative and more profitable trade was carried on through free ports in the Carribean, from where merchandise was conveyed in Spanish or Portuguese ships into Latin America.[4] From 1766 the British Government fostered the free port system in the West Indies in order to purchase essential supplies of raw materials and to obtain entry for exports into the Spanish and Portuguese Empires, but under Spanish colonial law this trade remained illegal. But since the administration of customs law varied from colony to colony British merchants often obtained the tacit approval of local officials to this trade.[5] When Spain declared war on Britain in 1796 and again in 1804 the attitude of the local officials to the free port trade hardened and trade with Spanish America became more difficult.[6] The third reason why South America never became an important market for British produce before 1808 can be found in the vigorous competition encountered from United States merchants purveying not only their native manufactures but German linens, French silks and other European products.[7] Published monographs on trade with South America indicate that it was risky and highly competitive. Before 1806 most British merchants contented themselves with vents for their produce in Europe and the United States.

But political interference with traditional European and American trade encouraged merchants to venture into Latin America. At the same time the prospects

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1. See Table 26 and Cristelow, 'Great Britain and the Trades', pp.2-6.
2. In 1807 George Rose estimated that 1/6th of British manufactures exported to the West Indies were re-exported to Spanish America - Parly.Debs., vol.9, p.101.
3. Evidence on the Orders in Council, 1812, pp.550 and 568 and Cristelow, 'Great Britain and the Trades', p.2.
4. Evidence on the Orders in Council, 1812, p.669; Armytage, The Free Port System, pp.68-71, 84 and 93; Cristelow, 'Great Britain and the Trades', p.20 and 'Contraband Trade Between Jamaica and the Spanish Maine', pp.309 and 334.
5. Goebell, 'British Trade to the Spanish Colonies', pp.294 and 298.
6. Ibid, pp.292-293 and Armytage, The Free Port System, pp.95-112.
7. Bullion Cttee., 1810, pp.63-64; Evidence on the Orders in Council, 1812, pp.524, 527, and 669 and Goebell, 'British Trade', p.294.

of direct and more profitable trade also attracted British merchants towards Brazil and Spanish America.[1] An edict of 1808 permitted direct trade with the Portuguese Empire in Brazil and by 1810 British goods enjoyed tariff concessions. Thus after 1808 British commerce with Brazil, "took on a new life" and by 1811 there were 75 English commercial establishments there.[2]

Political relations with the Spanish Empire were never as secure and remained liable to sudden interruption. Perceval made great efforts with the Spanish Government to open Latin American markets in order to find specie for Wellington's army in the Peninsular.[3] As he told Wellesley, "It is only through our commerce that we can keep up our exertions."[4] Nevertheless in spite of the risk British merchants succeeded with commendable vigour in establishing a foothold in the principal ports of the Spanish Empire.[5] A consular report from Buenos Ayres describes how "when trade was first opened it was subject to great fluctuations owing in some measure to political confusion. Great losses occurred in many instances to those engaged in it. But the evils gradually corrected themselves and a regular extensive and prosperous trade was established."[6] The following summary of the sequence of events at Buenos Ayres will illustrate not only the Consul's report but also the sort of difficulties faced by British traders in selling goods to other parts of the Spanish Empire, such as Venezuela, Chile and Peru.[7] In 1804 Mark Riley a London merchant succeeded in selling British produce in Buenos Ayres, but the first important entry to the Spanish colony of Rio de la Plata came in May 1806 when Admiral Sir Home Popham siezed Buenos Ayres and Montevideo.[8] Auckland received a memorial from the merchants of Manchester congratulating the Government on the victory and saying that South America held out good prospects for trade at the present time with difficulties in other markets.[9]

1. Huskisson Papers, - Dundas, dd.24.12.07.
2. Manchester, British Pre-eminence in Brazil, pp.71,75,76,86 and 89 and Monthly Mag., September, 1810, p.194.
3. Walpole, Spencer Perceval, vol.2, pp.113, 115 and 119 and Castlereagh Correspondence, vol.8, p.269.
4. Wellesley Papers, vol.37295 - Wellesley, dd.19.4.10.
5. Goebell, 'British Trade', pp.298 and 317; Williams, 'The Establishment of British Commerce with Argentina', p.47 et seq; British merchants received the full support of their Government in their endeavour to establish a foothold in the Spanish and Portuguese Empire _ see Castlereagh, Memoirs, vol.8, p.269 and Walpole, Life of Perceval, pp.115 and 121.
6. Humphreys, 'British Consular Reports', p.31.
7. On Venezuela, Chile and Peru, see Humphreys, 'British Consular Reports', pp.4, 93 and 127; Goebell, 'British Trade', pp.299,301 and 316 and Evidence on the Orders in Council, 1812, p.552.
8. Mullett, 'British Schemes Against Spanish America', p.270.
9. Auckland Papers, vol.34457 - dd.25.9.07.

Hansard reports that ships with cargoes worth £1½million sailed for the Spanish colony in September of the same year.[1] Much of this produce was lost in the spring of 1807 when the local Spanish Viceroy reimposed his authority.[2] Between the summer of 1807 and November 1809 British merchants negotiated without success to obtain re-entry to Buenos Ayres and contrived to trade with the colony by smuggling goods overland from Brasil.[3] In June 1809 British merchants expressed concern at the appointment of a Viceroy known to be unfavourable to British trade.[4] But by November 1809 a revolutionary junta seized power and declared Buenos Ayres open to free trade.[5] In May 1810 convinced that revolutions in South America were being fostered by British merchants, the Cabildo of Montevideo decided to blockade the West Coast of La Plata and warned British merchants to leave Buenos Ayres. The Cabildo's suspicions were not unjustified for in 1812 British merchants pressed for the liberation of Spanish America by British arms and in June 1814 assisted in fitting out a fleet which helped to capture Montevideo for the rebels.[6]

Part of the tenacity and vigour displayed by British merchants in Latin America can be explained by the prospects of high profits but the risks of exporting to new markets seem compensatingly high. Confiscation and sudden interruption to markets were ever present dangers.[7] In both Spanish and Portuguese colonies only the most primitive commercial and transport facilities existed.[8] At Montevideo English merchants set up their own retail shops to sell goods and in Rio merchandise was disposed of by public auctions. While the lack of wharves and the thieving of goods improperly warehoused made trade doubly hazardous.[9]

But the major difficulty which faced merchants in the early stages of

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1. Goebell, 'British Trade', p.307.
2. Ibid, p.307; Williams, 'The Establishment of British Commerce', pp.47-49; Mullett, 'British Schemes against Spanish America', p.270; The city were in grea dismay about losses at Buenos Ayres and "talk about £3½ million worth of goods on hand in the Plate" - Brougham, Memoirs, vol.1, p.383.
3. Williams, 'The Establishment of British Commerce', p.50.
4. Goebell, 'British Trade', p.311.
5. Ibid, p.312 and Williams, 'The Establishment of British Commerce', pp.50-51.
6. Zimmern, 'Spain and Its Colonies', p.442; Monthly Mag., May, 1810, p.404 and June, 1810, pp.514-515 and Goebell, 'British Trade', p.312.
7. Humphreys, British Consular Reports, pp.28 and 30 and Evidence on the Orders in Council, 1812, pp.187, 189 and 269.
8. Humphreys, British Consular Reports, p.31.
9. Williams, 'The Establishment of British Commerce', p.48 and Heaton, 'A Merchant Adventurer in Brasil', pp.8 and 12.

trade with South America was to find products suitable for sale there and the oft repeated quote of McCulloch about ice skates and cut glass littering the beaches shows how singularly unsuccessful some of them were.[1] Thomas Potts, a Birmingham merchant, dismissed the South Americans as "people who do not know what they want."[2] After a time merchants succeeded in marketing the right quality and quantity of merchandise and eventually cheap cotton goods became the principal British export to a market characterised by low per capita incomes, but the early stages of trade were inevitably a period of experiment and failure.[3]

Furthermore, British exports to South America developed in circumstances which were entirely unfavourable to steady and cautious penetration of a new and difficult market. The opening of the Spanish and Portuguese Empires came at a time when the problem of maintaining the level of British exports in other markets were acute. An unhappy coincidence of the Continental System, the United States Non-Importation policy with the opening of Rio, Buenos Ayres and other Latin American ports meant that the response of merchants to the prospects of alternative and supposedly profitable markets in South America quickly became generalised and uncritical.[4] It is not surprising to find that most accounts of trade with South America emphasise its instability and the tendency of British merchants to glut particular markets with invendable merchandise. Numerous illustrations might be cited but certainly the most quoted example of a glutted market was Rio do Janeiro. In January 1808 the Portuguese Government opened Brazil to the ships of all friendly powers, and Rio became a port not only for the Brazilian hinterland but an entrepot for smuggling goods into Spanish America.[5] The first British convoy to sail direct for Brazil left London in April 1808 and included merchandise excluded from Europe and the United States. Merchants were relieved to find an alternative market for their produce in these difficult years of the continental system and the troubled diplomatic relations with the United States.[6] By the end of 1808 £5 million worth of British goods had been sent to 'Braziland' and the "great dump" ruined the market.[7] Merchants of small capital, disparagingly called speculators by their

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1. Cut-glass and skates were among the more incredible objects sent out. McCulloch's quotation was repeated by Tooke, History of Prices, vol.1, pp.276-277; Feavearyear, Pound Sterling, pp.180-181; Heckscher, Continental System, pp.176-77; Smart, Economic Annals, vol.1, p.184 and Gayer, Growth and Fluctuations, vol.1, pp.92-93. All these accounts ignore the problems of trading with South America and repeat what is perhaps a misleading quotation.
2. Evidence on the Orders in Council, 1812, p.30.
3. Heaton, 'A Merchant Adventurer', pp.12-13; Monthly Mag., February, 1810, p.109; July, 1811, p.600; August, 1811, p.100; Manchester, British Pre-eminence in Brazil, p.97; Evidence on the Orders in Council, 1812, pp.109, 411, 530-532, 550 and 644 and Armytage, The Free Port System, pp.89-90.

footnotes continued ...

more affluent brethren, sold immediately and depressed prices even further.[1] Other merchants repatriated their goods but most appear to have waited, often from two to three years for payment during the difficult years after 1808, as "Rio was always in danger of being starved or glutted with goods." Communication with Britain took anything up to six weeks and market intelligence often arrived too late to delay the latest shipment.[2] The same difficulties appeared in trade with other ports. Large quantities of merchandise originally manufactured for customers in Europe or the United States arrived to take advantage of the opening or reopening of one or other of the Spanish colonies.[3]

The Orders in Council prevented neutral shipping from carrying the indigenous products of Spanish and Portuguese colonies to Europe. Trade with South America therefore became bilateral. British merchants were confronted with the problem of finding a suitable means of payment for the manufactured goods they sold. Payments in specie were prohibited and at the same time Britain remained closed to most indigenous produce of South America because Brazilian coffee and Cuban sugar were not allowed to compete with the produce of Imperial possessions in the metropolitan market.[4] With the exception of raw cotton and hides (allowed into Britain) payment for manufactures sold in South America could only be obtained through the resale of sugar, coffee, and spices to Europe. In the final analysis the ability of British merchants to smuggle colonial produce into Europe determined the level of exports to South America.[5]

At the beginning of the wars with France South America purchased few British exports, but the market became more important, particularly after 1808. British ships carried most of the indigenous produce of Latin America to Europe

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4. Evidence on the Orders in Council, 1812, pp.32, 37-38, 98, 159, 539 and 558 and Williams, 'British Commerce', pp.47-49.
5. Cristelow, 'Great Britain and the Trades', p.5 and Goebell, 'British Trade', p.309.
6. Evidence on the Orders in Council, 1812, pp.203, 254, 271 and 503.
7. Heaton, 'A Merchant Adventurer', pp.6-8.

1. Parly.Debs., vol.19, pp.333-336; Monthly Mag., Aparil, 1810, p.302 and January,1811, pp.591-93 and Evidence on the Orders in Council, 1812, pp.30, 181-182, 254, 269, 525, 577 and 645.
2. Heaton, 'A Merchant Adventurer', pp.8, 9-11 and 14-15 and Monthly Mag., May, 1811, pp.397-398; June, pp.500-501; July, p.600 and August, p.100.
3. Monthly Mag., February, 1810, p.93; July, p.616; October, p.292 and December, p.486; February, 1811, p.109; March, pp.197-198; August, p.305 and Brougham, Memoirs and Correspondence, vol.1, p.383.
4. Vansittart Papers, vol.31237 - unsigned memo, dd. September, 1809; Cttee. on Commercial Distress, 1811, pp.367-368 and Appdx 1 , pp.372-373; Manchester, British Pre-eminence in Brazil, p.89; Evidence on the Orders in Council, 1812, pp.404, 484, 524-25, 548-49, 572-73 and 578 and Heaton, 'Merchant Adventurer', pp.20-21.
5. Evidence on the Orders in Council, 1812, p.578; Manchester, British Pre-eminence in Brazil, p.99 and Humphreys, British Consular Reports, pp.32,39 &127.

and merchants acted as middlemen for a large share of South American trade. War undoubtedly aided the establishment of British commercial supremacy in the area.[1] Its privateering war with France from 1797 to 1800, prevented ships of the United States mercantile marine from supplying Spanish markets with foreign goods and British merchants stepped in.[2] From 1808 the Royal Navy excluded enemy and neutral powers from trade with the Spanish and Portuguese Empires, which gave British shipping a monopoly of the carrying trade in South American sugar, coffee, hides and raw cotton. The Navy also protected textiles from the competition of German linens and French silks which South Americans had previously preferred to the coarser cottons of Lancashire and the more expensive linens of the Clyde Valley.[3]

Most of the "injudicious shipments" to Latin America appear to have been the property of merchants facing ruin by exclusion from customary markets in Europe and North America rather than the speculations of gamblers in search of high profits. Ignorance of the market and the generalised response led to inevitable losses, but whether the losses made in Latin America were on a larger scale than was normally the case in new markets is impossible to assess. Even the glutting had some positive long term value. As one merchant told Parliament, "In consequence of the great influx of goods when South American trade was first open, I have understood from a gentleman who sent out supercargo to Lima, that they have been able to sell and introduce many goods that were not known before," and another felt that the intercourse between this country and the Brazils "led to establishing a taste and preference for British goods which never existed before."[4]

By 1812 the market was established and British merchants secured a foothold which enabled them to dominate the markets of Latin America for a century.[5] From Consuls at Rio, Chile, Peru, Venezuela and Mexico Canning received commendations of the vigour and tenacity of British merchants in pushing their native manufacturers under the most difficult political conditions.[6]

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1. Evidence on the Orders in Council, 1812, p.524.
2. Ibid, pp.524, 530-532, 550, 562, 578, 645 and 669; Goebell, 'British Trade', p.300 and Nicholls, 'Trade Relations', p.299.
3. Evidence on the Orders in Council, 1812, pp.524, 530-532, 550, 562 and 645 and Humphreys, British Consular Reports, p.31.
4. Evidence on the Orders in Council, 1812, pp.169, 547, 553 and 573.
5. Ibid, pp.484, 535-537, 539 and 645.
6. Humphreys, British Consular Reports, pp.39, 93, 127 and 275 et seq. The British Government was interested in obtaining gold from South America for its expenditure in Spain - Herries Papers, vol.3 - d'Ivernois, dd.26.2.10.

Perhaps in more tranquil times their losses would have been lower, their actions less desperate, but in the troubled years of the French wars British merchants called in a new world to redress an imbalance of trade with the old.

Foreign Trade and the Domestic Economy

War slowed down the flow of British trade with Europe and the Americas at a time when production was growing rapidly and when British merchants appropriated a larger share of the Atlantic carrying trade. Between 1793 and 1815 conditions in world markets lead to an unusually high degree of instability in the domestic economy. Merchants found it difficult to provide the economy with a continuous and smooth supply of imported raw materials and foodstuffs. Industrial production became erratic largely because its export markets were alternately closed and reopened through enemy action. In turn the instability of industry imparted an instability to the import of industrial raw materials. Government demands for military supplies also fluctuated with the tide of war and the unusual number of deficient harvests created sudden changes in the demand for foreign grain which affected the general level of demand and production throughout the economy. As the following survey will show the incidence of economic warfare and bad harvests induced fluctuations in the British economy well beyond the amplitude experienced in peace time or in previous wars of the 18th century. War made it necessary for the economy to carry higher levels of inventories and on at least four occasions the successful interruption to the flow of trade meant that production could only be carried on because merchants and manufacturers invested heavily in stocks of temporarily invendible commodities.

Napoleon's invasion and conquest of the Italian states in 1798-99 prompted merchants to import additional quantities of thrown and raw silk in case he cut off supplies in the silk industry.[1] When the French occupation of Holland and Italy disrupted trade in the summer of 1799, German and British merchants found themselves holding highly priced but temporarily invendible

1. Monthly Mag., December 1798, p.494; January, 1799, p.88 and April, p.259.
2. The connection between this crisis and the war in Europe has passed unnoticed. It has been regarded by most historians (following Tooke) as a straightforward example of the results of speculation in colonial produce. But commercial reports make it clear that French activity throughout the summer of 1799 disrupted European commercial organisation in Holland, Lubeck and Frankfurt - see Monthly Mag., July, p.508; Commercial Mag., September, p.137; Monthly Mag., September, p.675; Commercial Mag., November, pp.217-218 and Monthly Mag., November, p.843 and Tooke, History of Prices, vol.1, pp.233-236.

quantities of coffee and sugar. At Hamburg a crisis occurred and over eighty mercantile houses failed.[1] In London the Bank of England and other banks extended credit generously and Liverpool merchants secured a loan direct from the Government.[2] Although bankruptcy figures for November rose above the monthly average more widespread failures had fortunately been avoided by the liberal extension of credit which enabled merchants to hold stocks until prices rose again.[3]

In the early months of 1801 the dispute with the Northern Powers arrested exports to the Baltic and merchandise en route for Scandinavia, Russia and Prussia had to be held at warehouses in Liverpool, Hull and London until the summer when the Government compromised/on the rights of neutral shipping.[4] Fortunately British merchants had anticipated the possibility of a closure and had accumulated sufficient stocks of timber, flax and hemp to prevent prices rising to very high levels.[5] At the Peace of Amiens in 1802 British manufacturers anticipated a high level of European demand and increased production but the uncertainties and ambiguities of the peace treaty with France compelled merchants to stockpile until the French position became more clear.[6] Their caution avoided almost certain losses from confiscation when war broke out again in 1803. When raw silk supplies were threatened by the French reconquest of Italy in 1804-05 merchants again purchased heavily in order to prevent the development of a serious shortage.[7]

From the summer of 1807 to the autumn of 1808, the interruption to trade with Europe and America lead to a minor economic depression and inventory investment on a considerable scale.

Napoleon's announcement of his plans to intensify the economic blockade of the British Isles and the beginnings of the American Embargo policy prompted merchants to replenish their stocks of imported foodstuffs and raw materials.[8]

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1. McPherson, Annals, 1805, vol.4, p.485; Commercial Mag., October, 1799, p.213 and Monthly Mag., October and November 1799, pp.762 and 843.
2. Commercial Mag., November, 1799, pp.217-218; Checkland, 'American versus West Indian Traders', pp.147-148 and Commons Jnl., vol.55, p.752.
3. Commercial Mag., March, 1800, p.209; Monthly Mag., February, 1800, p.95 and Checkland, 'American versus West Indian Traders', pp.147-148.
4. Heckscher, Continental System, p.77; Albion, Forests and Sea Power, pp.179-180; Monthly Mag., 1801, pp.86, 101, 182, 198, 286, 563 and 586.
5. Cttee. on 11 Naval Rept., 1805, pp.156-161.
6. Monthly Mag., 1801, November, p.377 and December, p.474; 1802, January, p.570; February, p.94; March, p.194; April, p.306; August, p.94 and September, p.196; Parly. Hist., vol.36, p.1148 and Baines, History of Liverpool, p.729.
7. Monthly Mag., September, 1804, p.421 and May, 1805, p.518.
8. Tooke, Thoughts and Details, 1822, p.69.

In 1807 cotton brokers increased their purchases in the United States by 40% and wool merchants doubled the normal import of merino wool from Spain.[1] Larking, the Navy's principal timber contractor, wrote to the Board in 1806: "The ports of the Baltic from which I had to import timber that I have contracted for being shut against me I have turned my thoughts to other channels."[2] Few people in England took the threat of economic isolation seriously enough to stockpile on a sufficient scale to obviate the rapid rise in prices which occurred when supplies from Europe and the United States were effectively obstructed from the autumn of 1807 to the summer of 1808. Apparently the heavy import of merino wool satisfied demand but serious shortages of cotton, flax, hemp, raw silk and timber developed.[3]

For the re-export trades some quantitative notion of the volume of mercantile investment in colonial produce can be obtained by comparing the quantities imported with the quantities re-exported over the war years. Since there is no reason to expect domestic consumption to increase significantly in a period of depression the widening differential between the two provides evidence of increased investment in stocks of colonial produce.[4] Another statistical indicator of surplus supply is price data. Unable to market coffee and sugar in Europe British merchants attempted to sell in the home market, and the additional supply depressed domestic prices. Thus in 1807 and 1808, despite heavy indirect taxation, prices of colonial produce fell to unusually low levels.[5]

Qualitative information that British merchants held considerable stocks of coffee, sugar, tobacco and rum is unusually abundant because of the very active campaign conducted by the West India interest for Government assistance.[6] Throughout the years 1806, 1807 and 1808 they constantly appealed to the Government to help them dispose of their surplus produce. They petitioned Parliament, published pamphlets, and sent numerous memorials to the Committee of Trade.[7]

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1. Tooke, History of Prices, vol.1, p.300; Crump, Leeds Woollen Industry, pp.90 and 94 and see Table 32.
2. Albion, Forests and Sea Power, pp.327 and 337.
3. Tooke, History of Prices, vol.1, p.300; Daniels, 'The Cotton Trade in the Revolutionary and Napoleonic Wars', p.79 and Crouzet, L'Economie Britannique, vol.1, pp.395-397.
4. See Table 31.
5. Tooke, History of Prices, vol.1, p.302; Tooke, Thoughts and Details, pp.61 and 77 and Baines, History of Liverpool, pp.732-34.
6. West Indian Trade was investigated by three Parliamentary Committees in 1807-08; the Sugar Distillery Committee, the Committee on the Commercial State of the West Indies, and the Committee on Distillation of Sugar and Molasses.
7. Commons Jnls., vol.57, pp.857 and 942; vol.61, pp.77 and vol.62, pp.668 and 674; Dropmore Papers, vol.8, pp.162-163, 454-456, 469, 471-472, 474 and 489-490 and Auckland Papers, vol.34457, dd.27.12.06.

No less than three Select Committees investigated their complaints between December, 1806 and February, 1808 and confirmed that the "obstacles opposed to the exportation of colonial produce added to its forced accumulation in the market .... have been the principal causes for their plight".[1] The Committees made two recommendations: first that the distilleries should be compelled to use colonial sugar rather than grain and that British naval superiority should be used to restore the monopoly of the carrying trade to British shipping.[2] In November, 1807 by an Order in Council the British Government blockaded the mainland of Europe to all neutral ships which had not called at a British port and paid British customs dues, but by then continental markets were so effectively closed that the restoration of the monopoly only increased stocks of invendible colonial produce in British warehouses.

There can be no doubt that the Continental System affected the cotton industry. In the autumn of 1807 manufacturers and export houses held considerable stocks of cotton cloth. By February of 1808 the situation prompted workers and employers from Lancashire cotton towns to petition Parliament against the Orders in Council, which closed American markets to them.[3] One petition appealed to the House to sue for peace and another asked the Government to regulate wages.[4] When George Rose introduced a bill "to limit the excessive depression of wages on persons employed in weaving cotton" Sir Robert Peel opposed it on the grounds that "the greatest cause of distress at present felt was not the oppression of the masters but the shutting up of the foreign markets and the fact was the masters were now suffering from this cause still more than the men."[5]

The West Riding Woollen Industry and other textile industries were no less affected by the closing of markets in Europe and the United States. Yorkshiremen also petitioned the Government to negotiate a peace and the more desperate smashed machinery.[6] Production in the Scottish linen industry declined and not until

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1. Cttee. on Distillation of Sugar, 1808, pp.3 and 4; Cttee. on the Sugar Distillery, 1807, pp.226; Cttee. on the Commercial State of the West Indies, 1808, pp.252, 262, 277, 293, 295 and 297, and Parly.Debs., vol.8, pp.238-239; vol.9, pp.735, 1151-53 and vol.10, pp.742-743.
2. Cttee. on Commercial State of the West Indies, 1808, p.252.
3. Evidence on the Orders in Council, 1808, pp.344-345; Parly.Debs., vol.10, pp. 889, 1056-1058, 1236, 1281, 1304 and 1350-51; Picton, Memorials of Liverpool, pp. 327-329 and Hawes, Brougham, p.56.
4. Commons Jnls., vol.10, pp.692 and 708 and Annual Register, 1808, p.238 and Cttee. on Petitions of Cotton Manufacturers and Weavers, 1808, pp.97-134.
5. Parly. Debs., vol.11, pp.425 and 426-427.
6. Evidence on the Orders in Council, 1808, pp.119-124 and 1812, p.218; Annual Register, 1808, pp.237 and 238; Hammonds, Skilled Labourer, p.188 and James, Woollen and Worsted Industries, p.368.

1810 did Thomas Leach, the Leicester Hosier, succeed in clearing stock he had accumulated in 1808 and 1809. Birmingham experienced an acute depression.[1] At Christmas 1808 George Broom's stocks of carpets at Kidderminster were worth £20,000 more than they had been the previous years and silk weavers of Coventry and Spitalfields suffered from unemployment.[2]

From the autumn of 1808 to the spring of 1810 the blockade lifted enough for an export boom to Europe and the United States to develop. Merchants and manufacturers ran down their stocks, prices rose and production revived again.[3] Productive capacity in the export sector increased and British merchants and shippers assumed almost complete responsibility for the carrying trade in colonial produce.[4] The high prices and depleted stocks of 1808 together with the continued threat of complete interruption to supplies both from Europe and the United States encouraged British merchants and manufacturers to import on a very considerable scale throughout 1809 and the early months of 1810.[5] Imports of cotton, wool, silk, tallow, dyestuffs, timber, flax and hemp all rose well above average.[6] Possibilities for direct import of raw cotton from the United States before the outbreak of war in April 1812 existed for three months in 1809, seven months in 1810 and two months in 1811. During that time British merchants anticipated a more prolonged and perhaps complete cessation of supplies and imported on a considerable scale. The 199,000 bales which came into Liverpool in 1810 was a record for the decade.[7] Direct import from the United States became impossible from 1811-15, but while prices rose the shortage never became serious enough to disrupt textile production. Large stocks had been built up in 1809-10 and Brazilian cotton provided the industry with another source of supply.[8] Furthermore, merchants successfully smuggled a considerable quantity of cotton out of the United States and a large part of Britain's supplies came into Liverpool, London and Glasgow through Denmark, Sweden, Spain, the Azores and Florida.[9]

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1. Davies, Birmingham, pp. 86-87 and 98-100.
2. Evidence on the Orders in Council, 1812, pp. 125 and 193.
3. Heckscher, Continental System, pp. 180, 182 and 236 and Francis, Reflections, 1810, p.15.
4. Davies, Birmingham, pp.89-93 and see pp. 285-286.
5. Bullion Cttee., 1810, pp. 58 and 66; Chalmers, 'Considerations', 1812, pp.10, 25 and 65; Parly. Debs., vol.19, p.942 and see Tables 26 and 32.
6. See Table 32 and Bathurst Papers, p.137 - Chalmers dd. 25.12.09.
7. Daniels, 'American Cotton Trade', pp.278-279 and 282; Baines, History of Liverpool, pp.735-736; Ellison, Cotton Trade, p.86 and see Table 32.
8. Daniels, 'American Cotton Trade', pp.284-285.
9. Ibid, p.285; Ellison, Cotton Trade, p.87; Tooke, Thoughts and Details, 1822, p.105 and Heaton, 'Non Importation', p.133.

With Wellington's troops in Portugal supplies of Merino wool could be procured from Spain through Lisbon, but the shortage of timber became a more serious cause of concern. Napoleon succeeded in closing one Baltic port after another. Danzig fell to French troops in May 1807. Memel and Stettin were closed while at Riga and St. Petersburg the Russian Government confiscated timber bound for England.[1] Quantities of Baltic wood continued to reach England in neutral ships. A certain amount of smuggling went on and at Danzig French officials connived at illegal exports.[2] But it was much more difficult to import bulky commodities like timber by such methods. In 1809-10 the shortage remained acute enough for the Government to give positive encouragement to the development of an alternative source of supply in Canada. Duties on European timber were successively increased to offset the differential in transport costs. "With dramatic suddenness the North American timber trade burst into life" and alleviated the shortage.[3] Before 1807 British North America supplied only a fraction of Britain's timber requirements. From 1807 to 1815 Canada provided most of the oak plank the large masts required in shipbuilding and nearly half of British imports of pine timber.[4] This dramatic development of the North American timber supply resulted directly from the encouragement the Government gave to British mercantile enterprise to overcome the wartime shortage of Baltic supplies.[5]

From the spring of 1810 until autumn 1812 the French Government reimposed an even more effective blockade and the Government of the United States attempted to force British statesmen to rescind the Orders in Council by closing the American market to British goods and enforcing an embargo on exports to Britain. In these two years the sectors of the British economy dependent on foreign trade encountered a severe crisis. Imported supplies from the Continent and the United States became difficult and at times impossible to procure, but as exports fell the level of demands for imports was also reduced. Alternative supplies of timber came from Canada, raw cotton from Brazil and raw silk from India. Nevertheless, the heavy inventory investment of the previous eighteen months prevented shortages from developing on anything like the scale experienced in 1808, and prices remained more stable. From the end of 1812 it became possible to import from Europe again and merchants replenished their stocks.[6] During the

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1. Albion, Forests and Sea Power, pp.336-341 and Annual Register, 1809, p.698.
2. Dropmore Papers, vol.8, p.212 and Albion, Forests and Sea Power, pp.339-343.
3. Ibid, pp.353-358 and Bliss, 'The Timber Trade', pp.32-36.
4. See Table 32.
5. Anon, 'Observations on the Timber Trade', 1821, chs. 7-9.
6. See pp. 288.

early months of 1814 British merchants anticipated an export boom at the close of the war and invested heavily in stocks of industrial raw materials.[1] They could not, however, import raw cotton from the United States until December of 1814 but the stocks built up in 1810 and Brazilian and Indian supplies helped the industry to last out until the British and American Governments made peace.[2]

Merchants and manufacturers reacted to the blockade as they had in 1807-08. They made strenuous efforts to introduce their goods into Europe and the United States and exploited new markets. Pressure on the Cabinet to relax the Order-in-Council and accede to the wishes of the American Government from merchants who traded with the United States became sustained and vigorous. But above all they invested in stocks waiting for world markets to open up again.

Any examination of the export sector ought to begin with the trade in colonial produce since it excited most comment.[3] The difference between the quantities of sugar and coffee imported and the quantities re-exported provides a rough index of changes in the volume of stocks.[4] Statements from merchants and comments from pamphlets, the press and Select Committees of Parliament that British merchants were holding considerable quantities of colonial produce in warehouses at London, Bristol, Liverpool and Glasgow are voluminous.[5] Thus in the spring of 1811 the Select Committee on Commercial Credit found "that great distress was felt in a quarter which was much connected with this trade, namely, amongst the importers of produce from the foreign West India Islands, and from South America and the commercial agent for the City Corporation of Liverpool told the Committee how the greater part of the immense product of those places now comes to fill the warehouses and exhaust the capitals of the merchants of this country."[6] Even if "the enterprising exporter succeeded in getting his merchandise deposited in a place of safety (an entrepot) and surmounted the first difficulties he had to encounter the still greater difficulties in conveying them to a market of consumption."[7] At Heligoland for example a gentleman told Sir Philip Francis that "from the beach to the stairs he had walked up to his ankles in salted sugar and coffee."[8]

1. Tooke, History of Prices, vol.1, p.344.
2. Daniels, 'American Cotton Trade', pp.284-86 and Commons Jnl., 1811, p.760.
3. In 1823 it was the accumulation of stocks of sugar and coffee between 1810 and 1812 which Merchants seemed to have remembered best - Cttee. on Credit, 1823, pp. 306, 347-348, 352 and 369-371.
4. Cttee. on Commercial Distress, 1811, p.368; Tooke, History of Prices, vol.1, pp.344-45 and see Table 31.
5. Monthly Mag., 1810, February, p.93; May, p.404; June, p.514; July, p.616; August, p.95 and November, p.387; and 1811, January, p.591; February, p.109; March, p.197 and April, p.305; Evidence on the Orders in Council, 1812, pp.99, 345, 374, 378, 429 and 491-93, 631, 663 and 667 and Cttee. on Credit, 1823, pp.343, 347, 357, 369-370, 376, 385 and 407.

footnotes continued .

Widespread depression also characterised the manufacturing industry and merchants and manufacturers in the export trades were compelled to reduce production and stockpile on a considerable scale.[1] Production and trade statistics indicate that the general level of activity fell in the period 1810-12, but the evidence for investment in stocks is voluminous but entirely qualitative.[2]

Perhaps the most reliable account that it occurred on a large scale is contained in the Report of the Select Committee on Commercial Distress. Observing that "the embarrassments and distresses were of an extensive nature" the Committee recommended Government loans to help merchants and manufacturers "gradually to contract their operation, to call in their means to withhold from immediate sale, articles which at present can fetch only most ruinous prices and to keep up the employment of their machinery and their workmen, though upon a very reduced and limited scale; it will divide and spread the pressure of this distress over a larger space of time, and enable them to meet it with consequences less ruinous to themselves and less destructive to the interests of the community."[3]

Stocks of unsaleable merchandise were to be found not only in warehouses at British ports but at entrepot islands off the enemy coast or at collecting points on the mainland itself.[4]

The extent of distress in the Scottish and Lancashire cotton industries is revealed in petitions to Parliament, memorials to the Treasury and in evidence before Select Committees of the House.[5] Sir Robert Peel, speaking for Lancashire, knew that "the greatest manufacturers had reduced the quantity of their work by one third, others by one half and others again had been obliged to discharge their workmen altogether" and James Kay of Bury told Parliament that "we never had so large a stock."[6] For the woollen industry military orders mitigated the loss of export markets.[7] Nevertheless, the

6. Cttee. on Commercial Distress, 1811, pp.367-371.
7. Atkinson, 'A Letter', 1811, p.96 and Anon, 'Few Facts', 1811, p.13.
8. Francis, 'Reflections', 1810, p.15 and Coutts-Trotter, 'Principles', 1811, p.4

1. Gayer, 'Growth and Fluctuations', vol.2, pp.549 and 535.
2. See Tables 1, 25, 26 and 36.
3. Cttee. on Commercial Distress, 1811, p.371 and Atkinson, 'Thoughts', p.96.
4. Evidence on the Orders in Council, 1812, pp.239, 277 and 297.
5. Parly.Debs., vol.19, pp.1017-19; Cttee. on Commercial Distress, 1811, pp.367-370 and 373-73; Daniels, 'The Cotton Trade During the Revolutionary and Napoleonic Wars', p.79; Prentice, Historical Sketches of Manchester, pp.44-45; Monthly Mag., March 1811, pp.197-98 and April, p.305; Cttee. on the Petitions of the Cotton Weavers, 1811, pp.608-609 and Picton, Memorials of Liverpool, p.336.
6. Parly.Debs., vol.19, pp.254 and 344 and Evidence on the Orders in Council, 1812, p.218.
7. Cttee. on Commercial Distress, 1811, pp.371 & 372 and Crump, Leeds Woollen Industry, pp.119, 126 and 141.

industry sent representatives to Parliament to complain that the Orders in Council had led to heavy stocks of cloth at the factory and warehouse.[1] But the hosiery industry undoubtedly suffered more severely and was affected by outbreaks of Luddism.[2]

Representatives of the metallurgical trades located in the Midlands and around Sheffield did a great deal to convince Parliament of the extent of distress in their areas. Thomas Potts, a merchant of Birmingham told the House of Commons, "the manufacturers have been keeping their men employed in creating stock; piling that stock upon their shelves; they have got the whole capital engaged in a stock three parts finished."[3] At Sheffield another merchant observed that the "manufacturers were reduced to very great distress, the mercantile houses having in general good capitals were not reduced to actual distress but I apprehend most of their capitals are lying in stocks."[4] After the battle of Leipsig as successive countries were liberated from French control British merchants anticipated the prospect of high profits from 'pent up' European demand and invested heavily in stocks of home produced and colonial commodities. Prices of coffee, sugar and other colonial produce rose rapidly, and industrial production recovered in 1813. Heavy shipments of goods were made to Baltic markets. Merchants even exported direct to France at the end of 1813. By January of 1814 it was apparent that war in Europe would terminate very shortly. More inventory accumulation occurred but when hostilities finally ceased in May of 1814 the anticipated demand did not materialise because Europe recovered slowly from the ravages of war.[5] In Tooke's words "The disastrous effects of these ill judged and extravagantly extensive speculations began to manifest themselves in the numerous failures which took place at the close of 1814.[6] Tooke's interpretation has, however, been accepted too uncritically by subsequent historians and MacCleod noted that export speculations were at their height in the spring of 1814 and were followed by a violent revulsion and

1. Evidence on the Orders in Council, 1812, pp.218 and 230.
2. Sutton, The Date Book of Nottingham, pp.289 and 293-94; Paterson, Radical Leicester, pp.58 and 61; Hammonds, Skilled Labourer, pp.257-270 and Cttee. on Framework Knitters Petitions, 1812, pp.211-306.
3. Evidence on the Orders in Council, 1812, pp.19-22, 29, 46, 67, 74 and 96; Langford, A Century of Birmingham Life, p.327; Monthly Mag., October, 1810, p.291; April, 1811, pp. 197-97 and Davies, Birmingham, pp.97-100.
4. Evidence on the Orders in Council, 1812, p.135 and Lloyd, Cutlery Trades, pp. 339-340.
5. Tooke, Thoughts and Details, 1822, pp.97 and 99 and Daniels, 'Cotton Trade at the Close of the Napoleonic War', pp. 18-19.
6. Tooke, Thoughts and Details, 1822, p. 99.

general depreciation of prices.[1] While Acworth agreed that "exporters had speculated on the almost unlimited demand among the inhabitants of the continent for those goods from the use of which they had been so long debarred, "but Europe was limited in its means of purchase.[2] What such accounts do not mention is that the United States market remained closed in these years and a considerable proportion of those 'pent up' exports sent to Europe were 'pent up' stocks produced for the American market, and as Vansittart told Castlereagh the American carrying trade with Europe which had fallen into British hands constituted a further strain on the country's extended resources.[3]

Conclusion

In the introduction to this chapter I concluded that it would be difficult to support the assertion that the policy of permitting the rate of exchange to float between 1797 and 1815 had any very deleterious effects on either the British economy or the war effort. Nor is there evidence to support the criticism that rising prices significantly reduced the surplus or increased the deficit on the country's balance of payments, either by encouraging imports or by discouraging exports. I then proceeded to place monetary policy against the background of political disruption and commercial disorganisation which characterised the world economy during the French Wars in order to bring out its advantages and disadvantages.

First, the liberal monetary policy enabled credit institutions to share the new risks involved in trading overseas. At sea "France ... sought to destroy the commerce on which the life of England depended by sending out inumerable privateers to prey upon it."[4] In 1797 nearly a thousand British ships were captured by Corsairs and after 1812 they were joined by Yankee Marauders.[5] Although naval convoys had been organised from 1797 nearly 11,000 merchant ships were lost to the enemy between 1793 and 1814 and the average ratio of losses to the total number of ships employed in foreign trade rose to nearly 8% per annum.[6]

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1. Hawtrey, Currency and Credit, p.286; Smart, Economic Annals, vol.1, p.397; Gayer, Growth and Fluctuations, vol.1, pp.116-117 and Macleod, Theory of Banking, vol.2, p.181.
2. Acworth, Financial Reconstruction, p.72.
3. Vansittart Papers, vol. 31231 - dd. 26.11.14.
4. Day, History of Commerce, pp.342-43 and Mahon, The Influence of Sea Power, p.207.
5. Ibid, p.211.
6. Cambridge Modern History, vol.8, pp.485-86 and for different but less reliable estimates see Mahon, The Influence of Sea Power, pp.221-246.

Perhaps the best reflection of the increased risk of trading overseas is the sharp and continuous rise in marine insurance premium payable on all sea routes after 1793.[1] Delays in transhipment also involved merchants in losses.[2] When orders arrived late exporters were often required by the terms of their contract to repatriate the merchandise. Moreover, British merchants consigned large quantities of goods every year to the great fairs of Northern Europe and if they failed to catch this seasonal demand their losses could become very large.[3] At some point en route to or from Europe or the Americas, British goods passed through the hands of neutral shipping companies or smuggling organisations of one kind and another and the prospects for safe delivery by such unfamiliar means were certainly much less than the normal commercial organisation. Yet merchants had to take the risk for often goods could be bought or sold in no other way. On land the risks were no less serious. Examples of the confiscation of British property by the enemy on the continent, in the United States and in the ports of the Spanish Empire are numerous.[4]

Secondly, the time taken between manufacture and the payment for commodities sold abroad definitely lengthened. Credit institutions relieved merchants and manufacturers from some of the disabilities of waiting. For several reasons the period when commodities sold or purchased abroad were in the hands of middlemen lengthened. To begin with a higher proportion of British trade was with more distant markets. Shipping space was usually in short supply because the Government commandeered a large number of merchant ships for the Navy and foreign ships were prevented from filling the gap by the Navigation Laws.[5] Delays in transit became a common feature of international trade because convoys took time to organise and collect together and smuggling organisations had to be developed or contacted. Often merchandise was transferred between ships or from one entrepot to another before it reached a final destination. Finally the exploitation of new markets and new sources of supply often involved the British merchant in the construction of his own commercial and distributive organisation.

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1. Redford, Manchester Merchants, pp.32 and 45-48 and Wright and Fayle, History of Lloyds, pp.188-191.
2. Jennings, Croker Diaries, 1814, p.57.
3. Redford, Manchester Merchants and Foreign Trade, p.7.
4. Morris, Woollen Industry, p.182; Heckscher, Continental System, pp.26, 82, 83, 97 and 234 and Monthly Mag. 1801, pp. 198 and 586-587; 1811, pp.197-198
5. Fayle, 'Shipowning and Marine Insurance', pp.34-35. Neutral ships were allowed but under fairly stringent conditions and goods carried by neutrals had to pay higher import duties - Mahon, The Influence of Sea Power, p.229 and Cambridge Modern History, vol.9, p.241.

London credit institutions financed an increased share of international trade during the French wars. Britain's share of world trade probably expanded. Certainly the volume of British exports was very much higher in 1814 than it had been in 1793. British merchants also carried a larger share of the produce of the Americas to Europe. Production in the British West Indies increased and the conquest of enemy colonies in the Carribean, the opening of the Spanish and Portuguese Empires in South America and the command of the seas enjoyed by the Royal Navy gave merchants almost a monopoly of the Atlantic carrying trade. London financed an increased volume of American trade with Europe.[1] With the disruption of commercial organisation in Europe occasioned by French occupation of the great commercial marts of Amsterdam and Hamburg, London credit houses also assumed much more responsibility for the finance of international trade. In the two decades after 1793 the bill on London probably became the most common means of settlement in international trade.[2]

During the war years the flexible supplies of credit made it possible for merchants and manufacturers to stockpile sometimes on a considerable scale, whenever the enemy successfully interrupted the flow of exports and re-exports to Europe and America or whenever France or the United States threatened to cut off supplies of foodstuffs and industrial raw materials. Between 1793 and 1815 conditions abroad often made it difficult for merchants to provide the economy with a smooth and continuous supply of raw materials. Demand at home became erratic because of the blockade to export markets and to a lesser extent because Government demands for military goods was unstable. While the succession of bad harvests engendered not merely sudden changes in the purchase of imported grain, but sudden drops in the general level of demand for industrial commodities. Faced with the prospect of obstruction to supplies of foreign raw materials merchants first hurriedly stockpiled and then attempted to find alternative sources of supply such as Brasil for cotton or Canada for timber, or they attempted to promote smuggling. Conditions in international commodity markets made it imperative for the economy to hold higher levels of stocks per unit of output in order to mitigate the consequences of stoppages to foreign sources of supply.

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1. Evidence on the Orders in Council, 1812, pp.86,87,93,133,327,354,355,464,517 and 631 and Hiddy, Barings, pp.27 and 30.
2. Bullion Cttee., 1810, pp. 58,65,73,75,82,85 and 98; Chalmers, Domestic Economy, 1812, pp.9,11,26,27 and 71; Atkinson, 'Considerations', 1811, p.62 and Sinclair, 'Observations', 1811, pp.16-17.

Critics claimed, however, that the opportunities afforded by easy credit conditions encouraged merchants to over-trade on such a considerable scale that prices fell rapidly and involved them and frequently banks in losses or even failure. There is no doubt that the increased facility for procuring credit undoubtedly encouraged some "speculation" of the kind condemned by bullionists and historians.[1] Nevertheless it is misleading to argue that speculation was entirely or even primarily responsible for the losses encountered by mercantile and credit houses engaged in the import business. More often than not their difficulties came from adverse external conditions and not from foolhardy speculation. Monetary policy only permitted and did not cause the heavy mercantile investment in commodity stocks. Moreover the inventory cycle in imported raw materials persisted throughout the first half of the 19th century, a fact which is not surprising at a time when communications were undeveloped and transport slow.[2] The generalised response to rising prices was, moreover, characteristic of small scale competitive firms which operated in international commodity markets. Small merchants importing quite independently of each other frequently overstocked the market, and made losses because they could not hold stocks for any length of time. During the French wars existing deficiencies in the organisation of the import commodity markets were greatly exacerbated by enemy obstruction to British sources of supply. At times prices of the available stocks rose to abnormal heights. Losses were made because the response was so generalised and over enthusiastic. A large part of the fluctuations in investment in commodity stocks which took place can be explained as the anticipation or the reactions of merchants to the closing and re-opening of foreign sources of supply in Europe and the United States.

Furthermore, critics who focussed attention on the extent of bankruptcy among import merchants, frequently missed the point. To begin with, a rise in the annual number of bankrupts should be expected in a growing economy. The absolute figures are really not very revealing and losses incurred by merchants who organised the import of raw materials and foodstuffs were not losses to the economy. Domestic manufacturers gained by the ready availability and reduced

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1. Atkinson, 'A Letter, 1811', pp.96-97; Tooke, Thoughts and Details, 1822, pp. 63-65 and 73; Quin, Banking in England, pp.61-62; Andreades, History of the Bank of England, pp.218-219; Gayer, Growth and Fluctuations, vol.1, pp.86,87 and 91 and Crouzet, L'Economie Britannique, vol.2, pp.544-547.
2. Matthews, A Study in Trade Cycle History, pp.25-26; Dumbell, 'The Cotton Market in 1799', pp.147-149; Checkland, 'Finance for the West Indies', pp.466-469 and Tooke, Thoughts and Details, 1822, pp.63-68.

prices of raw materials.

Inventory accumulation in 1800-01, 1807 and in 1809-10 certainly added to the strain on the balance of payments. It depleted gold reserves and depreciated the rate of exchange which added further to the expense of buying essential supplies from overseas. Nevertheless the longer term needs of the economy on such occasions was to stockpile in order to avoid serious shortages of essential raw materials. The advantages of having Baltic timber and American cotton available when supplies were unobtainable in 1811 and 1812 ought to be contrasted with the disadvantages of the depreciated exchange in 1809 and 1810. It might, however, be argued that the ready availability of credit encouraged the import of non-essential foodstuffs and luxury goods. Undoubtedly it did but such commodities formed only a small part of total imports, and were heavily taxed. In any case this argument is really criticism of relying too heavily on the price mechanism and of not resorting to more direct controls over imports, rather than of credit policy as such.[1]

Monetary policy also enabled merchants and manufacturers working for the export trades to invest heavily in stocks during the crisis years of 1793, 1797, 1799, 1807-08 and 1810-12. Certainly the Government appreciated the advantages credit could play in alleviating or anticipating economic depressions and the Treasury itself on four occasions provided loans to the private sector. On the other hand critics again raised the charge that the banking system encouraged over-trading and drew their contrasts between "great old capitalists" and "visionary speculators". The former were"guided by prudence" while the latter were "men of adventurous and speculative dispositions whose spirit of enterprise needed to be curbed."

It may well be that the facility of procuring credit encouraged merchants to take more than the normal risks but critics often overlooked the point that the risks of trade increased enormously after 1793. The encouragement afforded by credit institutions to merchants to brave the uncertain conditions endemic to wartime trade undoubtedly raised the level of the volume of merchandise sold abroad. Perhaps the "race of old English merchants were superseded by a "new and very different set of merchants", "not guided by the same

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1. Of course direct controls were regarded as "despotism" at the time - Rosse, 'Observations', 1811, p.43 and Parly.Debs., vol.19, p.999.

prudence." Could it not be argued that the expansion of foreign trade in the difficult circumstances of war did not call for old English merchants, prudence or caution but for adventurous, daring, imagination, a capacity to take risks and exploit every opportunity afforded by administrative weaknesses on the part of the enemy or the opening of markets in new and untried parts of the world?

Perhaps the example of trade with South America will substantiate the point, particularly as trade with the Spanish and Portuguese Empires excited the most vehement condemnations of speculators. Studies of Anglo-South American economic relations between 1808 and 1814 show that the glutting of markets in the Spanish and Portuguese Empires occurred principally because alternative markets in Europe and the United States were closed for intermittent periods during three years and British merchants were more than anxious to find alternative markets for their commodities in any part of the world. Furthermore, mistakes were inevitable in the penetration of a new and unknown area. Losses in South America can be more plausibly explained by the closing of markets elsewhere. Perhaps the charge of over-trading has more point in relation to the re-export trade, where it might conceivably be argued that the British advantage in transhipping colonial produce to Europe during the Revolutionary War depended upon a series of fortuitous and transient circumstances, which required only very cautious exploitation.

Finally, Tooke's charge that British merchants encouraged by their bankers speculated rather foolishly on a high level of European demand at the end of the war has some substance to it, but he neglected to mention that the American market remained closed in 1813-1814. Moreover, in all these attacks on speculators there is perhaps a touch of pious hindsight. Successful speculators became real English merchants and the inevitable failures stand condemned by historians. Those who charged the wartime monetary policy with the encouragement it gave to speculators tended to overlook the nature of the international economy during those years and the very real advantages both the economy and the war effort derived from the liberal accommodation given by bankers to merchants and manufacturers.

THE TAX STRUCTURE AND THE ADMINISTRATION OF TAXES BEFORE 1793

Introduction

During the wars with France the amount of taxes collected by the State rose on average by £26 million per annum compared with the period 1790-92, measured in current prices, and by an annual average of £12.6 million, expressed in real terms.[1] Unfortunately we cannot show changes over time in the share of national income appropriated by the Government, but if we are prepared to utilise the imperfect estimates available for two years of the early 19th century then it is possible to guess that the proportion of gross national income paid in taxes rose from about 14½% in 1800 to just over 20% in 1812.[2]

Never before in the 18th century had citizens been compelled to endure anything like such a rapid increase in their tax burden. Traditional policy had been to provide the bulk of finance required for war through loans and Governments before 1793 had not tested the nation's capacity to pay taxes or placed much additional strain upon the revenue administration. The achievement in the conflict against France represents not merely a departure from past policy, but is remarkable because the country embarked on war with a tax structure and administration in many ways unsuitable for the task of financing expenditure on a large scale through the medium of taxes. Certainly the Government's success must have confounded those numerous pundits who before and during the war argued that the limits (generally unspecified) of taxable capacity had been reached. Moreover, given all the constraints upon the Government's freedom of action, the collection of taxes was obviously not

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1. See Table 4 . The deflator employed was Gayer's index of wholesale prices Gayer, Growth and Fluctuations, vol.1, pp.468-470.
2. Gross national income is from Mitchell, Abstract of Historical Statistics, p.366.

achieved easily.

In general terms four factors produced the startling increase in tax revenue: first, the imposition of completely new taxes; next increases to the rates of existing taxes; thirdly, tax receipts automatically rose with additions to the levels of production and consumption of taxed commodities and services; finally, payments of taxes into the Exchequer rose whenever improvements to the quality of the administration checked deliberate evasion of taxes or in other ways brought more goods and services into the net for assessment. But to describe and appraise the wartime achievement, it is first of all necessary to understand the whole problem of raising taxes at the end of the 18th century.

Several policies were open to a Government seeking more revenue. It could promote the production or consumption of taxable commodities, raise rates of taxes, implement its tax laws more vigorously or introduce new taxes. Of course these options were not understood as independent alternatives, but as possibilities to be finely balanced one against another. Raising rates of taxes could defeat its own object if the higher rate reduced production or consumption of the commodity concerned to a level where total receipts declined. Through complementarities in production and consumption the introduction of new taxes might adversely affect revenue from existing taxes. For example, a high rate of tax on tea reduced receipts from the tax on sugar. Vigorous implementation of the law or increases in tax rates were in general inimical to higher production and consumption of assessed commodities. Thus Chancellors operated within a structure of taxes in order to make existing levies more productive and upon the structure to design new and fruitful objects of taxation. Their range of choice depended upon perceiving the alternatives open to them but was always circumscribed by a variety of political, social and administrative constraints. Unless the constraints are appreciated it is impossible to appraise wartime fiscal policy. In other words the innovations, reforms and achievements of Pitt and his fellow Chancellors after 1793 can only be understood against their historical background.

It is the aim of this chapter to analyse the environment for decision making in the field of taxation policy at the end of the 18th century. I will begin with a discussion of problems related to the introduction and administration of direct taxes upon incomes and property. Part 3 will be concerned with similar problems for indirect taxes upon outlay, but first a digression in order to define terms.

A tax is a share of a citizen's income or wealth appropriated by the

State. The methods employed by Governments to raise taxes can be classified in numerous ways, but the most relevant categories for describing the British tax structure on the eve of the Wars with France are those which demarcate taxes on income from taxes upon outlay and indirect from direct taxes. Taxes on income were levied on the income or wealth of individuals, and income or wealth, as defined by the Government, formed the basis for tax assessment but liability for tax varied from person to person according to his material circumstances. For outlay taxes the objects of taxation were commodities and services and the amount of tax paid by an individual was proportionate to his expenditure upon the taxed goods and services, and not to his income or property. Direct taxes were taxes for which relations between the taxpayer and the revenue authorities were direct; that is the State collected them from definite and specified lists of people for whom individual assessments were made. The essence of the distinction between direct and indirect taxes was, therefore, administrative and concerned with the way taxes were collected.[1] Indirect taxes were collected not from lists of taxpayers but from points in the economy convenient to the revenue authorities leaving producers or merchants to pass on the tax to consumers. Most, but not all, outlay taxes were also indirect taxes. There were a group of taxes levied upon houses, carriages, servants and horses, which can only be defined as outlay taxes, but where relations between the administration and taxpayers was direct and individual assessments were compiled for each citizen paying these taxes, but in general outlay taxes were indirect and income taxes direct.

At the end of the 18th century there were some 1500 taxes upon the statute book. A complete description of the tax structure would be inordinately long and statistically incomplete because figures for the yield of each and every tax are not available, either in published or unpublished form. Many taxes, such as the multiplicity of stamp duties imposed on a wide range of legal transactions, were returned by the departments concerned as consolidated totals, and I could not trace the contribution made by several taxes to the Exchequer. Moreover the majority of taxes provided very little revenue but remained on the statute book for other reasons. Many functioned to protect domestic enterprise from foreign competition. Others served to almost prohibit types of

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1. Hicks, 'The Terminology of Tax Analysis', pp.214-226.

consumption considered socially undesirable. Some formed part of a system of levies designed to prevent consumers from substituting untaxed for taxed commodities. Several no doubt persisted as unrepealed anomalies.

Given the limitations of data and the fact that several published studies have already attempted to provide an inclusive picture of taxes operative at the end of the 18th century, I preferred to concentrate attention on a limited number of taxes which made significant contributions towards the finance of Government expenditure and for which information is available.[1] My analysis of the tax structure will include only a small sample of 34 taxes yielding £100,000 and above to the State, but during the period 1788-92 this group contributed almost 90% of the tax revenue collected by the Government. Unless otherwise stated the generalisations and proportions cited in this chapter will refer to those taxes, listed in tables 7 and 8 below, and not to the tax structure as a whole. Given the nature and importance of my sample the picture presented can, however, be taken as representative of the entire tax structure.

Direct Taxes Levied Upon Incomes and Property

The outstanding difference between the tax structure of 1788-92 and that of more modern times was the small contribution made to total revenue either by taxes upon income or by direct taxes in general. The contribution of this group of taxes depended upon the range of property and income assessed, the rates of taxation applied and the competence of the administration in implementing the law. Each of these factors will be analysed in turn.

Table 7. The Major Direct Taxes on Income and Property, Circa 1792

Tax Upon	Average Yield 1788-92 £000
Land	2037
Windows	769
Carriages	186
Houses	147
Domestic servants	129
Riding horses	120
Total	3388

Notes and Sources: see Appendix 2.

1. Dowell, History of Taxation, 4 vols; Blackader, The Rates and Duties on Excise, 1810 and Mascall, A Digest of the Duties on Customs and Excise, several editions, 1799-1814.

My table shows that direct taxes contributed approximately 21% tax revenue at the end of the 18th century and almost half of total receipts from direct taxes came from land tax. As defined by law the land tax was supposed "to be levied on the full yearly value of lands, tenements and heridatments at a rack rent; and .... on the yearly value of all personal property, this value being calculated at 6%." Parliament clearly intended the Land Tax to be imposed upon the annual value of property of all kinds but in practice the tax was paid almost entirely on land alone and only by accident according to the real annual value of land. Over the 18th century the rate of tax on land varied from one to four shillings per £ of annual value, rising in time of war and falling to its lower limit in peace time.[1]

Direct taxes also included levies upon expenditures upon housing, carriages, servants and pleasure horses where relations between taxpayers and revenue authorities were direct. In a sense this group of taxes are akin to income taxes, because expenditure was employed as an index of income, but since liability varied with expenditure upon the taxed item they are perhaps properly classified as "direct outlay" taxes. For taxes upon dwellings, liability was defined in proportion to the annual value of occupied houses and the number of windows per house. Taxes upon horses, carriages and servants were related almost exclusively to domestic establishments and horses, carriages and servants employed in agriculture, industry and commerce were exempt. All these taxes were assessed on a progressive scale so that tax rates increased with the annual value of the house and its windows and with the number of carriages, servants and pleasure horses retained by a given household. For example, houses with an annual value of £5 to £20 paid tax at 6d in the pound and those with an annual value of £5 to £20 paid tax at 6d in the pound and those with an annual value of £40 a year and above paid 1/-. Houses with 7 windows were assessed at 2d a window, with 25 windows and above at 2/- a window. A citizen was taxed at £8. 16. 0d. a year if he kept a single carriage and at £10. 14. 6d. per carriage if his establishment contained eight carriages.[2]

Although the mode of assessment and structure of rates of direct outlay taxes might look complicated, the intention behind such levies was clearly to tax

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1. Binney, British Public Finance, pp.50-52 and Dowell, History of Taxation, vol.3, pp. 93-97.
2. 1 Comms. of Inland Rev., 1857, Appdxs. 67 and 68; Accounts of Duties, 1830, pp. 30, 34 and 39 and Inland Rev., vol.384, p.35; vol. 385, p.58 and vol.767, p.244.

citizens according to some criteria of ability to pay for which their expenditure upon domestic transport, servants and housing was widely considered a reasonable index.[1] Thus Sir John Sinclair wrote of the house tax: "It is natural to suppose that every individual nearly in proportion to his property would procure for himself the convenience of being well lodged."[2] Direct outlay taxes had many advantages in contemporary eyes. They were considered voluntary in the sense that the citizen was liable only in so far as he chose to spend his money in particular ways. Finally, these taxes had introduced into English public finance the principle of progression, that is a rate of taxation which increased with each marginal increment of expenditure upon houses, servants and domestic transport and in this respect were the antecedents of a progressive income tax.[3] As far as their administration was concerned, the taxing of more or less clearly demarcated and visible objects of upper and middle class property gave rise to less opportunity for evasion than most customs and excise duties.

The Administration of Direct Taxes

In order to obtain revenue from direct taxes the Government was obliged to turn over their administration to local authorities. Two constitutional principles had been enshrined by the Glorious Revolution, first that no taxes could be imposed without the consent of Parliament and further that the assessment and collection of direct taxes should also be controlled by country gentlemen.[4] This latter principle explains the curious and incompetent structure of administration for direct taxes which prevailed on the eve of the Napoleonic Wars and which persisted until the third decade of the 19th century.[5]

Direct tax administration consisted of two parts: the machinery for assessment and machinery for collection. Assessment includes the process of ascertaining the extent to which a taxpayer was liable to contribute to the revenue. Liability for direct taxes was prescribed in general terms by Parliament and during the 18th century this liability was almost invariably defined in relation to property of one kind or another. Property was more easily described

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1. Steuart, An Inquiry, vol.2, 1767, p.519; Fauquier, 'An Essay on Ways and Means', 1756, p.27 and Shehab, Progressive Taxation, pp.10 and 35.
2. Sinclair, History of the Revenue, vol.3, Appdx.1, p.78.
3. Kennedy, English Taxation, pp. 129-130, 134 and 169; Steuart, 'An Inquiry', vol.2, 1767, p.519 and Shehab, Progressive Taxation, pp.29, 30 and 43-44.
4. Morgan, History of Parliamentary Taxation, p.306 and Thompson, A Constitutional History, pp.96-98.
5. Binney, British Public Finance, pp.58-59.

and, more important, less easily concealed than income. It fomed an obvious basis for tax assessment in a society where public administration was undeveloped and where such a marked reluctance to contribute anything to the revenue existed among all classes.

Assessment of precise individual liability for direct taxes was the function of Local Commissioners for Taxes. These Commissioners, nominated by members of Parliament, were responsible for the assessment of one, or more often several direct taxes, within a given area, usually a sub division of a county. Commissioners in turn appointed assessors for each parish in their division whose task was to obtain detailed returns from each householder liable to direct taxation in a given parish. Parish assessors made lists of taxpayers and collected from each householder a personal statement as to the annual value of his land, the number of windows in his house and the number of servants, carriages and pleasure horses etc. he maintained over the past year. If an assessor considered any householder had underdeclared his liability he could amend his statement. Returns were then delivered to the Commissioners for scrutiny. If any taxpayer disagreed with the assessment of the parish assessor he had the right to appeal to the Commissioners. But the Commissioners' word was final and a return signed by them represented legal liability for tax.

With the process of assessment completed, collection began. For this purpose the Commissioners also appointed a tax collector for every parish in their division and presented him with a list of taxpayers showing the amount of tax due from each household. Parish collectors had then to gather taxes within a specified period of time and then hand over the money, together with the names of any defaulters to the Receivers General of their divisions. The latter officials, appointed by the Treasury, had to gather taxes from all parish collectors covered by their area of appointment (usually a part of a county) and to transmit the money to the Exchequer in London.[1]

As set out in law, the formal provisions for administering direct taxes appears to have been adequate enough. Furthermore, they had certain advantages; not least being the measure of cooperation secured from country gentlemen in imposing direct taxes upon their property. Without allowing them to control

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1. A full description of the machinery for the assessment and allocation of direct taxes was included as part of the statutes which imposed the taxes - see 25 G.3.c.47, 29 G.3.c.49, 43 G.3.c.99 and C.161; Ward, Land Tax, pp. 4, 7, 12, 36 and 39; Binney, British Public Finance, pp.53-54 and 67 and Cttee. on Land and Assessed Taxes, 1821, pp.7-10, 19, 34 and 170-177.

the assessment and collection of direct taxes, it seems doubtful if such levies could have been imposed at all.[1] Voluntary organisations had, in addition, the great merit in contemporary eyes of being cheap.[2] While it was cheap in relation to the cost of collecting customs and excise (managed by professional organisations) those who administered direct taxes were, however, remunerated. Commissioners were paid sufficient to cover their expenses and for any clerical assistance they may have required. Parish assessors and collectors received a penny per pound of revenue obtained. Receivers were also paid according to the amount of revenue received.[3] Payment for the assessment and collection of taxes was never intended to be lucrative, but simply sufficient to cover out-of-pocket expenses for Commissioners and to provide a reasonable incentive towards efficiency among parish officials and Divisional Receivers.

Yet neither Parish officials nor Receivers considered themselves sufficiently well paid for their trouble and Parish assessors and collectors were by no means prized jobs. Usually these offices passed by rote and on occasions Commissioners had to compel reluctant citizens to accept the task.[4] As for Receivers, over the 18th century they supplemented their salaries by lending out public money entrusted to their care at interest. Their failure to transmit taxes promptly into the Exchequer was a definite cost to the public, because the Government had to borrow short term to meet day to day expenditure.[5] If proper account had been taken of the interest paid on Exchequer bills, the Select Committee of 1797 would have had less reason to congratulate the direct tax administration for its low costs of collection. Moreover, allowing Receivers to retain balances in their hands for any length of time involved a risk to the revenue and losses frequently occurred when Receivers went bankrupt.[6]

Tardiness by Receivers General in paying direct taxes into the Exchequer was one of the most frequently investigated problems of 18th century fiscal administration. Receivers were, however, not entirely to blame for the time it took for revenue to arrive in London. Gathering taxes from the parishes was a

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1. Binney, British Public Finance, p.59.
2. 8 Cttee. on Finance, 1797, pp.224-225 and 23 Cttee. on Finance, 1798, Appdx.E2
3. Ward, Land Tax, p.141; 8 Cttee. on Finance, 1797, p.225 and Appdxs. 9 and A16; Exch. - E/182/1360 and Treasy. - T.22/10 and T1/902/1729 and Inland Rev. - Vol. 384, pp. 193 and 209.
4. Treasy. - T1/1399/8401.
5. Ward, Land Tax, p.49; Cttee. on Public Accounts, 1780, p.75 and 8 Cttee. on Finance, 1797, Appdx. E.5. and see pp. 38-39.
6. Cttee. on Income and Expenditure, 1786, p.148; Ward, Land Tax, pp.49 and 101; Inland Rev. - Vol.384, pp.52, 63 and 68 and Treasy. - T1/769/2938 and T1/574/744.

protracted task particularly in the more remote parts of the country.[1] Delays often occurred through the refusal of citizens to pay promptly or the negligence of collectors to gather the revenue within the stipulated time. Sometimes collectors absconded with public money and their parish, (held legally responsible for any dishonesty in their officials) had to be reassessed.[2] Bills of Exchange payable in the capital were not always easy to obtain; although the shortage of bills became less of a difficulty with the spread of country banks later in the century.[3] Finally, Receivers had to retain some public money in their hands to pay the salaries of the local militia and bounties for the export of certain commodities, payments devolved on them by Parliament.[4]

Regulations were promulgated defining the time allowed for payment of taxes into the Exchequer and limits set to the amount of public money a Receiver was allowed to retain at any moment of time. Yet throughout the century they continued to lend public revenue for personal profit and there seems to have been very little the Government could do, except to encourage the Board of Taxes in London to harry tardy Receivers. This the Board did but with uneven degrees of vigour; occasionally threatening, but more often just urging Receivers to remit more rapidly, and all the time hampered by their inadequate powers over the machinery for collection.[5] Although Receivers were appointed by the Treasury they were usually aristocratic nominees, acceptable to the country gentlemen of their division, and as men of status they were not easily intimidated by promptings from Whitehall.[6]

Under Pitt's Chancellorship, the size and quality of staff at the Board of Taxes improved, and harrying Receivers became more vigorous, but the balance of public money retained by Receivers at any one time between 1780 and 1798 showed little tendency to decline. With the vastly increased amount of direct taxes collected in the counties, the ratio of the outstanding balance to total revenue did, however, fall sharply.[7] Given the character of the administration there was, moreover, a point beyond which it was not prudent to go because, as

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1. Particularly in the West Country and Scotland - Cttee. on Public Accounts, 1780, p.77 and 8 Cttee. on Finance, 1797, pp.223-225 and Appdx. ..16.
2. Ibid, Appdx. A.12 and Treasy. - T1/902/2081, T1/8593/2423, T1/1411/8519, T1/1254/6407 and T1/1328/8409.
3. Cttee. on Public Accounts, 1780, pp.70 and 79; Ward, Land Tax, pp.47-48; 8 Cttee. on Finance, 1797, p.224 and Pressnell, Country Banking, pp.56-57.
4. Cttee. on Public Accounts, 1780, p.74 and 8 Cttee. on Finance, 1797, p.224.
5. Ward, Land Tax, pp.55, 60-61, 87, 92, 103, 107, 114, 117, 127 and 138; Inland Rev. - vol.384, pp.13, 24, 42, and 93-96; Cttee. on Public Accounts, 1780, p.77.
6. Ward, Land Tax, pp.42, 49, 51, 60, 109 and 152.
7. 8 Cttee. on Finance, 1797, pp.223-224 and Appdx.A6; Ward, Land Tax, pp. 139, 146, 148 and 149 and Inland Rev.,vol.384, p.2 and vol.385, pp.2 and 239.

Parliamentary Committees pointed out, if Receivers were deprived of the privilege of retaining any public money the office would have become less attractive to men of the appropriate calibre and the entire efficiency and honesty of tax collection might decline still further.[1]

Central authority over the assessment of direct taxes was even weaker than over their collection. Absence of Government control appears most clearly in the assessment of the land tax, by far the most important of direct taxes. The land tax was the outcome of a series of attempts during the Interregnum and Restoration to impose a direct tax based upon some conception of a citizen's ability to pay. Under the Monthly Assessments of 1649 to 1654, the subsidy of 1670 and the General Aids to William III, Parliament tried and failed to tax income according to some clearly defined and equitable criteria. Wealth of every kind thus came to be the index of ability to contribute to revenue, but the regular assessment of the current value of property also proved to be beyond the capacity or will of Local Commissioners for Taxes. Legislative intentions were nullified by their inefficiency, or more often their obstruction.[2] Liability soon became stereotyped at an historical figure which very soon ceased to bear anything but a slight relation to current value. At the end of the 17th century, Parliament recognised the futility of defining and trying to impose criteria for assessment and simply fixed a quota which had to be contributed annually from a levy on property in every locality.[3]

Quotas for each country or town were determined according to the amount contributed by the area to the Aid, granted in 1692 for the war against France. This Aid instructed local commissioners to levy a tax of 4/- in the pound on the annual value of all real estate (annual value to be calculated at rack rent); upon income from other property (assumed to equal 6% of the current capital value of the property) and on stipends from certain public offices. After 1698, Parliament continued to pass laws imposing the same annual levy on all property. Assessment of individual liability was, however, left to Local Commissioners, without any kind of interference from the Treasury. Parliament

1. 23 Cttee. on Finance, 1798, Appdx.E.5.
2. Ward, Land Tax, pp.2-3 and Sinclair, History of the Revenue, 1802, vol.2, p.8. and Kennedy, British Taxation, pp.38-44.
3. Brand, Alteration of the Constitution, 1793, pp.7-9.

merely insisted that each locality contributed a predetermined sum to revenue based upon its contribution at the original assessment of 1692. The sum paid varied with the rate of tax imposed by the Commons, but whatever the rate the relative contribution of each locality remained static throughout the 18th century.[1]

Even if the original assessment of 1692 was tolerably accurate with the passage of time, property values in some localities increased faster than others and for some areas values declined. Imposing fixed quotas thus lead to unequal incidence as between different parts of the kingdom. Apparently the north and west escapted the full burden of tax, while the Home Counties paid more than their "fair" share.[2]

Within a county or division the efficiency and equity of assessment depended on the diligence and honesty of Parish Assessors and the vigilance of Local Commissioners. Methods of assessment varied considerably from place to place, but complaints about unequal incidence were numerous enough to discredit the land tax as an instrument for taxing people according to their ability to pay. Property other than land seems to have largely escaped. Despite the intentions of Parliament the tax became in practice, as well as in name, a land tax.[3] Commissioners often found it difficult to disagree with their betters and landed magnates used their influence to avoid paying their correct share of the tax. Any individual exemption or reduction in tax had to be balanced by increases elsewhere, but adjustments, particularly those between parishes, normally met with strong local resistance. Unless reasons for change were compelling, assessments tended to remain stationary and thus over time the tax became more and more unequal in its incidence.[4]

Administration of the direct outlay taxes was, on the whole, somewhat less haphazard and more equitable than the land tax, partly because of the nature of these taxes and also because some measure of central control had been introduced into their assessment. Annual values for all houses were already recorded for purposes of local rates. Since rates were collected and disbursed at the parish level each parishioner had an interest in the regular and

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1. Ward, Land Tax, pp.1-2 and Chisholm Rept., 1868-69, p.419.
2. Ward, Land Tax, pp.7 and 22; Steuart, An Inquiry, vol.2, 1767, pp.561-562; Smith, Wealth of Nations, 1776, p.780 and Brand, Alteration of the Constitution, 1793, pp.5-8.
3. Ward, Land Tax, pp.7, 19, 22, 39 and 87-88; Smith, Wealth of Nations, 1776, p.801; Mortimer, Lectures etc., 1801, p.439 and Adams, 1796, 'A Plan', pp. 22, 27 and 30.
4. Exch. - E/182/1360 and Treasy. - T1/763/1164.

efficient assessment of his liability and in the contribution of his neighbours. Property valuation, based on parish records, for the inhabited house tax was, therefore, tolerably accurate.[1] Taxes upon domestic servants, carriages and pleasure horses were also based upon clearly demarcated and visible objects of consumption. Nevertheless, they gave rise to a number of problems concerned mainly with legal definitions and exemptions. Parliament excluded poorer people from paying taxes on their dwellings and windows, by exempting all those not liable to pay poor rates and also by confining the operation of the tax to houses with an annual value of over £5 and with more than 7 windows.[2] Householders on the margin of this category usually made strenuous efforts to have their dwellings exempted and flooded the Commissioners for Taxes with Appeals against their assessments or proved very obdurate in paying the tax.[3]

Over time the law became more precise and careful in defining the tax base so that the intensions of Parliament were not thwarted. Thus it called skylights windows and prohibited the blocking and unblocking of windows. Windows extensive enough to give light to more than two rooms were counted as two windows for tax purposes. Houses were more carefully distinguished from places of work, domestic servants from other employees, carriages from carts and pleasure horses from beasts which pulled the plough.[4] The work of administering direct taxes on outlay was concerned with discovering those liable and the precise extent of their liability. Most appeals against assessment were concerned with definitions of carriages, domestic servants or pleasure horses, within the meaning of the act.[5] Problems of this kind were a normal and continuing part of 18th century direct tax administration and in any case proved much less intractable than attempts to define and assess income under the land tax.

Furthermore, the element of central control through Surveyors, which the Treasury had introduced into their assessment made them productive and more or less equitable sources of revenue. Surveyors were full time officials appointed and paid by the Treasury to assist Commissioners for Taxes with the

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1. Treasy. - TI/1240/3551.
2. 19 G.3. c.59. and 24 G.3. c.59.
3. Treasy. - T92/123.
4. 6 G.3.c.38, 19 G.3.c.59, 24 G.3.c.31, 24 G.3.c.38, 25 G.3.c.43 and 29 G.3.c.49, 1 Comms. of Inland Rev., 1857, Appdxs. 67-69 and Accounts of Duties, 1830, pp. 30, 34 and 39.
5. Anon, 'Abstract of Cases and Decisions Relating to the Tax on Servants', 1781 and Treasy. - TI/812/3749 and TI/1404/9510.

work of assessment in the localities. They were first appointed to help with the window tax of 1696. For much of the 18th century they had not performed their duties very competently, but when additions were made to the rate and range of assessed taxes during and after the American War, the Board of Taxes began to exercise some of its still inadequate powers over the assessment of taxes placed under its jurisdiction.[1] Thus care seems to have been taken in appointing Surveyors. More attention was paid to the age, education and character of applicants for the post, and at the same time their pay and prospects were improved. In addition to his salary of £90 a year, a Surveyor became entitled to 5% of all surcharges he made on citizens attempting to evade their liability. From time to time Surveyors received a bonus from the Board of Taxes for increasing the yield of taxes in their localities.[2] From the ranks of the more assiduous Surveyors, Inspectors were recruited. Inspectors formed a group of over-Surveyors sent by the Board to report on the efficiency of assessment in the counties and to suggest improvements. They checked upon the diligence of Surveyors and the efficiency of Commissioners in carrying out their administrative duties.[3]

With additional responsibility, financial incentives and closer scrutiny from Whitehall, Surveyors began to play a part in tax assessment which passed beyond assistance to the Commissioners. Thus when Parish Assessors neglected their duties, assessment was accomplished by Surveyors. They could undertake independent surveys to ascertain the current value of houses in their area and for this purpose all parish records were opened to them. Where necessary they amended the assessments delivered to Commissioners by Parish Assessors and were present at all appeals to the Commissioners. Surveyors also harried Parish collectors to pay over arrears of taxes to Receivers' General, and submitted reports to the Board on the balance in the hands of Receivers.[4]

There are numerous indications that during and after the American War the Government attempted to assert more control over the assessment and collection of direct taxes but the net results of this effort should not be

1. Ward, 'Administration of Window Taxes', pp.528 and 533; Ward, Land Tax, pp. 139,140,149 and 156 and 8 Cttee. on Finance, 1797, Appdx. A.6.
2. Ibid; Treasy. - T29/218 and T22/10 and TI/1323/7144; Exch. - E/82/1360 and Inland Rev., vol.384, pp.15 and 25 and vol.385, pp.2 and 15.
3. Cttee. on Land and Assessed Taxes, 1821, pp. 34 and 167; 8 Cttee. on Finance, 1797, p.227; Ward, Administration of Window Taxes, p.539 and Treasy. - TI/1323/7144, TI/961/448 and TI/1252/6188.
4. 18 G.3.c.26, 24 G.3.c.38, 25 G.3.c.47 and 28 G.3.c.49; Treasy. - TI/961/448, TI/1240/3551, TI/1254/6407 and Cttee. on Land and Assessed Taxes, 1821, pp. 20 and 151.

exaggerated. As far as assessment was concerned, the land tax remained unaffected by Treasury activity. No attempts were made to reform it, despite the widespread knowledge of its inequity and frequent suggestion for a revaluation of land.[1] Instead the Treasury's effort appears to have been concentrated on just four taxes, levied on dwellings, horses, servants and carriages and which contributed only a minor share of the revenue from direct taxes. Even in relation to these taxes the extent of improvement remains problematical. No doubt the efficiency of Surveyors was raised here and there, but while the machinery for the assessment of direct taxes remained in the hands of country gentlemen, whatever Whitehall might do to prod them towards more diligent application to the interests of the Exchequer, yields from direct taxes undoubtedly fell well below optimal levels.[2]

The contribution from direct taxes to the revenue might have been considerably increased if their range had been extended to include a tax upon income. On several occasions during the late 18th century suggestions had been made for such a tax but Parliament and public opinion were in general decidedly opposed.[3] One of the most frequent and pertinent objections advanced against an income tax was that it was not administratively feasible and the intentions of Parliament would be nullified by the kind of unequal assessment which characterised the land tax. Because the land tax was inequitable it was concluded that other attempts to tax incomes equitably would also fail.[4] At the same time the idea that the amateur and incompetent administration for direct taxes should be drastically reformed and replaced by professional civil servants with the ability to implement the intentions of Parliament remained repugnant to all sections of the ruling class. Resistance to any increases of central power had become a political tradition and no doubt the arbitrary nature of centrally administered income taxes in France strengthened the resolve of country gentlemen to maintain control over the machinery for the assessment and collection of direct taxes.[5]

Furthermore, several arguments of principle supported the administrative

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1. Brand, Alteration of the Constitution, 1793, pp.23-51.
2. On the Scottish system where Surveyors had greater powers see Cttee. on Collection of Taxes in Scotland, 1810, pp.513-517 and Pitt Papers, vol.317.
3. Norris, Shelburne, p.282; Shehab, Progressive Taxation, pp.38-39; Kennedy, English Taxation, p.124 and Anon, 'Letters on Taxation', 1780, p.3.
4. Sinclair, History of the Revenue, 1802, vol.2, p.18 and vol.3, Appdx.1, pp. 57 and 79; Kennedy, English Taxation, p.169 and Shehab, Progressive Taxation, p.32.
5. Norris, Shelburne, pp.110 and 200-201.

objections to an income tax. Ostensibly such views should have met with less ready acceptance because general opinion in the latter part of the 18th century subscribed to the precept that taxes ought to be imposed upon citizens in accordance with their ability to contribute to the needs of the State. Taxes were regarded as payments for State protection and since the rich had more to protect than the poor they were supposed to pay more taxes. As a corollary, 18th century opinion favoured exempting the poor from taxation as far as possible and taxes which fell upon their necessities were regarded with antipathy and required special defence in Parliament when introduced or increased by the Chancellors of the Exchequer.[1] Both these cannons of taxation seem to point logically to the need for a tax upon income, but this obvious corollary was not drawn during the 18th century because of the administrative objections already outlined and the widespread view that expenditure, rather than income formed a better criteria of ability to pay taxes. Expenditure taxes had the merit in contemporary eyes of being voluntary, in the sense that every citizen retained the option to consume as much of the taxed commodity as he wished and his circumstances permitted.[2] Arthur Young expressed a popular view when he wrote "taxes on consumption are the fairest, the most equal and the least burthensome of all others; every class of the people; every individual in the nation bears his share and that a voluntary share because if he forbears consuming he bears no tax."[3]

Finally, economic arguments against reform of the Land Tax or the introduction of an income tax was forcibly expressed by some of the ablest minds of the age who maintained that to tax interest or profits would hinder capital accumulation and thus adversely affect national prosperity.[4] Adam Smith added that capital would migrate in face of an income tax.[5] Commercial and industrial interests were, however, by no means adverse to a reassessment of the tax on land so as to make it more equitable and productive.[6] But landowners and their

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1. Shehab, Progressive Taxation, pp.10-14 and 16; Kennedy, English Taxation, pp. 104, 108, 111, 121, 143 and 148; Smith, Wealth of Nations, 1776, pp. 777 and 822-825; Kames, Sketch of the History of Man, 1774, pp.465, 470, 476, 478 and 484; Mortimer, The Elements of Commerce, 1801, pp.442 and 445 and Steuart, An Inquiry, vol.2, 1767, pp.520.
2. Seligman, Shifting Incidence, pp.20-24; Kennedy, English Taxation, pp.75, 128, 130 and 169; Kames, Sketch of the History of Man, 1774, p.469.
3. Young, Political Arithmetic, 1774, p.214.
4. Kennedy, English Taxation, pp.125-126.
5. Smith, Wealth of Nations, 1776, p.800.
6. Brand, Alteration of the Constitution, 1793, pp.39, 41, 45-46 and 51; Anon, A Serious Address, 1784, pp. 19-21 and Mortimer, Elements of Commerce, 1801, pp. 444.

supporters claimed that reform would be unjust to those who had recently acquired estates because the purchase price of land had been computed in relation to a fixed charge for the Land Tax.[1] Their more serious objection was that higher taxes upon land would "hinder improvement" or in modern parlance, reduce the rate of investment in agriculture.[2] This was clearly a counterpart of the case against taxing profits and thus at the close of the 18th century, both the landed and industrial interests were united behind strongly held arguments against refunding the Land Tax or the imposition of an income tax.

Indirect Taxes Upon Outlay

During and after the American War of Independence, Chancellors of the Exchequer had to devise ways of financing public expenditure with a limited range of direct taxes at their disposal and without aid from an income tax. But looking over the range of levies upon expenditure then available to them it might appear as if indirect taxes were more than sufficient for their purposes. Such "taxes" as Sydney Smith wrote in 1820, "were upon every article which enters into the mouth or covers the back, or is placed under the foot, taxes upon everything which is pleasant to see, hear, feel, smell or taste, taxes upon warmth, light and locomotion, taxes upon everything on the earth and waters under the earth, on everything which comes from abroad or is grown at home."[3] Even a glance at taxation statutes will vindicate Smith from the charge of hyperbole, but as the following table shows, the bulk of revenue emanated from a mere 27 taxes which produced amounts of £100,000 per annum and above for the Exchequer. I propose to confine my attention to this sample and to ignore the majority of indirect taxes.[4]

Indirect taxes accounted for 81% of total revenue collected from taxes over the years 1788-92 and the range of levies on outlay reflected the kinds of goods and services which made up the national output at that time. The amount of revenue collected from each tax was directly linked to the consumption and production of the commodity concerned. Given the rate of tax at higher

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1. Brand, Alteration of the Constitution, 1793, pp.20-23.
2. Young, Political Arithmetic, 1774, pp.7-8 and 225; Smith, Wealth of Nations, 1776, pp. 783-784; Steuart, An Inquiry, vol.2, 1767, p.518 and Kames, A Sketch of the History of Man, 1774, p.467.
3. Cited by Buxton, Finance and Politics, vol.1, p.19.
4. Details of taxes omitted can be found in Dowell, History of Taxation and Parliamentary Papers.

levels of production and consumption, revenue automatically increased. Thus anything which raised the level of demand or supply for taxed commodities and services also raised public income. On the demand side relative prices, incomes and tastes all affected the levels and patterns of expenditures by households. Furthermore, the Government itself influenced the volume of goods and services taxed indirectly through the effects of public expenditure and economic policy on the overall level of national expenditure and indirectly through the purchases by the military and other departments of state from the private sector.

On the side of supply anything which affected the prices at which producers offered their goods and services for sale influenced public revenue. Thus factor prices, the prices of raw materials and other inputs used by industry and agriculture, techniques of production, economies of scale, transport and distributive charges all helped to determine receipts from particular taxes.

Finally the rates of tax imposed on different commodities and services also influenced the relative contribution of each tax to the Exchequer. At higher rates of tax the volume taxed for most commodities usually fell as households consumed less and also because they bought untaxed or more lightly taxed substitutes. Good examples of the links between taxes can be found among the group of levies on alcoholic drinks. When the Chancellor raised the duties on brandy the volume imported fell but the Exchequer gained additional revenue from the increased imports of rum. When he raised the excise on beer demand for malt, its principal ingredient, usually declined. Thus at any point of time the revenue obtained from any given tax depended to some extent at least upon the rates of tax levied upon products which either competed or were complementary to it.

With these general considerations in mind we are now in a position to describe the major taxes on outlay available to the Government and to analyse the main factors which determined their yield just prior to the wars with France. In order to condense a large amount of information and to facilitate its comprehension the taxes in the following table have been classified into several groups in terms of their incidence. Taxes are here defined as falling upon the food, heat, light, shelter, clothing, cleaning materials and pleasures of the population and each group will be considered in turn.

Table 8 . The Major Indirect Taxes on Outlay, circa 1792.

Tax	Average Annual Yield 1788-92 £ 000	Type of Tax	Estimated Rate Ad Valorem
Beer	1968	Excise	20% (strong beer)
Malt	1838	"	16%
Sugar	999	Customs Duty	34% (muscovado)
Foreign Spirits	990	"	60% (rum)
Wine	739	"	27% (sherry)
Domestic Spirits	654	Excise	-
Coal	651	"	21% (sold in London)
Tobacco	607	Customs Duty	83%
Tea	583	"	12½%
Salt	425	Excise	70%
Soap	399	"	-
Candles	318	"	9%
Hides and Skins	257	"	-
Printed Cloth	226	"	-
Timber	225	Customs Duty	15%
Silk	224	"	13% (raw Bengal)
Indian Cloth	195	"	13% (Muslin)
Glass	181	Excise	-
Newspapers	150	Stamp	55% (Times)
Fire Insurance	147	"	16%
Iron Bars	133	Customs Duty	-
Post horses	131	Farmed	-
Hops	121	Excise	16%
Bricks	109	"	8½%
Linens	108	Customs Duty	-
Bills of Exchange	105	Stamp	-
Starch	102	Excise	-
Total:	12,585		

Notes and Sources: The methodology and sources used in the construction of this table have been described in appendix. 2. Where no estimate is given for the ad valorem rate of tax, this means I have been unable to find the required price data.

Taxes on foodstuffs included tea, sugar and salt. On tea and sugar the levies fell upon imported Imperial produce and the tax on tea represents one of the few examples of ad valorem taxes on the statute book in 1792. For tea the revenue administration found it possible to cope with the problem of valuation because only the East India Company could legally import tea and its sale in London was regulated by the Government. Two departments, the Customs and Excise, collected duties on tea, a device designed to check smuggling.[1] The Excise conducted regular surveys of licenced tea dealers in order to prevent the sale of smuggled tea through normal channels of distribution.[2]

Sugar duties were entirely collected by Officers of the Customs. As a bulky heavy commodity sugar could not easily be smuggled. Only semi-raw or muscovade sugar would be imported into Britain and West Indian sugar, which enjoyed an advantage over sugar imported by the East India Company from Bengal, provided British refiners with about 95% of their raw material.[3] Before and particularly during the war years the relative height of the tariff on sugar from different parts of the Empire remained a source of contention between the East and West Indian interests, each contending to win concessions from the Chancellor at the expense of the other.[4]

Although levied by the Commissioners for Salt the duties on salt were an example of an excise and after 1798 their assessment was in fact transferred to the Commissioners for Excise. Salt exported, used to cure fish, delivered to the manufacturers of glass or the bleaching section of the textile industry paid no tax and duties imposed on Scottish salt were below those levied in England and Wales.[5]

By the late 18th century all three foodstuffs were widely consumed. Although contemporaries disputed as to whether tea and sugar qualified as "necessities" they almost invariably agreed that salt was and frequently deplored a tax which burdened the poor.[6] Factors which determined the level

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1. Rept. on U.K. Tariff, 1898, pp. 199-200 and Excise, vol. 11894.
2. 1 Comms. on Excise, 1833, p.425.
3. Rept. on U.K. Tariff, 1898, pp.209 and 215 and Customs, vol. 10901.
4. Anon, 'The Right of the West India Merchants to a Monopoly', 1793, pp.1-10 and 28-29 and Macauley, 'East and West India Sugar', 1823 and Anon, 'Strictures Upon British Commerce with the East Indies', 1792.
5. Excise, vol. 11894 and Pitt Papers, vol.292.
6. MacArthur, Political Facts, 1801, p.76; Bernard, 'Case of Salt Duties', 1817, pp.8-10, 22 and 108; McDonald, 'Manufacture of Salt Explained', 1785, p.33; Parly.Hist., vol.32, p.1260; Pitt Papers, vol.294 - Fordyce, dd..13.12.84 and Thompson, 'Commutation Act', 1786, pp.11 and 26.

and changes in the amount of sugar, tea and salt subjected to tax included their prices, the prices of substitutes and complementary products, the range of uses for the commodities, incomes, tastes and the quantities of salt, sugar and tea which evaded the payment of tax.

Prices charged by producers of salt depended on the costs of production in the salt mines of Cheshire and the costs of distilling salt from sea water at various plants located around the coastline. By 1817 at least the raising and crushing of salt had mechanised.[1] But according to the Committee of 1801 the most significant cost element in the price of salt consisted of charges for fuel.[2] With the construction of canals, prices of coal to salt refiners may have fallen and the new canals probably lowered its distribution costs inland. From all accounts by far the most important element in the market price of salt consisted of the excise itself, which amounted to about 70% ad valorem.[3] With the rate at this level it is not surprising to find that evasion of salt duties was widespread and one account, written in 1817, asserted that only a third of the consumption of England and Wales actually paid duty.[4] Apparently exemptions granted under the law for salt used to cure fish and the drawbacks allowed on salt exports gave illegal traders good opportunities to defraud the revenue.[5]

Demand for salt came mainly from households, partly to season food but mainly to preserve fish, meat, dairy produce and vegetables at a time when other food preservatives were virtually unknown.[6] Industrial demand, although less important, came from bleaching, tanning hides, the manufacture of glass, soap, mineral alkalis and sal amoniac. If duties had been lower industrial demand might have been extended quite considerably but the Government could not resist raising the rate of tax to an inordinately high level on a commodity with, presumably, a highly inelastic demand.[7]

Although substitutes were not available households evidently found it far less difficult to refrain from the consumption of sugar than they did from salt. Demand for sugar may have been income and price elastic. By the late

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1. Cttee. on the Use of Rock Salt in Fisheries, 1817, pp.142-143 and 145-146.
2. Cttee. on Salt, 1801, p.509.
3. Vansittart Papers, vol. 31229 - Beeke, dd. 8.7.18 and Parkes, 'Thoughts on Salt Laws', 1817, p.117.
4. Bernard, 'Case of Salt Duties', 1817, p.28 and Pitt Papers, vol.292.
5. Cttee. on Salt, 1801, pp.507-508 and 512; Bernard 'Case of Salt Duties', 1817, pp. 28 and 50-60 and Cttee. on Rock Salt, 1817, p.141.
6. Bernard, 'On The Supply of Subsistence', 1817, p.58 and 'Case of Salt Duties', 1817, p. 110.
7. Parkes, 'Thoughts on Salt Laws', 1817, pp.6, 11, 22, 42, 43, 127 and 131.

18th century the taste for sugar appears to have reached all classes of the population and demand for sugar grew with the demand for beverages like tea, coffee and cocoa.[1] Perhaps sensibly, but no doubt partly in deference to the strong and articulate pressure from the West India interest in Parliament, the Government refrained from raising the import duty to a multiple of the price of sugar (c.i.f.) Just before the war the ad valorem rate on sugar amounted to about a third of its wholesale price in London. Sugar prices to British refiners and the volume of sugar taxed depended mainly upon the cost of cultivation in the West Indies, freight rates across the Atlantic and the opportunities open to planters to dispose of their crop outside the metropolitan market.

There seems to be no evidence that costs of cultivating sugar in the British West Indies were declining at the end of the 18th century. On the contrary, the testimony of planters and merchants suggest they may well have been rising.[2] Nor is there anything to indicate that technical progress or other factors may have caused a secular decline in the freight rates charged by the British mercantile marine.[3]

Imperial regulations compelled planters to use British ships and also forbade them to refine sugar in the West Indies, but they could distil rum there and, as the quantities of sugar converted locally into rum increased, the sales of Muscovado sugar to British refineries declined and forced up prices of sugar in the metropolitan market. But the amount of sugar converted into rum also depended mainly on the sales of the colonial spirit in the British market. As an Imperial product rum enjoyed tariff advantages over foreign rivals such as brandy, and geneva but stood at a disadvantage compared with substitutes manufactured in Britain, like whisky.[4] If consumers acquired a taste for rum or its price fell relative to foreign and domestic substitutes the revenue from sugar would be affected, but at the same time the Government would gain income from taxes on rum. In so far as the West Indies exported rum to other markets, such as the United States, the British Treasury failed to gain anything from additional production of colonial sugar.[5]

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1. Rept. on U.K. Tariff, 1898, pp.209 and 221 and Ilesley, 'A Statement of the Facts', 1810, p.84.
2. Anon, 'Remarks on the Sugar Bill', 1792, p.15 and see their evidence to Cttee. on Distillation of Sugar and Molasses, 1808.
3. Macauley, 'East and West India Sugar', 1823, p.5; Ilesley, 'A Statement of the Facts', 1810, pp.77, 85; Cttee. on Distillery, 1808, p.256 and Ragatz, Fall of the Planter Class, p.310.
4. Accounts and Papers, 1830, pp.942 and Rept. on U.K. Tariff, 1898, pp.160-162.
5. Anon, 'Considerations Against Duty on Sugar', 1744, pp.23-24 and Ragatz, Fall of the Planter Class, pp.180-181.

It seems, however, that the level of European demand for sugar constituted the most important influence on its price in London and the quantities imported. As the overall level of European demand rose with rising incomes on the Continent, or if alternative sources of supply failed to satisfy European demand, the prices of Imperial sugar on world markets rose and merchants found it more profitable to sell both raw and refined sugar outside Britain. Domestic prices then moved into line with international prices and receipts at the Exchequer declined with the fall in domestic expenditure on sugar. Whenever European demand could be satisfied with sugar imported from sources outside the British Empire the metropolitan market then absorbed a greater share of the supply of sugar produced in the colonies and the Government gained revenue.[1] For example, just before the outbreak of war with France the devastation of plantations on San Domingo, by far the largest and most efficient sugar producing island in the Carribean, stimulated the sales of Imperial sugar to Europe and raised prices in the British market.[2] Consumers, refiners and other groups with interests opposed to the planters protested to the Government about the height of sugar prices and Pitt reacted by lowering the drawback allowed on exports of colonial sugar and adjusting the bounty granted on the export of refined sugar to bring it into line with the price of sugar in the home market. His policy discouraged the export of sugar to Europe and increased receipts from the tax.[3]

At the end of the 18th century tea seems to have been well on the way towards becoming the national beverage. Demand for tea increased with the rise in income but also depended on the prices of substitutes, particularly beer and coffee and complementary products like sugar.[4] Since the average wholesale price of tea sold in London by the East India Company did not display any upwards trend during a period of general price inflation from 1793 to 1815 we can assume either that the prices paid by the Company in India and China declined, that freight rates fell, or that the Government fixed the price at a level which reduced the Company's profits on tea.[5] Freight rates do not appear to have fallen at this time and the Government fixed tea prices in order to

1. Anon, 'Remarks on New Sugar Bill', 1792, p.4; Anon, 'A Hint to Supply Resources for War', 1793, p.5; Macauley, East and West India Sugar', 1823, Appdx.1, pp. 114-119; Cttee. on Distillation of Sugar and Molasses, 1808, pp.166-168 and Cttee. on Trade with West Indies, 1808, pp.252 and 262.
2. Anon, 'Remarks on the Sugar Bill', 1792, pp.20-22 and Ragatz, Fall of the Planter Class, p.205.
3. Pitt Papers, vol.292 - letters on memos to Pitt from sugar merchants and refiners, 1791-92; Anon, 'Remarks on New Sugar Bill', 1792, pp.5 and 9; Anon, 'A Hint to Supply Resources for War', 1793, pp.11 & 14-15; Parly.Hist., vol. 32, p.564 and Ragatz, Fall of the Planter Class, p.207-208.
4. McArthur, Political Facts, 1801, p.38; Martin, State of Tea Trade, pp.18-20 and Parly.Hist., vol.32, p.1259.
5. Rept. on U.K. Tariff, 1898, pp. 199-200.

allow the Company to make a profit of one penny a pound above costs (c.i.f.).[1] It looks as if tea prices paid by the Company were in decline in the late 18th century, a trend which certainly stimulated demand and benefitted the British Exchequer. With fixed prices in the home market and a relatively small European demand tea prices appear not to have been affected as much as sugar prices by conditions in the international market.[2] Furthermore, at the outbreak of war the ad valorem tax on tea of 12½% hardly affected the general level of demand. Pitt's Commutation Act of 1784 had cut the rate from 112% and successfully checked the smuggling of tea, and at this relatively low rate tea enjoyed a small tax advantage over beer, a rival drink, and a considerable advantage over coffee, a close substitute.[3]

The Government taxed heat and light in the form of coal and candles. Unlike other excises imposed upon British products the tax on coal was collected by the department of Customs and levied upon only a part of total production, namely on coal carried coastwise into ports in England and Wales and coal exported.[4] Despite Parliament's antipathy to partial taxes the format of the coal tax had persisted for over a century, mainly because of the administrative difficulties involved in the taxation of a multiplicity of mines often scattered in remote parts of the kingdom but also because mine owners and their supporters in Parliament successfully frustrated an attempt in 1784 to introduce a tax on coal at the pithead.[5]

The Exchequer lost a considerable income from Pitt's failure to extend the tax to include all production because just prior to the war probably not more than a third of total output was transported by sea. Between 1788-92 the Exchequer received annually £103,000 for coal exported, £353,000 for coal carried into London and £194,000 for coal transhipped to other ports.[6] Moreover, since coal transported inland by canal, river and road escaped the tax, industries such as iron, cotton and woollen textiles, pottery and mettallurgy located on or near coalfields did not contribute to the tax on fuel. The

1. Rept. on U.K. Tariff, 1898, p.199.
2. Martin, State of Tea Trade, p.34.
3. Dowell, History of Taxation, vol.4, p.241; McCulloch, Commercial Dictionary, p.1141; Pitt Papers, vol.274 and Accounts and Papers, 1830, pp.21-22.
4. Customs, vol.10901 and Accounts and Papers, 1830, p. 4.
5. Stanhope, Life of Pitt, vol.1, pp.221-222; Pitt Papers, vol.301 memos on coal trade and Hardie, 'Taxation of Coal', 1793, p.2.
6. Customs, vol.10901.

contemporary view that the coal tax fell largely on consumers in the metropolis seems to have been substantially correct.[1]

In London resided many of the wealthy families in the country whose demand for fuel was not likely to be highly responsive to changes in its price. Moreover as a household fuel in urban areas coal was both superior to and cheaper than wood. In the countryside remote from mines or distant from rivers or sea lanes, charcoal, wood and peat may have enjoyed considerable advantages over coal due to the prohibitive costs of transporting bulky commodities by anything other than water transport. In towns wood enjoyed no similar advantages and with the growing shortage of domestic timber supplies the price differential between coal and wood probably widened.[2] Given the nature of the urban market and the absence of substitutes, the demand for taxed coal may have been highly inelastic. With the growing concentration of the population in towns and the rise in incomes the quantity of coal carried coastwise increased.[3]

The household demand for coal carried coastwise was supplemented by demand from industries which utilised heat in the process of production, such as breweries, distilleries, brickyards, glass furnaces, soap and sugar refineries, metallurgical workshops, bakeries etc. These industries were in general located near their markets in towns and their fuel supplies often reached them by sea.[4] Their demand for coal was a function of their output which in turn depended on the level of demand for their finished products. As fuel costs probably formed only a small proportion of total costs in these industries their demand for coal was not likely to be highly elastic, particularly as the specific nature of their capacity and labour supplies made it difficult to transfer to alternative forms of economic activity.

It is perhaps surprising to find part of this tax levied upon exports of coal. Obviously the Government had concluded that foreign demand for British coal was sufficiently inelastic for foreigners to pay the tax, a view shared by Beaumont who argued that Europe possessed no adequate substitutes.[5]

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1. Beaumont, 'Treatise on the Coal Trade', 1789, pp.2-3 and Hardie, 'Taxation of Coal', 1793, pp.3-5.
2. Anderson, 'Observations on Coal', 1792, p.18; Anon, 'Cursory Remarks on Bread and Coal', 1800, p.13; Smith, Sea Coal for London, p.1; McCulloch, Dictionary of Commerce, pp.289-293 and Sweezy, Monopoly and Competition in Coal, p.81.
3. Ashton and Sykes, The Coal Industry, Appdx.E.
4. Beaumont, 'Treatise on Coal Trade', 1789, pp.2-3 and Ashton, England in the 18th Century, p.92.
5. Beaumont, 'Treatise on Coal Trade', 1789, pp.21-25 and Ashton and Sykes, The Coal Industry, pp.226-227.

Demand for coal may not have been highly elastic to changes in its price but at lower prices the quantity of coal transhipped coastwise or exported would undoubtedly have risen. Just before the war when the ad valorem rate of tax upon coal in London amounted to about a fifth of its wholesale price, nearly half of the price charged to consumers consisted of freight charges and distributive margins of various kinds.[1] If the Government had chosen to prevent the exploitation of consumers by combinations of middlemen in the London coal trade prices may well have been lower. Freight charges would still, however, have accounted for a high proportion of the retail price and in wartime with the onset of Government competition for scarce supplies of shipping space and seamen the proportion rose still higher.[2]

As far as the cost of mining coal was concerned Galloway and Ashton point to the last decade of the 18th century as a period when innovations in the form of steam engines, iron railways and iron pit props were being introduced into the coal industry.[3] Yet there seems to be no evidence that this technical progress resulted in lower prices to consumers. For long periods in the 18th century coal owners of the Northumberland and Durham field, which supplied most of London's coal, operated a cartel to maintain prices just below the level where coal from other fields became competitive in the London market.[4] Thus, unless the Government had been prepared to break the "Vend" of coal owners in Newcastle and Sunderland, cost-reducing innovations were unlikely to result in lower prices to London consumers, because the Vend would only lower their prices if prompted to do so by competition from other fields. Again more determined action by the Government against a well publicised monopoly would have benefitted the revenue.[5]

Artificial light before the advent of gas and electricity came from candles made from wax or tallow. In 1792 the excise upon wax candles stood at three times the rate on tallow candles presumably because a pound of wax gave light for a longer period, and also because the more affluent classes tended to buy wax candles. About 85% of the yield came, however, from tallow candles.[6]

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1. Beaumont, 'Treatise on Coal Trade', 1789, pp.37 and 40; Ashton and Sykes, The Coal Industry, pp.195, 217 and 224; Edington, 'An Essay on the Coal Trade' 1803, pp.44-45; Stevenson, 'Observations on the Coal Trade', 1789, pp. 3, 4 and 13 and Smith, Sea Coal for London, pp.5 and 140.
2. Ashton and Sykes, The Coal Industry, p.201 and Stevenson, 'Observations on the Coal Trade', 1789, p.2.
3. Ashton and Sykes, The Coal Industry, pp.9,12,20,39,50,63; Galloway, Annals of Coal Mining, pp.300,304,313 and 314-316 and Stevenson, 'Observations on the Coal Trade', p.4.
4. Sweesy, Monopoly and Competition in Coal, pp.34,39, 79-81; Ashton and Sykes, The Coal Industry, pp.212,214,215 and Smith, Sea Coal for London, p.149.
5. If other fields introduced cost reducing innovations they could compel the

footnotes continued..

Demand for candles was widespread among classes of the population and the tax had been condemned by Adam Smith among others for falling upon a necessity.[1] Demand grew with population and probably increased with income, but seems unlikely to have been highly responsive to changes in price, since no substitutes existed.

The price of candles depended chiefly on the price of their raw materials, wax and tallow. Tallow came from British animals and by the end of the century considerable quantities were also imported. Distributive margins or transport costs were unlikely to have formed a significant proportion of the retail price because the manufacture of candles appears to have been a localised activity.[2] By the French Wars the tax itself amounted to approximately 10% ad valorem.

Taxes levied upon the shelter of the population included not only the direct taxes on houses and windows already discussed, but the indirect taxes on the materials used in the construction of houses including excises on bricks and glass and custom's duties on imported timber. Domestic timber escaped taxation but in 1794 Pitt imposed a tax upon slates and stones carried coastwise which competed with bricks.[3] Not all glass subjected to tax went into windows, but the yield from glass for bottles, mirrors, glassware and optical glass remained small.[4] While part of the timber imported found its way into furniture, farm implements and household utensils. Nor were the activities of the construction sector exhausted by the building of houses. To a considerable extent changes in the level of bricks, slates, stones, glass and timber assessed to tax varied with the construction of factories, commercial buildings, transport facilities, public utilities, ships and machinery of all kinds.

Thus demand for building materials depended on the rate of capital formation or all the influences bearing on investment. During the Industrial Revolution capital formation proceeded at a faster rate as factories, machines, canals and roads were built. While as the population grew and migrated townwards

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proprietors of Northumberland to lower their prices to the London market. Nevertheless, the Vend prevented prices from falling as far as they might have done in the absence of a cartel.

6. Excise, vol.11894.

1. Dowell, History of Taxation, vol.4, p.309 and Anon, 'Manufactures Improper Subjects', 1785, p.25.
2. Ashton, England in the 18th Century, p.91.
3. Parly.Hist., vol.30, p.1360 and Dowell, History of Taxation, vol.4, p.377.
4. Excise, vol.11894.

the level of investment in houses probably rose.

Prices of timber, glass, bricks and their substitutes were of course not without influence on the volume taxed. Windows could be constructed of no other material but glass. Bricks competed with stone where the latter could be quarried locally and imported timber competed with domestic supplies. There is, however, no evidence to suggest that in the late 18th century the latter increased. On the contrary, Britain became steadily more and more dependent on the Baltic countries and Canada for timber at this time.[1]

Albion argues that the prices of imported pine, fir, oak and other wood sold in London were some 66% above the prices paid for them by merchants in the Baltic because of the high costs of shipping timber across the North Sea.[2] In wartime when the enemy attacked British trade and the Government competed with the private sector for ships and seamen, freight charges rose to an even greater proportion of the original cost. But within Britain the costs of transporting bulky commodities such as glass, bricks and timber about the country probably declined with extensions to the canal system and improvements to the roads. On the other hand, neither the manufacture of glass nor bricks seems to have been undergoing a process of technical transformation in the late 18th century on a scale sufficient to bring about substantial reductions in the cost of production.[3]

Taxes which affected the prices of the clothing and footwear worn by the population included customs duties on European linens, Indian cloth such as calicoes, muslins and nankeens and the raw materials of the silk industry. In addition, the Government had imposed excises on hides and skins while being tanned or tawed to make leather for footwear, Horse furniture, farm implements and other leather products and upon the printing section of the British textile industry.

Foreign linens sold in Britain appear to have been of the best quality such as damask and lawn or consisted of varieties of cloth made from flax but used for purposes other than the manufacture of clothing, such as hessian, spruce, canvas and sailcloth. Tariffs were high in order to protect the domestic industry from serious competition from abroad.[4]

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1. Albion, Forests and Sea Power, pp.114-118.
2. Ibid, pp.150-152 and Ashton, Economic Fluctuations, p.10.
3. Barker, Pilkington Brothers, p.81. I could find no published work on the brick industry for this period.
4. Customs, vol.10901 and Rept. on U.K. Tariff, 1898, p.62.

Duties levied on thrown silk (a semi-manufactured input) purchased from France and Italy were over double those on raw silk imported from Bengal, China and Italy.[1] For Indian textiles, because the East India Company alone could legally import them, the Treasury imposed ad valorem rather than specific taxes upon muslins, calicoes and nankeens.[2] Excise on hides and skins and printed cloth varied with the type of leather and cloth under preparation and the Government attempted to tax higher quality cloth and leather purchased by the more affluent at higher rates of tax.[3]

Taxes on silk, linens, Indian textiles and certain types of printed cloth were regarded by contemporaries as falling on luxuries, but most writers agreed that the excise on leather fell upon a necessity, for which there were substitutes.[4] Some pamphlets pointed out that by the late 18th century the excise on printed cloth no longer affected a commodity purchased almost exclusively by the rich.[5] Excise statistics certainly bear out his contention because by 1790 most of the yield from this tax came from printed cotton. Nevertheless the textiles worn by the mass of the population (linens, cottons and fustians) did not pay tax unless printed. Plain cloth or cloth dyed a single colour escaped tax entirely as did woollens of every kind, printed or plain.[6]

One would expect that as incomes rose expenditure on better quality textiles such as silk, imported linens, Indian piece goods and printed rather than plain cloth, would also increase. To some extent the different markets for cloth overlapped and the adaptation of new techniques by the domestic cotton, linen and woollen industries which lowered their prices relative to the prices of silks, foreign linens and Indian piece goods adversely affected income from textiles taxed by the State. Until it imposed a duty on the import of raw cotton in 1798, only through the printing sector of the industry did the Government directly derive additional revenue from the Industrial Revolution in textiles. To some extent however it continued to benefit from the adoption

1. Customs, vol. 10901 and Accounts and Papers, 1830, p. 7.
2. Rept. on U.K. Tariff, 1898, p. and Customs, vol. 10901.
3. Excise, vol. 11863 and Accounts and Papers, 1830, p.645.
4. Anon, Treatise on Silk Manufacture, 1830, p.16; Dowell, History of Taxation, vol. 4, pp. 312 and 424 and McCulloch, Dictionary of Commerce, p.75.
5. Cttee. on Printed Cotton Goods, 1818, p.305; Anon, 'Considerations on an Improved System of Finance', 1785, p.17; Wright, 'An Address', 1785, p.3 and Pitt Papers, vol.301 - Memo on Printed Goods Charged, 1791-1800.
6. Excise, vol. 11894.

of new techniques by the silk industry but not significantly because most innovations in the production of silk had been introduced earlier in the 18th century.[1] The volume of raw silk and foreign textiles subjected to tax might have grown rapidly if freight charges, which formed a considerable proportion of their prices, had fallen, but no technical revolution occurred in ocean-going transport until well into the 19th century.

Finally silk goods and calicoes, muslins and high quality linens provided the smuggler with commodities which were of high value, heavily taxed, light in weight and easily disposed of in the home market, and the revenue suffered greatly from his activities.[2]

Tax fell on cleaning materials in their contemporary forms of soap and starch. Starch delivered to the linen industry and soap to the linen and woollen industries paid duties at lower rates.[3] Neither soap nor starch were regarded as necessary to the population as salt but contemporaries recognised that both excises affected the consumption of the poor and the Government attempted to meet this objection by levying a lower rate of duty on hard soap.[4] No substitutes competed with either material but whenver their prices rose the poorer classes probably reduced their purchases of both soap and starch, particularly the latter.

Prices depended partly on the cost of animal fat to soap boilers and grain to manufacturers of starch.[5] No innovations introduced into animal or arable husbandry at this period pushed down the prices of fat or grain to levels which perceptibly influenced the production of soap or starch. Nor is there evidence that new techniques in the process of starch or soap manufacture affected prices and demand.

Some of the taxes on the pleasures of the population, such as those levied on the carriages, horses and servants of the rich, have already been discussed under direct taxes. Here attention will centre upon pleasures which took the form of the consumption of alcohol and tobacco. No less than 54% of the revenue from indirect taxes came from beer and its raw materials (malt and hops), wine, brandy, rum, geneva, domestically distilled spirits and tobacco.

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1. Ashton, England in the 18th Century, pp.96 and 116; Jordan, The Silk Industry in London, p.24 and Warner, The Silk Industry, pp.75-76.
2. See p. 364.
3. Accounts and Papers, 1830, p.15 and Excise, vol. 11894.
4. McCulloch, Dictionary of Commerce, p.1071.
5. Ashton, England in the 18th Century, pp.60 and 91 and McCulloch, Dictionary of Commerce, p.1079.

The outstanding contribution made by this group of taxes towards the finance of Government has persisted until modern times. Although the taxes on wine, tobacco and foreign spirits were technically customs duties Pitt had divided responsibility for their collection between the departments of Excise and Customs in order to check smuggling. For the same reason he had also introduced the Survey and Permit system into the sale of tobacco and drinks which made it more difficult and risky for licenced traders to sell smuggled goods.[1]

Rates of tax were all specific but their structure reflected several aspects of Government policy other than its desire to obtain revenue. For example, beer, still regarded as a necessity at the end of the 18th century, paid far lower taxes per gallon (even allowing for the duties on malt and hops) than any other form of alcoholic beverage apart from cyder, but the tax levied on stronger and more expensive beer stood at a higher level per barrel than on table or small beer.[2] Brewers who brewed privately for consumption within the family escaped the tax on beer, but not on malt or hops.

For moral reasons Government's of the day throught it desirable to tax spirits at rates which would actively restrain consumption. Nevertheless to encourage domestic industry Chancellors still taxed spirits distilled within Britain at lower rates than imported brandy, geneva and rum, but the colonial spirit rum secured preferential treatment over its foreign rivals.[3] In the taxation of spirits and malt the special position of Scotland had secured recognition which lead to numerous legal complications and provided good opportunities for fraud. Thus barley grown north of the border, considered to be of inferior quality to the same crop cultivated in England and Wales, paid a lower duty when converted into malt for use in the Scottish distilleries and breweries.[4] While the lower rates of tax on Scottish spirits represented a grudging recognition from the English Government that Scotsmen drank whisky rather than beer. Within Scotland whisky distilled in the Highlands where locally cultivated bigg and barley produced a lower output of spirits per unit of input, received preferential treatment from the Treasury over whisky distilled in the Lowlands. Legally Highland spirit could not be sold in the Lowlands and whisky

1. Rept. on U.K. Tariff, 1898, pp.161 and 183; Accounts and Papers, 1830, p. 69; Excise, vol. 11894; Customs, vol. 10901; 2 Comms. of Excise, 1834, pp.2-11; 6 Comms. of Excise, 1834, pp.239-242, 245 and 269 and 7 Comms. of Excise, 1834, pp.1-3.
2. Excise, vols. 11894 and 11863 and Accounts and Papers, 1830, p.19.
3. Accounts and Papers, 1830, pp.9,10 and 17 and Excise, vols. 11863 and 11894.
4. Accounts and Papers, 1830, p.18.

imported from Scotland into England and Wales paid customs duties to equalise excise duties between the two countries and to protect the less efficient industry south of the border from "foreign" competition.[1]

In a desperate attempt to protect the revenue, particularly the taxes from Scotland, from illicit distillation the Government made it illegal for stills below a certain capacity to be used in the manufacture of spirits and imposed the permit and survey system upon all licenced dealers in spirits.[2]

Customs duties, with differential rates on wines from particular parts of Europe, reflected the country's commercial policy. Spanish and Portuguese wines paid lower duties than their French rivals because Spain and Portugal admitted British manufactures on favourable terms. Under the Anglo-French Commercial Treaty of 1786 the British Government lowered the duty on French wine in return for similar concessions on British exports, not, however, to the point where French claret and burgundy enjoyed the same tariff treatment as port and sherry.[3]

Of this group only the tax on tobacco amounted to a proportion nearly equal to its value (c.i.f.) on the London market. Not surprisingly tobacco smuggling proceeded on a considerable scale, but Pitt searching for revenue could not drastically cut the rate of tax as he had done for tea. He simply imposed the permit and survey system on dealers in tobacco in an endeavour to protect the Government's income.[4]

At the outbreak of war the annual consumption of alcohol in Great Britain can be estimated as follows: beer 234 million gallons, domestically distilled spirits 6.1 million gallons, rum 2.2 million gallons and brandy and geneva 2.1 million gallons.[5] Consumption of beer was far more widespread than any other drink and many contemporaries regarded beer as a necessity. Yet the consumption of beer does not appear to have risen with incomes or population and by the late 18th century tea was on the way to becoming the national beverage.[6] Except in Scotland, where spirits continued to be widely consumed, despite Government attempts to tax whisky beyond the reach of the working classes. Perhaps, however, in Scotland taxed spirits had become the drink of the more

1. Accounts and Papers, 1830, p.17 and Excise, vols. 11863 and 11894.
2. 7 Comms. of Excise, 1835, pp.38-41.
3. Rept. on U.K. Tariff, 1898, pp. 146-148 and Accounts and Papers, 1830, p.13.
4. Excise, vol. 11894 and 6 Comms. of Excise, 1834, pp.242-45 and 269.
5. Excise, vol. 11894 and Rept. on U.K. Tariff, 1898, p.161.
6. Mathias, Brewing Industry, pp.358, 359, 362 and 373-75; McCulloch, Dictionary of Commerce, pp. 10, 13 and 777 and Hoffman, British Industry, p.91.

respectable classes and the mass of the population purchased their spirits from illicit distillers.[1]

Brandy, geneva, rum and spirits distilled in England and Wales probably competed far more with each other than with beer or non-alcoholic beverages such as tea and coffee and revenue gained on one could often be at the expense of income lost on another. Certainly the pressures on the Government on the one side from the West India interest in favour of rum and on the other from the distillery interest to secure tax concessions for their product suggest they considered themselves in competition with each other and with imported brandy.[2]

Demand for malt and hops came from the demand for beer and to a lesser degree from spirits and vinegar. Purchases of malt by brewers can be divided between public brewers who brewed for sale to the general public and private brewers who brewed for consumption within the family. According to Mathias the latter were far more responsive to changes in malt prices than public brewers with large fixed capacity and a skilled labour force to maintain in production.[3] Demand for hops which formed only a small ingredient in beer was less elastic than the demand for malt. To some extent hops could, however, be substituted for malt, but to a far greater extent malt competed with unmalted grain, particularly in the distillery.[4] Whenever malt prices rose distillers and brewers used a greater proportion of barley and bigg which lowered the quality of their products.[5] Distillers could also manufacture from a wash of low quality wine, cyder, molasses and sugar if malt became relatively more expensive.[6] Over the 18th century brewers and distillers had succeeded in converting a given input of malt into a greater output of beer and spirits, but any change in the composition of production from weaker to stronger beer or from lower to higher quality spirit increased their demand for malt.[7]

On the supply side the prices of imported spirits and wine were affected by the customs duty. On port or sherry the tax amounted to about a third of the price and on French and German wines it must have been higher. On rum the ad valorem rate stood at 60% in 1790, undoubtedly a lower rate than the duties

1. Mathias, Brewing Industry, pp. xxi and xxii; Smith, Wealth of Nations, 1776, p.842; McCulloch, Dictionary of Commerce, pp. 1073-75; Dowell, History of Taxation, vol.4, pp.177,179 and 180 and Anon, 'Case of Lowland Distillers, 1798, pp.4-5.
2. See p. 432.
3. Mathias, Brewing Industry, pp.376-77.
4. Ibid, p.357.
5. Ibid, pp.374,391 and 5 Cttee. on Irish Revenue, 1823, p.268.
6. Cttee. on High Price of Corn, 1795, p.84 and Excise, vol.11894.
7. Mathias, Brewing Industry, pp.371 and 373 and Cttee. on Malt Duty in Scotland, 1821, p.213.

levied on foreign spirits like brandy and geneva. Furthermore, on bulky spirits like wine and spirits freight rates must also have exercised a strong influence on retail prices.

The ad valorem rate of tax on strong beer (including the excises on malt and hops) probably amounted to someting like 30% and on British spirits it must have been above beer but below rum - that is between 30% and 60%.[1] In the Lowlands of Scotland the introduction of an improved still had enabled manufacturers to discharge a wash of grain far more rapidly and to increase the rate of output from a given input of capital. This innovation probably lead to a fall in the price of whisky, a conslusion supported by the figures of the imports of Scotch spirits into England and Wales.[2] No evidence is available at least in published form to indicate that comparable chamges occurred in the techniques of brewing or malting in the late 18th century and the most important short run influence on the prices of beer and malt continued to be the character of the harvest. In years of bad harvests barley prices rose and increased the price of both the malt and grain.[3] Hop harvests had a less significant effect because hops formed a smaller ingredient. When harvests were exceptionally deficient, the Government, in order to reserve a higher proportion of available supplies of grain for bread prohibited the sale of grain to the distillers and occasionally closed down the distillery altogether.[4] Over time the rise in the population increased the demand and exercised an upward pressure on its price which also raised the prices of alcohol brewed or distilled from grain.

Four taxes remain to be described, namely the stamp duty on newspapers, bills of exchange and fire insurance and the tax on post horses. They are difficult to fit under a convenient label. Newspapers and post horses ministered to the pleasures of the more affluent groups in society but all four taxes might perhaps be described as levies on commercial services. Newspapers certainly provided merchants and industrialists with economic intelligence and contained advertisements, taxed separately by the Government. At 2½d a sheet they paid taxes often equal to or greater than their original cost and

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1. See Tables 8 and 11.
2. Marsden, Spirit Duties, p.36; Cttee. on Scottish Distillery, 1798, pp.319-21 and Excise, vol.11894.
3. Ashton, England in the 18th Century, pp. 57 and 58; Mathias, Brewing Industry, pp.377 and 380; Ashton, Economic Fluctuations, pp.37-38 and Cttee. on High Price of Grain, 1795, p.84.
4. Anon, 'The Distilleries Considered', 1797, pp.1-2 and Cttee. on Financial State of the Country, 1797, p.209.

newspaper prices presumably included the excise levied on the paper they used.[1]

Taxes on post horses hired by innkeepers and coaching companies to convey passengers and their vehicles from place to place, were one of two examples of revenue collected by tax farmers. In 1787 Pitt found receipts on the mileage duties on post horses and carriages in a state of decline and took the unusual step of farming the duties.[2] Taxes on post horses might be regarded as part of a group of levies on internal transport which included horses and carriages kept for use by private families and duties levied on passengers who travelled with hired horses and vehicles.[3] As internal trade and personal mobility increased and as the road system improved, the Government benefitted from taxes on travel by road before the advent of the railways.[4]

Stamp duties on bills of exchange and fire insurance were among the few examples of ad valorem taxes employed by the Government in 1792. Bills of £10 and under paid duty of 3d, from £10 to £50 the stamp increased to 6d and above £50 it became 1/-. Stamps affixed to fire insurance policies amounted to 1/6, on the value of the property insured. Ad valorem rather than specific rates could be employed for taxes of this type because the Government could stipulate that the courts would not recognise claims on such documents, unless stamp duties had been paid.

The value of bills of exchange circulated reflected changes in the volume of trade, changes in prices and the employment of bills to consign goods. In the late 18th century, with the spread of banks and other financial intermediaries to discount bills of exchange, their liquidity increased and probably encouraged the wider use of this form of credit.[5] In a similar way the development of fire insurance facilities may have prompted property owners to guard their assets against fire.[6] As the volume and value of capital grew the Government gained revenue from ad valorem taxes of this type, but demand for fire insurance also depended on the premium charged by companies. Given the risks in the business of fire insurance and the administrative costs involved, premiums charged depended on the rate of interest. If the return obtained by fire insurance companies on their investments in Government securities

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1. 1 Comms. of Inland Rev., 1857, Appdx.59; Dowell, History of Taxation, vol.4, pp. 342, 343 and 346 and McCulloch, Dictionary of Commerce, p.827.
2. Dowell, History of Taxation, vol.3, pp.50-52 and Binney, British Public Finance, p.44.
3. 1 Comms. of Inland Rev., 1857, p.203.
4. Ibid, Appdx.46 and Cttee. on Internal Communications, 1837, pp.303-307.
5. King, London Discount Market, pp.9 and 27-28; Ashton, 'Bills of Echange and Private Banks', pp. 37-49 and Pressnell, Country Banking, pp.88-90 and 171.
6. Pitt Papers, vol.277 and John, 'Insurance Investment', pp.137-139.

rose they could afford to charge lower premiums and the revenue would gain income.

At the end of the 18th century taxes fell upon a very wide range of goods and services but those which made large contributions to the finance of Government consisted either of levies on commodities in mass consumption (like beer and its ingredients sugar, coal, tobacco, tea, salt, soap, candles, leather, printed cloth) or were levies on goods such as brandy, wine, whisky, silk, Indian cloth, newspapers and foreign linens where the market was confined to the more affluent groups in society but where total expenditure reached substantial amounts.

About a third of the revenue from indirect taxes came from imported goods (sugar, tea, spirits, wine, tobacco, timber, silk, Indian cloth, iron bars and European linens) and about a third of this revenue emanated from the produce of British colonies.[1] Thus if direct taxes are included it is perfectly obvious that the bulk of public revenue came from taxes upon domestic incomes, property, goods and services. Fluctuations in the imports due to cyclical or political reasons were unlikely to cause serious disturbance to the public revenue.

The Exchequer seems to have been far more vulnerable to bad harvests and changes in the level of private investment, not merely through the effects of the latter on the consumption expenditures, but more directly through its influence on the Government's income from taxes upon construction materials, houses and windows. Harvest had perhaps the most important short run impact on public income. Ashton has shown their profound influence on the general level of economic activity and when we observe that the revenue from taxes on land, beer, malt, hops, spirits, soap, candles, hides and starch fluctuated directly with the harvest their importance becomes obvious.[2]

Since tax receipts depended on production, trade and consumption the Government naturally sought to promote the country's development. Chancellors of the day certainly appreciated the connection between higher levels of economic activity and revenue, but in at least three respects they had not designed a tax structure particularly well adapted to the task of automatically transferring a

1. See Tables 7 and 8.
2. Ashton, Economic Fluctuations, ch.2.

fixed or rising share of the national income into the Exchequer. In fact it may even have been the case that with constant rates of tax the share of increments to the national output taken by the State would have declined.

To begin with the Government lacked not merely a progressive income tax which transfers a rising share of national income to the Government but an income tax of any kind. The land tax, based upon a stereotyped valuation of the country's major form of wealth, did not allow the State to share in the appreciation of land values. While the assessed tax on houses which did made only a minor contribution to the revenue.

Secondly, the range of taxes on outlay, perhaps fortunately for the country's long term development, did not include taxes upon the most rapidly growing sectors of the economy. Thus no taxes fell directly upon cotton textiles, the woollen industry, pottery, the manufacture of iron, the bulk of coal used by industry or new forms of transport. Of course in various ways investment in these activities indirectly affected the revenue through the stimulus it gave to private consumption and through excises on building materials. On the other hand, as the efficiency of the British textile industry increased, imports of foreign textiles declined and adversely affected the Government's income from taxes on other textiles. Apart from coal, exports remained untaxed and their rapid growth after the American War of Independence provided nothing directly to the finance of Government. In fact the policy of drawbacks and bounties on exports encouraged British manufacturers, West Indian planters and the East India Company to avoid taxes by selling outside the home market.

Finally rates of taxes levied on outlay with few exceptions were specific rather than ad valorem. This meant the State would not share in the appreciation of prices obtained by merchants, manufacturers and farmers for their products. In periods of inflation unless the Chancellor adjusted tax rates rapidly the real value of the public revenue would decline. Fortunately for most of the century prices had remained fairly stable and experience had shown that the administration could not cope with the problems of valuation inherent in a system of ad valorem taxation. In fact during his tenure at the Treasury Pitt had converted several taxes to a specific base in order to reduce at least one of the opportunities open to manufacturers and traders for defrauding the revenue. Commodities such as tea and Indian textiles could without danger to the revenue be taxed upon ad valorem standard because they were sold by the East India Company at published prices in London. Stamp duties on bills of exchange and fire insurance policies could also be imposed in the same manner because the law stipulated that no bill or insurance policy would be recognised as a valid document by the Courts unless it bore stamps of the correct amount. For all other taxes specific rates had obvious administrative advantages.

On the other hand most outlay taxes which contributed amounts of £100,000 to the Exchequer do not seem to have been imposed upon goods and services in elastic demand or supply, which implied that the Government could increase its revenue fairly readily by raising tax rates. In the short run the general effects of elevating a tax rate or imposing a tax on a commodity is to raise the price charged to consumers and to lower the receipts of producers. At higher market prices consumers will usually buy less and at lower receipts per unit of output producers will sell less. Quantity supplied, purchased and taxed of the commodity concerned will fall. If total tax receipts rise the decline in the quantity assessed has not been sufficient to offset the rise in the rate of tax. If receipts at the Exchequer fall the decline has been enough to counteract the rise in the amount of tax paid upon each unit taxed. The response of consumers and producers to a change in the rate of tax imposed upon any good will depend on the elasticities of demand and supply for that commodity. The more inelastic the demand and supply the smaller the fall in quantity taxed and the greater the addition to aggregate tax receipts from any given rise in the rate of tax.

Measurement of the elasticities of demand and supply to changes in the rates of tax on different commodities is not feasible for this period, but the comments of contemporary writers on public finance and the evidence that receipts from most outlay taxes listed above continued to increase over several decades between 1780 and 1815 despite considerable additions to the rates of tax and to their market prices suggests that the Government had over time, by a process of trial and error, selected commodities for taxation where the quantities bought, sold and taxed were not particularly responsive to changes in the rate of tax. Moreover, at least some of the outlay taxes fell on goods with a high income elasticity of demand.

With certain exceptions outlay taxes fell on commodities without good substitutes - sugar, salt, coal, candles, glass, bricks, timber, soap, leather, newspapers, malt, hops, tobacco, fire insurance, post horses, pleasure horses and carriages. Even where substitutes existed the Government took care to extend taxation to include them - vide: tea, coffee, and beer, whisky, rum, brandy and wine. While several levies, in particular those on beer and its ingredients, soap, salt, candles, leather and coal, were described as taxes upon necessities. Another group of duties, namely those on brandy, wine, high quality imported textiles, pleasure horses, carriages and newspapers, purchased by the rich were for that reason unlikely to be responsive to marginal changes in tax rates, at least in the short run.

During the 18th century war came frequently and often suddenly and Chancellors had to find the taxes to pay the interest on loans floated to finance additional military expenditure. They looked for taxes which could be relied upon to meet demands for fairly rapid increases in revenue over relatively short periods of time. They favoured the taxation of commodities and services where the quantities demanded and supplied were not highly responsive to changes in the rate of tax, because if the imposition of a tax or the elevation in the rate of tax lead to a substantial fall in the quantity produced or consumed the products concerned were obviously unsuitable instruments for war finance.

Taxes selected had also to be feasible. Feasible implied that the objects chosen for taxation could be effectively defined in law, brought within the purview of the revenue administration and that they would be acceptable to Parliament. Taxes impossible to administer or which offended the ideals of the age never received the sanction of law. Of course the capacity of the revenue departments could always be strained and the cannons of taxation seem fairly flexible, but they certainly limited the discretion of the Government in taxation policy.

Cannons of Taxation and Pressure Groups

Thus in taxation policy Chancellors of the Exchequer found their initiative limited by the presence of Parliament and pressure groups. Only if their proposals for new taxes or to raise the rates of taxes already in the statute book accorded with the accepted cannons of taxation and did not arouse the opposition of politically powerful interest groups could they hope to succeed in persuading Parliament to give them legal sanction.

Prevailing notions of distributive justice formed the most common basis for opposing or supporting particular taxes.[1] It was widely felt that citizens should contribute to the needs of the State in proportion to their incomes. Taxes ought to fall heavier on the rich than upon the poor, or as Pitt said it was "justice to tax the wealthier in preference to the more indigent part of the community."[2] As a corollary of this broad general principle, Parliamentary and public opinion held that the necessities of the poor should be taxed moderately or preferably exempt from taxation, but taxes on luxuries or superfluities usually received wide approbation.[3] The question as to what was superfluous or essential does not seem to have bothered contemporaries unduly because the essence of the distinction was normative. Few investigations were undertaken into the consumption patterns of various social classes.[4] Each tax was considered in isolation and Members of Parliament simply assumed that the poor needed to consume certain things (necessities) and if they chose to buy other commodities like whisky and citrus fruits (luxuries) which were highly taxed they did so "voluntarily" and accepted the consequences. From the outlay taxes which contributed significant sums to the revenue those levied on salt, candles, beer, cider, soap, coal, starch,

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1. See Parly. Hist., 1782-1792, passim.
2. Parly.Hist., vol. 25, p.552; McArthur, Political Facts of the 18th Century, p.4 and Pitt Papers, vol.294 - Fordyce, dd. 13.12.84.
3. Kennedy, English Taxation, pp.98, 102, 104, 106, 131 and 136; Anon, 'Considerations on the Policy', 1771, pp.65-66; Sinclair, History of the Revenue, 1802, vol.2, pp. 6 and 367-369; Seligman, Shifting and Incidence, pp. 79 and 87-88; Parly. Hist., vol.25, pp.552 and 787-788 and Smith, Wealth of Nations, 1776, p.846.
4. Except by Massie, ('Calculation of Taxes', 1756 and 'Calculation on the Present Taxes', 1756) but his statistics seem to have been ignored by Parliament.

leather and malt were regarded as departures from the principle of not taxing necessities.[1] On the other hand, duties on male (but not female) servants, carriages, pleasure horses, larger houses, wine, spirits, imported foodstuffs (such as sugar, dried fruit, nuts, citrus fruit, spices etc.) glass, printed muslins, calicoes and linens, tobacco and all stamp duties were usually accepted as taxes on luxuries.[2] Spirits were considered a particularly eligible luxury because whisky and gin consumption was seen to have such unfelicitous effects upon the health and morals of the labouring classes.[3] But tea, which was widely consumed at the end of the century gave rise to some contention as to whether it was a luxury or a necessity.[4] Finally, because several major excise duties fell upon necessities and most customs revenue came from imported luxuries, there was often an indiscriminate tendency in contemporary discussions of taxation to condemn all excises as taxes on necessities and approve of customs duties for falling upon superfluities, made, moreover, by foreigners.[5]

Another distributional cannon, also a corollary of the general tenet that taxes should be levied in accordance with people's ability to pay, was the injunction that taxes should not be proposed which were partial. Fox expressed this view when he warned Pitt, "in imposing new taxes care should and might be taken to avoid the imposition of any that were grossly partial and oppressive upon one description of people", and the Chancellor concurred.[6] Partial taxes were, however, even more difficult to define than levies upon necessities or

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1. Sinclair, History of the Revenue, 1802, vol.2, pp.367 and 375; Smith, Wealth of Nations, 1776, pp. 839 and 842; Kames, Sketches of the History of Man, 1774, p.484; Parly. Hist., vol.24, p.1029 and vol.28, pp. 1192 and 1201 and Dobbs, 'Thoughts on the Present Mode of Taxation', 1784, p.4.
2. Sinclair, History of the Revenue, 1802, vol.2, p.379; Smith, Wealth of Nations, 1776, pp.836-837; Whately, 'Considerations on Trade and Finance', 1769, p.6 and Parly. Hist., vol.25, pp. 558-562 and 812.
3. Hamilton, An Inquiry Into Taxes, 1791, p.35; Smith, Wealth of Nations, 1776, p.842; Cttee. on Scots. Distillery, 1798, p.322 and Sinclair, History of the Revenue, 1802, vol.2, p. 367 and vol. 3, p.229.
4. Parly. Hist., vol.24, pp. 1342-1345 and Pitt Papers, vol.294 - Fordyce, dd. 13.12.84.
5. Kennedy, English Taxation, pp. 29,30,37,98 and 136; Mortimer, Elements of Commerce, 1801, p.450 and Seligman, Shifting and Incidence, p.78.
6. Parly.Hist., vol.25, p.782 and 480 and Anon, 'Considerations on the Advantages', 1785, p.4.

luxuries and as Lord Grenville pointed out, every tax must be more or less partial.[1] But Grenville was being somewhat disingenuous: partial taxes were regarded as those which clearly offended the cannon of ability to pay and fell upon particular social groups. Taxes upon luxuries were rarely opposed as being partial, even though luxuries were consumed by a small class, but the stamp duty on commercial receipts was condemned by Lord Sheffield and Henry Thornton on such grounds because they maintained the tax fell with particular severity upon middling tradesmen.[2] Pitt recognised that the coal duty, paid entirely by London consumers,was partial, but he refused to accept the contention of the Opposition that his shop tax of 1785 favoured certain kinds of shopkeepers over others.[3] On the other hand contemporaries usually considered it laudable to single out for higher taxes certain groups which had incurred the odium of social disapproval, such as bachelors, for not propagating the English species, and hawkers for acting as agents to smugglers. One pamphlet wished to extend the odium to shopkeepers in general as being parasitic members of society.[4]

Time after time during the 18th century, whenever a Chancellor proposed excise duties he was accused of actions "repugnant to liberty". Vociferous antipathy to excises upon political grounds which was conspicuous during the 'eighties echoed a tradition which went back to the opposition to Walpole's excise scheme of 1733 and Bute's cyder tax of 1763; and unless we agree with Steuart's cynical comment that "the objection from the infringement of liberty is more a pretext in order to facilitate fraud than anything else", the basis of the objection must be found elsewhere.[5] Sheridan candidly revealed one argument against excise when he pointed out that "the collection of taxes" required revenue officers the appointment of these being on the executive government would necessarily extend the influence of the crown and that extension must necessarily be at the expense of the right of the people."[6] This particular objection seems to apply, however, to taxes in general, but granted the need for public finance, there appear to have been two.political objections of substance to

1. Parly. Hist., vol.28, p.1021.
2. Ibid, vol.24, pp. 101 and 109.
3. Ibid, vol.24, p.1027; vol.25, pp.559, 779-782, 786, 793-794 and 1234-35 and Pitt Papers, vol.301.
4. Gray, 'The Policy of the Tax on Retailers', 1786, pp.8,10-12 and 34.
5. Steuart, An Inquiry, 1767, vol.2, p.516; Turner, 'The Excise Scheme of 1733', pp. 35-39; Brisco, The Economic Policy of Walpole, pp.105-111; Steven-Watson, The Reign of George III, pp. 60-64; Parly. Hist., vol. 25, pp.541-546, 795-811 and 1438; vol.26, pp.116-118 and vol.28, pp.231-233, 248-250, 277, 654-655 and 665-678; Sinclair, History of the Revenue, 1802, vol.2, p.366.
6. Parly. Hist., vol. 25, p.651.

excise duties. First, that most offenders against excise laws had their trials conducted by excise officials and not by the ordinary courts. Dr. Johnson's Dictionary defined excise as "a hateful tax levied on commodities and adjudged not by common judges of property but by wretches hired by those to whom Excise is paid."[1] Administrative justice was cheap and speedy and had the merit, in official eyes of being a moderately applied but efficient deterrent to tax evasion. For its opponents such procedures represented nothing but "foul despotism".[2] Whether administrative justice was moderately or tyrannically imparted by Excise Commissioners cannot be determined, except by careful evaluation of particular cases, but Pitt was sufficiently worried by the attacks made upon his policy of transferring import duties to Excise management that in 1790 he investigated the department's judicial process.[3] Since he made no attempt to reform procedure we might assume that in the opinion of a Prime Minister, who at that time was not indifferent to questions of liberty, the system afforded adequate protection both to the subject and to the revenue.

The other political objection to excise duties referred to the very wide powers exercised by revenue officials over manufacturers and their property.[4] A perusal of the excise statutes in operation will certainly reveal the force of this contention. Excise officers were afforded liberal rights of entry to all places where excised commodities were manufactured. For some goods the law prescribed the type of equipment which could be used and for many the times when production might take place.[5] Pitt's proposals to transfer the duties on wine, tea, tobacco and spirits to excise management in order to reduce evasion aroused such strong opposition principally because this involved extending the regulations of excise survey to dealers in those commodities, thus wholesalers premises would be opened to excise officials, their stocks made liable to periodic survey, and an excise permit would be needed to sell above a small quantity of their merchandise.[6] No doubt the Chancellor found it necessary to protect the

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1. Owens Plain Papers Relating to the Excise, p.2; Hughes, Studies in Administratio pp.327-331; 9 Cttee. on Irish Revenue, 1824, pp.307-323 and Appdx.4.
2. Hughes, Studies in Administration, pp.327-332; Parly.Hist., vol.25, pp.541-546 and 795-811; vol.26, pp.116-118 and 123-124 and vol.28, pp.669-688.
3. Pitt Papers, vol.290 - unsigned memo on summary jurisdiction in the Excise Dept., dd. 15.2.90.
4. Parly.Hist., vol.26, pp.116-118 and 123-124 and vol.28, pp.654-657.
5. For details on the powers of Excise officers see Blackader, The Rates and Duties on Excise, 1810 and Excise - vol.11356 and Instructions for Country Excise, 1778. The Department of Customs and Excise has several copies of Instructions to Excise officers for this period.
6. 1 Comms. on Excise, 1833, p.425; 2 Comms. on Excise, 1834, pp.4-5 and 6 Comms. on Excise, 1834, pp.242-245.

revenue from fraud, but equally Fox and many like him felt impelled to resist all extensions of excise, while one City member declaimed "we might pay too dearly even for revenue."[1] Certainly in the range and stringency of its regulations as well as in the provisions for punishing those who infringed the statutes, excise legislation exhibited features (not characteristic of other branches of revenue) which made it repugnant to the liberal sentiments of the age, so that any attempt by the Chancellor to extend the excise system to new commodities immediately raised the cry of freedom.

Towards the end of the century organised and articulated pressure from traders and manufacturers was becoming a more important influence on questions of economic policy particularly taxation. While the nature and extent of this influence is more often assumed than traced, it has been clearly revealed for the commercial negotiations with France and Ireland during 1785 and 1786. Pitt's attempt to place the tariff systems of Great Britain and Ireland on a footing of equality was frustrated in large part by the organised pressure of commercial interests who were opposed to altering the system of Imperial trade.[2] Conversely information and support from several groups of merchants and manufacturers were important factors in the success of the Anglo-French treaty of 1786.[3] Commercial policy and customs revenue were of course intertwined, but internal taxes were also subject to the influence of pressure group activity.[4] During the 1780's organised extra Parliamentary pressure prevented a tax being imposed on coal at the mine head and what both Fox and Pitt contemptuously termed "popular clamour" played an important part in forcing the Chancellor to abandon his taxes on hops and printed cottons.[5]

Apart from raising specific objections to particular taxes (usually to the effect that the tax would ruin the industry concerned) propagandists for commercial

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1. Parly.Hist., vol.28, pp.182 and 250.
2. Harlow, The Founding of the Second British Empire, pp.565, 569, 592, 595, 597 and 607-609; McPherson, Annals, 1805, vol.4, pp.85-92; Holland-Rose, William Pitt, pp.249,251 and 256-266 and Pitt Papers, vol.352.
3. Ehrman, The British Government, pp.181-183 and Rees, 'British Commercial Policy, p.150.
4. Bowden, 'The Influence of Manufacturers on Some Policies of Pitt', pp.655-674. The activities of pressure groups can be traced through petitions submitted to Parliament in Commons Jnls.; to the Treasury in series T.1 and to the Committee on Trade in series B.T.4 and B.T.5.
5. Parly.Hist., vol.24, pp.98, 101, 995, 998 and 1027; vol.25, pp. 479-482, 780-781, 1165 and 1177; vol.27, pp.1340-1343; Dowell, History of Taxation, vol.3, p.19 and vol.4, p.415; Stanhope, Life of Pitt, p.222; Pitt Papers, vols.292 and 301 and McPherson, Annals, vol.4, p.71.

and manufacturing interests attempted to induce widespread acceptance of the notion that national economic progress depended so intimately upon the development of industry and trade, that no actions should be undertaken which might impede their growth and consequently manufactures were improper subjects for taxation. Thus excise regulations which restricted the initiative of manufacturers and traders positively impeded industrial progress.[1] Finally, several recognised authorities on economic matters pronounced it inexpedient to tax necessities, not on distributional grounds, but because duties levied on necessities would raise their prices; higher prices would lead to a rise in wages (they assumed an inelastic labour supply, and a subsistence wage level) industrial costs would then rise and British merchandise would be priced out of world markets.[2]

There is little evidence to suggest that views very similar to those propagated by the manufacturing or commercial interests were held by individual ministers or accepted by many members of Parliament.[3] On the contrary both Pitt and Fox rejected the idea that manufactures were improper subjects for taxes.[4] M.P.'s, when criticising excise regulations seldom described them as anything stronger than "vexatious" or "oppressive". Pitt seemed, however, aware that an excise survey might well be "inconvenient" for, in considering a tax on printed cottons in 1785, he consulted the manufacturers as to how it might best be imposed.[5] From 1782 to 1792 no member of the Commons appears to have employed the economic argument against taxing necessities, although the objection on distributional grounds was mentioned in several debates. Ideological arguments against Government interference with industry and trade were probably more significant in creating a feeling of common interest among merchants and manufacturers than for their direct impact upon the ruling classes at the close of the 18th century.

Government and Parliament had, however, long accepted the view that rates of taxation should not be carried to heights which actively discouraged the

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1. Anon, 'Manufactures Improper Subjects for Taxation', 1785, pp.3-4, 7, 11, 15 and 25; Anon, 'A Serious Address', 1784, pp.21 and 35; Anon, 'Considerations on the Advantages', 1785, pp. 3, 9-11 and 12-19 and Wright, 'An Address on Fustians', 1785, pp.10, 23, 25 and 41-46.
2. Kennedy, English Taxation, pp. 111, 113, 120-121, 143 and 148; Kames, Sketches of the History of Man, 1774, pp.470, 477 and 484; Dobbs, 'Thoughts on the Present Mode of Taxation', 1784, pp.3-4 and Smith, Wealth of Nations, 1776, pp. 823-825. Steuart rejected this theory - An Inquiry, 1767, vol.2, pp. 502-507.
3. Ehrman, The British Government, pp.180-181 and 208-209. Shelburne seems to have been the most open to these ideas - see Norris, Shelburne.
4. Parly.Hist., vol.25, pp.480-482 and 485.
5. Ibid, vol.24, pp.78-79.

development of industry or the growth of exports. Moreover, since the balance of payments was the focus of mercantilist thought, opposition to taxes on trade derived strength from the prevailing ideology. Thus it was considered desirable to avoid all levies on exports, except for cases like coal where it was thought Britain could turn the terms of trade in her favour.[1] All excised products were allowed drawbacks when sold abroad.[2] Certain major industries, such as wool, whose contribution to exports was considered vital, were not subjected to excise duties. "Infant manufactures", such as cotton textiles, pottery, iron ore and metallic products had largely escaped taxation. Industrial development was fostered by heavy protection which was seldom relaxed to feed the revenue. Thus raw materials not supplied domestically or by English colonies, such as raw cotton, hemp, bristles, certain kinds of timber, barilla, kelp, indigo and cochineal, were recognised as essential imports and were exempt from, or bore only very light, import duties.[3] Products utilised as inputs for other industries were often exempt from duty or taxed at less than the standard rate, as were, for example, soap delivered to the woollen industry, salt used to cure fish, or bleach cloth, starch for the linen industry or tiles for agricultural drainage.[4] Pitt recognised this principle in 1784, when he proposed to tax coal entering ports outside London, but promised to except certain kinds of manufacture from the incidence of the tax.[5]

In altering or imposing import taxes a Chancellor was furthermore constrained by a long and revered tradition of regulation related to Britain's shipping and colonial interests. Since the late 17th century British policy had attempted to confine as much as possible of the Empire's carrying trade to British ships. With certain exceptions, produce from Asia, Africa, America and British colonies could only be imported in British ships. For the European trade, legislators recognised it was not feasible to restrict trade to native ships, but they encouraged merchants to utilise English Shipping by levying higher customs duties on goods arriving in foreign vessels.[6] Colonial produce

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1. Kames, Sketches of the History of Man, 1774, pp. 483 and 488 and Beaumont, 'Treatise on Coal Trade', 1789, pp.21-25.
2. Blackader, The Rates and Duties on Excise, 1810.
3. Hodin, The British Duties on Customs and Excise, 1792 and Customs - vol.10901.
4. Blackader, The Rates and Duties on Excise, 1810.
5. Parly.Hist., vol.24, p.1028; Pitt Papers, vols. 222 and 301 and Sweezy, Monopoly and Competition in English Coal Trade, p.52.
6. Harper, The English Navigation Laws, pp.388, 404 and 408-409 and Beer, The Old Colonial System, pp.58-62.

was afforded almost a complete monopoly of the domestic market, but with some exceptions all trade between various parts of the Empire had at some stage of their journey to be landed in Britain. This imperial entrepot of trade was a source of revenue to the Exchequer because colonial produce or foreign exports destined for the colonies paid customs duties on arrival at the metropolitan country, not all of which were drawn back upon re-export.[1] By the end of the 18th century the British navigation code and system of Imperial preferences had become a deeply entrenched part of commercial and revenue policy and, as Pitt's attempt of 1785 to liberalise trade with Ireland illustrates, was difficult to alter without arousing ideological and sectional opposition. Certainly the trading system of the Empire was not easily open to manipulation for purposes of raising revenue. Furthermore, over time a great deal of non-Imperial trade had come to be conducted within a network of bilateral agreements which circumscribed still more the Government's initiative when collecting customs revenue. For example, French wine paid higher duties per ton than the Portuguese wine and Russian bristles obtained a slight differential over bristles from elsewhere.[2] To disturb the tariff for fiscal purposes was difficult without breaking trade agreements and inviting retaliation upon British exports. Changes in customs legislation was more often the outcome of protracted diplomatic negotiations than unilateral acts of Ways and Means by the British Parliament.[3] Significantly, if we exclude the regulations to check smuggling, very few of the alterations made to the structure or rates of taxation between 1783 and 1792 involved customs duties.[4] Given the network of trading and Imperial relationships it appears by 1792 that limits had been reached as far as additions to tariffs for purely revenue purposes were concerned.

Although taxation policy at the close of the 18th century operated within a fairly restricted tradition of laws and conventions, one acceptable plea open to a Chancellor seeking new ways of financing expenditure was that of necessity. Parliament usually recognised that Government had to be carried on and shared Pitt's opinion that "it was difficult to find any tax against which plausible

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1. Beer, The Old Colonial System, pp. 64, 72, 137, 161 and 168.
2. Customs - vol. 10901 and Nodin, The British Duties on Customs and Excise, 1792.
3. See Erhman, The British Government on the whole series of commercial negotiations with European countries in the 1780's.
4. Rose, 'Brief Examination', 1792, passim.

exceptions might be made", because "all the more obvious and eligible objects of taxation were already pre-occupied and almost exhausted, the finding out new sources of revenue therefore was become in a greater degree than it ever had been known an option of evils."[1] Although new taxes upon bricks and receipts as well as the additions to levies on candles and coal offended orthodox cannons of taxation, they were accepted by Parliament as productive ways of raising revenue. This conclusion emerges clearly from the debates, where the members who opposed revenue proposals felt obliged to suggest alternative taxes (often of a wildly implausible kind) which they supported as being less objectionable to orthodox doctrine.[2] Moreover, Pitt's attempts to abolish sinecures in the public service and above all his sinking fund made almost all taxes more palatable because Englishmen could anticipate the day when their burdens would be lightened by the repayment of the national debt. To them the sinking fund represented a trusted promise that taxes, however high or offensive to the orthodoxy of their age, would not persist indefinitely.[3]

The Administration of Taxes Upon Outlay

An important constraint upon the Government's ability to raise the level of receipts from existing taxes or to impose new levies was the quality of the administration available to it for the assessment and collection of revenue. To an extent it is perhaps impossible to imagine today the absence of a competent tax administration narrowed the area of choice in fiscal policy and reduced tax income well below optimum levels.

Outlay taxes gave rise to quite different problems from those encountered in the administration of direct taxes. Their assessment and collection were not controlled by country gentlemen, in a position to thwart the intentions of Parliament, but were conducted by professional civil servants subject to direction from Whitehall. Their central problem was to enforce tax laws in a society where nearly everybody either practised or at least condoned frauds on the revenue. At the end of the 18th century Chancellors of the Exchequer were well aware that elevating the rate of particular taxes increased the profitability

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1. Parly.Hist., vol.24, p.1007 and vol.25, pp.551, 785 and 1176.
2. Ibid, vol.24, p.1350 and vol.25, p.784. Pitt's papers are full of suggestions for taxes of every conceivable kind - see vols. 264-271.
3. See pp. 63-64 and 230.

of fraud and pushed revenue below current levels. Alternatively, they realised that a reduction of tax rates might increase yields by reducing the propensity to evade taxes among the public. When adding to the rate of a particular tax a Chancellor had to estimate, not merely the elasticities of demand and supply for the commodity in question, but also the probable level of evasion. Similar difficulties arose in finding new objects for indirect taxation where fraud was a more or less probable contingency. For example, taxes levied upon glass made in large scale domestic factories were much less prone to evasion than duties on imported spirits and tobacco, but there was hardly a single tax which was not subject to the problem of fraud.

Apart from deliberate fraud, tax receipts fell below their optimal level through negligence on the part of revenue officials. Of course it might be argued that the incompetence of officials created possibilities for evasion, but equally there are two parties involved and it is hardly accurate or fair to ascribe all frauds on the Exchequer to the low quality of revenue administration. Successful evasion also depended upon the skill and vigour of those who sought to defraud the revenue and this fluctuated over time. Assessment and collection were themselves sometimes lax enough to permit citizens to escape liability without strong intention or effort on their part to avoid payment. Loss of revenue through negligence cannot be measured but might be appreciated from a description of the system and quality of revenue administration at the end of the 18th century. Furthermore, receipts at the Exchequer were diminished by the expense of collecting taxes and when the revenue departments became more incompetent or overstaffed, costs per unit of revenue collected rose and less money became available for alternative expenditures by the Government. Fraud, negligence and costs of collection all reduced tax receipts and circumscribed the initiative of the Government in its taxation policies. I propose to discuss each in turn.

Frauds on the revenue seem to have been by far the most important problem faced by the revenue authorities. Certainly the existence of widespread complicity among all ranks of the population to evade liability for taxes was frequently commented upon and often condoned by contemporary writers. Even the eminent Commissioner for Customs in Scotland, Adam Smith, said "to pretend to have any scruple about buying smuggled goods .... seems only to expose him who effects to practise it to a suspicion of being a greater knave than most of his neighbours."[1] While in 1791 an Inspector of Excise sadly recognised that "to evade a revnue law is no disgrace and many people of property have made fortunes out of it."[2] At a time when Government expenditure was not generally recognised as making a particularly useful or worthy contribution to social welfare, it is not surprising to find that citizens deeply disliked paying taxes and were imbued with contempt for Customs and Excise Officers or that expressions of sympathy for smugglers and others who defrauded the revenue were frequently evinced.[3]

Unfortunately, the extent to which the revenue sustained losses on account of fraud cannot be measured with any degree of accuracy. Various estimates were offered by official reports but these ratios cannot be regarded as other than informed guesses.[4] The Commissioners who enquired into frauds on the revenue in 1783 considered that illegal sales of imported tea, coffee and brandy exceeded the quantities taxed.[5] But the magnitude of evasion upon tea and imported spirits was greater than for any other taxed commodities, with the possible exception of tobacco and whisky distilled in Scotland. Tea, tobacco and spirits were par excellence the wares of the smuggler and the illegal manufacturer and they cannot be used as indicators of the overall extent of fraud.[6] Taken together they are, however, significant because of the relatively high contribution they made to total tax revenue. While estimates could not and cannot be made contemporaries are, however, agreed that losses to the revenue from fraud were substantial and had increased considerably during and immediately following the American War of Independence. But by 1792 the reforms introduced by Pitt into the structure and administration of tax revenue may well have reduced possibilities for evasion within narrower limits and thereby

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1. Cross, 18th Century Documents, p.26.
2. Hamilton, An Inquiry, 1791, p.52.
3. McArthur, Political Facts, 1801, p.75; Leftwich, 'The Later History of Customs Revenue', p.195 and Hughes, Studies in Administration, pp.191 and 328.
4. Cttee. on Illicit Practices, 1783, p.234 put frauds on the revenue at £2 million a year from a total tax income of approximately £13 million. Mortimer, Elements of Commerce, 1801, p.449 estimated fraud at about 7% for 1771.
5. Cttee. on Illicit Practices, 1783, pp.229-230. Estimates of the extent of smuggling for the early 1780's abound. The range of variation is so wide and since they cannot be other than guesses they are impossible to appraise - See Pitt Papers, vols. 283 and 294 - Fordyce, dd. 13.12.84.; Cole, 'Trends in 18th Century Smuggling', p.405; Cross, 18th Century Documents, p.27; McPherson, Annals, vol.4, 1805, pp.49-51 and Parly.Hist., vol.24, p.1008.
6. Cole, 'Trends in 18th Century Smuggling', p.408 and Cttee. on Illicit Practices, 1783, p.228.

raised the ratio of actual to possible revenue from outlay taxes.[1]

Frauds on the revenue arose in two distinct ways: commodities might be concealed from the Customs or Excise authorities, or the commodities might come within their purview but remain untaxed becausé of collusion to defraud between officials and the merchants or manufacturers liable to tax.[2] From all acounts it seems that the former mode of evasion was far more prevalent in the latter years of the 18th century. Moreover, the question of direct corruption is part of a wider problem of efficiency in the revenue departments which will be discussed later.

Year by year the quantity of commodities actually concealed from revenue officials depended upon the propensity of those liable to duty to defraud, and on the efficiency of the authorities in arresting attempts to evade taxes. In turn the propensity to defraud was related directly to the level of the duty and risks of detection. Illicit traders by evading tax could undersell and capture markets from fair traders compelled to pay duties and the higher the ad valorem rate of tax levied on any commodity the more profitable their activities.[3] The high rates of duty on tobacco, tea and spirits rendered them favourite wares for smugglers and no doubt the Parliamentary Committees were correct in their opinion that "the great and infallible remedy towards prevention of fraud is undoubtedly to be found only in the reduction of duties."[4] Robert Hamilton, an Inspector for Excise, wrote a lengthy plea for reducing duties as a way of curbing evasion, but he pointed out that for many commodities tax rates had to be cut considerably in order to produce the required effect.[5] Pitt had just this consideration in mind when he reduced the duties on tea in 1784 from 112½ to 12½ ad valorem and the subsequent reduction in smuggling of tea seems to have justified his expectations.[6] The difficulties of reducing duties over a wide area lay in finding other sources of revenue in the short run and Pitt incurred strong opposition and charges of impartiality towards the East India

1. Ibid, p.228 and Cttee. on Illicit Practices, 1784, p.263; Cole, 'Trends in 18th Century Smuggling', p.409; Cross, 18th Century Documents, pp.237 and 290; Rose, 'Brief Examination', 1792, pp.5,6,8 and 10; Cttee. on Public Accounts, 1786, p.41 and Sinclair, History of The Revenue, 1802, vol.3, p.228.
2. The revenue also lost from plunderage while certain commodities such as coffee were in bond - Pitt Papers, vol.301 - Irving Memo, dd.1797 and Treasy.TI/897/544.
3. Hamilton, An Inquiry, 1791, pp.51, 57 and 67.
4. Cttees. on Illicit Practices, 1783, pp.228 and 230, 1784, p.265 and 1784, pp. 286-288 and Pitt Papers, vol.274 - Fordyce Memo, n.d.
5. Hamilton, An Inquiry, 1791.
6. Accounts and Papers, 1898, p.199; Rose, 'Brief Examination', 1792, pp.5-6; Cole, 'Trends in 18th Century Smuggling', p.409 and Pitt Papers, vol.294.

Company in commuting duties on tea for higher taxes upon windows.[1] Tea was the most famous example where substantial reductions in the rate of duty were effected in order to curb evasion and to raise yields, but the policy was also moderately successful for wine, coffee, cocoa, muslins and callicoes.[2] No doubt given time, Pitt might have accomplished similar results for other taxes.

Penalties for fraud were severe. They invariably involved forfeiture of the concealed commodities as well as any transport employed in smuggling the goods. Traders caught selling illicit products often had their licence to trade revoked and naturally heavy fines and lengthy prison sentences were to the fore of punishments for frauds upon the revenue. If public opinion was tolerant towards tax evaders, the law was decidedly harsh and the common reaction of the legislature to reports of increased evasion, was to raise penalties against transgressors. High duties on a commodity were thus frequently conjoined with heavy punishments for evaders. When the profits for tax evasion were high, Parliament usually made sure that risks were at a comparable premium.[3]

Possibilities for fraud or the risk of apprehension varied from commodity to commodity, county to county and also depended upon the department responsible for collecting taxes. Most outlay taxes were assessed and collected by four principal revenue departments. The Customs was responsible for collecting duties levied upon imports, exports and goods carried coastwise; the Excise Department in the main collected taxes upon domestically produced goods and services and the Board of Stamps supervised duties imposed on a wide range of legal and commercial transactions as well as a smaller number of commodity taxes. While the Salt Commissioners managed the tax on salt. Just before the French wars the Excise Department collected the highest proportion of total tax revenue followed by the Customs, the Board of Stamps, the Board of Taxes and the Commissioners for Salt.[4] The revenue departments were not clearly demarcated as to the type of taxes they managed. For example, the Excise Department shared responsibility for collecting part of duties on imported tea, tobacco, wines and spirits. Not all taxes managed by the Board of Stamps were

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1. Thompson, 'The Commutation Act', 1786, pp.6, 18, 28 and 36; Sinclair, History of the Revenue, 1802, vol.2, pp.396-397 and Pitt Papers, vol.294 - Fordyce, dd. 13.12.84.
2. Dowell, History of Taxation, vol.4, p.254; McPherson, Annals, 1805, vol.4, p.21 and Pitt Papers, vol.295.
3. Hamilton, An Inquiry, 1791, p.57 and An Alphabetical Abridgement of Laws for the Prevention of Smuggling 1818. But the enforcement of the law remained lax - see Treasy. - TI/723/2332.
4. Cttee. on Income and Expenditure, 1791, Appdx.A.1. I have excluded from consideration the Commissioners for Hawkers and Peddlars, the Commissioners for Hackney Coaches and the Departments which managed the hereditary revenues of the Crown - see Binney, British Public Finance, pp.76-83.

imposed by way of affixing official stamps to legal and commercial documents, the Board also assessed taxes upon such products as playing cards, silver plate, race horses and stage coaches. Finally, the Commissioners for Customs exercised wider responsibilities than the collection of duties; they also managed the complicated network of shipping and navigation laws and enforced the country's quarantine regulations.[1] But for the purposes of this discussion it is sufficient to regard smuggling as a problem which concerned the Customs administration; evasion of taxes upon domestically produced goods as a matter for the Excise and the non-payment of dues and fees upon legal and commercial instruments as involving the Board of Stamps.

Again measurement is not possible but the bulk of contemporary comment suggests that tax evasion upon imported commodities was more extensive than upon domestic products, so that the ratio of actual to possible tax receipts from the Customs fell below that for any other department. Reasons for accepting contemporary opinion are not difficult to find. Ad valorem duties for imported commodities were generally at higher levels than those imposed upon domestic products. Many tariffs reached prohibitive levels in order to protect British industry from foreign competition, but since they were not designed to yield income for the State they are not our concern, except in so far as they gave an added impetus to smuggling in general.[2] The range of imports which made significant contributions to tax revenue was really quite narrow and included tea, tobacco, wine, spirits, sugar, dried fruit, raw and thrown silk, Indian textiles, hemp, timber, iron and coal carried coastwise.[3] From this list the rates of tax on industrial raw materials were relatively low. Moreover, timber, iron, hemp and coal hardly met the smugglers' requirements for commodities light in weight, easily concealable with wide markets inland. The other imports listed above, however, were of this nature being relatively expensive foodstuffs and clothing readily sold inland. Thus it is hardly surprising to find such items as tea, wine, tobacco, brandy, silks, cambrics, muslins, calicoes and lawns among the most frequently mentioned commodities in contemporary reports of smuggling. No other selection of taxed products seems to have been quite as

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1. Ibid, pp.29-31 ; Chisholm,Rept., 1868-69, pp.406-09 and Nodin, The British Duties on Customs and Excise, 1792.
2. Nodin, The British Duties on Customs and Excise, 1792 and Accounts and Papers, 1830, pp.1-19.
3. See Table 8.

profitable or suitable for the smuggler's craft.[1]

Perhaps the principal reason for the high level of evaded import duties was that the Customs Department was faced by a highly organised, clever and determined conspiracy to defraud the revenue, which apparently proved quite beyond its competence to check. "Long practice in the deceits and strategems of illegitimate trade had", according to Ramsay, "enabled smugglers to reach a high point of ingenuity and attainment in the 18th century."[2] After the American War smuggling came to be carried on by large gangs of highly skilled seamen, equipped with speedy vessels, fully armed to resist arrest on sea or land. Companies were set up on the European mainland to manage the business of running goods into Britain and their entrepots at Jersey, the Isle of Man, or more commonly, Ireland, which were points for the transhipment of produce into smaller and lighter craft properly furnished for the trade.[3] In addition the re-export trade provided smugglers with excellent openings. Imports re-exported from Britain were paid drawbacks, that is the duties, levied when the goods first landed, were repaid entirely, or in large part, to the exporter. This device designed to promote exports, presented smugglers with opportunities to buy tobacco, spirits or silks from legal merchants, load them onto vessels designed to run contraband, falsely declare the ship was bound for foreign ports and reland the cargo somewhere along the coast.[4] Once ashore the contraband passed quickly into the hands of consumers through equally well established channels of internal distribution, which employed as one letter to Pitt put it, "opulent farmers, overgrown landlords and dealers in spirits and tea who revel in luxury at the expense of the public."[5] To counteract smuggling the Government passed laws to prevent ships from hovering off the coast and also the Manifest Act of 1786, whereby vessels engaged in the coasting trade were compelled to obtain a manifest of their cargoes from customs authorities at their point of embarkation which had to be handed to and checked by customs officials

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1. Pitt Papers, vol.s 283, 294, 295 and 298; Treasy. - TI/754/3678 and TI/825/2825 Cttee. on Illicit Practices, 1783, pp.228, 229 and 231; Cole, 'Trends in 18th Century Smuggling', pp.408-409; Cross, 18th Century Documents, p.308 and Hamilton, An Inquiry, 1791, p.18.
2. Ramsay, 'The Smugglers Trade', p.136.
3. Cttees. on Illicit Practices, 1783, pp.228-231 and 1784, p.263; Treasy. - TI/825/2825; TI/754/3678 and TI/755/4016; Pitt Papers, vols. 283,294 and 298; Liverpool Papers, vol. 38262/186; Atton and Holland, The Kings Customs, pp.184, 293 and 331; Leftwich, 'The Later History of Customs', pp.196-197 and Cross, 18th Century Documents, pp.239 and 315.
4. Pitt Papers, vol.297; Cttees. on Illicit Practices, 1784, p.273 and 1785, p.285 and Rive, 'A Short History of Tobacco Smuggling', p.560.
5. Pitt Papers, vol.274, dd. 17.2.92.

at their port of destination. Ships from foreign ports obtained manifests from the local consul.[1] George Rose, the Secretary to the Treasury under Pitt, declared the Hovering and Manifest Acts checked smuggling, but just how effective they were is impossible to measure.[2]

Sometimes smugglers were powerful enough to forcibly run contraband under the eyes of intimidated revenue officials, but more frequently they utilised the inaccessible or remote creeks and inlets along the coasts of Scotland and North or South Western England to conceal their illegal trade.[3] At all times they exploited weaknesses in the local Customs service and derived much protection from the sympathetic attitude of the populace, including often those responsible for upholding law and order.[4]

To counteract these systematic and persistent attempts to evade duties were the heavy penalties prescribed by law and also the preventive arm of the Customs administration. But ferocious punishments proved to be an inadequate deterrent because they prompted the public to aid smugglers to escape grim sentences and juries and justices to be more than merciful in enforcing legislation.[5] Prevention, the Committee Investigating Illicit Practices recognised, "depends upon executive power not just laws."[6] Unfortunately, the Preventive Service suffered from all the weaknesses of Customs administration in general (weaknesses which will be discussed below) as well as being afflicted by several inefficiencies of its own.

To check smuggling, the Commissioners for Customs organised patrols by revenue cruisers around the British coastline, backed up by mounted patrols of "Riding Officers" along the shore and its neighbourhood. They also operated an intelligence service which through the medium of well rewarded spies and informers, provided the Board with information about smugglers' plans and movements in particular localities. On their side the smugglers had agents within the Customs service and the violence they wreaked upon known informers

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1. Pitt Papers, vols.283 and 290; Stanhope, Life of Pitt, pp.215-216; McPherson, Annals, 1805, vol.4, pp.51 and 103 and Lecky, A History of England, vol.5, p.31.
2. Rose, 'Brief Examination', 1792, pp. 5-6 The departments pressed the Treasury to make the acts more stringent - Treasy. T1/754/3801.
3. Pitt Papers, vol.283; Cross, 18th Century Documents, pp.239 and 308 and Rive, 'A Short History of Tobacco Smuggling', pp.565-566.
4. Atton and Holland, The King's Customs, p.84.
5. Hamilton, An Inquiry, 1791, pp.51 and 128; Hughes, Studies in Administration, pp. 200 and 330 and Leftwich, 'The Later History of the Customs', p.195.
6. Cttee. on Illicit Practices, 1785, p.284.

was extremely savage.[1]

Administrative exertions to put down smuggling became more vigorous in the latter years of the century. Between 1763 and 1783 the number of armed cutters employed by the Customs had nearly doubled and their rights to detain and search ships sailing along the coast were extended by the Hovering Acts of 1784 and 1786.[2] As a result, over two decades the value of contraband seized by the Customs also doubled which might, however, be more an indication of the enlarged scale of smuggling than a tribute to the improved efficiency of the Preventive Service.[3] Although the crews of revenue cruisers were paid a bonus varying between 30% and 50% of the seized contraband, the Customs Commissioners experienced great difficulties in keeping their cruisers constantly at sea. The need for the entire force to be always afloat must, however, have arisen because the total number of vessels and mariners available for patrol was inadequate to the demands being made upon them. Moreover, although the Customs employed durable and seaworthy craft they were often too slow to apprehend the lighter and more speedy boats used by smugglers.[4] Here is an example of misplaced Parliamentary emphasis on reducing the cost of collecting revenue, because parsimony in equipping the Preventive Service with sufficient cruisers of the right type probably cost the revenue considerably more than it saved on expenditure.

According to the Commissioners of 1783, the weakest link in the Preventive Service was, however, the Land Guard, whose functions were to patrol the coastline and its vicinity night and day in order to apprehend smugglers and contraband.[5] Although Riding Officers were mounted and well armed, they had not, according to Musgrave (Commissioner for the Custom in 1782) shown themselves "sufficiently numerous or resolute to prove any serious obstacle to the large bodies of armed smugglers that infest the coasts."[6] The Land Guard was fit

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1. Cttee. on Illicit Practices, 1785, p.285; Atton and Holland, The Kings Customs, pp. 241 and 296; Hoon, The Organisation of the English Customs, pp.187,230, 233 and 316; Customs, General Orders and Circulars, 1780-1814, pp.495 and 514 and Customs, Notes on the Coastguard Service, pp.1-15.
2. Cttee. on Illicit Practices, 1783, p.228 and appdx.1 and 24.G.3.c.2. and 26. G.3.c.40.
3. Cross, 18th Century Documents, p.256.
4. Pitt Papers, vol.284 - memo dd.20.10.96; Hoon, The Organisation of the English Customs, pp.180-181,219,235 and 286 and Leftwich, 'The Later History of the Customs', pp.196-197 and Cttee. on Public Accounts, 1787, p.17.
5. Cttee. on Illicit Practices, 1783, p.228; Customs, Instructions for Officers at Outports, 1781 and 1803 and Customs, Notes on the Coastguard Service, pp.5-7.
6. Hoon, The Organisation of the English Customs, p.185 and Treasy. - TI/794/4027.

only to cope with isolated small scale evasion, not the organised and systematic smuggling of the late 18th century. Thus, despite improvements to the Water Guard there seems to be no reason to modify the opinion of Atton and Holland that "for a full century the revenue staff failed conspicuously in prevention."[1]

By comparison the problems encountered by the Department of Excise in checking evasion seem much less intractable. Excise duties were levied in 1792 upon manufacturers of beer, bricks, candles, cyder, glass, malt, paper, spirits, soap, starch, stone bottles, sweets, vinegar and gold and silver wire; the tanners of hides and skins, the growers of hops and the printers of silks, muslins, calicoes and linens. Licence fees were collected by the Department from the manufacturers of all exciseable commodities, from auctioneers and from dealers in tea, coffee, cocoa, wine and spirits, tobacco and silver and gold plate. In addition the department administered the tax upon all sales of property by auction and since the late 1780's shared responsibility with the Customs for collecting duties upon imported tea, coffee, cocoa, tobacco, wines and spirits.[2] An excise strictly defined is a tax levied upon a domestically manufactured product, but in 1792, the Department of Excise clearly had responsibilities wider than the assessment and collection of excise taxes. Moreover, one important "excise" upon salt, was administered by Commissioners for Salt. However, the bulk of revenue collected by the Department was in the form of excise taxes; imported duties have already been discussed and since the administrative problems encountered in levying the tax on salt were similar to other exciseable products (so much so that in 1798 the salt tax was transferred to the management of the Excise Commissioners), this discussion will be focussed on evasion in relation to taxes levied upon British manufacturers in general.[3]

Excise duties were specific taxes imposed upon the quantity made of the products listed above and were collected from their manufacturers. From a local office, excise officials called Gaugers, made periodic visits to the plant making the taxed commodity to calculate the quantity liable for tax. By 1778 all makes of exciseable goods were subjected to daily survey. Gaugers' surveys

1. Atton and Holland, The Kings Customs, p.182.
2. Excise - vols. 11863 and 11894 and Nodin, The British Duties on Customs and Excise, 1792.
3. Hughes, Studies in Administration, pp. 355-356 and Pitt Papers, vol. 292.

were totalled and the required sum collected about every six weeks by the local Collector of Excise.[1]

Evasion of excise duties could arise in two ways: first through production by illicit manufacturers who had refrained from registering with the Department and had not paid the annual licence fee required by law to make exciseable commodities. Alternatively licensed manufacturers could defraud by deliberately concealing part of their output from the Gauger. The relative importance of these distinct modes of evasion varied from tax to tax and depended to a considerable extent upon the possibilities open for fraud with different processes of production. Illicit manufacture flourished when the excised product would be made rapidly, unobtrusively and with relatively little equipment. Commodities which met such conditions for successful evasion included candles, soap, starch, spirits, beer and malt, and for this particular group clandestine manufacture was a definite problem to the Excise Department.[2] At least this kind of fraud was much more prevalent than for commodities with lengthy processes of production carried on in large scale plant for such products as glass, paper and bricks; the tanning of leather, the refining of salt or the printing of textiles.[3] Up to 1780 the private manufacture of malt, spirits, beer, cyder and candles for family consumption was allowed by law, but these concessions were so much abused in order to defraud the revenue that by 1792 they had all been revoked except for beer and cyder and, despite Pitt's intention, he was not able to prevent private brewing from continuing to be a source of tax evasion.[4] Frauds in relation to salt occurred principally as a result of the privileges afforded fish curers, who could buy their salt duty free and transport it coastwise to their plant, and also by virtue of the lower duties paid on Scottish salt, clandestinely exported to England.[5]

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1. The system of survey for each commodity subjected to excise is described fully in Instructions to Officers of the Excise. Several volumes of these instructions for the period 1778 to 1828 survive at the Library of Customs and Excise and provide an invaluable source for the history of the excise. The other source on the assessment of excise is 2 Cttee. on the Irish Revenue, 1822, Appdx. 62.
2. Cttee. on Illicit Practices, 1783, p.232; Owens, Plain Papers Relating to the Excise, pp.77,334 and 340; Treasy. - TI/754/3803, TI/754/3801, TI/754/3803, TI/868/4372 and TI/984/3295; Pitt Papers, vols.274, 296 and 301; Cttee. on Scottish Distilleries, 1798, pp.513-515; Hamilton, An Inquiry, 1791, p.38 and see Instructions to Officers of Excise for these commodities, dd. 1778, 1781, 1814, 1816, 1818 and 1828.
3. Ibid and Mitchell, British Historical Statistics, p.243.
4. Instructions for Country Excise, 1781; Hamilton, An Inquiry, 1791, p.40; Smith, Wealth of Nations, 1776, p.845; Owens, Plain Papers Relating to Excise, pp.77 and 340; Treasy.TI/754/3801 and Dowell, History of Taxation, vol.4, pp.130-131.
5. Cttee. on Salt, 1801, pp.506-512 and Treasy. - TI/754/3683 and TI/726 - memo for Comms. for Salt, dd.14.12.93.

Licensed manufacturers had a positive interest in concealing as much of their output as possible from the Gauger, but their propensity to evade tax varied not merely with the rate of tax, but also with the scale of production. Larger firms, the Excise had discovered, were less prone to risk fraud than smaller enterprises anxious to expand and with less to lose if detected. For this reason, and because it took less time and expense to survey a few large enterprises, Excise Officials preferred large firms and the regulations governing certain taxes prescribed for the capacity of plant which could be licensed, for example, to distill spirits, or to make soap and starch.[1] The manufacture of most excised products was also tightly regulated. Glass manufacturers had to notify the local Excise Office when they wished to commence operations because their furnaces were fastened by official locks and a Gauger was required to be present during production. Every step in the process of making starch, soap and tobacco was regulated and surveyed by officials.[2] Leather, paper and printed textiles which had paid tax were stamped, a device which, if the manufacturer tried to sell contraband produce, added to his risk.[3] Over the 18th century as they gained experience and knowledge of collecting the taxes levied upon domestic manufactures, the Commissioners for Excise framed their regulations governing the assessment of taxes as to make it difficult for licensed firms to evade liability. Moreover, the capacity and average output of manufacturers under their survey was usually well known at the Local Excise Office, so that inexplicable fluctuations in production were bound to arouse suspicion.[4] Strong beer which paid a higher rate of tax than small or table beer was diluted by brewers into the weaker drinks in order to reduce their total tax bill.[5] When the Commissioners on Illicit Practices reported in 1783, they considered the system of regulations governing the manufacture of spirits and beer inadequate for protecting the revenue, and recommended that Excise Officials be allowed less restricted rights of access to breweries and distilleries and be given more controls over the process and times of production.[6] Yet, overall, it seems reasonable to conclude that the volume of production concealed from the Excise by licenced firms was probably a less important source of loss to the revenue than

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1. Cttee. on Illicit Practices, 1785, pp.287-288; 7 Comms. on Excise, 1834, pp.10-14; Hamilton, An Inquiry, 1791, p.117 and Cttee. on Scottish Distilleries, 1798, p.320.
2. Instructions to Excise Officers.
3. Instructions to Excise Officers; Treasy. - TI/754/3801 and TI/868/4372 and Hamilton, An Inquiry, 1791, p.197.
4. Ibid, p.25.
5. Cttee. on Illicit Practices, 1783, p.232; TI/754/3801 and Excise Town Instructions, 1781, pp.25-77.

footnotes contd..

illicit manufacture.

Not all the duties collected by the Commissioners for Stamps were paid for the impressment of official stamps upon legal and commercial documents. The Commissioners also managed taxes levied on the productions of newspapers, cards, dice and gold and silver plate; on the sale of advertising space by newspapers, patent medicines, perfumes, toilet requisites and gloves; and upon the hire of carriages and horses. While licence fees to exercise the occupation of pawnbroker, attorney, notary, gamekeeper, peddlar, hawker, conveyancer, horse dealer and coach proprietor were collected by this department.[1]

But the bulk of revenue paid into the Exchequer by the Commissioners was stamp duties, that is taxes imposed by means of a stamp upon legal and commercial instruments of every kind. For example stamp duties were payable in respect of property deeds, bonds, marriage certificates, the transfer of stocks, the admission to a wide range of professions, degree certificates, articles of apprenticeship, affidavits, probates and other legal documents. Stamps had also to be affixed to fire insurance policies, bills of exchange and commercial receipts.[2] Since the documents or instruments drawn up for such commercial or legal transactions were not valid in law unless stamped it was in the interest of the parties concerned to meet their tax liabilities. Moreover, heavy penalties were imposed on lawyers who drew up unstamped legal documents.[3] Some fire insurance companies evaded tax by continuation certificates, instead of issuing new policies to their clients, and the probate duty could be avoided by executors not proving wills; but, compared to almost all other taxes, evasion of stamp duties appears to have been minor, and the problem of evasion in this department was not considered worth investigating by the Commissioners on Illicit Practices of 1783, or the Finance Committee of 1797.[4] As Sheridan pointed out, losses to the revenue from fraud in relation to the taxes collected by the Commissioners for Stamps arose principally from the small group of taxes which were not stamp duties.[5] Thus, fraud was frequently committed by the manufacturers of cards and

6. Cttee. on Illicit Practices, 1785, pp.287-290. On frauds in salt taxation see Hughes, Studies in Administration, pp.343-346; Pitt Papers, vol.292 and Treasy. - TI/754/3683.

1. This list is not intended to be exhaustive. It is difficult to find breakdowns of stamp revenue for the years before the war. See Cttee. on Income and Expenditure, 1786, appdx.A.1 and Customs - C17/17 for 1795.
2. Ibid and 1 Comms. of Inland Revenue, 1857, pp.20-31.
3. Hughes, 'The English Stamp Duties', pp.249 and 252.
4. Pitt Papers, vols. 274, 277 and 290 contains some memos on fraud in this department.
5. Parly.Hist., vol.25, p.1421.

dice, the vendors of patent medicines and, above all, by the proprietors of stage coaches.[1] This last tax was imposed at a penny per mile travelled by any public coach, but the department found it impossible to check upon the mileage accounts rendered by carriage proprietors. Inspectors were appointed to travel the road and survey coach routes, and occasionally the operators of turnpike trusts were enlisted to keep records of coach movements for the department, but the nature of the tax made it all too simple to defraud with impunity.[2] The same problem had arisen with the duty imposed on post horses let out to hire, which was also rated at so much per mile travelled. Here the temptation for proprietors to charge the duty and pocket most of the proceeds was so strong that in 1787 Pitt took the unusual step of farming this tax.[3] Despite these examples of fraud it seems safe to conclude that the ratio of actual to possible tax receipts collected by the Commissioners for Stamps was probably higher than for any of the other major departments of revenue.

Apart from losses inflicted upon the revenue by deliberate evasion, tax receipts were also affected by the quality and honesty of the officials employed in their collection. Frauds occurred frequently with the connivance of civil servants, and money which should legally have found its way into the Exchequer failed to come even within the purview of revenue officials through their lack of diligence. Total receipts available for expenditure by the Central Government were also reduced by costs of collecting taxes and during the latter years of the 18th century, Parliamentary attention appears to have been focussed upon possibilities for lowering these costs. Thus almost all Committees which reported upon the public income published statistics which showed up disparities in cost per unit of revenue collected between the different tax departments. This ratio was widely and uncritically accepted as an index of efficiency and its variations over time were regarded as signs of improvement or deterioration in the competence of the department concerned.[4] Thus the Commissioners for

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1. Dowell, History of Taxation, vol.4, pp. 366-367 and 14 Cttee. into Irish Revenue, 1826, p.80.
2. Ibid, p.80 and Inland Rev. - vol.547.
3. Binney, British Public Finance, pp.44-45; Dowell, History of Taxation, vol.3, pp.57-59 and Parly. Hist., vol.26, p.1035.
4. 14 Cttee. on Public Accounts, 1786, p.9; 4 Cttee. on Finance, 1797, p.54; 8 Cttee. on Finance, 1797, Appdx. A.9 and pp. 2237225 and Anon, The Debt of the Nation, 1781, pp.72-73.

Customs, Excise and Stamps made every effort to avoid enquiries from the Treasury as to why their collection charges had risen. But, as a standard of comparison, the ratio of management charges to total tax receipts had definite deficiencies. The Commissioners for Customs administered the country's navigation laws, quarrantine regulations, commercial policy and coastal protection, but the department's total management charge (expressed as a ratio of duties collected) was compared, to the chagrin of the Commissioners, with that of the Excise Department which did little more than administer internal taxes.[1] Some taxes were inevitably more difficult and costly to collect than others, depending upon the possibilities they opened to the public for evasion. Thus excise duties which were difficult to avoid were cheaper to collect than Customs duties. Furthermore, any factor which added to the revenue gathered by a given department (such as increases in the volumes of production and trade), without at the same time raising management charges, lowered unit costs of collection.

The central weakness of the attention paid to this ratio is best revealed by the approval bestowed at the time upon the collection of direct taxes for being "cheap". Of course amateur administration was cheap, but it was also grossly incompetent when assessed in relation to the amount of revenue which might have been collected by a professional organisation applying the letter of the law. Management charges could always be reduced by employing voluntary staff, or by pruning the number of officials and their emoluments. No doubt during the period of "Economical Reform", some necessary reductions in the salary bill were accomplished by abolishing a number of sinecures in the Customs; but they were insignificant compared to what might have been achieved if Parliament had paid more attention to the overall problem of administrative efficiency.[2] More revenue would have found its way to the Exchequer and been collected at lower cost if the revenue departments had been staffed and organised with an eye to the maximising of taxation yields.

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1. 4 Cttee. on Finance, 1797, Appdx.A.
2. Norris, Shelburne, pp. 199-201 and 210-11; 14 Cttee. on Public Accounts, 1786, pp. 10-11, 18-21 and 24-25 and 4 Cttee. on Finance, 1797, pp.57-58.

Administrative efficiency depends principally upon creating the kind of organisation appropriate to its tasks; appointing suitable people to different posts within each Department and creating that balance of initiative and control which ensures diligence and application to duty from all personnel. Some of the characteristics of revenue administration in the late 18th century will be summarised in order to indicate how income from taxes suffered from the incompetence and dishonesty of those responsible for their collection.

Appointments to the Customs department were made by the Commissioners for Customs, the Treasury and the Crown. The Crown held title to a number of important posts in the service, called patent offices, some of which had become in the course of centuries outright sinecures, but to others definite and important duties were attached. Patent offices were usually filled by aristocratic nominees, who seldom took a direct part in customs administration, but appointed a deputy or deputies to undertake their duties for them in return for part of the emoluments attached to the job.[1] Although minor posts throughout the service were filled by the Commissioners for Customs, most of the more responsible jobs in the department (sometimes including the deputies, nominally appointed by the Patent Officers of the Crown) appear to have come under Treasury control or influence. As such, appointments to the Customs were part of the 18th century system of political patronage and posts were filled by the nominees of aristocrats or members of Parliament whose patrons were thereby rewarded by My Lords of the Treasury for their services to Governments of the day.[2]

Patronage was a system of appointment in contra-distinction to selection through competitive methods and it implied that jobs in the public service were obtained by those who enjoyed the favour of men with powers of nomination. Treasury patronage managed with a view to the Government's political advantage was more likely to be bad for efficiency than nomination by the Commissioners heading various revenue departments, who had at least some interest in the competence of the men under their command, and who were, moreover, pressured by Parliament to collect their taxes as cheaply as possible.[3] Patronage does

1. Hoon, The Organisation of the Customs, pp. 7-17, 20-25, 131, 167 and 196; 14 Cttee. on Public Accounts, 1786, pp.10-11 and Pitt Papers, vol.285 - Musgrave, dd. 1.12.82.
2. Hoon, The Organisation of the Customs, pp.20-22, 50, 197 and 200-202 and Thompson, Constitutional History, pp.234-237.
3. Hughes, Studies in Administration, pp.267-269 and 306-308 considers that Treasury interference lead to inefficiency but Norris, Shelburne, pp.210-213 regards the influence of the Treasury with favour.

not necessarily mean the incompetent are elevated to office, but unless certain criteria for nomination or some system for training nominees are established this is likely to be the result. Yet not until 1786 was a general age limit of 45 fixed for admission to the Customs. For a number of subordinate posts some ability, after training, had to be demonstrated before appointment was confirmed, and for the senior positions of collector and controller (the officials in charge of managing the outports) six months' training was imposed in 1787, but only after admittance to the department.[1] From all accounts the calibre of men appointed to manage and collect tariffs was anything but impressive. In 1782 a Commissioner of the Customs deplored the appointment to the important office of collector of "Country Fox-hunters, Bankrupt Merchants and Officers of the Army and Navy - without the least previous knowledge of the Business of the Revenue and too late in life to acquire it - so that they are totally unfit to keep good order in the port or to be the respresentatives of the Board .... "[2] Hoon's survey of Custom's personnel leads her to the conclusion that "customs offices of the 18th century sometimes existed less for the collection of revenue than for the collection of favours" and that "the appointment system was open to abuse at every turn and efficiency suffered accordingly."[3]

Appointments to the Salt Department were similarly influenced by Treasury patronage and a report of 1796 suggests that "the present relaxed state of discipline and inattention to duty in the officers in some places are principally owing to a defect in the judgement and experience of the collectors or chief officers appointed over them."[4] Administration of stamp revenue was different from other departments in that taxpayers made their liability known to the department as and when they required stamps. Thus the Commissioners for Stamps did not supervise a body of officials whose task was to detect and assess recalcitrant taxpayers, but collected duties which were difficult to evade. Stamps reached the public through Distributors who were not salaried public servants, but men who in effect retailed stamps for the Government and

1. Hoon, The Organisation of the Customs, pp. 204-207.
2. Cross, 18th Century Documents, p.250.
3. Hoon, The Organisation of the Customs, pp.211, 202 and 229. The Commissioners for Customs in 1857 noted that officers in the outports were "too often people who had failed in trade", 1 Comms. for Customs, 1857, pp.3-8.
4. Hughes, Studies in Administration, pp.306, 308 and 311.

were paid a poundage of 1/- for every £100 of stamps issued.[1] Distributors were required on appointment to give heavy security for their office as a precaution against default and were entitled to appoint as many sub-distributors as they considered appropriate for particular areas under their charge.[2] Thus administrative problems of the Stamp Department were less concerned with personnel and more with creating a system of accountability which would prevent stamps reaching the public through illegal channels. Here the work of the head office was particularly important in protecting the revenue from internal fraud by checking and counter-checking the distribution of stamps and stamped paper. No information is apparently available on how well this function was performed but post-war reports revealed a lack of diligence and application at the London Office.[3]

On matters of selection, training and promotion of personnel the Department of Excise was frequently held up by contemporaries as the model for 18th century revenue administration.[4] Top jobs in the department such as the Commissioners and Solicitor General for Excise were crown appointments but all other posts remained at the discretion of the Commissioners themselves. Fairly strict qualifications as to age, literacy and numeracy were demanded from candidates seeking entry as Excise Officers. Candidates were appointed as "expectants" and given thorough training before admission to the permanent staff.[5] Compared with their Irish counterparts, who came from a higher social strata, English Officers were, so the Solicitor to the Excise considered, "sober and industrious".[6] Perhaps the feature of Excise administration which excited most praise from investigating committees was its system of promotion. Except for very top appointments promotion was normally accorded to officials from within the Service who had, over a lengthy and carefully observed probationary period, demonstrated their merit and zeal; in sharp contrast to Customs Administration where senior officials were often appointed from outside the Service.[7]

1. Hughes, 'The English Stamp Duties', p.246; Cttee. on Stamps, 1821, pp.274-276 and 6 Finance Cttee., 1797, Appdx.7.
2. 15 Cttee. on Irish Revenue, 1828, pp.27-28.
3. 13 Cttee. on Irish Revenue, 1826, pp.8-14.
4. Smith, Wealth of Nations, 1776, p.835; Binney, British Public Finance, p.41; 20 Cttee. on Excise, 1836, p.183 and Owens, Plain Papers Relating to the Excise, pp.9-10.
5. Ibid, p.111; Pitt Papers, vol.317 - memo from Jackson, Commissioner for Excise; Accounts and Papers, 1819, p.479; Accounts and Papers, 1823, p.635 and 2 Cttee. on Irish Revenue, 1822, Appdx.74.
6. Ibid, Appdx.73.
7. The system is described in Pitt Papers, vol.317, memo from Jackson; Excise - vol 8088-93, Expectants, Appointments and Instructions, 1790-1822; Excise, Minutes E540/387 et seq. and Owens, Plain Papers Relating to the Excise, pp.125, 176 and 410.

Honesty and application on the part of revenue officials were also influenced by levels of salaries and modes of payment adopted for remunerating public servants. But their concern with the ratio of management charges to tax receipts had influenced the Commissioners of Excise to be myopic in their attitude towards Salary revision. After years of discontent and agitation, the Excise Officers secured a general rise in pay in 1788; their first of the century. Apparently the Commissioners were prodded into pressuring the Treasury for a salary increase because many excise officers had felt compelled to take part time jobs to supplement their earnings.[1] According to a Survey of 1796, salaries in the Salt Department were at a level which made officers "liable to pecuniary temptations and bribes," and watchmen, who saw to it that no salt was smuggled from the works at night, were easily corrupted.[2] The system of remunerating distributors of stamps by a poundage rate fixed in 1765 had resulted, with the rise in the average rate and extension of stamp duties to a whole range of new legal instruments, in some unnecessary cost of collection. The Select Committee of 1797 felt the poundage rate might be reduced without endangering the revenue, an opinion not shared by the Commissioners for Stamps.[3]

But the mode of remunerating officials by compelling merchants, manufacturers, lawyers and other taxpayers to pay, over and above their tax liability, fees to the officials who had assessed them, constituted a danger to the revenue and irritated taxpayers. By 1790 fees had almost disappeared from excise and stamp assessments but remained a significant part of the emoluments for a large body of officials in the Customs service.[4] Fees and perquisites paid by merchants to Customs officers for the complicated tasks involved in assessing their liability to import duties, were derived both from usage and acts of Parliament but with this tradition of fees and gratuities went low fixed salaries, too low in many cases for the subsistence of the officer concerned.[5] Fees probably originated in an attempt to institute some kind of incentive payments for a department where the amount of work fluctuated with

1. Pitt Papers, vol.290 - memo from the Board to the Treasury and Hughes, 'Salaries of Excise Officers', pp.260-261. The officers petitioned for further increases in 1796 - see Treasy. - T.44/38.
2. Hughes, Studies in Administration, p.346 and Pitt Papers, vol.292.
3. 6 Cttee. on Finance, 1797, Appdx.7; Pitt Papers, vol.290, memo, dd.6.1.96. and TI/842/3769.
4. Excise - 10776 - dd.20.4.04; Owens, Plain Papers Relating to the Excise, pp. 25-28 and Hersee, The Spirit of the General Letters, p.130.
5. Pitt Papers, vol.285 - Reports of Commissioners in 1789 and 1791 into Emoluments of Customs Officers; 15 Cttee. on Public Accounts, 1787, pp.21 and 28-31; 4 Cttee. on Finance, 1797, Appdx. D.4. and see Hoon, The Organisation of the Customs, pp.145, 212 and 215.

the volume of trade. No doubt the system had persisted because the Commissioners were not anxious to add to costs of collection by paying their officers fixed and regular salaries.[1] But, whatever their origins or rationale, fees were forcibly condemned by several Parliamentary Committees for the encouragement and opportunities they created for bribery and for collusion between merchants and officials to defraud the revenue. Merchants frequently withheld fees which were grounded upon usage unless they were favourably treated by their assessors.[1] As the Commissioners of 1787 saw it "The revenue of the customs rests and must rest upon the integrity and diligence of officers not high in the official scale" who, they noticed, "were continually placed in a situation where the rights of the public and the interests of individuals was opposed."[2] According to both contemporary and modern opinion bribery was more common in the Customs than any other revenue department, but it is impossible to even guess at the extent of loss to the revenue on this account.[3] Nevertheless, the remedy was plain, to protect the revenue from fraud and the merchant from extortion no less than 4 Committees in the late 18th century recommended the abolition of fees and the substitution of fixed and regular salaries for Customs Officers. Pitt agreed and in 1792 he failed to push a bill through Parliament designed to affect drastic changes in the mode of remunerating Customs Officials.[4]

Given the quality of the personnel, administrative efficiency may still be increased by the creation of the kind of organisation within which inattention to duty, mistakes or culpable dishonesty are readily detected. How far 18th century revenue departments secured accountability at all levels of administration is difficult to judge without detailed studies of their day-to-day performance. Their formal administrative structures or chains of command provided, however, for an elaborate system of check and counter-check upon nearly every task connected with the assessment and collection of taxes. In fact a striking feature of 18th century revenue administration was the large number of officials, whose jobs consisted in checking the functions performed by more junior officers. For example: the ultimate unit of Excise administration was the district. Within each district gaugers assessed the manufacturers to

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1. Pitt Papers, vol.285 - Report Into Emoluments of Customs Officers, 1791.
2. 15 Cttee. on Public Accounts, 1787, pp.28-29.
3. Smith, Wealth of Nations, 1776, p.847 and Hamilton, An Inquiry, 1791, pp. 19, 22 and 48.
4. Pitt Papers, vol.285 - Reports on Emoluments of Customs Officers, 1789-91; Cttee. on Illicit Practices, 1783, p.229 and Cttee. on Illicit Practices, 1785, p.285 and see Binney, British Public Finance, pp.32-33.

tax. Districts were headed by a supervisor who made continual and random checks on assessments made by gaugers. Their efficiency was in turn subject to random check by travelling Inspectors directly responsible to the Commissioners in London. Finally, the entire system was under constant scrutiny by a group of officials called Surveying General Examiners, who analysed office management, assessment procedure and tax laws in order to bring about constant improvements in administration.[1] In addition the Board moved Excise Officers to a new district every four years to make persistent collusion with local traders difficult, but whether this device gave any real protection to the revenue is a moot point. One memo to Pitt argued it had little effect because if an officer became corrupt in one locality he was likely to remain so in another, but this same memo considered the excise was adequately safe-guarded by the diligence of supervisors.[2]

A structure of administration very similar to that of the Excise Department operated under the Commissioners for Salt. Supervisors examined the methods of survey of officers at the salt works who checked and weighed the production of salt, and reported on their diligence to collectors responsible for groups of salt works.[3]

The actual procedure for assessing import duties seems equally involved and careful. When a merchant vessel came within a certain distance of port, Customs Officers, called tide waiters, went aboard to check and guard the cargo and remained on the ship until every item of merchandise had paid duty. As soon as the ship docked merchants attended at the Customs house with their invoices and other documents from which liability to tax was calculated. This assessment was checked and counter-checked by several clerks through a laborious process before the merchant obtained an official warrant to unload his cargo, which certified he had paid duty. This warrant then passed to another officer at the quayside called a land waiter who supervised the unloading and weighing of the cargo and checked that it accorded with the merchant's warrant. If the merchants had deliberately, or in error, under-declared his cargo, he would be

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1. Pitt Papers, vol.317 - memo from Jackson; 5 Cttee. on Finance, 1797, Appdx.C1; 20 Comms. on Excise, 1836, pp.237 and 255-57; Hamilton, 'An Inquiry', 1791, pp.27-28 and 48 and Excise, Instructions for Officers.
2. Pitt Papers, vol.290 and Excise - 27019, dd.24.3.95.
3. Pitt Papers, vol.292.

detected by the land waiter and surcharged. Land waiters were obviously key officials in the assessment of duties; if they became corrupt or negligent the revenue suffered. For this reason the Board made them work in pairs and keep full records of the unloaded cargo which were later compared with the records at the Customs House. Furthermore, their work on the quays was liable at any time to inspection by higher officials called Land Surveyors. In turn the work of both Surveyors and Waiters was superintended by a small group of Inspectors. Throughout the Customs procedure the checks were numerous and involved, but the ingenuity of those who were determined to defraud the revenue appears to have been equal to anything the Commissioners for Customs might devise to protect it.[1]

As a response to the low quality and corruptibility of public servants, those who had constructed the administrative machinery for the assessment and collection of taxes had established elaborate and complicated methods to secure accountability. Unfortunately, it is not possible to appraise the workings of the system. No doubt men are more important than elaborate administrative machinery, but probably the opinion of the Commissioners who, in 1821, enquired into the management of stamp revenue might apply equally well to the Customs and Excise. As the Commissioners saw it, "The regulations and mode of conducting business ... in this department are in general well calculated to meet the object for which they were established."[2]

In defence of the revenue officials, it must be pointed out they were called upon to work within a system of public accounting and administer a network of laws which would have tried the efficiency of any civil service, no matter how competent and qualified. Parliament had imposed upon its undeveloped public service the most complicated revenue legislation which provided taxpayers with numerous opportunities for evasion and officials with excuses for negligence. It has often been remarked that the laws administered by the Customs Department were the most intricate of all tax legislation.[3] 18th century tariffs reflected

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1. Hoon, The Customs Organisation, pp.136-138, 141-142, 161 and 245-56; Customs - Instructions to Customs Officers in the Outports, 1809 and Customs, General Orders and Circulars, 1780-1814, pp.100 and 223.
2. Cttee. on Stamps, 1821, p.274. On accountability in the Department of Stamps see the above report and Inland Rev. - 1041/83 Minutes of the Board of Stamps, 1807-08.
3. Accounts and Papers, 1898, pp.12-13; Comms. of Customs, 1857, pp.323-325 and 4 Cttee. on Finance, 1797, p.60.

the diverse functions performed by the Customs Service in collecting revenue, administering the Navigation Laws and protecting domestic industry. Thus a duty on a commodity might vary with its country of origin (Portuguese wines paid lower duties than French clarets) and with the nationality of the ship which transported the merchandise to England (taxes were higher on goods imported in foreign vessels). Some customs duties were assessed ad valorem and in most cases the department employed a fixed valuation in order to simplify procedure, but for a minority of commodities it made the effort to obtain a current valuation by compelling merchants to declare the worth of their imports. This latter mode of assessment gave rise to disputes between the merchant and officials and provided both with ways of defrauding the revenue.[1]

Before the Consolidation Act of 1787, many duties were appropriated to particular items of expenditure, consequently any import might be liable to tax under several acts of Parliament and in some extreme cases commodities were assessed under as many as thirteen headings. To calculate tax liability was the work of experts who had mastered one or other of thosetechnical guides published to assist both merchants and officials through the maze of Customs legislation.[2] Furthermore, each tax had to be accounted for separately which made the task of detecting mistakes in the original assessment almost impossible. Pitt's reform of 1787 by consolidating all duties levied upon a commodity under a single head simplified the work of the Customs administration very considerably.[3] Pitt also replaced many ad valorem duties by specific taxes which also added to the security of the revenue and brought the Customs into line with assessment procedure in other departments. Except for certain imports like tea, coffee, cocoa and spices, which were sold by public auction in London so that their wholesale prices could be easily ascertained, the practice of levying ad valorem taxes strained the competence of the 18th century revenue departments. Hence the tax structure of 1792 was dominated by specific taxes, and Pitt's reform of tariffs represented a further movement away from ad valorem duties. But even after consolidation "the merchant and shipowner still required expert help to enable him to cope with the intracacies" because the new tariff

1. Accounts and Papers, 1898, pp.13-16 and Nodin, The British Duties on Customs and Excise, 1792
2. Pope, A Practical Abridgement of Customs and Excise Laws, 1812 and Nodin, British Duties on Customs and Excise, 1792.
3. Rose, 'Brief Examination', 1792, p.15. Pitt discussed the details of his Consolidation Act with merchants - Pitt Papers, vol.305.

still contained "1200 articles and the laws relative to the Customs filled six large folio volumes."[1]

Excise duties were specific but the Consolidation Act simplified assessment and departmental accounting. Compared to the Customs, excise laws were reasonably clear cut, because they consisted of defining liability in relation to fairly specific commodities such as bricks, candles, malt etc., but complications arose (and with them occasions for fraud and mistakes) when the good could not be classified easily. For example: the numerous grades of paper or tanned hides taxed in different ways and at varying rates of duty engendered perplexity. Furthermore, reductions in the rates of tax which were permitted on products delivered as inputs to other industries (salt used to cure fish or hard soap to wash wool) also occasioned disputes and administrative confusion, but, in general excise legislation was promulgated simply to provide the State with revenue and was not made complex by other aspects of economic policy.[2]

Just before the war Pitt divided the assessment of duties upon cocoa, coffee, tea, wine, spirits and tobacco between the Customs and Excise departments in an attempt to check tax evasion. Tariffs continued to be collected by the Customs as these products arrived at British ports, but excise duties were levied on licenced dealers in beverages, spirits and tobacco. Assessment took the form of periodic surveys of their stocks, for which they were obliged to record all receipts and sales and they were not allowed to deliver merchandise without an excise permit.[3] By controlling internal trade in these imports most subject to evasion Pitt hoped to discover contraband and check both smuggling and fraud by customs officials.[4] But, although the permit and survey system (as the excise assessment method was called) was initially effective, Excise Officers found the task of frequent stock checking very difficult, particularly for districts where numerous traders operated on a small scale. In time administration became lax and Excise Officers tended to rely on the dealers' own reports on the state of his stock and traders found it more easy to handle contraband.[5] The transfer of selected imports to the Excise Department, in order to reduce the extent of tax, reveals how constrained Government was in the 18th century by the quality of the administration then available for implementing tax legislation.

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1. Accounts and Papers, 1898, p.13.
2. Blackader, The Rates and Duties on Excise, 1810.
3. 1 Comms. on Excise, 1833, pp.422-425; 2 Comms. on Excise, 1834, pp.4-6 and 8; 6 Comms. on Excise, 1834, pp.239, 242, 245 and 277 and Hersee, The Spirit of the General Letters, pp.251, 261 and 451.
4. Parly.Hist., vol.25, pp.1434-36.
5. McPherson, Annals, vol.4, 1805, pp.189-190; 1 Comms. on Excise, 1833, pp.428, 435 and 457 and 6 Comms. on Excise, 1834, pp.249, 260, 269 and 277.

TAXATION, 1793 - 1815

Sources of War Taxation

During the wars with France the amount of taxes collected by the State rose rapidly and substantially above peace time levels. Before the War citizens paid nearly £18 million in taxes. Between 1793 and 1815 the Government appropriated an additional £12.6 million per annum, measured in pre-war prices. My interest is not, however, in the burden or effects of taxation but in the achievement in finding finance to pay for the war. In previous wars Governments had only imposed taxes to pay interest on loans floated to meet the rise in military expenditure. 18th century opinion maintained that the country could not or would not bear large increases to its tax burden in order to fight wars and statesmen of the day found in the funding system an efficient instrument for their expansionary foreign policies.

At the beginning of the war taxes available to the Government fell mainly upon the outlay of British citizens. Only small proportions came from import duties and direct taxes upon income and wealth.[1] Government income depended partly on the rates of taxes imposed and partly upon the volume of goods and services assessed to tax. Thus all forces in the economy which affected the level of private expenditure in general or the demand and supply for taxed goods and services in particular also affected the public revenue. With such a large share of its income emanating from the processed raw materials of the agricultural sector the Government was particularly vulnerable to bad harvests.

Most tax revenue came from commodities which were either consumed by the mass of the population or attracted a considerable amount of expenditure from the more affluent groups in society. Very few of the really productive taxes appear to have fallen on goods and services with obviously elastic demands and, by and large, taxes were imposed upon products regarded as necessities either by the poor or by the rich or both. Chancellors could, therefore, expect that the elevation of tax rates would not in most cases lead to a fall in the Government's

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1. See Tables 7 and 8.

income. On the whole tax rates were specific which implied that the Government's real income would probably fall in periods of inflation.[1]

During the 18th century Governments exercised nothing remotely resembling absolute power in matters of taxation policy. Even in wartime they continued to be constrained by the conventions of the Parliamentary system, the pressures of powerful interest groups and the ideology of the age in regard to taxation matters. Moreover, to a degree unheard of in more modern times Chancellors found themselves circumscribed in the collection of revenue by the perverse, if explicable, attitude found among all ranks of the population towards the payment of taxes and also by the quality of the administration for the enforcement of tax laws in this unfavourable environment.

Constrained by the political system, obstructed by pressure groups and hampered by an incompetent administration the amount collected in taxes between 1793 and 1815 is in many ways remarkable. It is the purpose of this chapter to show where the money came from, to outline some of the problems and to appraise the methods employed in its collection.

Taxes collected between 1793 and 1815 were employed to finance the war effort, to meet the interest on loans floated to pay for the rise in military expenditure and to provide for the normal civil expenditure, including interest on the National Debt as it stood at the outbreak of war in 1793. I have assumed that in the absence of war civil and military expenditure would have remained constant between 1793 and 1815, and defined all additional tax revenue collected by the Government during those years as "war taxes", that is money appropriated as a direct result of the conflict with France. This definition includes but is wider than levies employed for the finance of additional military expenditure. It also embraces the interest paid on loans raised during the war years and the taxes used to pay for increments to civil expenditure, which increased in wartime. In other words my definition of war taxes rests on the premise that in the absence of hostilities the tax bill would have remained at its pre-war level. Thus war taxes are total taxes collected minus taxes employed to pay for the peace time civil and military establishment and include all additional tax revenue collected between 1793 and 1815.

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1. See pp. 348-349.

It is not possible to collect data on the yields of every tax which contributed towards the finance of war. My analysis will, therefore, be confined to the most significant taxes - that is levies which yielded at least £500,000 for additional military expenditure. This convention excludes from consideration the majority of taxes which had relatively small yields but since the sample accounts for 88% of the additional tax revenue required for the war, it seems reasonable to generalise on the basis of such a small but significant sample. Unless otherwise stated all proportions and generalisations made in this chapter will refer to the taxes quoted in the following table, and not to the tax structure as a whole. Taxes marked with an asterisk refer to taxes imposed after the outbreak of war. All other taxes were on the statute book in 1792. In accordance with my definition of war revenue, yields from the latter group consist of the sums collected in each year minus the average annual amount collected for the period 1788-92 aggregated. For new taxes, yield simply means the total collected from the date of imposition to the conclusion of the war.

Table 9 . The Contribution of Individual Taxes to the Finance of War.

Tax on	Yield £ million	Type of Tax	Yield from Changes in Quantity Taxed
Income*	155.6	Direct	-
Malt	41.7	Excise	0.0
Tea	36.2	Customs (ad val.)	1.3
Sugar	34.0	"	1.2
Foreign spirits	30.6	"	4.8
British spirits	28.7	Excise	1.1
Wine	20.8	Customs	0.0
Windows	20.7	Direct	1.8
Salt	15.4	Excise	1.3
Beer	11.8	"	2.9
Tobacco	11.2	Customs	4.0
Pleasure horses	9.8	Direct	0.0
Cotton fibres*	9.4	Customs	-
Farm horses*	9.4	Direct	-
Houses	9.1	Direct	0.0
Timber	8.0	Customs	0.0
Bills of Exchange	6.8	Stamp (ad val.)	5.4
Coal	6.5	Excise	2.7
Probate*	6.0	Direct	-
Paper	5.4	Excise	0.6
Legacy*	5.2	Direct	-
Soap	4.8	Excise	4.8
Fire insurance	4.3	Stamp (ad val.)	2.5
Marine insurance*	4.2	Stamp (ad val.)	-
Servants	4.1	Direct	0.0
Carriages	3.8	"	0.4
Auctions	3.4	Excise (ad val.)	1.9
Glass	3.3	"	0.8
Coffee	3.2	Customs	2.0
Bricks	2.8	Excise	0.2
Newspapers	2.8	Stamp	0.0
Dogs*	2.4	Direct	-
Printed textiles	2.5	Excise	2.5
Dried fruit	2.5	Customs	0.5
Hides and skins	2.3	Excise	1.4
Hemp	2.1	Customs	0.4
Hair powder*	1.9	Direct	-
Stage coaches	1.8	Stamp	0.0
Silk	1.8	Customs	0.2
Post horses	1.6	Stamp	1.6
Hops	1.2	Excise	0.8
Indigo*	0.9	Customs	-
Tallow*	0.9	"	-
Slates and stones*	0.6	"	-
Armorial bearings*	0.6	Direct	-
Totals	542.1		47.1

Notes and sources on next page.

Notes: The taxes marked with an asterisk were imposed after the outbreak of war. All taxes except those marked otherwise were specific. The yield from changes in quantity for ad valorem taxes should read yield from changes in value.

Sources: See Appendix 2.

In general terms tax revenue collected to finance the war came from the following sources:

	Total Yield £ million	% of Total
1. New taxes (marked with an asterisk)	197.1	36
2. Taxes extant 1792 (see breakdown 3 and 4)	345.0	64
3. Income from Changes in the Volumes or Values of Goods and Services Taxed in 1792	47.1	9
4. Income from Changes in the Rates of Tax Imposed on Commodities or Services Taxed in 1792	297.9	55

New taxes are self-explanatory. In groups 3 and 4 I have attempted to divide war revenue from taxes on the statute book before the war between the part which came from increased production or consumption of taxed goods and services and the share from additions to the rate of tax. The contribution from any given tax on the statute book in 1792 came from additions to the quantities assessed of the commodity or service concerned or from changes in the rate of tax per unit assessed or from both. Thus a given tax could yield revenue for the war even if the quantity taxed fell below pre-war levels provided the Government raised the rate of tax to a level sufficient to compensate for the fall in the quantity assessed. Alternatively, at a constant rate of tax additional yield could come from growth in the quantity assessed. For most taxes additional yields emanated from both sources, but it is possible to isolate the change in quantity assessed from alterations to the rate of tax by calculating the yield for each tax on the assumption that the peace time rate of tax prevailed throughout the years 1793–1815. This calculation distinguishes the "pure quantity" effect from additions to yield which came about from the eleveation of the tax rates.

In brief, the sources of war taxation came mainly from increments to the rates of tax of levies available to the Government at the outbreak of war. 36% emanated from new taxes imposed during the war years designed to broaden the tax base. Most of this income is the yield from the income tax imposed in 1799. The remaining 9% came from increases to the volume of goods and services assessed to tax. Changes in the volume of taxed goods and services depended on all the forces affecting their demand and supply and the efforts of the revenue administration in bringing them into assessment.

The remainder of the chapter will be divided into 4 sections. The first will consider the income tax and other innovations to the tax structure. The second will discuss the influence of constraints of ideology and the pressures of interest groups on the Government's selection of taxes to pay for the war. The third part will analyse the relationship between the growth of the economy and increases in the volume of goods and services taxed between 1793 and 1815. The fourth part will be concerned to describe and evaluate the role played by the revenue administration in providing finance for the war. Its contribution is not measurable but is too important to be omitted from any discussion of the sources of war finance.

The Income Tax and Other New Taxes

I traced 21 "new" taxes imposed between 1793 and 1815. But the yield of several such as the levies on flax, silk thread and lace, bankers notes, ships hulls and materials, watches and clocks and madder made too small a contribution to be worth detailed consideration. While the convoy duties imposed ad valorem on imports and exports and the tonnage of ships cleared through British ports cannot be with strict accuracy defined as new taxes. On the side of the imports, the duty might well be considered as an addition to existing tariffs and only the tax on exports and shipping were new.[1] Thus the productive innovations to the tax structure included (in order of importance) the income tax, and the levies on farm horses, cotton fibres, probates, legacies, marine insurance, dogs, hair powder, tallow, indigo, slates and stones carried coastwise, and armorial bearings. From this relatively short list the income tax was of such overwhelming importance and represents such a departure from pre-war taxation policy that it deserves detailed consideration and the remaining new taxes can conveniently be discussed together.

Perhaps the first point to note about new taxes is the absence of excises.[2] Both Pitt and Petty attempted and failed to extend excise duties to

1. 38 G.3.c.76.
2. Slates and stones is an excise in the sense of a tax imposed upon a domestically produced commodity but it was collected by the department of Customs on slates and stones carried coastwise.

include iron, private brewing and clocks. Ostensibly the iron industry appeared to be an eligible subject for an excise. Production was concentrated in large units and could not be easily concealed. During the war years under the stimulus of technical progress, military demand and increased protection from foreign competition, production expanded rapidly.[1] In 1796 Pitt investigated the possibility of a tax of £1 per ton on pig iron and asked the Excise Department to draw up estimates of total production. But eventually he decided not to proceed with the plan. Perhaps he was convinced by the case against the tax put to him by Lord Dundonald, Sir John Sinclair and the ironmasters, whose arguments stressed the infancy of the iron industry and the strength of potential competition from Russia, Sweden and Germany.[2] The ironmasters pleaded for time to perfect their enterprises, to introduce new techniques and opportunities to reinvest their profits in the industry.[3] Richard Crawshay in his letter to Pitt attempted to prove the tax would not produce more than £7,000 a year in revenue. He argued that the Excise department had exaggerated total production and pointed out that more than half the yield would be repaid as drawbacks on exported iron and metallurgical products, while the Government itself would pay a good deal of the tax through its consumption of iron.[4] Crawshay also exaggerated his case but his and other letters to Pitt probably convinced the Government that a tax upon iron would be neither politic nor particularly productive.

But a decade later Lord Henry Petty, Chancellor in the Ministry of All Talents, made a much more serious attempt to place a tax on iron on the statute book. On this occasion the ironmasters mounted a vigorous and systematic campaign to defeat the proposal. They set up a Committee in London to lobby Ministers and members of Parliament and held protest meetings in Birmingham and other provincial cities.[5]

In the Commons Petty spoke convincingly for the tax. He observed that the industry had flourished in wartime and refused to accept the argument (first

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1. Ashton, Iron and Steel, pp.143, 144, 151, 153 and 156; Scrivenor, The Iron Trade, pp.126-127. The rate of duty per ton on imported bar iron rose from 56/2 in 1793 to 130/- in 1814 - Customs, 10901.
2. Pitt Papers - vol. 301, Partridge and Company, dd. 1797 and a letter to Lord Sheffield, dd. 13.1.98 and vol. 266 - Dundonald, dd. 3.12.96.
3. Pitt Papers, vol. 301, passim.
4. Ibid, dd. 21.11.97.
5. Ashton, Iron and Steel, p.176; Davies, Birmingham, p.84 and Langford, A Century of Birmingham Life, p.79.

used in 1797) that the proceeds of the tax would in large part be repaid as drawbacks or passed on to the military departments in higher prices for armaments. Petty answered his critics with statistics to show that the tax would be a productive source of revenue.[1] The Chancellor also met the objection that the tax would make the industry less competitive with its foreign rivals by pointing out that the bill allowed drawbacks upon exports and he might also have observed that since 1793 the tariff on imported iron had almost reached prohibitive levels.[2] Against him the opposition maintained that to tax a staple commodity utilised as an input for such a wide range of activities, including coal, industrial and agricultural machinery, transport and armaments, offended orthodox cannons of taxation. George Rose added that the great Pitt had abandoned the tax for all time.[3] Although Petty carried the bill through Parliament by ten votes he found it too small a majority to proceed with such a contentious tax and once again the iron industry escaped from the encroachments of Government.

Having failed to secure general acceptance for an excise upon iron Petty then proposed to tax private brewing. Taxes on beer included levies on the finished commodity and on its ingredients, malt and hops.[4] Beer brewed privately for consumption within the family escaped the tax on the finished beverage. This anomoly not only gave rise to fraud but had been recognised as inequitable since it favoured those families affluent enough to brew privately over the mass of the population who had no alternative but to purchase their needs from the ale house.[5]

As he told the House, Petty found in private brewing a source of taxation connected with the general consumption of the more affluent. Moreover it was likely to be productive. He carefully framed his proposals to avoid the charge that the Government would send hated Excise Officers into people's homes and placed its assessment under the local Commissioners for Taxes who would assess families upon a notional figure of annual consumption. Despite the Chancellor's political precautions meetings were held up and down the country against the tax and the cry of "Excise and despotism" prompted the Whig Government to drop

1. Parly. Debs., vol. 6, p.949 and vol.7, pp.86-88.
2. Ibid, vol.7, pp. 77, 78, 82, 84 and 88 and on the tariff see Customs - vol. 10901.
3. Parly. Debs., vol.7, pp.75-76, 78, 81 and 90.
4. Excise - vol. 11863 and see p. 341.
5. Mathias, The Brewing Industry, p.358 and McCulloch, Commercial Dictionary, p.11

the idea.[1] When Perceval revived the proposal five years later he again encountered hostility and Vansittart who succeeded to his office in 1812 deemed it expedient not to proceed with the tax.[2]

In 1797, after he had committed the Government to the policy of financing a greater part of the war expenditure through taxes, Pitt also investigated the idea of a levy on parcels carried by coach and a tax on canals. No doubt the origins of the former could be traced to one of those numerous letters in the Chancellor's correspondence which suggested taxes to him, often of a wildly implausible kind.[3] A Committee examined the tax on parcels and advised Pitt to reject it as a partial tax which could not be passed on.[4] Apparently North first mooted a tax on canals and Pitt's proposals were for a levy on the profits of canal proprietors above the rate of 5% on their investments.[5] Fox strongly opposed the tax and Sinclair told the Chancellor that canals already augmented the public revenue through their effects on the productivity of agriculture and advised caution in taxing enterprises upon which the general prosperity of the economy depended.[6] Pitt decided not to proceed with either scheme. He did, however, persuade the House to grant an annual levy, administered by the Board of Taxes, on persons possessed of watches and clocks.[7] But such a volume of protest reached Parliament and the Cabinet from the manufacturers concerned that the Select Committee which investigated the tax subsequently advised the Chancellor to repeal the law.[8]

But most of the new taxes which reached the statute book during the war years did not arouse strong opposition on grounds of principle or from the groups most immediately affected. Nor, unlike the income tax, did they give rise to any special problems of collection but could be accommodated within the existing framework of administration. Thus taxes on amorial bearings, hair powder and dogs represented extensions to the assessed taxes on the consumption of the upper classes and were the kind of levies approved by the age, at least in principle. In fact the tax upon dogs emanated in petitions to Parliament against dogs, which,the petitioners argued,killed sheep and consumed food fit for humans.[9]

1. Parly. Debs., vol. 7, pp. 255-258 and 523-525.
2. Ibid, vol.23, p. 570.
3. Pitt Papers, vols. 264-271.
4. Ibid, vol. 273 - report dd. 1797.
5. Dowell, History of Taxation, vol.2, p.217 and Sinclair, History of the Revenue, vol. 2, 1802, pp.262-263.
6. Ibid, pp. 260-263 and Colchester, Diary & Correspondence of Abbott, vol.1,p.77.
7. 37 G.3. c. 108.
8. Commons Jnl., vol.53, pp.158-159,167,174,178,230,239,247,256,318,326,364 & 373; Pitt Papers, vol.222; Liverpool Papers,vol.38252/183 and Davies,Birmingham,p.54
9. Parly.Hist., vol.32, pp.994-998.

The tax upon amorial bearings was imposed on a sliding scale according to the wealth of the taxpayer.[1] But with this kind of tax the yield could often only be raised by additions to the rate which could, however, be self-defeating when many families simply ceased to use amorial bearings. The yield of the new levy on hair powder imposed on those who indulged in what Pitt termed "vanity" also fell steadily.[2] Despite the exemption of unmarried daughters, army officers and servants, as Fox and Palmerston predicted, the rich readily abstained from this fashionable vanity.[3] On the other hand, they found it less easy to give up sporting dogs when Parliament imposed and then steadily increased the licence fee.[4]

With taxes on dogs, hair powder, amorial bearings, servants, carriages, houses and horses, Parliament reached the limit of durables consumed by the upper classes which could be taxed directly as an alternative to an income tax. During the war this group of assessed taxes was, also, extended beyond their original purposes to include horses employed not for pleasure by the rich, but used in industry and agriculture. While Parliament widened the tax upon servants to include persons employed in hotels, taverns and inns and the carriage tax came to embrace vehicles employed for more productive purposes than the conveyance of aristocrats from place to place.[5] Only the tax upon farm horses aroused opposition. The Government met one possible objection by taxing the horses of small farmers and also smaller horses at lower rates.[6] Fox and Sinclair disliked the whole notion of taxing farmers and the latter thought the tax would affect the price of food. But the Government felt that farmers were prosperous enough to pay the tax.[7] Between 1800 and 1815 the administration succeeded in raising the numbers of horses taxed from 945,000 to 965,000 and the yield increased very slightly above the initial total.[8] When Pitt attempted to increase the rate in 1805 Parliament defeated his proposal by three votes on the grounds, put by Coke of Norfolk and others, that the tax took away all incentive to investment in agriculture.[9] At the end of the war Vansittart bargained with the landed interest against the repeal of the tax, which then yielded as much as

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1. Pitt Papers, vol. 273 - memo, dd. 22.6.97.
2. Parly.Hist., vol.31, p.1313 and 1 Comms. of Inland Revenue, 1857, Appdx. 70.
3. Connell, Portrait of a Whig Peer, p.310 and Inland Rev., vol. 385, p.52.
4. 1 Comms. of Inland Revenue, 1857, Appdx. 70.
5. Dowell, History of Taxation, vol.3, pp.218-219 and Commons Jnl., vol. 53, p.680 and 1 Comms. of Inland Revenue, 1857, Appdx.68.
6. Accounts of Duties, 1830, p.233 and 1 Comms. of Inland Rev., 1857, Appdx.69.
7. Parly.Debs., vol.1, p.546 and Sinclair, History of the Revenue, vol.2, p.398.
8. Inland Rev., vol.385, pp.98, 102, 159.
9. Parly.Debs., vol.3, pp.569-570 and 861-862.

the original levy on pleasure horses, in return for higher tariffs upon imported grain.[1]

Two general taxes were levied upon foreign trade, namely the marine insurance stamp of 1795 and the convoy duty of 1797. Convoy duties were imposed ad valorem on imports and exports and upon the tonnage of shipping cleared inwards and outwards from British ports. The rate of tax varied between commodities and the destination of exports, but Pitt resisted pressure from the American Consul for more favourable terms for trade with the United States.[2] Apparently London merchants were consulted about the format of the duty and seem to have accepted the Government's view that the tax represented a fair recompense for the protection afforded by the Royal Navy in a period of economic warfare.[3] They submitted to the duty without much protest but as soon as the Peace of Amiens had been signed they campaigned for its repeal.[4] The suggestion in 1807 that the Government might continue the tax after the war caused considerable alarm and the Chancellor had to reassure Parliament he would not persevere with such a plan but in fact the tax persisted until 1819.[5] While the war lasted ships of the Royal Navy accompanied merchants on their ventures across the oceans and the latter could readily appreciate one of the reasons for the high taxes levied upon trade. In turn the Government gained revenue from its active promotion of exports and imports.

Similar considerations probably made the stamp on marine insurance more acceptable. While ships sailed under the protection of the Navy underwriters at Lloyds and elsewhere could afford to keep their premiums at lower levels. Pitt in 1795, therefore, imposed an ad valorem tax on marine insurance, where the rate of tax varied with the amount insured and with the premium charged.[6] During the war years the income from marine insurance rose rapidly with the increase in international trade, the general inflation of commodity prices, the rise in the premiums charged by underwriters and the increased share of business transacted through London, occasioned by the decline of other commercial centres such as Amsterdam and Hamburg.[7] For example, in 1784 a letter to Pitt from a

1. Vansittart Papers, vol. 31231 - Atkinson, dd. 18.5.14.
2. 38 G.3.c.76; McArthur, Political Facts, 1801, p.37 and Vansittart Papers, vol. 31229, memo dd. 1.6.98.
3. Pitt Papers, vol.302 - memo from Land Rev. Office, dd.16.11.97; Vansittart Papers, vol. 31239 - undated memo; Parly.Hist., vol.36, pp.550-551 and Rose, 'Brief Examination', 1806, p.40.
4. I came across just two objections to the institution of the tax in 1797. One from the merchants of Leeds and the other from the East India Company - Pitt Papers, vols.114 and 222. On the agitation for repeal in 1802 see Parly.Hist., vol.36, pp.550-551; Vansittart Papers, vol.31237, undated memo and Monthly Mag. 1802, May, p.569, June, p.513 and December, p.472.
5. Parly.Debs., vol.7, p.427 and Hansard, vol.29, p.863.

footnotes continued...

merchant connected with the business put the total property insured at £67 million and sixteen years later the Committee on Marine Insurance, on the basis of information provided by the tax, placed it at £163 million.[1] Another example of the growth of this business can be seen in the increase in the annual premium income of the London Assurance Corportion from £9,000 at the outbreak of war to £286,000 in 1813.[2] From the remaining new taxes imposed on trade those on imported indigo and tallow aroused no conflict between the Government and the private sector and infringed no cannons of taxation.[3]

Imported tallow was used mainly in the manufacture of candles, the only form of artificial light available to the population at the end of the 18th century.[4] Over the war years the Government made no addition to the excise on candles and quantity taxed for England and Wales rose from 55 million lbs. in 1792 to 78 million lbs. in 1815. Between 1799 when Pitt first imposed the duty and the end of the war imports of tallow increased from 227,000 cwt. to 360,000 cwt., despite the rise in the prices of both candles and tallow.[5] Demand for candles was probably price inelastic and rose with population. Imports of tallow increased because the domestic production of sheep fat did not keep pace with the requirements of the candle industry. Indigo was employed to dye cloth and imports grew with the consumption of the latter. The duty enabled the Government to share in the Revolution in textiles which continued during the war years.[6]

The duty imposed on raw cotton in 1798 performed the same function. After the campaign of the ironmasters one would expect that a tax levied for the first time in 1798 upon the basic raw material of major industry which offended orthodox principles, to have aroused more opposition. When Pitt investigated a possibly levy on raw cotton he received protests from Bolton, but in general the tax passed into law without demur.[7] Perhaps the very low rate of tax at 1d per pound engendered apathy in an industry undergoing rapid technical progress.[8] When the rates of tax doubled in 1803 the Government did receive a

6. Dowell, History of Taxation, vol.3, p.147 and Pitt Papers, vol.277.
7. John, 'The Marine Insurance Market', pp.127, 132 and 136.

1. Pitt Papers, vol.108 - Andrews, dd. 9.11.84 and Cttee. on Marine Insurance, 1810, p.250. The Committee estimated that a further £157 million were left uninsured against hasards at sea and thus escaped the tax.
2. Drew, London Assurance, pp.130-131.
3. For details of these taxes see Customs, 10901. In 1803 the Committee for Trade received a petition from the woollen industry against the duty on indigo - Board of Trade - 5/13, dd. 14.1.03.
4. Dowell, History of Taxation, vol.4, pp.308-309.
5. Excise - 11894; Customs 10901 and Tooke, History of Prices, vol.2, p.415.
6. Accounts and Papers, 1826-27, p.151.
7. Greig, Farrington Diary, vol.1, p.137.

footnotes continued

petition for the repeal of the tax, but real opposition emerged during the conflict with the United States from 1809 to 1815 when shipping and colonial interests almost succeeded in persuading the Cabinet to exclude American cotton in favour of the imperial product.[1] Although the Government sensibly refused to prohibit the import of American cotton only determined pressure from the cotton industry, ably conducted in Parliament by Peel and Baring, prevented the imposition of a higher duty on cotton fibres from the United States.[2] At the end of the war the industry pressured Parliament for repeal of the tax but between 1798 and 1815 the rapid growth of cotton production automatically increased revenue from the tax on cotton fibres. As prices of raw cotton fell, it is perhaps surprising that the Treasury did not impose higher rates of tax on such an eligible source of revenue.[3]

Three direct taxes were initiated during the French wars, one upon income and two upon inherited property. Not one of these taxes introduced new principles into British taxation policy because embryo forms of death duties already existed and the land tax, as defined in law, provided for the general taxation of income. Pitt's innovations in the field of direct taxes consisted in making taxes accepted in theory legally possible and administratively effective.

At the outbreak of war the existing taxes inherited property consisted of a probate stamp and the legacy duty. Wills or letters of administration proved in the Courts were required in law to pay stamp duty according to the amount of property bequeathed. Only personal or moveable property paid the tax which did not apply to real estate or to Scotland. An inheritance of £20 to £100 paid 10/- and the scale of charges ceased at £5,000 and above which required stamps worth £20.[4] The legacy duty, imposed on receipts given for legacies, again related only to personal or moveable property. It also operated on a sliding scale according to the value of the inheritance.[5] Neither of the taxes on property which changed hands at death were comprehensive in scope nor

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8. Accounts of Duties, 1830, p.2. Ellison, The Cotton Trade, p.52 has quotations for cotton fibre prices which vary between 25d and 45d per lb. in 1798.

1. Their campaign can be traced in: Anon, 'Letter to Spencer Perceval', 1812; Liverpool Papers, vol. 38252 - memo, dd. 19.3.13; Lynne, 'A Letter on the North American Trade', 1813 and petitions to the Committee for Trade - B.T./5/18, dd. 15.5.09 and 30.5.09; B.T./5/19, dd. 1.6.09; B.T./5/20, dd. 24.5.10; B.T./4/14098, dd. 22.3.13 and 7.4.13. and B.T./5/22, dd. 29.3.13 and 1.4.13.

2. Parly.Debs., vol. 20, pp.222, 274-275 and 305-306 and vol.26, pp.202, 259, 372 and 395. This pressure certainly influenced the Government - Rose wrote to Bathurst that "if the requests of importers are complied with manufacturers will impute the present distress to us" - Bathurst Papers, dd.29.8.10.

3. Total imports of raw cotton for 1797-99 was about 33 million lbs. by 1809-15

footnotes continued

effective in application, because the law did not require receipts for legacies and executors avoided probate duties by not proving wills properly through the courts.[1]

In 1795-96 Pitt reformed both taxes in order to make them effective instruments for the collection of revenue. As he told Parliament, "in a war for the protection of property it was just and equitable that property should bear the burden."[2] To make the probate duty effective the Chancellor imposed penalties on those who executed the property of deceased persons without obtaining probate in the courts.[3]

For the legacy duty the Chancellor's proposals were more far reaching. First he secured the tax by making the executors of inherited property responsible for payment of stamp duties. Then he reformulated the law to impose ad valorem rates of tax according to the legatee's relationship to the deceased. Thus widows and children paid no tax on their inheritance, brothers and sisters paid 2% and friends 6%.[4] Pitt also proposed to make the tax comprehensive to include all property inherited at death, but he submitted his ideas to Parliament in the form of two bills - one related to personal property (already taxed by the legacy stamp on receipts) and the other related to real estate.[5] His speech insisted that neither bill involved new principles and carefully pointed out to the Parliament of aristocrats that the Government would not tax lineal descendents.[6] Fox and others, with some insight into the British political tradition, were worried where the tax could extend once Parliament admitted the principle of a levy on collateral succession.[7] Nevertheless, the legacy duty on personal property passed on the second reading by 81 votes to 52. But Pitt's other proposal to include real property gave rise to very strong opposition among the landed gentlemen and only passed the House of Commons on the casting vote of the Speaker. Pitt, perceptive enough to foresee nothing but trouble and eventual defeat in the Lords found it expedient to give up the attempt to tax inherited

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it had increased to about 90 million lbs. - Tooke, History of Prices, vol.2, p.391. Tooke, pp.401-402, also shows that prices fell over the same period.

4. Dowell, History of Taxation, vol.3, pp.125-127 and 1 Comms. of Inland Rev., 1857, Appdx.44.
5. Ibid, p.209 and Dowell, History of Taxation, vol.3, p.133.

1. Dunn, A History of Inheritance Taxation, pp.45-50 and 54 and Pitt Papers, vol.274 - 'Observations on the Duties for Probates of Wills'.
2. Parly.Hist., vol.32, p.562.
3. Dowell, History of Stamp Duties, p.34.
4. Accounts of Duties, 1830, p.25 and 36 G.3.c.52.
5. Dunn, History of the inheritance Taxation, pp.64-65.
6. Parly.Hist., vol.32, pp.561 and 1030.
7. Ibid, pp.1026-1028.

land and real estate.[1]

In 1802 Addington tightened up the administration to make evasion more difficult and two years later he raised rates on the legacy duty and extended the probate stamp to include Scotland.[2] In 1805 when the country gentlemen rejecte his proposed tax on farm horses Pitt fulfilled the prediction of Fox and extended the legacy duty to include lineal descendents at a rate of 1% on the bequest. He also included real estate.[3] Both taxes suffered from the quality and format of the machinery for their assessment until the Treasury took steps in 1816 to improve the whole administration of the succession taxes.[4]

Taxes upon inherited property together with the Triple Assessment of 1798 paved the way for the most radical alteration to the tax structure, namely the income tax of 1799. In terms of its contribution to the finance of military expenditure the income tax was far and away the most important innovation of the war years. It provided no less than 28% of the finance required to pay for the war and without it Governments of the day would have been compelled to finance the war through the traditional medium of loans and Pitt's departure from this traditional policy in 1797 could not have been sustained. To the wartime income tax the British people owed alleviation from their tax burdens in the difficult years after Waterloo. Without the income tax the interest bill on the national debt during the two decades after 1815 would have been far higher.

For reasons already outlined, before 1793 such a tax would have been unacceptable to almost all groups whose cooperation constituted a prerequisite for its introduction into the fiscal system. Moreover, there is no reason to suppose the tax became any less repugnant to the middle and upper classes during the early stages of the war.[5] When he formulated his proposals in 1798 Pitt had to meet strong and deeply held convictions against an income tax and almost all improvements to the format of the tax or to the structure of the administration after it became law continued to arouse opposition. Perhaps the strength of feeling against the income tax can be illustrated by the successful campaign for its overthrow immediately after the war. Petitions for the repeal

1. Senator, vol.16, pp.1035-1041 and Parly.Hist., vol.32, p.1258 and Dunn, History of Inheritance Taxation, pp.65-66.
2. Newmarch, Legacy Duty, pp. 9 and 12-15.
3. 1 Comms. of Inland Rev., 1857, Appdx.44; Parly. Hist., vol.3, pp.550-551 and Dunn, History of Inheritance Taxation, pp.86-87.
4. Ibid, pp. 101 and 181.
5. Criticism to the effect that Pitt should have imposed an income tax during the early years of the war ignores the circumstances of its introduction in 1798-99.

of the tax came in from several towns almost as soon as the Peace of Amiens had been signed in 1802 and Addington who concurred in the view that it was a war tax repealed the law.[1] In 1815 even before Napoleon had been finally defeated at Waterloo, Vansittart had difficulty in persuading Parliament to renew the tax for another year until the situation in Europe changed.[2] The following year a determined campaign lead by Brougham Creevey and Lord Grey succeeded in securing the repeal of the tax against the opposition of the Liverpool Administration by a majority of 37 votes.[3] While it is certainly the case, as Shehab demonstrates, that the opposition both exaggerated and dramatised the extent of feeling in the country for repeal, and the Government's Parliamentary tactics appear inept, nevertheless petitions did pour into the House against the tax from almost every major town in the land and the opposition did manage to defeat the Government.[4] Even after sixteen years experience with the tax, an otherwise powerful Cabinet could not find a majority for its retention in peace time. Given the hostility of powerful political and interest groups to the whole notion of a levy upon income and the difficult administrative problems involved in its assessment and collection, the yield of the tax is a tribute to the men who designed, introduced and collected the tax. I will now attempt to explain how Pitt surmounted or rather circumvented the opposition to an income tax and then analyse the factors behind its contribution to the Exchequer between 1799 and 1816.

No doubt the prime factor behind the acceptance of an income tax after 1799 was the war. Heavy military expenditure required to combat France had to be financed somehow and the patriotic or frightened upper and middle classes expected to make real sacrifices in order to prevent the invasion of Britain by their revolutionary foe. As Lord Auckland remarked: "This measure has been accomplished by the union of opinions respecting the nature of French hostility."[5] Moreover, the Government introduced the tax at a time when the country's ability to resist aggression seemed highly problematical. Equally it it important to notice that income tax became law only after the Government had designed and

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1. Commons Jnls., vol.57, pp. 250, 251, 273, 276, 286, 290, 291, 296, 297 and 303 and Parly. Hist., vol.36, pp.446-447.
2. Hansard, vol.30, pp.652-696 and 711-715.
3. On this campaign see Shehab, Progressive Taxation, pp.60-69 and Brougham, Life and Times, vol.2, pp.296-297.
4. Shehab, Progressive Taxation, pp.68-69 and see Hope-Jones, Income Tax, pp. 111-120.
5. Auckland, 'Substance of a Speech', 1799, p.30.

implemented an alternative scheme to avoid a direct tax upon incomes. While the gradual introduction of amendments designed to improve upon the conciliatory format of the original act and to raise the efficiency of the machinery for assessment and collection helped to weaken opposition to the tax and to make it acceptable to the country.

After four years of war and understanding that hostilities with France would be more protracted than he, or indeed most people, had initially anticipated Pitt persuaded Parliament to depart from the country's traditional policy of financing war expenditure through the medium of loans in favour of raising more supplies in the form of taxes.

Immediately the question emerged as to which among existing taxes could be raised or alternatively what were the possibilities for new and fruitful sources of revenue. Letters to Pitt at this time contained countless suggestions for taxes and between 1796 and 1799 most of the innovations in taxation policy passed on to the statute book.[1] Several pamphleteers also published advice to the Chancellor of the Exchequer and some authors mooted fairly well developed proposals for a tax upon income.[2] While Parliament received petitions from the prominent citizens of Glasgow, Dumbarton, Lanark and Ayr who strongly supported the policy of raising more supplies in the year and advocated a general tax upon property.[3] But Pitt knew that proposals for a general tax upon incomes or property would not be popular with Parliament because the landed members had already resisted his suggestions for a levy upon inherited real estate. Moreover he must have been acutely aware of the administrative difficulties involved and probably agreed with an unsigned memo submitted to members of the Government which argued that such a tax was impracticable.[4] In the event the Chancellor attempted to circumvent potential opposition and to place no additional burdens upon the amateur administration for direct taxes by a compromise proposal known as the Aid and Contribution Act or the Triple Assessment.[5]

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1. Pitt Papers, vols. 264-271 passim.
2. Anon, 'Hints Towards an Improved System of Taxation', 1798, pp.1-25. This pamphlet was sent to Pitt. Zenour, 'Observations on the Taxation of Property', 1798, pp.12, 16 and 36; Adams, 'A Plan for Raising Taxes', pp.8, 37-38 and 44 - this work was also sent to Pitt; Pitt Papers, vol. 183 - Thornton, dd. November 1796 and undated memo in vol. 274 and Windam Papers, vol. 37879 - letter from Jickling.
3. Commons Jnl., vol.53, pp.541, 582, 616, 672 and 676.
4. Liverpool Papers, vol. 38354 and Pitt Papers, vol.273, dd.11.10.97.
5. This plan together with Pitt's marginal annotations can be found in Pitt Papers, vol. 273 and in Liverpool Papers, vol. 38354 - memo dd. 11.10.97.

Briefly, this act aimed to use the existing legal and administrative framework for direct taxes upon outlay in order to achieve all the advantages of an income tax. Assessed taxes were collected from defined lists of taxpayers and the assessments were based upon their expenditure upon housing, servants, carriages and pleasure horses. Expenditure upon these items provided the Government, according to prevailing views, with a good index of income. Moreover, the rate of tax increased progressively with the number of taxed items retained by taxpayers as part of their domestic establishments.[1] Pitt instructed the Tax Office to present him with consolidated data on the incidence of assessed taxes and then used this information to design a scheme which converted direct taxes upon expenditure into a tax upon persons, which, he hoped, would be roughly commensurate with their incomes.[2] Thus the Aid and Contribution Act divided those who paid assessed taxes into three groups.

1. The very wealthy, who paid in respect of carriages, servants and horses - their assessments were increased according to the following scale:

Tax Paid in 1797	Tax Liability Under Aid and Contribution Act increased:
£25	Three times
£25-30	three and a half times
£30-40	four times
£40-50	four and a half times
£50 and above	five times

2. A middle group, who paid assessed taxes upon houses, windows, watches and clocks. Their liability also became a multiple of the tax contributed in 1797 and was based upon an ascending scale, which ran from one-quarter upon a tax of £1 to £2 to five times a tax of £50 and above.
3. Those who paid assessed taxes in respect of lodging houses and shops had their liability calculated upon a less steeply ascending scale than other groups.

Apparently the Act was intended to exempt people with incomes below £60 a year, to tax those with incomes between £60 and £200 at an increasing rate and

1. See pp. 317-318.
2. Information related to the design of this scheme can be found in Pitt Papers, vols. 279, 280, 282 and 283.

take no more than 10% from the incomes of those with £200 a year and above. Citizens could claim exemptions and abatements if they could show that the strict application of the law would take from them more than the specified proportions of income. While those with large families were granted additional abatements.[1]

Pitt insisted the Triple Assessment should not be termed an income tax, but despite his disclaimer, the act had several features in common with such a tax. For example, it sought to tax the wealthy and exempt the poor, it provided for child allowances and, unlike traditional taxes upon expenditure, taxpayers could not avoid liability by selling their horses, carriages and houses or by dismissing their servants. Their liability was personal.[2] It had in Pitt's eyes the advantage, made all too clear by his experience with the legacy duty, of avoiding "improper disclosures of circumstances" which the Chancellor recognised as "repugnant to the manners and customs of the nation."[3] At the same time those who wished to claim exemptions and abatements had to disclose their incomes and the Tax Office issued very careful instructions as to how their circumstances might be investigated.[4] By stressing the continuity and avoiding the "inquisition" of disclosing income to Government officials Pitt hoped to make the tax acceptable to Parliament and the nation.

But as the King expected the tax aroused opposition, particularly from those intimately affected.[5] In Parliament Fox and his friends stressed the unequal incidence of a tax based upon past expenditure patterns, a point the Chancellor had himself recognised when he appealed to those whose spending habits did not reflect their incomes to come forward and contribute voluntarily to the needs of the State.[6] Some members of the opposition, including Sheridan, were unwary enough to call upon Pitt to design a tax which taxed according to some more accurate indicator of ability to pay, but Fox, who appreciated the implications of this line of attack, concentrated his objections upon the whole case for the tax, namely the attempt to raise more supplies within the year.[7]

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1. Dowell, History of Taxation, vol.2, pp.221-223; Shehab, Progressive Taxation, p.43 and Parly. Hist., vol.33, pp. 1043-74.
2. Liverpool Papers, 38354 - memo, dd. 11.10.97 and Parly.Hist., vol.33, p.1048
3. Ibid, p.1139.
4. Pitt Papers, vol. 273 - Plan of Finance for 1798.
5. Windham Papers, 37877/205. Lord Sheffield wrote to Auckland that the country would not bear such taxes - Buckingham, Memoirs, vol.2, p.387 and the Whig Peers organised a campaign against the tax - Holland, Memoirs, vol.1, pp.96-97.
6. Parly.Hist., vol.33, p.1051.
7. Ibid, vol.33, pp. 1112-14, 1120, 1147, 1149, 1107-08 and 1115.

Fox, thereby, diverted attention from the real deficiencies of the bill onto the less contentious question of raising more taxes within the year and the Government secured a large majority for its scheme, which it presented to Parliament as the means of checking the accumulation of the national debt.[1]

Pitt originally hoped to raise £7 million through the Aid and Contribution Act but in April, 1798 he revised his estimate downwards to £4½ million after receiving reports of widespread evasion. Eventually the tax yielded only £3 million, but the Exchequer received a further £2.8 million in voluntary contributions.[2] Its failure to produce anything like the estimated sum can be attributed mainly to the inequitable incidence of the tax. Too many affluent people escaped assessment simply because their expenditure patterns did not bring them within the scope of the law. Their good fortune naturally created resentment and furthered widespread evasion which the administration could not check.[3]

With the failure of the Triple Assessment the urgency as well as the case for a general tax upon incomes became stronger. Several pamphlets and speakers in the Commons adumbrated upon the deficiencies of the Aid and Contributio Act. Expenditure they argued had proved itself to be an unsatisfactory criterion of capacity to contribute to the needs of the State. Furthermore, the Triple Assessment had been neither comprehensive nor equitable in its incidence. Many affluent citizens escaped entirely while others, particularly the landed gentry, paid more than their fair share because their patterns of living had been defined arbitrarily as indicators of income.[4] Hostility to the Triple Assessment together with continued support for the policy of containing the accumulation of the national debt gave support to proposals for an income tax and the Government managed to persuade Parliament to accept the tax.[5]

Of course the tax did not become law without opposition and its opponents rehearsed all the traditional arguments against a direct levy upon incomes.

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1. Parly.Hist., vol.33, pp. 1100-1104, 1139, 1152, 1191 and 1286.
2. Accounts and Papers, 1799-1800, p.1011.
3. Pitt Papers, vol.279; Buckingham, Memoirs, vol.2, p.387 and Lauderdale, 'A Letter on the Present Measures', 1798, p.16.
4. Bell, 'Three Essays on Taxation', 1799, pp.11-12; Adams, 'A Plan for Raising Taxes', 1798, pp.34-48 and Beeke, 'Observations on Income Tax', pp.59-60.
5. Pope, 'A Measure', 1799, pp.12-14 and 27-28; Anon, 'Observations pn the Act for Taxing Income', 1799, pp.1-3; Parly. Hist., vol.34, pp.88, 91, 93 and 142 and Auckland, 'Substance of a Speech', 1799, pp.10 and 15-16.

Sir John Sinclair uttered the most frequently repeated objection to the tax when he described it as "abhorrent to a free constitution".[1] It is unusual to find Sinclair in opposition to Pitt, and his genuine fears of arbitrary executive power were echoed in several speeches. More subsidiary arguments stressed the possible deliterious consequences of the tax upon incentives, investment and prices or lamented its unequal incidence upon particular classes invariably described as the backbone of the nation.[2] But for all the vehemence of the opposition the bill passed through Parliament by large majorities. Members evidently saw the necessity for a tax which would provide the Government with a productive source of revenue other than loans, and they recognised it should apportion the burden in accordance with some criteria of ability to pay. By 1799 the obvious failure of taxes on expenditure to meet either the needs of Government or principles of equity, accepted for over a century, made some kind of an income tax acceptable.

Apart from the compelling logic of the situation the Government's success in surmounting potential opposition owed a good deal to the flexible arrangements it made for the assessment and collection of the tax. Only gradually did amendments to original legislation redefine income, tighten up loopholes, remove ambiguities and improve the administrative machinery in order to make the tax a more efficient instrument of finance. The original definitions of taxable income, particularly income from agriculture were based to a considerable degree upon rules formulated for the assessment of the land tax and local rates. Thus the law defined income from the ownership of the real property as equal to its annual value or rack rent. It avoided the difficult and unpopular task of assessing farmers' profits by assuming they bore a proportionate relationship to rent. This rule possessed the merit of simplicity and administrative convenience. Rent was usually known whereas the duty of checking the returns of actual profits from a multiplicity of small farmers might have proved beyond the competence of the administration. Apparently the rule understated the real incomes of farmers but this rendered the tax less unpopular with them and also with those who argued that earned incomes should be taxed at lower rates than incomes from property.[3] It also avoided the direct disclosure of circumstances

1. Sinclair, History of the Revenue, 1802, vol.2, pp.232-248.
2. Parly.Hist., vol.34, pp.22, 81, 84, 90-91, 97, 134 and 144 and Olphin, Tierney, pp.61 and 68-69.
3. O'Brien, 'British Incomes', pp.257-259; Bell, 'Three Essays on Taxation', 1799, p.66 and Newberry, 'Observations on the Income Act', 1801, pp.16-17.

to the Government which formed one of the strongest planks of opposition.

Other schedules of the bill gave legal and administratime force to the intentions of the old land tax to assess all kinds of income regardless of source. Schedule E which related to salaries, fees and pensions from the public revenues duplicated existing taxes upon the same kind of income.[1] A tax on interest paid to bondholders, long advocated, had previously been resisted on the grounds that it represented a breach of faith between the Government and its creditors. Pitt decided, however, that to exempt such interest in the context of a general tax upon incomes would be inequitable.[2] Thus the format of the new bill, apart from Schedule D which included income from the professions, trade and industry, can be traced to existing legislation. Unlike the Aid and Contribution Act it set out to include the income of every British citizen whose income reached the annual level of £60 and above.[3] Despite pressures from the commercial community the law did not differentiate between income from different sources.[4] Essentially this pressure from the City and other interest groups amounted to a demand, not to distinguish earned from unearned income, but to exempt or tax the profits from commercial or industrial enterprises at lower rates than rents from real estate or from interest on the national debt.[5] Pitt undoubtedly saw the political dangers and administrative difficulties of suggesting any such distinction to a Parliament of landowners when the country's first general tax upon incomes came under review. Wisely he refused to consider it.[6]

Another major advantage of the tax in contempoary eyes consisted of its neutrality. Although several pamphleteers had advocated a progressive tax, Pitt and George Rose insisted that the great merit of the legislation was that it left citizens in the same relative material positions after payment as before.[7] As Lord Auckland put it, "progression ..... would be contrary to all the safety and rights of property ..... inequalities should remain as they are found."[8]

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1. Chisholm Rept., 1868-69, pp.421-422.
2. Apparently he changed his mind on this issue - Pellew, Life of Sidmouth, vol.2, pp. 198-199.
3. Anon, 'Abstract of an Act for Taxing Income', 1799, pp.3-5.
4. Pitt Papers, vol. 279 - City of London, dd. 19.12.98; Frend, 'Principles of Taxation', 1804, pp.15-21; Anon, 'Hints Towards an Improved System of Taxation', 1798, pp.25-26 and Parly.Hist., vol.34, pp.78 and 147.
5. Auckland, 'Substance of a Speech', 1799, p.27.
6. The suggestion was, however, made by several members of Parliament - Parly. Reg., vol.7, pp. 249-250, 253, 260-261, 262 and 285 and see Shehab, Progressive Taxation, pp.49-50 and Frend, 'Principles of Taxation', 1804, pp.15-17.
7. Rose, 'Brief Examination', 1806, p.38 and Shehab, Progressive Taxation, pp. 49-50.
8. Auckland, 'Substance of a Speech', 1799, p.25.

Nevertheless the law did provide for a progressive rate of tax upon incomes between £60 and £200 a year. This scale adopted from the Aid and Contribution Act served two purposes: it avoided certain anomalies inherent in a flat rate system, whereby a citizen with an annual income of £60 contributed £6 to the Exchequer and another with £59 paid nothing and the device also mitigated the incidence of the tax upon those with "middling incomes".[1] Other parts of the law such as the exemption of incomes below £60 from tax, the provision for child allowances also appealed to the views of the age on taxes. Its comprehensiveness, neutrality and generosity towards the middle classes and those with larger families helped to ensure the passage of the bill through Parliament and to undermine resistance in the country.

Moreover grudging assent was more readily given to a tax which involved no departure from the kind of traditional machinery used for the collection and assessment of other direct taxes.

Thus the framework established for the income tax bore close resemblance to the machinery which had operated for the land and assessed taxes. Administration of the new tax remained to a considerable degree in the hands of representatives of the propertied classes, and was not conducted by salaried officials subject to the Treasury. The process of assessment operated, as it did for all direct taxes, within the basic unit of local Government, the parish.[2] Parish assessors appointed by General Commissioners for divisions, called upon householders and demanded a signed declaration as to the amount of tax they proposed to pay. Householders with incomes below the exemption limit simply returned a statement to the effect that their incomes fell below £60 per annum. Those enjoying incomes within the range of the differential rate (£60 to £200) made a precise declaration of their incomes. Everybody else simply stated the amount of tax they proposed to pay, which in law represented 10% of their incomes.[3] Definitions of income varied with its source and the Tax Office issued very detailed instructions to citizens as to how they should calculate their incomes for purposes of the tax.[4] Parish officials then delivered these

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1. Shehab, Progressive Taxation, pp.50-51; Becke wanted a scale to begin earlier and end later - Becke, 'Observations on the Income Tax', 1799, pp.79-81.
2. Bell, 'Three Essays on Taxation', 1799, pp.45-47 on parish administration.
3. Clear accounts of the administration can be found in the original legislation 99 G.3.c.13 and c.22.
4. Anon 'Abstract of an Act', 1799, pp.19-24.

signed statements to the Commissioners actually responsible for checking the assessments. If a significant proportion of a citizen's income emanated from trade or industry he could opt for assessment by special bodies called Commercial Commissioners. If not, his declaration went to the General Commissioners for the division in which the parish was located.

Commissioners, the most important part of the administration, were usually prominent residents of the divisions over which they presided. Nominations for the post of Commissioner had to be submitted to the Grand Jury for the county by the Commissioners for the Land Tax. Nominees required a substantial property qualification which was lower for Commercial than General Commissioners.[1] For London Commercial Commissioners were elected by the Council and by Directors of the large City Corporations such as the East India Company, the South Sea Company, the Royal Exchange and the Bank of England elected 24 Commissioners to assess local liability.

Sitting either collectively or in sub committees the Commissioners examined the statements. Their local knowledge or expert knowledge of trade and industry in theory provided them with a basis for evaluation.[2] If they were satisfied, their signatures translated declarations into legal liabilities for tax. If Commissioners suspected householders had underdeclared their true liabilities they had the power to demand a full statement of income from all sources including deductions specified under different schedules of the act. Commissioners also possessed powers to summon taxpayers for examination or if citizens failed to make a return they imposed an assessment upon them.[3]

Although affluent members of the landed or commercial classes occupied the more important posts in the administration the Government did not hand over entire control to them. Pitt was determined that the Treasury should be represented, as it had been for other taxes upon houses, carriages, horses and servants, through surveyors. For over a century Surveyors had assisted local Commissioners in the assessment of direct taxes. As their title suggests they conducted surveys of houses and other taxable property for particular parishes. They advised Commissioners upon points of law, attempted to detect evasion,

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1. Hope-Jones, Income Tax, pp.11 and 50 and Parly.Hist., vol.34, pp.7 and 45.
2. Parly.Reg., vol.7, pp. 313-315 ; Anon, 'Observations on the Act for Taxing Income', 1799, pp.44 and 47-48 and 39 and 40 G.3.c.49.
3. Anon, 'Observations on the Act for Taxing Income', 1799, pp.47-49.

checked the assessments of parish officials and harried local collectors to gather taxes more promptly.[1] Pitt intended them to perform similar functions for the assessment and collection of the income tax, but proceeding with caution he appointed no additional personnel in the first instance but simply imposed extra duties upon the existing body of Surveyors.[2] Furthermore, the law carefully limited Surveyors' functions to include little beyond assistance to the Commissioners. While they had rights of access to taxation returns and local records relating to the poor law and parish rates and could question particular declarations, Pitt insisted that full statements of income could not be demanded merely at the request of Surveyors.[3] Their objections could be overuled by a majority of the Commissioners, but Surveyors retained the right to appeal, above the heads of divisional Commissioners, to the Commissioners of Appeal for the County.[4] Generally speaking, the status of Surveyors both legal and political vis a vis the Commissioners never appears to have been high. Local magnates were not easily intimidated by officials of the Treasury. Tierney suggested that Commissioners should be given the powers to dismiss Surveyors but they were unlikely to be troublesome to men of superior status who controlled part of their remuneration.[5] Surveyors were not even allowed to attend meetings of Commercial Commissioners.[6]

While some degree of central control over administration certainly existed it was never emphasised either in law or by Government spokesmen in the debates before Parliament. The original act of 1799 attempted to meet the demand for minimum disclosure of circumstances and intervention by Government officials. Taxpayers virtually assessed themselves and then made a submission of their proposals to a Committee of their peers in the locality. The attention given by the Government to susceptibilities for secrecy, particularly those of the commercial classes, and for the minimum of State interference undoubtedly facilitated the acceptance of Pitt's income tax bill.[7]

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1. See pp. 325-326.
2. Pitt Papers, vol. 282 - Rept. on the Workings of the Income Tax, 1799.
3. Parly.Hist., vol.34, p.101.
4. 39 G.3.c.22.
5. Parly.Reg., vol.7, p.494.
6. Pitt Papers, vols. 279 and 282 - Reports from the Board of Taxes on the workings of the Income Bill, 1799-1800.
7. The separate assessment of commercial and industrial income was, however, resisted in Parliament - Parly.Hist., vol. 34, pp. 89 and 137 and Parly.Reg., vol. 11, pp.646-671.

Once Parliament accepted the tax in principle, successive amendments to the law, reforms to the administration and the upward trend in money incomes made the tax the single most productive source of revenue employed to finance the war. I propose to investigate the factors behind the rise in yield over the sixteen years of its existence. Unfortunately it will not be possible to measure the contribution of each factor, but it is possible to assess qualitatively the relative importance of alterations to the scope of the tax, changes in the definition of taxable income, improvements to the administration and additions to national and taxable income. I will discuss each in turn.

Additions to the amount of income assessed occurred whenever the Government widened the overall range of income liable to tax or reformulated the definition of gross and net taxable income under particular schedules. Under the first possibility the amount of income liable for tax rose when the law included persons or types of income previously excluded. The original act of 1799 exempted from tax all citizenswhose total income from all sources did not exceed £60 a year.[1] In effect the exemption limit excluded from the operation of the tax the bulk of the population, wage earners, small farmers, and most self employed people in the service sector.[2] The law sought to include the incomes of all residents, nationals and foreigners from employment or property in Great Britain and the repatriated earnings of property located abroad owned by resident nationals. Despite protests from some members of Parliament foreigners with holdings in the national debt were not required to pay tax upon their interest.[3] Assuming dividends to foreigners would have been assessed at the standard rate, this concession cost the revenue approximately £20 million or about 12% of the total sum collected from the tax.[4] Finally the act excluded from assessment income accruing to charitable institutions, friendly societies, hopitals and colleges and the tenths and first fruits of clergymen. It also allowed citizens to deduct from incomes declared for tax, premiums paid on life insurance policies and annuity payments to wives and close relatives.[5]

No material change occurred in the definition of income liable to tax

1. Apparently the Government regarded £60 as subsistence level - Shehab, Progressive Taxation, p.50.
2. In practice no wage earner with an income of less than 30/- a week became liable for tax - O'Brien, 'British Incomes', p.260.
3. Parly.Debs., vol.20, pp. 202-204.
4. The figures of foreign holdings in the debt are from Pitt Papers, vol.276 and Accounts and Papers, 1806, p.447; 1806-07, p.49, 1814-15, p.113 and Cttee. on Resumption, 1819, Appdx.43.
5. Anon, 'An Abstract of an Act 1799', pp. 12-13.

until 1805 when deductions for life insurance premiums became confined to citizens with incomes below £150 a year.[1] In 1806 the law lowered the exemption limit to £50 per annum in order to bring into the assessment a large bloc of people on the margin who had underdeclared their incomes by a small amount in order to evade the tax entirely.[2] No other significant amendments were made to the general definition of income but the Government introduced minor alterations into the definitions of net taxable income assessed under particular schedules.

Changes in the standard rate obviously raised receipts from the income tax and can be briefly described. From 1799 to 1801 the standard rate of 10% commenced at £200 and those with incomes between £60 and £200 paid tax at a rate which ascended from 0.83% at the exemption limit. Taxpayers also received abatements upon their gross assessment for children which varied the number of children and the size of the income.[3] After the Peace of Amiens Addington reimposed the tax at a standard rate of 5% which commenced at a lower level of £150. From £60 to £150 taxpayers continued to contribute upon an ascending scale but the Chancellor confined abatements for children to families with more than two and the scale became less generous.[4] Addington attempted to tax all income from property at the standard rate of 5% but Pitt from the benches of the House insisted that landowners and bondholders were entitled to pay at the lower rate if their income fell within the range below £150. He considered that "any attempt to meddle by a legislative measure with the unusual and spontaneous distribution of property would be highly unjust."[5] Although Parliament agreed with Addington by a large majority he thought it expedient to placate Pitt and withdrew the clause from the bill.[6]

Two years later Pitt carried the standard rate to 6¼% and confined abatements for children to families with three or more.[7] In 1806 Petty raised the standard rate to 10% and revived Addington's proposal to confine the differential rate to Schedules B, D and E. His bill also provided for the complete abolition of child allowances.[8] Several members of Parliament argued strongly against both proposals but Petty had no real difficulty in obtaining a majority for the bill.[9]

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1. 45 G.3.c.65.
2. Hope-Jones, Income Tax, p.27 and Parly.Debs., vol.6, p.570.
3. Anon, 'Observations on the Act for Taxing Income', 1799, p.9 and Shehab, Progressive Taxation, pp.48-51.
4. Anon, 'An Exposition of the Act', 1803, p.6.
5. Parly.Hist., vol.36, pp.1663,1665,1669-70 and Farnsworth, Addington, pp.63-64.
6. Parly.Hist., vol.36, pp.1669-70.
7. 45 G.3.c.49.
8. Shehab, Progressive Taxation, p.57.
9. Parly.Debs., vol.7, pp.218-225, 263-269 and 410-411.

From its inception in 1799 the income tax legislation distinguished income by its source or origin.[1] Schedule A (or 1 as it was termed in 1799) included all income from land and houses and royalties from mines, quarries, iron works and similar categories of real property. The act of 1799 defined income under this schedule as rent received or imputed on the asset concerned. From their gross incomes so defined the law permitted proprietors to deduct those taxes and local rates, legally levied on ownership, and to claim part of their expenses incurred for the drainage of land and for repairs to farm and other buildings. No important changes appear to have been made in the legal definition of income taxable under this schedule between the initial bill of 1799 and the final codified legislation of 1806, but the deductions allowed for repairs to buildings except for cottages with a very low annual value, were circumscribed in 1803 and disallowed entirely after 1806.[2] Apparently the repairs allowance had precipitated fraud and its abolition increased the amount of net income from real property subject to tax.[3]

Profits from the cultivation of land were taxed under Schedule B but the framers of the early income tax legislation did not require farmers to make a return of their profits. Instead they defined farmers' incomes in relation to a known and clear magnitude, namely their rents. Throughout the period several pamphleteers and members of Parliament insisted that the convention adopted was unrealistic and that farmers should be required to submit a return of their profits.[4] Perhaps realistically the Government decided that the task of checking returns submitted by numerous small farmers, most of whom kept no accounts, would be quite beyond the competence of the administration.

The relevant rent for tax purposes was rack rent, that is the actual or imputed payment made for the occupation of land notionally unencumbered by tithes, local rates and other fixed burdens. The legislation prescribed elaborate rules for the calculation of rack rent on farms occupied under divergent contractual conditions, but the intention of the law was clear, namely to arrive

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1. The first bill distinguished 4 schedules and the act of 1803 is the first to distinguish the 5 schedules we know today - Anon, 'An Exposition of the Act', 1803, pp.5-32.
2. Blee, 'An Explanation of the Property Act', 1803, pp.11-14.
3. Ibid, pp.13-14 and Shehab, Progressive Taxation, p.58.
4. Parly.Reg., vol.11, pp.656-657; Bell, Three Essays on Taxation, 1799, pp.48-49; Newberry, 'Observations on the Income Act', 1801, pp. 2 and 7-30; Heslop, 'Observations on the Duty on Property', 1805, pp.19-29 and Horner, Memoirs, vol. 2, p.138.

at a figure which represented the payment for the use of land in agricultural production.[1]

When this figure had been ascertained, the law of 1799 defined a farmer's income as equal to ½ to ⅔ of an annual value under £300 and 3/5 to 4/5 of an annual value above £300; the precise ratio in particular cases being left to the discretion of the local Commissioners.[2] Apparently the law intended to afford relief to smaller farmers by defining their incomes at a lower ratio to their rents. Just a year after the introduction of the first income tax bill the Government decided that the farmers had been taxed too lightly in relation to other groups and amended the law in order to redefine income from cultivation as equal to 3/5 of an annual value below £300 and 3/4 of a rack rent above £300.[3] The amendment effectively increased the share of farmers' profits assessed to tax. In 1803 the Government again amended the law and defined profits from cultivation regardless of the size of holding as being equal to 3/4 of the rack rent.[4] Unfortunately figures which would enable us to measure the impact of these legal changes upon the amount of income assessed under Schedule B are not available.

Schedule C included "all profits arising from annuities, dividends and shares of annuities paid from the public revenue." The scope of the schedule was widened in 1806 to include income from short term public assets, previously assessed under Schedule D, the broad definition employed for this type of income did not change throughout the war years. Similarly Schedule E which embraced all salaries, fees, stipends, pensions and annuities paid for public service was also defined in approximately the same words in every income tax bill passed by Parliament between 1799 and 1806.[5]

Schedule D is best described last because it was a residual category which included all other income not assessed under other Schedules. In general terms all emoluments from professions, trades or vocations, profits from the ownership of industrial and commercial property located in Britain or overseas, payments to entrepreneurs and some wages were taxed under Schedule D. Most of the Schedule consisted, however, of profits accruing to the owners of industrial and commercial assets. From such profits, which the law defined vaguely as

1. Anon, 'An Exposition of the Act for a Contribution on Property', 1803, pp.11-19 and G.3.39.c.13.
2. 'Abstract of an Act', 1799, pp.19-21.
3. 40 G.3.c.49; Parly.Reg., vol.11, pp.646,654 and 658 and vol.12, pp.21-22.
4. Anon, 'An Exposition of the Act for a Contribution on Property', 1803, pp. 10-11 and 13-19.
5. 39 G.3.c.22; 43.G.3.c.122 and 46 G.3.c.65.

"arising after the payment of necessary expenses", proprietors were not permitted to claim depreciation allowances but were allowed to deduct an amount for repairs equal to the sum actually spent on average over the past three years. Recognising that Schedule D contained for the most part income of uncertain annual value the law provided for its assessment as an average of a three or in some cases a five year period.

While the Schedule expanded through transfers to it from other schedules the definition of net taxable income employed by the act of 1799 appears not to have changed during the war years. Industrial and commercial profits were defined at once too vaguely and also too narrowly for the Government to increase revenue by reformulating the definition of income assessed under Schedule D.

The process of assessment introduced for the income tax was based, to a large extent, upon the experience with other direct taxes - and the provisions contained in the law were designed not only to yield revenue but also to render it acceptable to Parliament and taxpayers at large. But once initial repugnance had been overcome the Government proceeded step by step to reform the machinery for assessment and collection in order to make the tax more productive. Perhaps the best way to observe the process of improvement is to consider each element of the administration separately, beginning with returns from taxpayers, then moving on to their scrutiny by the local Commissioners for Taxes and concluding with an appraisal of the vital part played by permanent officials of the Treasury (Surveyors and Inspectors). Over the 18th century the Treasury discovered that the effective assessment of direct taxes depended upon precise definition of liability and above all came about through strengthening the powers of permanent officials. The collection of the income tax evolved towards greater efficiency in precisely the same way.

During the early years of income tax evasion reduced receipts well below Pitt's original estimate of £10 million, and between 1799 and 1802 its net yield never exceeded £6 million.[1] As one pamphleteer rightly said, "It so happened that this wise and judicious measure in its operation on the interests of individuals was found to depend too much upon the imperfections of human nature."[2] Taxpayers undoubtedly found false statement much less risky under the original act which did not oblige them to give details about their incomes but simply required them to submit a signed statement to Parish Assessors of the amount of tax they proposed to pay as being "not less than the just rate of proportion of my income."[3]

1. See Table 10.
2. Anon, 'An Exposition of the Act', 1803, p.2.
3. Anon, 'Observations on the Act for Taxing Income', 1799, p.38.

Nevertheless the law specified how income should be calculated for purposes of taxation and set out the deductions allowed under particular schedules.[1] Parish assessors attempted to ensure that every resident made a declaration and then delivered returns to Commissioners for scrutiny. Citizens whose earnings emanated mainly from trade, commerce or industry could elect to have their statements examined by Commercial Commissioners but the bulk of taxpayers submitted returns to General Commissioners.[2]

Two reports to the Treasury in 1800 reveal that Commissioners were handicapped in the examination of returns by the paucity of information at their disposal. Pitt had made the law palatable by minimising the disclosure of individual circumstances but this political compromise meant the Commissioners and Surveyors had nothing to scrutinise except a declaration of the tax a citizen proposed to pay, but once the principle of a levy on income had been accepted the Government followed the recommendation contained in reports on the workings of the original legislation and amended the law in order to extract more information from those liable to tax.[3]

Nevertheless Pitt discovered when he introduced amendments to the law in April, 1800 that he had to proceed cautiously. Parliament refused to accept his suggestions that taxpayers should be required to submit a complete statement of income divided into 4 schedules and setting out all deductions claimed under each schedule.[4] Nor were members of Parliament amenable to the abolition of separate assessments for commercial incomes, which numerous reports to the Board of Taxes condemned as facilitating fraud.[5] The Chancellor had to compromise and introduced more modified proposals which simply obliged taxpayers to distinguish commercial from other income in their returns and to state to whom they paid interest on their debts.[6] Parliament recognised, however, that in London fraud had been extensively practised by small businessmen and the revenue would benefit if the right to submit returns to Commercial Commissioners was confined to merchants and manufacturers with incomes above £2,000 a year.[7] For

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1. Anon, 'Abstract of an Act', 1799, pp.19-24.
2. Anon, 'Observations on the Act for Taxing Income', 1799, pp.37-38 and 45.
3. Among Pitt's papers are reports from Commissioners and Surveyors and Inspectors to the Board of Taxes upon the administration of the tax in the countryside for the first year of the bill - see vol. 282. These reports were then summarised in a long memo to the Treasury from the Board of Taxes - vol. 279, dd. 25.4.1800 and see Treasy. - T1/824/2579.
4. Farnsworth, Addington, pp.24-26 and Rickman, 'Pitt's Democracy Manifest', 1803, pp. 9-10.
5. Pitt Papers, vol. 279.
6. 40 G.3.c.49 and Parly.Reg. vol.11, pp.657-659 and vol.12, p.15.
7. The incidence of fraud among small businessmen was observed in reports to the Board of Taxes - Pitt Papers, vol.279 and Vansittart Papers/- Beeke, dd.11.5.04. vol. 31229.

other parts of the country taxpayers lost the option to submit either to Commercial or General Commissioners. If the former were available, incomes from industry and trade had to be examined by them and if no Commercial Commissioners operated in the locality the amendment empowered General Commissioners to appoint special sub committees to deal with this category of income.[1]

During the Peace of Amiens the Government repealed the income tax but at the resumption of war in 1803 reimposed it at half the former standard rate. At this lower scale and after three years' experience with the tax Addington found it possible to remodel the process of assessment without arousing any real opposition. Under his new bill citizens who claimed complete exemption had to have their claims substantiated by the Parish Assessor who made use of local records and hearsay to ensure nobody escaped proper liability.[2] Taxpayers were compelled to make returns under five headings or schedules which showed the amount of income earned from different sources and the deductions claimed under each schedule.[3] People whose incomes emanated from commerce or industry included the names of two referees with their statements. Referees were supposed to be disinterested parties willing to testify to the veracity of particular returns, and in cases of dispute the Commissioners examined referees not taxpayers, but this device did not work well and cannot be found in the bill of 1805.[4] By 1803, in law at least, Commissioners for Taxes had before them fairly complete information on incomes liable for tax and no further changes were made to the law apart from a minor amendment in 1805 which required citizens to submit claims for complete exemption to meetings of the Parish Vestry.[5]

Furthermore, in time the Commissioners had placed at their disposal more ancillary information which provided them with a better basis for the examination of returns. For example, Parish Assessors and Surveyors furnished them with up-to-date valuations of land and houses in their localities, compiled from poor law records, as well as direct valuation.[6] Information from other direct taxes upon houses, windows, servants, carriages and horses was utilised to ascertain if taxpayers' expenditure patterns diverged inexplicably from their

1. 40 G.3.c.49 and Parly.Reg., vol. 11, pp. 649-651.
2. Anon, 'An Exposition of the Act', 1803.
3. Schedules of income from different sources were also tabulated in the bill of 1799 and the 5 schedules incorporated in the act of 1803 (which survive in the present income tax) can be found outlined in a letter to Vansittart - Vansittart Papers, vol. 31229, dd. 8.10.01.
4. Heslop, 'Observations on the Duty on Property', 1805, pp.15-17.
5. 45 G.3.c.49.
6. Treasy. - TI/1259/2626 and TI/1240/3551 and Excheq. - E/182/221.

declared incomes. Occasionally the Board of Taxes in London prepared special reports on industry and trade in particular localities.[1] Statistics from the local offices of Customs and Excise also proved valuable for checking the returns from traders or manufacturers. Customs Officers provided the authorities with ships manifests and data on cargoes, and Excise figures were an excellent record of gross production.[2] Finally the discreet use of paid informers gave Commissioners many a useful tip and created apprehension among taxpayers.[3] In diverse ways they built up a body of useful information which rendered evasion more difficult and risky.

Commissioners for Taxes scrutinised returns on behalf of the Government assisted by Surveyors. Their status as substantial property owners was supposed to guanrantee their integrity.[4] Their appointment by Parliament elevated them to the position of mediators between citizens and the State while their local or specialised knowledge provided them in theory with a basis for judgement. Sometimes Commissioners divided into sub-committees in order to examine certain kinds of income or returns from particular districts. If necessary they could contact colleagues in other divisions for information and if dissatisfied with any declaration they possessed powers to compel citizens to submit a complete statement of income or to appear before them for oral examination. Their signatures validated returns and transformed them into legal liability for tax.[5] Reports to the Treasury in 1800 suggested that Commissioners had not operated effectively enough to check widespread evasion. Apart from the lack of information at their disposal, the separation of the assessment between two separate bodies, one acting only for business income facilitated fraud. Commercial Commissioners often resided too far from the taxpayers they were supposed to assess and failed to liaise with the General Commissioners in their localities.[6] Furthermore, the complexity of the law particularly with regard to the definition of income and the rules for allowances and abatements tried the patience of country gentlemen.[7] At the same time Surveyors who had greater competence in

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1. Inland Rev., Minutes, 1808-09, vol.818, pp. 6 and 30.
2. Treasy. TI/1499/2541, TI/1443/1299 and TI/1323/7144 and Inland Rev. Minutes, vol.818, 1808-09, p.181.
3. Treasy. - TI/1269/9930 and Exchsq. - E/182/1360.
4. Apparently the original income tax bill set criteria for appointment which were too high - see 39.G.3.c.13. and 39 G.3.c.22. Even with revised qualifications the Government found difficulty in finding men of the right calibre in Scotland - Vansittart Papers, vol. 31229 - McKensie, dd. 8.10.01.
5. Anon, 'Observations on the Act for Taxing Income' 1799, pp.13-14, 31, 34-35 and 50-51 and Hope-Jones, Income Tax, pp. 11 and 48-51.
6. Pitt Papers, vols. 279 and 282.
7. Treasy. TI/995/1582.

interpreting the wishes of Parliament and more interest in its proper implemntation found their role too circumscribed both in law and practice to make up for the laxity of the Commissioners.[1]

In 1803 the Government abolished Commercial Commissioners and empowered the General Commissioners to appoint and remunerate up to three Additional Commissioners with lower property qualifications than themselves to deal specifically with incomes assessed under schedule D. Where taxpayers disagreed, either with these subordinate Commissioners or with Surveyors, the case was referred for jurisdiction to General Commissioners.[2] Thus specialisation was retained and the disadvantages of separate assessment avoided. Two years later the Treasury, still apparently dissatisfied with the work of the General Commissioners, appointed Special Commissioners to each division charged to assist with the more complicated aspects of their work under schedules A and C, and in 1806 they were instructed to take over the functions of negligent General Commissioners.[3] Commissioners frequently delegated most of their routine work to Clerks, usually attornies, appointed by them but paid on a poundage basis from the revenue.[4] Thus by the end of the war General Commissioners nominally responsible for the assessment of the income tax had probably evolved into tribunals of appeal against the actions of permanent paid officials.[5] In other words, the real work of assessment perhaps passed in many areas into more capable and expert hands.

One of the most important amendments which facilitated the task of checking returns was the introduction by Addington in 1803 of taxation at source. Thereafter farmers deducted tax from the rent they paid to landowners, debtors from the interest owed to creditors, firms from dividends transferred to shareholders and employers from the disbursements to employees. At one stroke this amendment considerably reduced possibilities for evasion, but its significance should not be exaggerated because many, perhaps a majority of taxpayers were self-employed and not affected by taxation at source.[6] Farmers, partnerships, small family firms and entrepreneurs in industry and trade continued to pay their

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1. Pitt Papers, vols. 279 and 282 and Vansittart Papers, vol. 31229 - McKenzie, dd. 8.10.01.
2. Hope-Jones, Income Tax, pp. 21-22.
3. Ibid, pp.23-24 and 45 G.3.c.49.
4. Inland Rev. Minutes, vol.818, 1808-09, p.67; Excheq. E/182/1360 and Treasy.- TI/1467/7461.
5. The minutes of the Property Department of the Board of Taxes for 1808-09, vol. 818 certainly suggest this was the case.
6. It seems to me fanciful to suggest (as Farnsworth does) on the basis of this single amendment that Addington not Pitt is the "father of the income tax".

footnote continued ...

own tax. The majority of wage earners paid no tax and until 1806 the Bank of England resisted the application of the principle to dividends on the National Debt on the dubious grounds that "levying the tax upon dividend warrants is impracticable and breach of Parliamentary faith which will shake public confidence in the security of the funds."[1] Pitt, always wary of possible lapses of confidence in Government bonds, concurred and persuaded Addington to exempt interest on the debt from his proposals for taxation at source.[2] Pitt's support for the Bank's view undoubtedly cost the Exchequer money but fortunately Petty in 1806 managed to persuade the Directors that it was both practicable and desirable to tax interest on the funds at source.

Compared to later laws the act of 1799 appears difficult to administer. It laid down complicated rules for the definition of farmers' profits, differential rates of tax for incomes between £60 and £200, deductions for repairs to fixed assets and a complex system of child allowances. In 1803 the law simplified the definition of farmers' profits. By 1806 allowances for repairs and children had disappeared and differential rates abolished except upon earned incomes.[3] Over time simplifications to the law must have made it easier to administer.

Perhaps the most important element in the machinery for direct taxation consisted of permanent officials (Surveyors and Inspectors) appointed by and responsible to the Treasury. Although these offices formed part of the patronage system suggested candidates were usually scrutinised by the Board of Taxes who often insisted on some qualifications in law or accountancy. For years past Surveyors and Inspectors had worked in the countryside to raise yields from the other assessed taxes. Their job called for devotion to the interests of the Exchequer and strong qualities of character. It consisted in the detection of evasion, arresting negligence among Parish officers and reporting partiality or want of diligence on the part of their legal and social superiors, the local Commissioners for Taxes. Surveyors had to work with local magnates, liable to

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(Farnsworth, Addington, pp.1-2,46,53 and 59-60). The tax had antecedents in earlier direct levies like the land tax and the assessed taxes. When Farnsworth credits Addington with the idea of schedules he overlooks the schedules in the original bill of 1799. No evidence is adduced to prove that Addington first thought of taxation at source and this ingenious idea probably emanated from civil servants directly concerned with its administration. (See Vanaittart Papers, vol. 3:229, McKenzie, dd. 8.10.01 and Pitt Papers, vol.279). Finally Pitt himself discussed and approved of Addington's reforms to the administration of the tax in 1803, apart from the taxation of interest on the national debt at source. (Pellew, Life of Sidmouth, p.69).

1. Bank Minutes, 23.6.03.
2. Pellew, Life of Sidmouth, p.197 and Farnsworth, Addington, pp.65-67 and 91.
3. Shehab, Progressive Taxation, pp.57-58 and Parly.Debs., vol.6, pp.265-269.

truculence and who resented interference from London. Most of their neighbours had a high propensity to evade taxes which they sought to check. No wonder the officials operated in an atmosphere of hostility but fortunately the job was relatively well paid and the Treasury experienced no shortage of applicants for vacant posts.[1] During Pitt's tenure at the Treasury he attempted to raise the calibre of men appointed and the Inspectorate sent round the countryside by the Board of Taxes sought to ensure more diligent application to duty.[2]

Onto the Surveyors and Inspectorate for the Assessed Taxes the Government devolved responsibility for income tax, and within a very short time its yield exceeded aggregate revenue from all the other direct taxes combined. Their duties were to see that Parish Assessors submitted comprehensive returns on time and to harry Parish Collectors into prompt payment of revenues to Receivers General. Surveyors also scrutinised returns and drew the attention of Commissioners to possible frauds and evasions. Their local knowledge and experience with the other assessed taxes gave them a basis for this detection and their share in surcharges provided some incentive towards diligence.[3]

Shortly after Surveyors and Inspectors for the Assessed Taxes added the income tax to their responsibilities reports to the Treasury pointed out that there were too few and many did not possess the abilities for the job. Furthermore, their status and powers vis a vis both taxpayers and Commissioners precluded vigorous implementation of the law.[4] For example, although they could make objections to a return they could not insist upon a full statement of income without permission from the Commissioners.[5] Nor could Surveyors surcharge without authority from the Commissioners who also regulated their rewards for the detection of fraud and could over rule Surveyors by simple majority.[6] Pitt carefully avoided the impression that his new bill gave strong powers to permanent officials and as a result the authority of Surveyors and Inspectors was too weak to prevent widespread evasion during the early years of the tax. Commissioners often ignored their hints as to how the law might be implemented more effectively and Commercial Commissioners even excluded Surveyors from

1. In 1797 they received £80 to £90 a year together with occasional bonuses for diligence and a share of the surcharges levied upon taxpayers who were caught evading their liabilities - 8 Cttee. on Finance, 1797, Appdx. 1A.
2. Hope-Jones, Income Tax, p.62 and see pp. 325-326.
3. Cttee. on Land and Assessed Taxes, 1821, p.25; 8 Cttee. on Finance, 1797, pp. 223-224 and Inland Rev. 22/396-398 Letters and Circulars to Surveyors and Inspectors, 1805-06.
4. Pitt Papers, vols. 279 and 282.
5. Parly.Reg., vol.7, pp.269-271 and vol. 8, p. 246.
6. Parly.Hist., vol.34, p.101 and 39 G.3.c.13 and c.22.

their proceedings. The reports to the Treasury of 1799-1800 recommended that Surveyors be given more powers and that the Board of Taxes despatch Inspectors to the countryside to investigate the reasons for widespread evasion.[1]

The numbers of Treasury officials at work on the assessment and collection of direct taxes rose steadily over the war years. While it is impossible to ascertain if the quality of the men responsible for the collection of taxes improved, there are indications that the Board of Taxes exercised care in investigating the credentials of candidates for the arduous and unpopular job of representing the Government in the countryside.[2] Certainly Surveyors had some incentive to apply themselves to raising yields from direct taxes. To begin with their promotion prospects improved with the expansion in numbers of Inspectors, selected from among the more diligent of them.[3] Furthermore, with the increase and amount of taxes passing through their hands opportunities to supplement basic pay also increased. For example, Surveyors were legally entitled to retain part of the surcharge imposed upon all citizens caught evading their liabilities for tax.[4] For undertaking surveys of the value of real property in the neighbourhood they received bonus payments which sometimes took the form of share in the addition subsequently made to the revenue.[5] If the divisional accounts are any guide Surveyors certainly used the opportunities open to them to raise their emoluments by surcharging unfortunate taxpayers. In fact they had on occasion to be restrained from excessive displays of zeal.[6]

Apart from financial incentive, reforms to the structure of administration sought to make local officials more accountable. Thus Surveyors appear to have been closely supervised by circulars from London by divisional Inspectors and after 1808 by a special body of roving Inspectors who reported upon all aspects of tax administration direct to the Board of Taxes.[7] Inspectors checked cases of obvious negligence. Often their experience and knowledge of administration elsewhere enabled them to draw the attention of Surveyors and Commissioners to

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1. Pitt Papers, vols. 279 and 282.
2. Treasy. - T92/218; T22/10 and TI/802/1206 and Hope-Jones, Income Tax, pp. 12-13 and 62.
3. Treasy. - TI/961/448 and T22/11.
4. After 1803 their share of surcharges was fixed by law and ceased to be paid at the discretion of the Commissioners - Treasy. TI/1185/4599.
5. Treasy. - TI/752/2604 and TI/1323/7144 and Inland Rev., Letters and Circulars to Surveyors, vols. 22/396-398, 1804-05.
6. Exch. E/182/221-222 and Inland Rev. Minutes, vol. 818, 1808-09, pp. 32, 275, 306, 357 and 367.
7. Inland Rev., Letters and Circulars to Surveyors, vols. 22/396-398, 1804-05; Cttee. on Land and Assessed Taxes, 1821, pp.20 and 167 and Treasy. - TI/961/448 TI/1800/751 and T22/11.

defects in the local procedures for the assessment and collection of taxes.[1] Sometimes they noticed that some divisions seemed too large for efficient management or alternatively that certain areas were obviously short of personnel. Occasionally Inspectors initiated surveys of property values or compared yields under the income tax with statistics of local production and trade obtained from the departments of Customs and Excise.[2]

Prompted by Inspectors and induced by material rewards Surveyors appear to have responded to calls from the Exchequer for vigorous application of the law. Thus they surveyed property values in their districts, replaced negligent Parish officials, surcharged those who attempted to defraud and attempted within the confines of their social status and legal powers to pressure Local Commissioners towards greater efficiency.[3] But all the time the law restrained their activities and zeal. Under the original act of 1799 their authority had been deliberately circumscribed in order to make the tax acceptable, but their powers gradually widened. By 1803 Surveyors had access to all tax returns including those made by merchants and industrialists. If Surveyors objected to the assessments made by Additional Commissioners, responsible for Schedule D, the returns were then examined by the General Commissioners and by 1805 no assessment became valid without a Surveyor's signature.[4]

Throughout the war the voluntary element which in terms of personnel represented the larger part of the administration for direct taxes acted as a brake upon vigorous implementation of the law. Even though they were allowed expenses for the job, Parish Assessors and Collectors never considered the remuneration sufficient to compensate them for the onerous and unpopular work involved. Frequently they performed their "voluntary" duties perfunctorily and with a marked lack of enthusiasm.[5] Over time Commissioners left administration to their clerks, paid on a poundage basis by the Government, or allowed Surveyors to perform their functions.[6] Thus by default Treasury officials came to exercise greater authority over the assessment and collection of the

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1. Cttee. on Collection of Taxes in Scotland, 1810, p.517 and Inland Rev. Minutes, vol.818, 1808-09, pp.107, 156 and 197 and Letters and Circulars to Surveyors, vol. 22/396, pp.155, 160 and 187.
2. Cttee. on Land and Assessed Taxes, 1821, pp.20 and 167 and Treasy.TI/1288/15214
3. Treasy. - TI/1323/7144, TI/1259/2626 and TI/1240/3551. Many of the circulars sent to them from London are in effect instructions to bully Local Commissioners into greater efficiency - Inland Rev., Letters and Circulars to Surveyors, 22/396-398, 1804-06.
4. 43 G.3.c.199 and 45 G.3.c.49.
5. Cttee. on Collection of Taxes in Scotland, 1810, pp.513-514 and Treasy. - TI/995/1582 and TI/1399/8401.
6. Treasy. - TI/1467/7461; TI/995/1582; TI/859/1595 and TI/860/1710.

income tax. Naturally the Board of Taxes welcomed this development and in a lengthy memorandum to the Treasury in 1807 sought to formalise and carry the process a stage further. The Board suggested that "the principle part of the business now done by clerks to the Commissioners in relation to the assessed and property taxes should in future be executed by Surveyors." Surveyors would then originate all proceedings for assessment. They would take over the job of Parish Assessors, who were illiterate people of little utility. Returns should be delivered to them and the work of Commissioners could then be confined to artitration in cases of dispute. But the Board sensibly recognised that if the plan was put into effect "difficulties must be expected to arise in the minds of country gentlemen goaded as they will be by the artful contrivances set afoot and the ingeneous constructions discovered by individuals interested in the assessment." Although the Treasury approved of the Plan My Lords decided it would not be politically expedient to arouse dormant sentiments against the extension of Government power without first ascertaining the sentiments of the country.[1] In the event no fundamental alterations were made to the administration of direct taxes during the war years. Perhaps Ministers decided it would be more prudent to allow Surveyors to gradually ursurp the powers and functions of the voluntary element in the administration without raising the question as a matter of principle.

So far the analysis of factors affecting the yield of the income tax has considered changes in the scope of the tax, the definitions employed for income liable to tax and improvements to the administration. The remaining factor is of course increases in taxable income and at this point it seems appropriate to present a table of the gross income assessed to tax.

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1. Treasy. - TI/995/1582.

Table 10. Gross Income Assessed to Tax 1800-14 and Revenue Received From the Income Tax and Aid and Contribution Tax. 1798-1815.

Year	Schedules of Gross Income Assessed A	B	C	D	E	Total	Total Tax Collected
1798							3.8[1]
1799							4.7[2]
1800						80.2	5.3[3]
1801						-	6.0
1802						-	3.3
1803	38.5	24.3	12.9	34.9	5.6	114.2	0.4
1804	-	-	-	-	-	-	3.7
1805	41.8	27.0	14.4	34.7	7.1	125.0	4.5
1806	44.8	28.5	22.4	34.6	6.8	137.1	6.2
1807	-	-	-	-	-	-	10.2
1808	48.0	31.4	24.0	33.5	9.3	145.2	11.1
1809	-	-	-	-	-	-	12.4
1810	51.9	33.4	24.8	34.4	10.3	154.8	13.5
1811	51.9	36.3	25.4	33.3	11.1	158.0	13.4
1812	57.1	36.9	26.5	34.4	11.5	166.4	13.1
1813	56.7	36.3	30.0	36.1	11.4	170.5	14.3
1814	60.1	38.4	30.0	37.1	12.8	178.4	14.5
1815	-	-	-	-	-	-	15.0
							155.6

Notes: 1. Yield of Aid and Contribution Tax.
2. Includes £2.0 million from Aid and Contribution Act - Customs 17/20-21.
3. Includes £0.5 million from Aid and Contribution Tax - Customs 17/22.
4. Gross Income Assessed relates to year ended 5 April and Total Tax Collected relates to tax collected for year end 5 January.

Sources for gross income: Accounts and Papers, 1812/13 (XII), p.235 et. seq.; 1814-15 (X), p.85 et seq; 1 Comms. of Inland Rev., 1857 62a; Inland Rev. - vol. 385, pp. 106-120 and 258 and House of Lords Paper, 1846 (XIX), p.363. Schedule C for 1803 and 1805 was calculated from the tax collected. Gross means total income which came within the purview of the tax administration - see O'Brien, 'British Incomes', pp.255-262.

Sources for tax collected: Customs 17 States of Navigation Revenue and Commerce, 1798-1808 and Accounts and Papers, 1814-15 (X) and 1816 (XI).

Total tax collected depended upon net income assessed and the rate of tax. Unfortunately it is not possible to present a complete series of net income assessed by schedule for each year, 1803–15 and before the Peace of Amiens returns were not even presented in that form. But the forces which determined the contribution of the tax to the war effort can be appreciated from a study of the figures for gross income assessed and the tax collected. Looking over the years 1798–1815, it is possible to distinguish three periods, 1798–1801 when the Government introduced the tax with a format and administration which was both experimental and designed to secure its general acceptance. 1803–1806 when both the law and administration were tightened up in order to make the tax a more productive source of revenue, and the wartime income tax really came into full operation during the years 1807–15.

Comparing total tax collected in 1800 (when the standard rate stood at 10%) with 1804 when the standard rate had been halved, it is apparent that Pitt's original law and administrative arrangements permitted a great deal of evasion. In 1800 gross income assessed amounted to £80.2 million, well below the Chancellor's original estimate. Three years later the authorities managed to bring a further £60 million into their net. Most of this increment undoubtedly originated in improvements to the format of the law and administration (taxation at source, the introduction of detailed returns under 5 schedules, and the more stringent definitions of income land ownership and farming) rather than from rising prices or additions to national product.[1]

By 1806 receipts had risen to more than double their level for 1803. This rise reflected a doubling of the standard rate, the abolition of child allowances and abatements on property incomes below £150, the dropping of the exemption limit from £60 to £50, the assessment of Schedule C income at source by the Bank of England, the termination of the repairs allowance, previously permitted under Schedule A, increased administrative experience and some part to the rise in money and real national income. It would be impossible to measure the contribution of each factor, but everything except the rise in the standard rate of tax is reflected in the additional income assessed to tax. If we assume that gross and net income assessed rose by a comparable proportion then about 80% of the additional revenue collected in 1806 compared with 1803 can be

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1. My conclusion is also supported by a comparison between the numbers taxed in 1800 and 1803. In 1800 304,000 people paid tax. In 1803 the number estimated by the Board of Taxes was 1,059,000 - Inland Rev., vol. 384, p.175.

attributed to the higher rate of tax.[1]

After 1806 no further changes occurred in the format of the law or the rate of tax and additional receipts from the income tax emanated entirely from gross income assessed to tax. The latter depended upon further improvements to the administration and increments to national income in current prices.

Finally if we turn out attention towards the contribution made by each schedule, several interesting facts emerge. First of all it is clear that most of the payments into the Exchequer came from the assessment of property income. Schedule A included for the most part rent from land and houses.[2] Schedule C was composed of interest on the public debt and Schedule D was dominated by industrial and commercial profits.[3] Only Schedules B and E contain income from personal services and they contributed about 25% of the revenue collected from the tax between 1803-15. The tax remained in fact as well as in name a property tax and in many ways can be regarded as nothing more than the old land tax, implemented according to the letter of the law.

Moreover, many of the difficulties encountered with the assessment of industrial and commercial profits under the land tax persisted with the new property tax. It is obvious from the correspondence between the Board of Taxes and the Treasury and the figures of gross income assessed that businessmen found it easier to evade their liabilities than landowners, bondholders or civil servants. Not one of the indices of trade, industrial production or wholesale prices confirms the impression from the gross income assessed under Schedule D that industrial and commercial profits remained roughly constant between 1803-15. The evidence suggests that the Government never managed to obtain its proper share of the rise in industrial production and internal and external trade which occurred after the Peace of Amiens.

The taxation of civil servants and interest on the National Debt presented the authorities with no real problems. War itself engendered a rise in the gross income assessed under Schedules C and E. As the Government borrowed money and the interest bill on the public debt mounted the Treasury recouped 10%. Similarly as the number and salaries of Government employees rose the Exchequer profited.

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1. In 1800 with liberal allowances the ratio of tax collected to income assessed amounted to 7½%. In 1806 with more stringent rules of assessment it rose to nearly 9%.
2. In 1810, for example, the gross income assessed included £34 million for lands, £14 million for houses, £2 million for tithes and £1 million for other kinds of income - Accounts and Papers, 1814-15, p.87.
3. Schedule D also included income from professions and vocations but excluded wage earners unless their wage amounted to 30/- and above per week. Few wage earners received incomes of that size at the beginning of the 19th century. - O'Brien, 'British Incomes', p.260.

Income assessed under Schedules A and B depended upon the movement of rent or the annual value of land. Part of the rise in annual value of land assessed after 1803 can be attributed to the more regular revaluation of property by Treasury Surveyors. Contemporary accounts suggest that during the war years large areas of marginal land were brought into cultivation in order to meet the demand for food, but probably most of the additional income assessed to tax after 1803 reflected the sharp upward movement in rent over the war years.[1] Its average rate of change cannot be measured but according to information in the Farmers' Magazine and the testimoney of witnesses before Parliamentary Committees on Agriculture, in numerous instances rents doubled during the period 1790 to 1814.[2]

Changes in rent per acre of agricultural land reflected to a large extent the profitability of farming and the increased demand for land for housing and urban facilities as the population grew and migrated townwards. Between 1790 and 1814 prices of meat, dairy produce and wool doubled. Grain prices fluctuated more sharply but even in years of normal harvests such as 1809-10 they stood about 80% above their pre-war levels.[3] As wages and inputs purchased from the industrial sector lagged behind agricultural prices the profitability of cultivation increased the demand for land and in conditions of easy credit farmers found little difficulty in raising funds from banks in order to stock and equip farms.[4]

On the supply side the enclosure and consolidation movement reduced the supply of farms available for lease.[5] Landowners also improved the productivity of their lands in other ways and naturally wished to recoup on their investments.[6] At a time of rising food prices and with the increased demand for land for other purposes, when leases expired they found no difficulty in raising rents to heights way above pre-war levels. As rents rose the Exchequer gained additional revenue under Schedules A and B and the wartime prosperity helped to make the income tax productive and acceptable to the agricultural interest. As the Committee of 1821 observed "While prices were increasing the ultimate balance of

1. Cttee. on Corn Trade, 1814, p.453 and Adams, Agricultural Depression and Farm Relief, p.3.
2. Lords Cttee. on Grain, 1814, p.115; Cttee. on Agriculture, 1821, pp.92-93, 84, 49,200,209,212, and 323; Farmers' Magazine, February, 1802, pp.100,265 and 268; February, 1803, pp.113 and 123; November, 1804, p.486; May, 1805, p.243; February, 1806, pp.100-101 and 122; May, 1806, pp.254,311,391 and 422; February 1807, pp.111 and 122; May, 1807, p.243; August, 1807, p.339; November, 1807, p.427 and September, 1808, p.311.
3. For details of the indices used in the measurement of changes in agricultural prices see pp. 265-266.
4. To support a proposition of this kind I require an index of the prices of

footnotes continued

revenue left to the owner of the soil was so much enlarged that he could discharge its incumbrance with less difficulty."[1]

The Influence of Pressure Groups and Cannons of Taxation on Policy

Decisions of the Government in the field of taxation policy were constrained by the activities of more or less powerful pressure groups concerned to defend their interests against the exactions of the State and by the attitudes of Parliament and public opinion towards the proper distribution of the tax burden. No good study has yet been made of the organisation and mode of pressure group activity in the late 18th century, but it is obvious from the debates on taxation policy for the period 1788-1815 that the House of Commons contained spokesmen for the West India planters and traders, for the mercantile marine, for the East India Company, for the Bank of England and for particular industries as well as the more amorphous and less organised groups of members connected with the concerns of the City of London, and a majority who spoke for agriculture as a whole. In Parliament and on Parliamentary Committees members sought to defend particular industries or sectors of the economy against taxes and if possible to obtained advantages for the economic activity they represented vis a vis its competitors' domestic and foreign. Thus West India interest attempted to maintain the tariff on foreign sugar at a prohibitive height and to widen the differential between sugar imported from the Carribean and imported from Bengal. Given the fluid nature of political allegiance, Governments of the day had to cultivate members of Parliament and to modify taxation policy in order to retain their support.

Apart from the presence of representatives in the Commons, one technique open to economic groups seeking to avoid taxation was to petition Parliament and to make a case against the Government's proposals. The Journals of the House are full of references to petitions against particular taxes, which usually asserted that the tax in question would ruin the industry involved or in

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industrial products purchased by farmers as inputs compared with an index of the products sold by farmers. My comparison is simply between the prices of bricks, coal, iron and cement recorded in Beveridge, Prices and Wages in England, and the movement of food prices. See Appdx.1.

5. According to Porter, Parliament gave landowners permission to enclose nearly 4 million acres of land during the period 1790-1819. The war years coincided with the zenith of the enclosure movement - Porter, Progress of the Nation, pp.181 and 188 and Cttee. on Agriculture, 1821, Appdx.38. See Table 36.
6. Lords Cttee. on Grain, 1814, p.69 and Farmers' Magazine, February, 1805, p.60; November, 1805, pp.60-62; February, 1806, pp.100-101 and September, 1808, pp. 311-317 and Tooke, History of Prices, vol.1, pp.341-343.
7. Cttee. on Agriculture, 1821, p.215.

some way react adversely on the national interest. These petitions were often investigated by Committees of the House who reported to the Government on the potential effects of the proposed changes in taxation. Petitions sometimes formed part of a well organised campaign designed to mobilise public opinion against changes in taxation.

Groups affected by taxes also attempted to exercise influence directly upon Ministers and departments of State concerned with revenue such as the Treasury and the Committee on Trade and Plantations. The papers of Pitt, Huskisson, Vansittart and Liverpool contained abundant examples of letters and memoranda designed to prevent or modify some proposed change in taxation. Statesmen sometimes consulted interested parties before proceeding with a new tax. Letters to the Treasury and to the departments responsible for the collection of revenue are on the whole concerned with the interpretation of tax law.[1] Manufacturers, merchants and other interested groups petitioned the Treasury Board or the Boards of Customs and Excise for rulings on the application of the law to particular cases.[2] But letters to the Committee on Trade contain more evidence on the attempts of interest groups to actively influence the formation of policy. Manufacturers might for example request the Committee to impose higher duties on rival products imported from overseas or merchants might seek to bring about reductions in the tariff.

Revenue policy also operated within a framework of ideology or cannons of taxation. Parliamentary and public opposition to particular taxes often crystallised around fairly well defined and widely held attitudes and the Government not only sought to avoid opposition but also operated in terms of the same precepts which effectively limited its discretion in the selection of taxes. The basis for taxation cannons can be found in the ideals of the age with respect to distributive justice and prevailing notions of how to promote economic development and national security. To summarise these ideals and notions crudely we can say that at the end of the 18th century most Englishmen opposed taxes which fell on the necessities of the poor, approved of levies on the luxuries consumed by the rich, found all excises and a general tax on

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1. See Treasy. - Series T.I. under Customs, Excise, Stamps and Taxes.
2. See Excise - Series 48/26-70. Correspondence with Treasury and Customs - series 30/9. Correspondence with the Treasury.

incomes repugnant to their liberal sentiments, felt that duties on exports or the inputs used by the export sector should be avoided, considered that certain industries described as "basic" should not be taxed, thought that the country's tariff should be designed primarily to favour the produce and shipping of the British Empire and secondarily to favour imports from countries which granted concessions to British exports. Thus Chancellors of the Exchequer found it very difficult to alter the network of commercial treaties and Imperial regulations in order to obtain revenue and they always needed special justification when their proposals offended the distributional ideals of the time.

War certainly undermined the activities of pressure groups - after all their interests were being defended and they could expect to pay towards the cost. Ministers became less amenable to pressures of other kinds when the overriding pressure was to find revenue. Furthermore, they could always excuse transgressions against the cannons of taxation on grounds of necessity and their opponents, who persisted in arguing from precepts, were often rhetorically asked by the Chancellor to suggest alternative ways of raising finance. It would be difficult to trace the precise influence either of ideology or pressure groups on policy. Nevertheless pressures continued to be exerted through Parliament and through departments of State on taxation policy and the Chancellor continued to work within the ideals of the age in the selection of taxes.

Most of the innovations to the tax structure came between 1797 and 1800. During the early years of the war Pitt attempted to finance it through the traditional medium of loans. Only when the cost of borrowing rose sharply and the national debt accumulated rapidly did he attempt to obtain a greater proportion of revenue from taxation. Before the war Pitt had convinced Parliament that the national debt ought to be placed under a process of redemption and 1797-98 he had little difficulty in persuading his Cabinet and members of Parliament that the Sinking Fund should continue to operate and that it was necessary to restrain the rate of accumulation in the national debt.[1] Thus in the context of fairly widespread agreement about the need to raise more taxes for the finance of the war, Pitt found it possible to widen the tax base in ways which might otherwise have aroused a far stronger and perhaps decisive opposition.

Even then Pitt still found it politically expedient to introduce the

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1. See pp. 402-402.

income tax by stages. He began with the Triple Assessment which built upon the existing framework of levies on expenditure and involved no disclosure of material circumstances. When that failed his first income tax bill of 1799 set out to conciliate opposition by minimising the amount of information given by taxpayers to the authorities and by limiting the powers of Treasury officials in the process of assessment. Only gradually did the Government turn the income tax into an efficient instrument for the collection of revenue and at no time during the war did Ministers attempt to introduce the principles of progression into the tax, despite several suggestions for such a reform.[1] At the end of the war Parliament and public opinion defeated the attempts of an otherwise powerful administration to retain the income tax as a permanent part of the tax structure. Only during a period of national emergency did the middle and upper classes feel inclined to accept an income tax. Direct investigation of material circumstances even by an amateur administration still remained repugnant to them in 1816.[2]

Pitt also proceeded cautiously with the rudimentary form of death duties he introduced in 1796. He stressed the continuity of the new duty with the former stamp on receipts for legacies and undermined one ground of opposition by exempting bequests to lineal descendents.[3] Yet Parliament still truncated the tax by refusing to accept its extension to land, a proposal which Sheridan described as "the most execrable measure of finance ever to come before Parliament."[4] Nine years later when the agricultural interest defeated Pitt's attempt to raise the rate of tax on horses used by farmers, he retaliated by extending the legacy duty to land and at a low rate of tax to lineal descendents.

The assessed tax on farm horses first aroused strong objections from the country gentlemen when Pitt extended the tax on pleasure horses to horses used in agriculture in 1801. Four years later, by stressing the burden of the tax on farmers, its adverse effects on bread prices and investment in agriculture, the opposition managed to defeat a proposal to increase the rate by three votes. While at the end of the war the agricultural interest only gave up their campaign against the tax in return for higher import duties on foreign grain.[5]

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1. See pp. 401-405.
2. See p. 398.
3. See pp. 396-397.
4. Parly.Hist., vol.32, p.1038.
5. See p. 392.

Strong opposition from the same source came again in 1812-13 when Vansittart doubled the excise duties on tanned hides and skins. For nearly a century the rate had remained stable and his opponents in Parliament used three arguments in their unsuccessful attempt to defeat his proposal. First of all they stressed the unequal incidence of the tax on the poor who wore coarser and heavier shoes than the rich.[1] They deplored the impact of the tax on exports and on the prices of agricultural implements used by farmers.[2] Finally several speakers warned the Government that the tax would not even be productive because it would be paid in large measure by the Army and Navy.[3]

A year later, after the increase had passed the Commons by a small majority, the petitions which poured into Parliament against the increased duties were investigated by a Committee of Parliament.[4] Representatives of the leather industry and landowners reiterated most of the arguments expressed by M.P.'s and tended to blame the depression in the industry on the tax.[5] Yet the Government remained unmoved by their campaign. Vansittart insisted, probably correctly, that most of the arguments used against the tax exaggerated its effects. The depression in the industry came from the loss of export markets due to the Orders in Council and Continental System, and the decline in the exports could not be blamed on a tax which anyway gave drawbacks on output sold abroad.[6] Treasury spokesmen had no difficulty in showing that the yields would be only marginally affected by the purchases of leather goods by the armed forces.[7] Vansittart admitted the poor might be unfairly affected but pointed out that rich and poor alike had an interest in national security and Castlereagh added: "If this principle of tenderness were admitted here it might with equal propriety be extended to other taxes of a far more oppressive nature."[8]

Landed gentlemen in Parliament also took part in a campaign to defend its interest vis a vis a group which perhaps exercised more influence than any other upon the formulation of taxation policy during the war years - namely the planters and merchants concerned with marketing of produce from the British

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1. Parly.Debs., vol.23, pp.783-86; Le Marchant, Althorp, p.135 and Liverpool Papers, vol. 38363 - memo from Maberly.
2. Ibid, and Parly.Debs., vol.23, pp.783 and 930-932.
3. Parly.Debs., vol.23, p.786 and Hansard, vol. 26, p.227.
4. Commons Jnl., vol.68.
5. Cttee. on Leather Duties, 1812-13, pp.597-709 and Anon, 'Observations on the Duties on Leather', 1813.
6. Hansard, vol.26, pp.225,228,231,232,236 and Parly.Debs., vol.23, pp.787-790.
7. Hansard, vol.26, p.228.
8. Ibid, p.269 and Parly.Debs., vol.23, p.790.

Carribean. This West India interest concerned itself directly with duties on sugar, coffee, indigo, cotton and rum and indirectly with levies on rival commodities such as Indian sugar and coffee, grain and malt (which competed with sugar as inputs in the British distillery), American cotton, European brandy and domestic spirits. They pressured to win concessions from the Government either in the form of lower taxes on produce imported from the Carribean or higher duties on rival produce.[1]

Traditionally the Government had given domestic produce tariff advantages over both foreign and Imperial produce, and the latter also enjoyed advantages over imports from outside the Empire. Within the Empire Carribean coffee and sugar paid lower customs duties on coffee and sugar than the substitutes cultivated in Bengal.[2] During the war years conditions in international markets first favoured and later turned against produce from the British Carribean.[3] Until about the turn of the century, as prices of coffee, sugar and rum rose on world markets, the activities of the West India interest were directed towards maintaining its advantages in the metropolitan market in the face of hostile consumers and refiners of sugar and a Chancellor concerned to boost consumption and tax revenue. It failed to prevent some narrowing of the differential duties between the produce of the India and the Carribean.[4] Nor did the protests of its representatives prevent Pitt from reducing the bounty on exports of refined sugar and the drawback on raw sugar sold outside Britain.[5]

From 1800 to the end of the war taxation policy worked on the whole to favour the West India interest. To some extent the change resulted from very determined pressure on the Government, but in general Ministers seemed anxious to afford relief to a part of the Empire, which for a combination of political and economic reasons suffered perhaps more acutely than any other from the war.[6]

Thus to appease the West India and shipping interests and also to retaliate against Napoleon's Continental System the Government used the Royal Navy to interfere with American trade with Europe which lead eventually to war with the United States.[7] But even under strong pressure from the colonial and

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1. See pp. 457-459.
2. Accounts and Papers, 1830, pp.5 and 11 and Rept. on U.K. Tariff, 1898, pp.209 and 215.
3. See p. 456.
4. Rept. on U.K. Tariff, 1898, p.215; Ragatz, Fall of the Planter Class, pp.211-212; Anon, 'Strictures on the System of British Commerce', 1792 and Anon, 'The Right of the West India Merchants', 1793, pp.1-10 and 28-29.
5. Pitt Papers, vol.292 contains several memos from the West India interest protesting against the reductions of drawbacks and bounties; Parly.Hist., vol. 32, pp. 564 and 1260 and vol.34, p.1057; Anon, 'Remarks on the New Sugar Bill', 1792, pp.1,4,5,9 and 14-15 and Anon, 'A Hint', 1793, pp.14-15.
6. See p.458
7. See pp. 458-459.

shipping interests the Government preferred to accede to counter pressure from textile manufacturers and refused to raise duties on American cotton.[1]

Yet vociferous opposition from the landed interest failed to prevent more concessions being made to the planters and merchants from the Carribean. Between 1808-13 successive decrees prohibited the use of wheat in the British distilleries and lowered the excise duties levied on a wash of spirits from sugar and molasses and sugar compared to a wash of grain and malt.[2] Government policy in this case was perhaps mainly determined by a wish to reserve food grain for the manufacture of bread in a period of deficient harvests and high grain prices. In 1795 and 1799-1801, years of very poor harvests, the agricultural interest had accepted the closing of a market to their grain as a necessary sacrifice for the masses, but in the latter phase of the war their speeches and petitions to Parliament in opposition to the policy reflect their conviction that their welfare was being sacrificed to the West India interest.[3]

Despite pressure to do so, the Government did not lower duties on sugar and rum nor did it convert to an ad valorem basis but it did keep rates roughly stable at a time when most other taxes went up.[4] In 1808 Perceval cut the customs and excise duties on coffee from 1/8 a lb. to 7d. a lb. and imports increased enormously.[5] From 1801 onwards the drawbacks and bounties on exported sugar were restored to their former levels and the differential between Carribean and Indian produce widened despite protests from the East India Company.[6] While the duties on brandy and geneva which competed with rum were raised almost to prohibitive heights.[7] There seems no doubt that the situation on world markets for the produce of Britain's possessions in the Carribean coupled with determined pressure from the West India interest, definitely limited the Chancellor's discretion to select taxes for the finance of war.

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1. Hansard, vol.26, pp.117, 202-203, 250-251, 372, 395-396 and 515; Commons Jnl., vol.68, pp.450,465,491 and 560 and see p. 395.
2. Galpin, Grain Supply, pp.55, 63, 76, 77, 82; Ragatz, Fall of the Planter Class, pp.316-319 and see p.
3. Auckland thought in 1810 that Parliament would not agree to close the distillery to grain - Dropmore Papers, vol.10, p.128; Edinburgh Review, vol.13, pp.382-413, review of Bell, 'An Inquiry into the Justice of the Prohibition of Grain in the Distilleries'; Dixon, 'Impolicy of Prohibiting Distillation from Grain', 1810; Commons Jnls., vol. 63, pp.295,316,339-340,352,357-358,386 and 407; vol. 64, pp.44,54,62,64,70,78 and 99 and Parly.Debs., vol.11, pp.816-824; vol.15, pp.390-399; vol.19, pp.321-323, 357-360, 687-690 and 789 and vol.21, pp.286-292, 320-326 and 490-492.
4. Accounts and Papers, 1830, pp.10-11; Rept. on U.K. Tariff, 1898, pp.161 and 215; Dropmore Papers, vol.8,p.489 and Ilesley, 'A Statement of the Facts', 1810, pp.80 and 84.
5. Accounts and Papers, 1830, p.5 and 1829, p.380; Ragaty, Fall of the Planter Class, p.42 and Corrie, 'Letters on the Duties on Coffee', 1808, pp.1,7,9 and 51.

footnotes continued.

Other examples of pressure which effectively hindered the Chancellor's freedom to tax occurred in 1797 when discussions with the ironmasters convinced Pitt against an excise on iron and ten years later they again conducted a victorious campaign against a similar proposal by Petty. Opponents of the excise argued from the precept that the Government should not tax a basic or staple raw material like iron, nor any industry in the early stages of its development.[1] Although Petty obtained a majority of 10 for excise he decided not to proceed and attempted to substitute a tax on private brewers, but it aroused such a storm of protest at public meetings up and down the country that he deemed it wise to drop an idea which seemed to be so repugnant to the landed interest and liberal sentiment. Six years later, when Vansittart again tested feeling for such a tax, he found it politically expedient not to proceed further.[2]

Successful campaigns were also conducted by the industry against Pitt's tax on the owners of watches and clocks and by farmers against his extension of the tax on carriages to include their carts.[3] While the anticipation of opposition persuaded Pitt not to introduce an excise on canals and Vansittart against reviving the idea for a tax on coal at the mine.[4]

Yet on the whole the majority of protests made by industrialists and traders did not deter the Government from the imposition of higher taxes on their products.[5] Ministers appear to have been more willing to consider petitions which claimed that the industry concerned had lost rome relative advantage as a result of a change in policy. This can be seen clearly in the Government's endeavours to preserve a balance between the three parts of the country in which spirits were distilled. London distillers sought to improve their position by higher tariffs on imported Scotch and the distillers of the Lowlands protested against any additional advantages enjoyed by the Highlands whether in the form of duties on their finished spirits or excises on the input of malt.[6] The Government also seemed prepared to consult industry about the

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6. Parly.Debs., vol.8, pp.840 and 849; Ilesley, 'A Statement of the Facts',1810, pp.60-68; Hansard, vol.27, p.201; Ragatz, Fall of the Planter Class, pp.291 and 295 and Commons Jnls., vol.55, p.495 and vol.58, p.650.
7. Rept. on U.K. Tariff, 1898, p.215; the pressure of the West India interest for this began in 1806 - Board of Trade - 5/16, dd.17.3.06, 26.3.06 and 29.12.06 and Parly.Debs., vol.8, p.851.
1. See p. 389.
2. See pp. 390-391.
3. Commons Jnl., vol.50, pp.531, 557 and 582.
4. Vansittart Papers, vol.31237 - Rose, dd.11.11.09.
5. Petitions against taxes can be traced in Commons Jnls., and Board of Trade Papers - Series B.T.4 and 5.
6. Commons Jnl., vol.52, pp.393,483,523,682 and 685; vol.54, pp.191,193,201 and 217 and Rept. on Scottish Malt, 1806, pp.427,433,434 and 527-529.

mode of imposing an excise, that is about the regulations which surrounded its assessments and collection.[1] Where an industry opposed regulations adopted by the department of Excise for the protection of the revenue it petitioned the Treasury or occasionally Parliament for changes in the law.[2] Finally the records of the Treasury and the Board of Trade show that pressure on the Government did not come from a single monolithic source, but often from several groups each attempting to gain advantages at the expense of the other.[3] This came out very clearly during the discussions on the timber duties in 1809-12 when merchants trading to North America and shipping interests pressured strongly in favour of higher duties on Baltic timber. While groups with interests in the Baltic naturally resisted the change and attempted to convince the Government that any change to favour colonial timber would be contrary to the national interest.[4]

Apart from the pressures of sectional interests in Parliament the Government had to meet opposition for increasing taxes on commodities and services consumed by the mass of the population - the poor. Of course protests on welfare grounds were often employed to reinforce the campaign of interest groups, but they became general when the Chancellor raised taxes on "necessities" such as salt and leather, and to a more limited extent when he put up duties on beer, tea, coal and stamps - the last because it made justice more expensive to the poor.[5] On most occasions the Government remained unmoved by appeals on welfare grounds which Ministers countered with the plea of wartime necessity, but the facts suggest that the distributive ideals of the age were by no means ignored in the contest against Revolutionary France.

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1. Pitt Papers, vol. 301 for glass and printed cotton.
2. Commons Jnl., vol.48, pp.420, 550, 567, 584 - for Auction duty; vol.58, pp. 12, 43, 44, 79, 83 and 98 for malt.
3. For linen see B.T. 4/14098 and B.T.5/14-22; for silk see B.T.4/14098, B.T.5/20 and 22 and Commons Jnl., vol.58, p.477; for wine see Vansittart Papers, vol. 31229, dd.20.4.04 and for rum - B.T. 5/16.
4. Board of Trade, B.T.4/14098 and B.T.5/18-22 and Bliss, 'On the Timber Trade', pp.8-9.
5. Parly.Hist., vol.31, p.1318; vol.36, p.454; Parly.Debs., vol.2, pp.962, 1016 and 1021; vol.3, pp.562, 677, 696, 788 and 864 and vol.23, pp.600, 783-790, 930-932.

Table 11 . Rates of Taxes in 1792 and 1814

Tax	Specific Rate 1792	1814
Food		
Sugar (plantation per cwt.)	15/-	32/-
Coffee (plantation per lb.)	10½d	7¼d
Tea	12½%	96%
Currants (per cwt.)	23/4	44/4
Salt (per bushel)	4/7½	15/-
Textiles		
Printed cloth (cottons per sq. yd.)	3½d	3½d
Indian muslins and Nanqueens	18%	32½%
Linen (German plain per ell)	22/7	58/-
Silk (Bengal raw per lb.)	3/-	4/2
Cotton (raw - U.S.A. per 100 lb.)	6/6	16/11
Leather (tanned hides per lb.)	1½d	3d
Alcohol and Tobacco		
Beer (strong per barrel)	8/-	10/-
Spirits (English per gallon)	3/4¾	10/2¾
Malt (English a bushel)	1/6¼	4/4
Rum (per wine gallon)	4/8	13/10½
Brandy (per wine gallon)	5/10	22/7
Wine (Portuguese sherry, per gallon)	2/6	7/7
Tobacco (American per lb.)	1/3	3/2
Cleaning Materials		
Soap (hard, per lb.)	2¼d	2¼d
Starch (per lb.)	3¼d	3¼d
Heat and Light		
Candles (tallow, per lb.)	1d	1d
Coal (London, per chaldron)	8/10	9/4

continued .....

	1792	1814
Housing and construction		
Houses (with annual value of £20)	16/6	45/-
Windows (payable on a house with 10 windows, per annum)	22/2	46/-
Timber (Memel fir, per load)	6/8	64/11
Glass (Crown sheet, per cwt.)	16/1½	73/6
Bricks (small, per '000)	2/6	5/10
Transport		
Carriages (cost per annum to retain 1 4-wheel carriage)	£8.16.0.	£12.0.0.
Horses (cost per annum to retain 1 horse)	10/-	57/6
To travel by public stage carriage (per mile)	1d	2-5d
To travel by public horses, per mile	1½d	1½d
Miscellaneous		
To keep 3 servants per annum	£4.19.0.	£11.8.0.
Newspaper (large sheet)	2½d	7d

Sources: See Appendix

Notes: I have attempted to present the typical commodity from a given group. For example, American cotton was the most common type of cotton fibre imported between 1793-1815. No estimate is given for ad valorem tax rates where price data could not be traced in published sources. Certain taxes (e.g. tea and Indian textiles) were imposed on an ad valorem basis. Not all taxes discussed in this thesis have been listed. I have included onlythose which appear relevant to a discussion of incidence.

For example, if we examine the changes in tax rates presented in the above table several interesting pointers to the incidence of wartime taxation emerge. First of all rates of duty upon soap, starch, printed textiles (taxes viewed by contemporaries with some antipathy because they fell upon commodities consumed largely by the poor) remained constant. Tax rates on beer and coal which also affected the mass of the population rose only slightly, but excises on salt and leather remained fixed until 1812. Significantly both taxes aroused opposition both inside and outside Parliament on welfare grounds. The excise on malt nearly trebled over the war years, but about 52% of total malt consumption in Britain was by private brewers (on the whole families with high incomes).[1] Duties on tea and sugar went up sharply but contemporaries were not convinced that the incidence of these taxes fell on the poor, and they did not arouse much opposition on welfare grounds.

With certain exceptions tax rates on commodities and services consumed by the more affluent, such as Indian textiles, European linens, spirits, wine, tobacco, windows, glass, transport, newspapers and servants appear to have increased more steeply than taxes on commodities more widely consumed. Certain luxury or semi-luxury products such as coffee and silk escaped lightly but special circumstances prompted the Chancellor to cut the duty on coffee in 1808 and he may have kept down the duty on raw silk to protect the silk manufacturers from the competition of silk textiles smuggled into the country from France.[2]

It would be relevant to discuss the burden of wartime taxation on different income groups, but unfortunately sophisticated measurement of the kind carried out by modern investigations of the tax burden is impossible for the early 19th century because data on income distribution and expenditure patterns for various classes are not available.[3] Apart from Eden's work on the very poor no household budget surveys exist, but a very crude measure of the relative burden can be made on the basis of contemporary opinions and assumptions.[4]

Discussions of taxation during the period is on the whole marked by the assumption that taxes were borne as legislators intended. In other words they ignored the whole problem of incidence which looms large in modern writings of taxpayers assessed and indirect taxes were passed on to consumers in the form of higher prices.[5] Parliamentary and published comment focussed on two sets of social classes: the agricultural and commercial interest on the one hand and the rich and poor on the other. Since the boundaries between the agricultural and other interests were never clearly defined and because the debate never came to grips with the problem of the incidence of particular taxes on either class, it is impossible to make any assessment of the assertions made by both sides that the other had not paid its fair share towards the finance of war.

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1. See p. 344.
2. See p. 458.
3. Shirras and Rostas, The Burden of British Taxation.
4. Eden, The State of the Poor, 1797. I concluded from a study of Eden's data that it would not be possible to use it for an analysis of the incidence of taxation, because his statistics relate to a special group in society.
5. This is also the assumption made by an empirical investigation into the burden of taxation in 1938, cited in footnote 3.

Contemporaries distinguished more explicitly between taxes which fell mainly on the rich from those borne largely by the mass of the population - termed the poor. According to the cannons of the age necessities in mass demand should either not be taxed or taxed very lightly, while commodities and services consumed by the affluent were considered to be particularly eligible subjects for taxation. For example, it is clear from the law and the figures of houses assessed that Parliament intended to exempt the mass of the population from the operation of the house tax by confining it to houses with an annual value of £5 and above. Of course argument continued about the incidence of particular taxes but in general a definite consensus prevailed about the incidence of most taxes. Groups other than the "rich" or the "poor" were seldom distinguished and for several taxes such as those levied on timber, bricks, bills of exchange, glass, hemp, auctions, slates and stones, paper and marine insurance the question of incidence was rarely and perhaps could not be meaningfully discussed.

Nevertheless, on the basis of contemporary opinion it is possible to divide most of the tax revenue collected to pay for the war into two parts - that contributed by the rich and that paid by the poor.[1] For the taxes on malt and domestic spirits total yields can, however, be divided between both groups. Malt, which formed the principal constituent of beer, was purchased by affluent families who made their own beer and public brewers who brewed for sale to the population. Using information from Mathias's study of the brewing industry I divided the war yield between both categories. Spirits in Scotland were widely consumed but in the rest of the Kingdom they probably remained a drink for the more affluent , and this geographical difference provided a basis for dividing the yield from this tax between the two groups. All other taxes were allocated between levies paid by the rich and levies paid by the poor, according to the views of contemporary writers on public finance and a perusal of the legislation.

1. By contemporary opinion I mean Members of Parliament and the pamphlets and books of the period dealing with taxation.

. Contribution to War Finance From Taxes Levied on the Affluent

Tax	Yield £000
Malt	29.9
Foreign Spirits	30.6
Domestic Spirits	21.5
Wine	20.8
Windows	20.7
Tobacco	11.2
Pleasure Horses	9.8
Houses	9.1
Servants	4.1
Carriages	3.8
Coffee	3.2
Newspapers	2.8
Stage Coaches	1.8
Silk	1.8
Post Horses	1.6
Income Tax	155.6
Farm Horses	9.4
Probate	6.0
Legacy	5.2
Dogs	2.4
Hair Powder	1.9
Glass	3.3
Total	345.5
Total collected for the war:	542.1

Sources: See Table 9.

Notes: All other taxes listed above are either not allocable in terms of their incidence or were assumed to have been paid by the "poor".

These figures have been constructed on the basis of the crude methodology outlined above but it does indicate that the bulk of the additional tax revenue required to defeat Napoleon came from the richer classes in British society. At least as far as taxation was concerned "the war for the defence of property" as Pitt called it was probably financed to a considerable extent by levies on those with property. This conclusion does not imply that the richer classes contributed a higher proportion of their income than those lower in the social scale, although the figures may well suggest such a conclusion. The data simply reveal that burden did not fall with undue severity on the poor and the Government cannot be condemned for departing from the accepted cannons of the age. Under pressure of war the tax structure did not become obviously less equitable.

Moreover, a considerable share of the tax revenue collected from the poor came from levies on alcohol. In general this group of taxes which included malt, beer, hops, spirits and wine contributed 27% of the additional tax revenue required for war. If smoking and the consumption of alcoholic beverages had not been widespread in British society the Government would have experienced far greater difficulty in finding finance for the combat against Napoleon.

Economic Development and Tax Revenue

It is sometimes asserted that Britain's triumph in the wars against France resulted from their coincidence with the Industrial Revolution. Presumably the term Industrial Revolution used here means the acceleration of economic growth which began after the American War of Independence and not simply the rapid development of certain industries such as textiles, iron and pottery. Unfortunately the overall measurement of real national output is not possible for this period but the war can be placed in the context of Britain's economic development by using the available indicators of changes in trade and production.

Table 12. Indices of Economic Development, 1750-1815. Average Annual Rates of Growth

Years	External Trade			Agriculture		Industry	Construction		
	Imports	Exports	Re-exports	Arable Production	Animal Production	Production	Timber Imports	White Glass Output	Brick Production
1751-55	2.4%	1.2%	0.6%	0.34%	1.1%	0.7%	4.0%	11.3%	-
1756-60	1.9%	2.4%	1.1%	0.34%	0.5%	0.0%	-0.1%	3.3%	-
1761-65	2.0%	1.9%	0.5%	0.20%	1.6%	0.9%	4.2%	4.8%	-
1766-70	3.8%	-1.6%	0.4%	0.20%	-1.0%	1.7%	2.1%	1.2%	-
1771-75	1.7%	1.3%	4.6%	0.71%	1.9%	1.3%	3.1%	8.0%	-
1776-80	-1.9%	1.2%	-3.5%	0.71%	0.0%	1.2%	-0.9%	-3.1%	-
1781-85	4.2%	2.8%	-0.3%	0.72%	1.0%	3.2%	1.2%	-2.2%	-
1786-90	4.7%	6.5%	3.3%	0.72%	0.6%	4.3%	6.1%	5.2%	-
1791-95	3.4%	5.0%	12.6%	0.61%	1.7%	3.5%	-	2.5%	4.6%
1796-1800	5.0%	5.5%	9.9%	0.61%	0.3%	2.8%	2.9%	-1.5%	-3.6%
1801-05	3.4%	3.6%	2.5%	1.58%	0.1%	3.3%	3.2%	4.2%	9.3%
1806-10	1.6%	4.2%	-1.4%	1.58%	2.4%	2.2%	-4.5%	0.0%	2.1%
1811-15	-1.2%	0.8%	1.9%	2.8%	1.7%	1.8%	3.5%	-3.5%	0.4%

Notes and Sources:

(a) External Trade: Calculated from changes in the official values of imports, exports and re-exports which provide a rough index of changes in volume over the period. For a discussion of these figures see Deane and Cole, British Economic Growth, pp.43-44. The figures of official values are from Mitchell, Abstract of British Historical Statistics, pp.280-281 and see Sources to Table 26. The figures to 1775 relate to England and Wales, thereafter they are for Great Britain.

(b) Agriculture: Arable Production is based on Deane and Cole's (British Economic Growth, pp.65-66) estimates of corn output. They estimated output for every tenth year. Animal Production is based on the weight of animal skins tanned, tawed or dressed in oil charged to excise duty in England and Wales - see Deane and Cole, British Economic Growth, p.73. Figures from Mitchell, Abstract of Historical Statistics, p.266.

(c) Industry: This is the Hoffmann index of industrial production (W. Hoffmann, British Industry, 1700-1950, table 54). The deficiencies of this index, particularly for the early years of the 18th century, have been revealed by W.A. Cole in Economic History Review, 1958, pp.309-15 and by J. Wright in Jnl. of Econ. Hist., 1956, pp.356-364.

(d) Construction: Timber imports are official value imported used as a volume index. The figures to 1790 relate to England and Wales, thereafter they relate to Great Britain. Figures from Mitchell, Abstract of Historical Statistics, pp.286-and 289. White glass is glass used mainly for windows and subject to excise duty in England and Wales. Figures from Mitchell, Abstract of Historical Statistics, p.267 and see Ashton, Economic Fluctuations, p.91. Bricks are bricks charged with excise duty in England and Wales, from Mitchell, Abstract of Historical Statistics, p.235. No figures available before 1785.

The imperfections of the statistics available for the measurement of economic growth over the period 1750–1815 are already well known but all the quantitative information now published suggests that the rate of growth of the British economy accelerated after the American War of Independence and continued at a slower rate during the Wars with France. Imports and exports continued to grow at high rates until the turn of the century. While re-exports increased more rapidly than any period after 1750. After 1800 the growth in all three indices of trade slackens and for the closing years of war is only just perceptible. Industrial production followed a similar pattern with a slower but still high rate of increase until 1805 and a definite fall in the last decade of the war. Grain production rose to 1796, its rate of increase fell off in the period of bad harvests from 1796 to 1804 but surged forward again in the decade before Waterloo. Animal production failed to grow at anything like the pre-war rate and it looks as if the agricultural sector re-allocated land from meat to grain production. Construction, apart from a brief boom in a period which included the Peace of Amiens, never developed at the pre-war rate and in the last decade of the war hardly developed at all.

If the French Wars are compared with the 7 Years War and the American War of Independence, it is apparent that the development of trade, industry and agriculture between 1793 and 1815 was impressive for a war period. Almost complete stagnation prevailed in the conflict with the American Colonies and although the growth of exports and re-exports also accelerated in the 7 Years War, the growth of agriculture, industry and construction definitely declined.

Nobody would deny that the creation of additional capacity in the armaments, iron, food processing, shipbuilding and textile industries helped to provide the Army and Navy with the equipment and sustenance they required to defeat the enemy. Yet the relationship of economic growth to tax revenue is less obvious. As agriculture, industry and trade developed the volume of goods and services taxed by the Government also expanded. Yet my calculations show that only about 9% of the revenue collected to pay for the war came from additions to the quantities of goods and services already taxed in 1792.

At first sight this rather low ratio may suggest the economy developed too slowly to provide very much of the tax revenue required to finance the war. In one sense this is true because the bulk of tax revenue came from changes in tax rates or from new taxes and a faster rate of economic growth would undoubtedly have raised the share of war income from changes in the volume of goods and services taxed. Yet if we turn from proportions to the actual addition to the volume of goods and services taxed between 1793 and 1815 the record looks different. £47.1 million of the £606 million of taxes collected to pay for the war came from increments to volume of goods and services taxed. Over the 23 years of war these increments provided the Exchequer with an average sum of approximately £2 million annually. If we compare this amount with total taxes collected just before the war of £17.6 million then it becomes obvious that the rate of change in the volume of goods and services assessed to tax between 1793 and 1815 was not nearly as unimpressive as its relatively low contribution to the war effort may at first suggest.[1]

Even this calculation neglects the infuence of economic growth upon the revenue collected from taxes imposed during the war. Some part of the yield from the income tax and other new taxes introduced after 1793 arose because they fell upon incomes, goods and services undergoing growth. For example the average amount of gross income assessed to the income tax between 1803-06 amounted to £119 million, but by 1814-15 it had risen to £179 million.[2] When Pitt imposed a duty on raw cotton in 1798 its import amounted to about 37 million lbs. annually, but at the end of the war imports had increased to 72 million lbs.[3]

Even if some allowance could be made for the impact of growth upon innovations to the tax structure, it would still be the case that the bulk of revenue came from raising rates of tax or from the imposition of new taxes. This is not because the volume of goods and services taxed by the Government increased at a particularly slow rate but because the total amount collected for the war happened to be very large. Only an implausibly rapid rate of growth could have provided the Government with the revenue required at constant rates of tax.

On the other hand if the tax structure had been better adapted to obtaining automatically a higher share of the benefits of economic growth for the State the need to raise tax rates or find new sources of revenue would have been diminished. To the extent that production and trade developed in

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1. I calculated the yield from each tax emanating from changes in the volume taxed by assuming that the rate of tax remained at the pre-war level. On this assumption all additions to yield derive solely from changes in volume and the rate of changes in total revenue is equivalent to the rate of change in the volume of goods and services assessed to tax.
2. See Table 10.
3. Mitchell, Abstract of British Historical Statistics, p.178 and Marshall, A Digest of All the Accounts, p.110. The figures are five year averages centering on 1798 and 1815.

commodities and services untaxed by the State the direct impact upon its income would be negative. But growth even in untaxed sectors of the economy might indirectly increase the demand for taxed goods and services through complementarities in production and through higher expenditures by families as their incomes increased. The proportion of any addition to national output automatically obtained by the Government depended upon the degree to which taxes fell upon sectors of the economy undergoing growth or upon inputs delivered to those sectors. In the absence of an input-output table for the British economy in the early 19th century it is not feasible to do anything more than mention some of the more obvious linkages between industries and their broad relationship to the tax structure.

Economic growth appears to have been particularly rapid among industries which sold a high proportion of their output abroad, such as textiles, metallurgical products and pottery. Parliament was resolutely opposed to taxes in any form on exports, and if manufacturers sold their products overseas they escaped taxation.[1] On the whole the raw materials delivered to the most rapidly growing industries also remained untaxed. Thus iron (and other ores), coal, domestic timber, bleaching chemicals, dyestuffs, raw wool, kaolin and all kinds of machinery were not taxed. Despite Pitt's attempts, the new forms of transport used by industry such as canals and surfaced roads also escaped the exactions of Government. He did, however, extend the tax structure to include raw cotton, indigo, tallow and horses used by farmers and the Exchequer did derive direct benefit from investment in industry and transport through its taxes on construction materials.[2] It also gained through the deliveries of increased quantities of the cotton and linen cloth to the printing sector of the textile industry, which paid excise duty.

Given Government policy towards the promotion of exports and the rather low linkage of the export sector to taxed intermediate goods and raw materials the benefits of the Industrial Revolution to the Exchequer accrued more through its effects on the general level of demand than through the income from taxes which fell directly on rapidly growing sectors of the economy. But only an analysis which examines each taxed commodity or service in the context of its supply and demand conditions can reveal the major economic forces which affected the Government's revenue between 1793 and 1815.

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1. See p. 357.
2. See pp. 391-395.

Generally speaking, the quantity taxed of any given commodity is a function of the current level of demand and supply. The range of influences bearing on the demand and supply for taxed products and services over the twenty-three year period, 1793 to 1815 was extremely wide. On the demand side they included movements of prices and incomes and changes in tastes brought about by the growth of population, internal migration and the introduction of new commodities. While changes in the prices of finished goods, in the costs of factors of production, raw materials and other inputs purchased by the taxed industry, the availability and application of new techniques, external economies and diseconomies all affected the amount supplied. In addition the Government itself influenced the quantities taxed directly through the influence of public expenditure on the levels of private expenditure. Finally, improvements to the administration enabled the Treasury to assess a greater proportion of the volume of taxable commodities bought and sold in Great Britain.

To isolate and measure the effects of all the factors which bore on changes in the volume of taxed goods and services is not feasible. Information on key variables such as prices and costs of production is generally not available and published monohraphs for most of the industries or commodities affected by taxation do not exist. The following discussion will simply attempt to reveal some of the major forces at work. The contribution of the revenue administration will be dealt with in the next section.

The first group of taxes, conveniently analysed together, include houses, windows, bricks, glass and timber because changes in the quantities assessed to tax depended mainly upon changes in the level of construction activity. Taking the war years as a whole, it is, however, evident from the limited information at our disposal that capital formation did not come to a halt. Brick production fell below the average level achieved between 1788-92 for just 8 out of the 23 years of war, the output of window glass for just 12 years and timber imports for 15 years.[1] Houses with 10 windows and above expanded in number by only 2% between 1796 and 1810 but there may have been a boom in the building of more modest houses between 1798 and 1806.[2] Taking this period as a whole the

1. Excise, vol. 11894, and Cttee. on Timber Duties, 1835, Appdx.5.
2. Inland Rev. - vol. 384, p.51; vol. 385, pp.48, 55-56 and 60 and Accounts and Papers, 1825, p.757.

investment data on the tonnage of ships built and canal, turnpike and enclosure bills passed by Parliament suggest that construction proceeded but at a more modest pace than during the years prior to the war.[1]

The revenue may, however, have been reduced through substitution of local stone, slate and iron domestic timber for taxed building materials. As the Government raised the rate of tax on glass, manufacturers attempted to increase the area of glass converted from a given quantity of raw material and builders may have reduced the thickness and weight of glass employed to cover a given area of window space.[2] But in so far as construction took place for the Government the increased quantities of bricks, glass, stone and timber assessed to tax would not produce a net increment to public revenue, defined as taxes received by the State less taxes paid by the State. Just how much of the building materials taxed after 1793 were purchased by the Navy for ships or the Ordnance for the construction of barracks and fortifications is impossible to measure but capital formation by the public sector did not help the Exchequer.[3]

Why private investment did not proceed at the pre-war rate probably cannot be accounted for in terms of any change in conditions of demand. On the contrary with a growing population, a lower age of marriage, a high rate of internal migration and rising real income one would expect the general level of demand for housing to increase. While the development of trade and production required shipping, docks, harbours, canals, roads, factories, warehouses and other buildings. It may be that the construction boom which overlapped with the commencement of war satisfied demand for several years thereafter and left the economy with a stack of houses and an infra-structure adequate for its short run needs, but over time pressure on capacity gradually developed.[4]

Perhaps a more plausible explanation can be found in terms of rising costs for labour and inputs employed by the building and shipbuilding industries. Over the war years the prices of imported timber, bricks, hemp, building wages and the rate of interest all rose rapidly.[5] Perhaps more than any other sector

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1. See Table 36.
2. Barker, Pilkington Brothers, p.81.
3. For public expenditure on construction see 3 Cttee. on Finance, 1817, pp.107-108; 20 Cttee. on Finance, 1797, Appdx.A.3; 24 Cttee. on Finance, 1798, Appdx.E and Commons Jnl., 1804, Appdx.25.
4. Ashton, Economic Fluctuations, pp.101-103 and 165-167 and Gayer, Growth and Fluctuations, vol.1, p.14.
5. Bowley, Statistics of Wages in the U.K., p.82 and see pp. 266-267.

of the economy the construction and shipbuilding industries felt the pressure of Government competition for labour and raw materials. As the Department of Ordnance constructed barracks, roads, canals and fortifications and the Navy built ships resources moved from the private to the public sector. Rapid transfers from civil to military purposes were seldom achieved smoothly and were inevitably accompanied by upward pressure on prices and as prices rose private demand declined. Between 1792 and 1814 brick prices almost doubled even though the spread of canals probably served to restrain the rate of increase in the cost of transporting them from site to site. Pitt's decision of 1794 to tax slates and stones carried coastwise weakened competition between the two materials and exerted some upward pressure on prices.[1] No data seems to be published on glass prices but during a period of general inflation when the costs of two inputs employed by the glass industry, namely coal and bricks, rose rapidly there is no reason to expect that glass prices lagged and Barker's study provides no evidence that the industry adopted cost-reducing techniques during this period.[2] Furthermore, with a 44% rise in the specific rate of tax on window glass between 1792 and 1805 manufacturers found it profitable to sell more of their output overseas in order to claim drawbacks on exported glass.[3]

Government borrowing also restrained the growth of private expenditure on buildings and transport facilities of all kinds. As Ashton has emphasised the construction industry depended on a plentiful supply of cheap credit to sustain its activities.[4] Yet between 1793 and 1815 the rate of interest on Government bonds (which can be used to represent movements of interest rates in general) seldom fell below 4¾%, compared with an average rate of 3.7% for the five years before the outbreak of war.[5] Until the Suspension of Specie Payments in February, 1797, the private sector found it progressively more difficult to borrow funds on any terms and this helps to account for the very low level of building activity during the early stages of the war.[6]

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1. Parly.Hist., vol. 30, p.1360 and Dowell, History of Taxation, vol.4, p.380.
2. See Appdx. 2 and p.339.
3. Excise, vol. 11894 and Porter, Treatise on Glass, p.142.
4. Ashton, Economic Fluctuations, pp.85-86.
5. See Table 19 and Mitchell, Abstract of Historical Statistics, p.455.
6. Ashton, Economic Fluctuations, pp.86-87, 103-104 and 167 and Gayer, Growth and Fluctuations, vol.1, pp.35 and 47.

During the war years competition among merchants on the one hand and between the public and private sectors on the other for shipping services increased enormously and freight rates moved sharply upwards.[1] The armed forces needed ships to transport men and materials to and from theatres of war. Merchants required more shipping space to accommodate the rise in Britain's imports and exports and because, under the protection of the Navy, they had captured a far larger share of the world's carrying trade. Shipbuilders who attempted to meet their demands and the demands of the new canal companies for barges found themselves in competition with the Navy for scarce supplies of timber, hemp, copper, bar iron and skilled labour.[2] Their purchases helped the Treasury to finance Naval expenditure, but their costs must have risen enormously, which probably accounts for the low level of timber imports. Over the war years Albion calculated that about two thirds of the price of imported timber consisted of freight charges and the addition of insurance costs would perhaps push the proportion near to 75%.[3] At the same time the risks which attended international trade in wartime lead to increased marine insurance premiums and the competition of the British and foreign navies for timber, hemp and other naval supplies raised prices charged in the Baltic. On four occasions during the war years hostile powers threatened to cut off Britain's timber supplies entirely and although their attempts did not succeed, supplies certainly became much more difficult and costly to procure, and prices fluctuated sharply about the rising trend.[4] The rising cost of imported timber must have lead to the substitution of untaxed domestic timber and iron.

To protect the Navy and the economy from enemy blockades the Government explored possibilities for alternative sources of timber and hemp supplies. The attempt to foster the local cultivation of hemp failed, but in 1806 the Government abolished duties on Canadian timber.[5] Three years later faced by Napoleon's determined enforcement of the Continental System it raised the tariff on Baltic timber to a height which gave Canadian timber an advantage in the British market, despite the huge differential in transport costs between

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1. See p. 249.
2. Ashton, Economic Fluctuations, p.72 and 24 Cttee. on Finance, 1798, Appdx.E and Commons Jnl., 1802-03, p.1158.
3. Albion, Forests and Sea Power, p.152.
4. Monthly Mag., January 1800, pp.586-587; Crouset, L'Economie Britannique, vol. 1, pp.398-400 and 490; Albion, Forests and Sea Power, pp.337,341,344-45 an 420-422 and see pp. 299, 300, 302 and 303-304.
5. Pitt Papers, vol.301 - memos to the Privy Council on Hemp Cultivation, 1800.

Europe and North America.[1] Perhaps strategically the policy made sense but it raised the overall price of a key raw material and, as the figures show, pushed demand towards tax free Canadian timber. As imports of Baltic timber fell so did receipts at the Exchequer.

Given the rapid rise in wages and the costs of materials utilised by the building industry, the appreciation of land values, the high cost of borrowing and the steep acceleration of progressive taxed levied on housing, it is perhaps remarkable to find that the level of construction by an industry which did not enjoy the benefits of technical progress remained as high as it did.

Another group of taxes which can be analysed together are the levies on tobacco and alcoholic beverages, which included beer, malt, hops, domestic spirits, imported wine, rum, brandy and geneva. This group contributed no less than 27% of the revenue required to pay for the war, but only 8 % of this amount came from additions to the volume taxed.[2] The quantities taxed of malt, wine and brandy failed to rise above pre-war levels, but beer, hops, spirits, rum and tobacco all increased in volume. Rum and tobacco imports grew more rapidly than any commodities assessed to tax in this group.[3]

As the prices of drink and tobacco rose less would be purchased but as incomes went up more would be demanded and the net effect on the quantity assessed to tax depended on the income price elasticities of demand. For commodities where the quantity taxed failed to increase, the positive effects of higher incomes failed to outweigh the negative effects of rising prices and vice versa.

To express propositions in terms of elasticities does not explain why prices rose nor does it reveal the forces behind changes in the quantity demanded of the different drinks, subjected to tax. For example, between 1792 and 1814 the price of strong beer almost doubled, not because the rate of tax increased (in fact the ad valorem rate declined from 20% to 14%) but because the cost of its principal raw materials, malt and hops, increased very rapidly.

1. C Cttee. on Timber Trade, 1820, p.383; 1 Cttee. on Foreign Trade, 1821, pp.3-5 and Cock 'Observations on Timber Trade', 1821, ch.6.
2. See Table 9.
3. Rept. on U.K. Tariff, 1898, pp.161, and 190; Accounts and Papers, 1829, p.372; Excise, vol.11894, and 11863 and 1 Comms. of Inland Rev., 1857, Appdxs. 20 and 21.

Ad valorem rates of tax on both malt and hops went up but the rise in the rate of tax again accounts for only a small proportion of the rise in their prices. Malt prices moved upward with the price of barley which shared in the inflation of grain prices during the French Wars.[1] There is no need to recapitulate the analysis of Tooke, Lowe and other contemporary writers on the causes of the wartime inflation of grain prices except perhaps to reiterate their point that agriculture suffered from an unusual number of bad harvests (in 1795, 1799-1801, 1804 and 1809-12)which pushed up the price of barley and malt to very high levels.[2] Hop pricesexercised far less influence on the price of beer because hops formed only a small proportion of its total cost. Moreover, hop production seems to have experienced a harvest cycle all of its own.[3]

Although the price of beer rose by almost 80,. the quantity taxed continued to increase and the rise in incomes and the inelastic demand for beer raised the number of barrels of beer taxed by the Excise Department in England and Wales from an annual average of 6.5 million barrels in 1788-92 to 7.3 million barrels in 1811-15.[4] Several other factors helped to maintain its demand. Prices of possible substitutes such as spirits, tea and wine rose even higher than the price of beer.[5] At the same time, private production of beer for internal consumption within the family declined and some demand probably moved to the taxed product of public brewers.[6] On the other hand the downward trend in coffee prices and the run of bad harvests reduced the overall level of demand.

While the quantity of beer taxed rose perceptibly over the period,for all but 9 of the 23 years of war the quantity of malt taxed by the Department of Excise fell below the pre-war level.[7] Malt was not apparently an industry undergoing technical progress at a rate rapid enough to seriously counteract the effects of the rise in the price of barley on its final product. But since no good substitutes existed for malt, demand from brewers, distillers and vinegar manufacturers continued to be high enough to prevent any sharp fall in

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1. See p. 435 and Appdx.1.
2. Tooke, History of Prices, vol.1, pp.7-10, 179-187, 213-224, 258-267, 293-299, 319-327 and vol.2, pp.2-5 and Lowe, Present State of England, 1822, pp.45-72.
3. 1 Comms. of Inland Rev., 1857, Appdx.21.
4. Excise, vol.11894.
5. See Appdx. 1.
6. Mathias, Brewing Industry, pp.376-377.
7. 1 Comms. of Inland Rev., 1857, Appdx.20 and Excise, vol.11894.

the amount assessed to tax, despite the rise in its price.

Purchases of malt by public brewers served to offset a fall in the volume of malt bought by family brewers, who responded to the higher price of malt by reducing their output.[1] To some extent distillers found a substitute in barley and other grains or in other ways diluted the malt content of their product.[2]

Other aspects of public policy also influenced the distillers' demand for malt. In order to reserve grain for the manufacture of bread and to reduce dependence on foreign sources of supply, in years when harvests fell below normal (1795, 1799-1801, 1808-10 and 1812-13) the law forbade distillers to use wheat for the manufacture of spirits. In 1799 the harvest was bad enough in Scotland for the Government to forbid the distillation not only of wheat but also from barley and malt. Between 1808-13 Government regulation of the distillery also served to placate the West India pressure on the Government for outlets for their surplus sugar.[3] Thus coupled with its injunction against the distillation from wheat the Government lowered the duty on a wash of spirits made from sugar and molasses.[4] Only in 1799 and only for Scotland did the law forbid the purchase of malt by distillers and it never lowered taxes on sugar to the point where the colonial raw material competed seriously with malt. On balance the regulations promulgated to control the use of grain by British distillers probably raised their overall demand for malt.

No doubt public brewers continued to lower the input of malt per barrel of beer, but their possibilities for using raw materials other than malt were more limited than those open to distillers, particularly as the growth of beer production over the war years came on the whole from strong beer which required a higher input of malt per barrel brewed. Their demand for hops appears to have grown steadily. Perhaps they substituted hops for malt as price differentials between the two raw materials widened.[5]

Published information on the manufacture of spirits is particularly scarce. Government reports at the time were concerned almost entirely with

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1. Mathias, Brewing Industry, p.377.
2. Ibid, pp.374 and 391 and Cttee. on Malt Duty in Scotland, 1821, p.213.
3. 2 Cttee. on High Price of Corn, 1795, p.84; 1 Cttee. on High Price of Provisions, 1800, pp.3 and 8; Lords Cttee. on Dearth of Provisions, 1800, p.118 Galpin, Grain Supply, pp.9,22,26,29,67,68,75,77 and 78; Smart, Economic Annals, pp.170,172,199,212 and 275 and Dixon, 'An Inquiry into the Prohibition of Distillation', 1810, pp.1,26-27 and 46.
4. Excise, vol. 11894 and Accounts and Papers, 1830, p.17.
5. Excise, vol.11894.

the problem of illicit distillation or with the diversion of grain into the distillery in years of bad harvest. It may be, however, that variations in the quantity assessed to tax depended more upon the capacity of the Excise Department to check illicit distillation than any other single factor. Over the years 1793 to 1815 growth in the quantity of spirits assessed to tax was not high. Production from the English distillery showed no tendency to rise and most of the increment assessed to tax came from Scotland and increased imports of cheaper spirits from Ireland.[1]

Data on the prices of domestic spirits is not available but, given the rapid rise in the price of grain, the industry's principal raw material, and the steep increase to the tax rates on the finished product and upon malt, it is difficult to believe that the price of domestic spirits did not also rise rapidly. Furthermore, the Government's prohibitions on the distillation of grain in years of bad harvest raised costs when firms substituted malt.[2] Although in 1799 and 1808 the Government also lowered duties on a wash of spirits made from sugar or molasses in order to placate the West India interest, duties were never lowered to a point where sugar competed seriously with malt.[3]

To some extent the pressure on prices from the rising cost of grain was offset by technical improvements which apparently enabled distillers in the Lowlands of Scotland to bring about large increases in output from stills of given capacity.[4] Their success resulted in additional exports of Scotch whisky to England despite the high tariff which protected English firms from more efficient competitors across the border.[5] According to several commentators distillers also diluted the quality of their product through the substitution of unmalted for malted grain and other devices, which exploited consumers but helped the revenue.[6]

Despite the rise in tax rates grain prices, the quantity of spirits consumed did not actually fall, partly because incomes also went up but also because the demand remained inelastic. Moreover, the consumption of British spirits must, to some degree, have been stimulated by the additional wartime

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1. Excise, vol.11894 and 1 Comms. Inland Rev., 1857, Appdx.32.
2. See footnote 3 p.451 and Pitt Papers, vol.317, memo from Scottish Excise Comms., dd. 5.10.96.
3. Excise, vol. 11894.
4. 5 Cttee. on Irish Rev., 1823, p.261; Marsden, Spirit Duties, p.36 and Cttee. on Scottish Distillery, 1798, p.328.
5. Excise, vol. 11894; 5 Cttee. on Irish Rev., 1823, p.661 et seq. and Corrie, 'Letters on the Scottish Distillery', 1796, pp.13-14.
6. Cttee. on Scottish Distillery, 1798, pp.321&335-336.

freight charges and duties on imported brandy and geneva. With rum, however, the fall in sugar prices may have been sufficient to offset any rise in transport costs, and to make it more competitive with spirits.[1]

Either because smuggling increased or because the increased duties and freight charges forced up prices to exorbitant levels, imports of wine, brandy and geneva declined below pre-war levels.[2] It must, however, be pointed out that consumption immediately before the war had been stimulated by the Anglo-French Commercial Treaty of 1786 and by reductions in duties introduced by Pitt in order to check smuggling.[3] On the other hand, imports of rum displayed a definite tendency to rise, particularly in the years after 1803 when sugar prices fell rapidly.[4] Moreover, to placate West India pressure the Government did not raise duties on rum nearly as high as those on brandy and wine. In fact during the last decade of the war when the West India interest pressured very strongly for relief from the burden of taxation the Government kept duties on rum at a constant level.[5] But on the advice of the Committee of 1808 the Chancellor refused to prohibit the import of brandy because he knew such a step would only encourage smuggling. He also refused to lower duties on rum to the point where the colonial drink became really competitive with British spirits.[6]

Despite the rapid rise in the price of tobacco, prompted largely by the upward movement in the rate of duty, its demand appears to have been inelastic enough to ensure that the quantity assessed to tax increased rapidly over the war years.[7] As the Chancellor observed tobacco was a commodity well suited to supplying the needs of the revenue, because it seemed able to bear any amount of taxation.[8] If a trade war had not developed between Britain and the United States, her principal supplier, in the closing years of the war, the quantity taxed may well have been even higher.[9]

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1. See p. 458.
2. Rept. on U.K. Tariff, 1898, p.161 and Accounts and Papers, 1829, p.372.
3. Rept. on U.K. Tariff, 1898, pp.139, 160 and 161; Emerson, Wine, Its Use and Taxation, p.16 and McCulloch, Dictionary of Commerce, p.179.
4. Rept. on U.K. Tariff, 1898, p.161.
5. Accounts and Papers, 1830, p. 10.
6. Cttee. on the Distillation of Sugar and Molasses, 1808, pp.322 and 327.
7. According to Tooke the price of Virginia tobacco without tax rose from 3d per lb. in 1790 to 1/2d per lb. in 1813. Tooke, History of Prices, vol.2, p.418. Over the same period the tax rose from 1/3 to 2/8 per lb. - Rept. on U.K. Tariff, 1898, p.190.
8. Parly.Debs., vol.23, p.569.
9. Monthly Mag., March 1809, p.412.

Taxes on foodstuffs, salt, dried fruit, tea, coffee and sugar form a third group of levies conveniently lumped together. Between 1793 and 1815 the average annual amount of salt assessed to tax rose above the pre-war level, but most of the increment came in the years after the Peace of Amiens.[1] Wholesale prices of salt increased by almost the same amount as changes in the rate of tax over the war years.[2] In a period of general price and wage inflation this suggests either the industry adopted cost reducing techniques of production to mine and refine salt or the costs of transporting salt fell. With the extension of canals and the wider use of steam engines in mines both may have occurred.[3] But as tax rates rose it became more profitable to export salt in order to claim the drawback and over the years 1800-15 a rising proportion of the industry's output went overseas, and reduced Government income.[4] Salt used for preserving fish, in the bleaching and glass industries paid no tax and throughout the period manufacturers who used salt or its derivatives pressured the Government for the privilege of drawback on the salt they purchased. As duties rose and their appeals proved unsuccessful soap manufacturers began to substitute barilla for alkali and farmers ceased to use poor quality salt as manure on their lands.[5] Fortunately for the revenue the household demand for salt remained inelastic. The reaction of most people to such an enormous increase in the rate of tax levied upon a basic necessity was, however, to attempt by every known means to defraud the revenue.[6]

Imports of dried fruit, including currants, raisins, sultanas, prunes, figs, which gave variety to the Englishman's diet at the end of the 18th century fell slightly in the early stages of the war as freight rates and interruptions to the flow of trade pushed up prices on imports from the Mediterranean.[7] Although customs duties formed about a third of the retail price of most dried fruit and tax rates rose sharply they did not increase more rapidly than wholesale prices and at the end of the war the ad valorem rate of tax still remained at roughly 33%.[8] After 1800 the quantity of imported currants rose and remained consistently above the peace time level for the rest of the war.

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1. Excise 11894.
2. See Appdx. 1.
3. Cttee. on Use of Rock Salt, 1817, pp.142, 143, 145-146.
4. Cttee. on Salt Duties, 1818, Appdx.16 and Parly.Debs., vol.3, p.550.
5. Cttee. on Salt Duties, 1818, Appdx.5; Bernard, 'On Supply of Employment', 1817, p.10 and Parks, 'Thoughts on Salt Laws', 1817, pp.6, 43 and 53.
6. Bernard, 'Case of Salt Duties', 1817, p.28 and Cttee. on Salt, 1801, p.508.
7. Customs, vol.10901 and Commons Jnl., vol.46, p.716.
8. See Appdx. 1 and Table 11.

Popular taste seems to have been deeply rooted and widespread enough to raise the overall level of demand for dried fruit, despite rising prices and higher import duties.[1]

As similar factors affected the consumption of coffee and sugar both taxes can be discussed together. Revenue statistics show that the quantities of sugar and coffee assessed to tax between 1793 and 1815 rose well above pre-war levels and that the most rapid rate of increase occurred after the Peace of Amiens.[2] Taking the war years as a whole the price of coffee seems to have risen less rapidly than the prices of substitutes like tea and as the differential between the two beverages widened the quantity imported rose. Consumption may also have been stimulated by the slow rise in the price of sugar, a complement to sugar.[3]

Demand for raw sugar came mainly from four sources: British sugar refiners and distillers, from distillers of rum located in the West Indies and foreign refiners and distillers. Only when bad harvests pushed up grain and malt prices to very high levels did the quantity of sugar consumed in the British distillery exercise any perceptible influence on imports and the quantity taxed, despite Government attempts to encourage distillers to use the colonial raw material by lowering duties on the wash made from molasses and sugar.[4] Moreover, any gain to the Exchequer from the use of sugar by distillers may have been offset by a comparable reduction in their purchases of malt.[5]

Imports of raw sugar into Britain also depended on the demand of distillers of rum in the West Indies, whose demand in turn was derived mainly from the purchases of rum by consumers in Europe, the United States and above all Great Britain. Additions to the price of rum in the British market over the war years depended largely on the level of import duties. On the one hand increases to the tariff reduced the demand for rum and also the demand for sugar by West Indian distillers, which encouraged the Islands to export more sugar. On the other hand since tariffs on wine, brandy and duties on domestic spirits rose even more rapidly than those on rum, it must to some extent have been substituted for its expensive rivals.[6] Significantly only rum among imported

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1. McCulloch, Dictionary of Commerce, p.456 and Dowell, History of Taxation, vol. 4, pp.36-38.
2. Accounts and Papers, 1829, p.380; Excise, vol.11894 and Mitchell, Abstract of Historical Statistics, p.355.
3. See Appdx. 1.
4. Excise, vol.11863 has yield figures from wash of grain and sugar. See also Accounts and Papers, 1816, p.267.
5. See p.451; Dixon, 'An Inquiry into Distillation from Grain', 1810, p.16 and Cttee. on Sugar Distillery, 1807, pp.6-8.
6. Accounts and Papers, 1830, pp.9,10,13 and 17.

spirits displayed any upward trend in the quantity assessed to tax over the war years.[1]

Throughout the war years the state of trade with Europe seems to have been the most important element affecting prices of sugar and coffee in the home market and the quantities retained for home consumption. For several years after the outbreak of war a series of fortuitous events increased the sales of Imperial produce to Europe, raised domestic prices, lowered the quantities of coffee and sugar retained for home consumption. Such circumstances as the slave revolt in San Domingo, warfare in French possessions in the Carribean, the interruption by the Royal Navy of trade between Holland and France and their Empires and the successive capture of enemy colonies all served to divert demand towards the produce of British Imperial possessions, to raise prices to British consumers and to lower the quantities of coffee and sugar assessed to tax.[2] Of course additions to tax rates also helped to raise prices but over the years 1790-98, only 40% of the rise in the price of sugar can be attributed to this cause and even less for the additional cost of coffee.[3]

Consumers, sugar refiners and other groups with interests opposed to the sugar planters protested to the Government against high sugar prices.[4] But Pitt also had the interests of the Exchequer in mind when he gradually lowered the drawback on re-exports of colonial sugar and adjusted the bounty on the export of refined sugar in order to lower prices in the home market.[5] Several other forces also operated to offset the effects of European demand on consumption in Britain. In 1794 the Government repealed a decree which had allowed merchants to export sugar direct to Europe under licence from the Committee of Trade and Plantations.[6] In the Carribean, stimulated by high prices, planters extended the margin of cultivation for both coffee and sugar and introduced new and more productive varieties of sugar cane into cultivation.[7] Bad harvests in Britain and Government regulation of the distillery in 1795

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1. Rept. on U.K. Tariff, 1898, p.161.
2. Cttee. on Distillation of Sugar and Molasses, 1808, pp.166-167 and 214; Monthly Mag., May, 1798, pp.480-81; Anon, 'Remarks on New Sugar Bill', pp.20-22; Ragatz, Fall of the Planter Class, pp.205,213 and 217; Marshall, A Digest of All the Accounts', p.74; McPherson, Annals of Commerce, vol.4, pp.232,365, 484-485 and 523-524; Anon, 'A Hint to Supply Resources', 1793, p.5 and see pp. 281 and 431.
3. See Appdx. 1.
4. Pitt Papers, vol.292 and Anon, A Hint to Supply Resources, 1793, pp.14-15.
5. Parly.Hist., vol.32, pp.564 and 1260 and vol.34, p.1057; Anon, 'Remarks on the New Sugar Bill', 1792, pp.1-4 and Anon, 'National Compacts Respecting the Sugar Trade', 1792, pp.4, 9, 12 and 26.
6. Ragatz, Fall of the Planter Class, p.107.
7. Ibid, pp.213-215; Cttee. on Distillation of Sugar and Molasses,1808,p.167 and Spence. 'Radical Causes', 1807, p.9.

and 1799-1801 increased demand for sugar employed in the distillation of spirits.[1] Moreover, as Britain conquered enemy colonies in the Carribean and elsewhere their produce also entered the home market on the same terms as other parts of the British Empire.[2] Despite the handicap of a high tariff, sugar from India also began to enter the British market in growing quantities.[3] Nevertheless, exports to Europe of refined and muscovade sugar continued to exert the most powerful influence on the amount of sugar and coffee consumed in Britain and on receipts from duties levied upon these foodstuffs.

From just before the turn of the century until the battle of Leipzig the combination of circumstances which had favoured the sale of British colonial produce in Europe ceased to operate as powerfully as before and more sugar and coffee came to be absorbed by the home market. Far stricter enforcement of the blockade of the European mainland enabled Napoleon to effectively restrain the trade of Britain and her Empire with the continent, particularly in the years after 1806.[4] Although the Royal Navy continued to prevent direct trade between enemy powers and their colonies, European consumers bought sugar and coffee from American and other neutral merchants, who naturally purchased colonial produce in the cheapest markets, which often lay outside the British Empire. For example, during the closing decade of the war sugar, coffee and cotton from the virgin soils of Cuba and Brazil came into competition on world markets with the more expensive produce of the erroded lands of the British Islands in the Carribean.[5]

Americans also carried produce from neutral and enemy colonies and their freight charges were usually lower than those charged by the British mercantile marine, burdened by the convoy tax and Government competition for scarce supplies of seamen and shipping space.[6] Moreover, British shipping firms, merchants, banks and insurance companies had no special interest in

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1. Cttee. On Distillation of Sugar and Molasses, 1808, p.230 and Galpin, Grain Supply, pp.9,14,22,26 and 29.
2. Ilesley, 'A Statement of the Facts', 1810, p.68; Cttee. on Distillation of Sugar and Molasses, 1808, pp.3-4, 167 and 297 and Marshall, Digest of all the Accounts, p.74.
3. Cttee. on Distillation of Sugar and Molasses, 1808, pp.167; Monthly Mag., October, 1798, p.315; Ragatz, Fall of the Planter Class, pp.210-212 and Anon, 'The Right of West Indies Merchants', 1793, pp.28-29.
4. Cttee. on Distillation of Sugar and Molasses, 1808, pp.166-167, 226,230 and 262; Monthly Mag., September, 1804, p.121; May, 1806, p.383; February,1807, p.102; May, 1808, p.378; February, 1810, p.93 and see pp. 282,285,286,300 & 304
5. Cttee. on Distillation of Sugar and Molasses, 1808, pp.252,262 and 279; Ragatz, Fall of the Planter Class, pp.304,305,309 and 316 and see pp. 300 & 304
6. Cttee. on Sugar and Molasses, 1808, p.256 and Ilesley, 'A Statement of the Facts', 1810, pp.77 and 85.

Imperial trade per se. They profitted from international trade in general and if Imperial produce could not be sold in Europe, either because its price was too high or because of the effectiveness of the French blockade, they became just as interested to finance, insure and tranship coffee and sugar from other parts of the world to European consumers.[1] At the same time the British shipping interest naturally resisted any proposals for the relaxation of their monopoly of the Imperial carrying trade in favour of neutral ships.[2]

Thus the French blockade, the rapid development of neutral trade in colonial produce with Europe, often financed through London, the rising costs of production in the British West Indies and the opening of the metropolitan market to the produce of captured colonies lead to the offer of increased supplies of sugar and coffee to the British consumers. Their prices fell sharply.[3]

Pressured strongly by the West India interest, the Government sought to mitigate the effects on planters and merchants from the loss of markets in Europe. Drawbacks and bounties on exported sugar were gradually restored to their former levels, which cheapened Imperial sugar on world markets.[4] Between 1808-13 the law prohibited the use of wheat in the distillery and the Treasury lowered the excise upon a wash of spirits made from sugar or molasses.[5] No further taxes were placed upon sugar, or rum but the tariff on brandy was raised to a prohibitive height.[6] In 1808 the Government cut the duty on coffee from 64/- to 38/- a cwt.[7] About the same time Perceval yielded to a long standing grievance of the West India interest and widened the differential in duties between East and West Indian produce.[8] Most important of all, the Government used the Royal Navy to arrest the American trade with Europe.[9] Between 1808-14 British merchants and shippers effectively monopolised the international market in coffee and sugar, but until 1813 the French blockade

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1. See pp. 281, 286 and 287.
2. Sheffield, 'Strictures on the Necessity of Maintaining the Navigation and Colonial System of G.B.', 1804.
3. Tooke, History of Prices, vol.2, pp.233,399,413 and 414.
4. Parly.Debs., vol.8, pp.840 and 849 and Ragatz, Fall of the Planter Class, pp. 291, 309 and 316.
5. Galpin, Grain Supply, pp.48,56,59,64,65 and 75-78 and Parly.Debs., vol.10, p.712; vol.19, pp.321-22 and 687-90.
6. Parly.Debs., vol.8, pp.840 and 851 and vol.19, pp.687-90.
7. Corrie, 'Letters on the Duties on Coffee', 1808, pp.51-52 and Customs, 10901.
8. Rept. on U.K. Tariff, 1898, p.215; Parly.Debs., vol.27, p.201; Ragatz, Fall of the Planter Class, p.295 and see Parly.Hist., vol.27, pp.201-203.
9. Heckaher, Continental System, Appdx. 1 and see pp. 285-286.

barred them for direct trade with Europe. Through smuggling and indirect shipments they managed to sell there but never on a large enough scale to force up prices or lower the stocks of coffee and sugar in the British market.[1]

After the battle of Leipzig the blockade lifted and as coffee and sugar could be sold directly to European markets their prices rose and British consumption fell.[2] Paradoxically, while it lasted Napoleon's Continental System helped the Treasury to raise revenue to prosecute the war from duties on sugar, coffee, tea and other produce excluded from European markets.

For a decade after the outbreak of war tea consumption rose at a rate faster than the growth of population, but from 1804 the quantity imported failed to increase and per capita consumption fell.[3] Since the wholesale price of tea net of tax hardly increased over the war years despite the rise in freight and other distributional charges it appears that its cost on the plantation probably fell. But as the ad valorem rate of tax went up from 12½% to 96%, by 1806 the market price had almost doubled. Furthermore, after 1808 the differential between tea and coffee prices narrowed considerably and tea prices also rose more rapidly than the price of beer.[4] Substitution between taxed drinks probably lowered the demand for tea or at least brought its substitution for beer temporarily to a halt. On the other hand, the French blockade had similar, but by no means as significant, effects on the import of tea as those already noted for coffee and sugar.[5] The Exchequer benefitted when France cut off markets in Europe to the East India Company.

Tax rates on cleaning materials - soap and starch - remained constant throughout the war, but revenue from starch fell consistently and appreciably below the pre-war level.[6] Starch prices undoubtedly rose with the cost of its principal raw material - grain. Although widely consumed, starch is unlikely to have been a commodity with a highly inelastic demand. With the substitution of cotton for linen textiles the habit of starching ~~clothing~~ may in fact have declined. Moreover, in years of bad harvest the Government forbade the

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1. Cttee. on Sugar Distillery, 1807, pp.73-78; Cttee. on Distillation of Sugar and Molasses, 1808, pp.3-4 and 262; Gwynne-Timothy, Anglo-French Colonial Rivalry, pp.370-375; Monthly Mag., 1808-11 passim and Evidence on the Orders in Council, 1812, pp.397,404,405,494-495,537-538,557,630 and 679-680.
2. Liverpool Papers, vol. 38256 - letter from a merchant dd.3.3.14. and Ragatz, Fall of the Planter Class, p.331.
3. Accounts and Papers, 1829, p.379 and McCulloch, Dictionary of Commerce, p.1143.
4. Rept. on U.K. Tariff, 1898, p.199 and Appdx. 1.
5. Crouzet, L'Economie Britannique, vol.1, p.329.
6. Excise, vol. 11894.

manufacture of starch from food grain.[1]

Soap production on the other hand experienced a period of growth. Unfortunately we can only speculate as to why the soap industry developed rapidly. Price data is not available in published sources. Supplies of the industry's principal raw material, namely animal fat, increased as a by-product of the production of meat and may have fallen in price.[2] Perhaps the industry enjoyed a period of technical progress or perhaps the habit of cleanliness spread among the population about this time.[3] Upward pressure on the demand for soap certainly came from the revolution in textile production.

Of the two taxes on heat and light only that on coal contributed revenue for the war. Despite the rapid growth in the weight of candles assessed to tax the annual yield, apart from the years 1814 and 1815 fell below the annual income for 1788-92 because just before the war Pitt reduced the rate of tax on tallow candles from 1¼d to 1d per lb.[4]

The duty on coal provided the State with about £6½ million for the war of which 41% came from changes in the quantity assessed. All of this amount represented duties on coal carried coastwise into British ports because, not surprisingly, coal exported to Europe declined during the war years.[5]

Coal prices rose after 1793, but several factors operated to restrain the rate of increase. More mines adopted Watt's engine for their winding and pumping operations and for many the use of iron railed ways lowered the costs of transporting coal above and below ground.[6] In 1800 a Committee of the House of Commons exposed the activities of the Vend of coal owners in Newcastle and Sunderland, but the Government did nothing to terminate their monopolistic practices.[7] But together with the Corporation of the City of London it did regulate the sale of coal within the metropolis which may have reduced distributive margins on coal after it arrived in the capital.[8]

On the other hand charges for the carriage of coal coastwise into

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1. Galpin, Grain Supply, pp.9, 14 and 26 and Commons Jnl., vol.55, p.861 and vol.57, p.8.
2. Ashton, England in the 18th Century, p.60.
   The rising imports of tallow apparently forced down soap prices - Monthly Mag., September 1808, p.195 and October, p.297.
3. I could trace nothing relevant in Clow, The Chemical Revolution.
4. Excise, vol. 11894.
5. Customs, vol. 10901 and Mitchell, Abstract of Historical Statistics, p.120.
6. Ashton and Sykes, Coal Industry of the 18th Century, pp.39,50,63 and Galloway, Annals of Coal Mining, pp.300,309,313-318,363 and 367.
7. Ashton and Sykes, The Coal Industry of the 18th Century, pp.214-15 and Smith, Sea Coal for London, pp.141,149 and 150.
8. Sweezy, Monopoly and Competition, p.50 and Smith, Sea Coal for London, pp. 90-91 and 151.

British ports probably increased rapidly in wartime when the Government employed a greater share of the available shipping space and seamen for military purposes and when the enemy attacks increased the risks of transporting goods around the coast.[1] With the spread of canals and the location and expansion of industry on the coalfields, colliery companies found new outlets for their coal, which exerted an upward pressure on prices charged consumers in London and other traditional markets.[2]

Yet despite the elevation of coal prices in the metropolis from 42/- a cwt. in 1792 to 69/- in 1814 the quantity purchased continued to rise. No substitute competed with coal, particularly in a period when timber prices probably rose even more rapidly. London and other towns supplied by coastal ships continued to expand and demanded greater quantities of coal both as a domestic fuel and as an input for industries for the processing of food, and drink, the manufacture of bricks, the smelting of metal, and the manufacture of pottery and glass, located near their markets in towns.

Four taxes which can be lumped together are the levies on passenger transport by road, public and private. Public transport included stage coaches and carriages and post horses used by the general public and the taxes were based on the number of miles travelled by a vehicle or a horse. There is no evidence from taxation yields that the mileage travelled by stage carriages or coaches increased over the war years.[3] Of course yields from the tax had long been reduced by evasion and as tax rates rose from a penny a mile in 1792 to between 2d and 5d in 1804, fraud probably increased and passengers no doubt sought cheaper alternatives.[4] More people began to own vehicles, particularly of the smaller kind and significantly the number of miles taxed per post horse rose by about 50% between 1793 and 1815 while the rate of tax on this cheaper form of passenger transport remained constant.[5]

Private families also paid taxes on their means of transport and at a progressive rate.[6] Their demand was presumably highly responsive to changes in income but it also depended on the initial and recurrent costs (including

1. Ashton and Sykes, The Coal Industry of the 18th Century, pp.200-202; Edington, 'An Essay on the Coal Trade', 1803, pp.10-11 and Anon, 'Cursory Remarks on Bread and Coals', 1800, p.14
2. On the relationship of coal production to internal transport see Ashton and Sykes, The Coal Industry of the 18th Century, p.12.
3. Inland Rev., vol.10/86; 1 Comms. of Inland Rev., 1857, Appdx.24 and Dowell, History of Taxation, vol.3, pp.41-42.
4. Inland Rev., vol.547 correspondence of Board of Stamps with The Tax Farmers.
5. Inland Rev., vol. 384, pp.35,227 and 237, vol.385, pp.26,50,56,97; vol.10/86 and 1 Comms. of Inland Rev., 1857, Appdx.25.
6. Accounts and Papers, 1830, p.39 and 1 Comms. of Inland Rev., 1857, Appdx.69.

taxation) for the maintenance of horses and carriages. With the expansion of agriculture and the armed forces the demand for horses and the skills of those who made vehicles must have grown and with the rise in grain prices the cost of keeping horses undoubtedly rose. Carriages manufactured largely from highly priced wood and leather probably also became more expensive to purchase after 1792. Taxation itself strongly dissuaded private families from increasing their establishment of vehicles and horses. Tax rates on the expenditures of the more affluent (including servants, dogs, houses, carriages and horses) rose more rapidly than almost any type of taxation and made it far more expensive for the rich to maintain their traditional style of living.[1] Significantly the increase in the number of horses and carriages subjected to tax came entirely from persons keeping a single horse or carriage often of the two rather than the four wheel variety.[2] Steeply progressive taxes on the expenditures of the rich were evidently pushed to their limit during the French wars.

At the outbreak of war taxes levied upon the clothing and footwear worn by the population included those on tanned leather, the imported raw materials of the silk industry, all printed cloth except textiles of silk and wool, Indian cloth and European linens. Taking the war years as a whole, average yields from the last two duties failed to rise above pre-war levels, despite considerable additions to the customs duties.[3] Imported textiles suffered severe competition from the domestic linen and cotton industries at a time when ocean freight rates increased rapidly. If he had been more interested in obtaining additional revenue from these taxes, it might have paid the Chancellor to lower and not raise import duties, but after 1798 he had to balance the gains in income from Indian textiles and European linens against a possible decline in the import of raw cotton.

Duties on imported thrown and raw silk did help to finance the war but the bulk of their contribution came from changes to the customs duty. In only 8 of the 23 years of war did the volume of silk imports rise above the peace

1. Accounts and Papers, 1830, pp.30-39.
2. Statistics from Inland Rev., vols. 384 and 385.
3. Customs, vol. 10901 and Accounts and Papers, 1810, p.425.

time level.[1] Several forces on the supply side operated to increase prices of thrown silk. Imports of Italian thrown silk were subjected to a great deal of interference from the enemy which pushed up prices in London and presumably stimulated production in the throwing section of the domestic silk industry.[2] On the other hand there seems to have been no definite upward trend in the prices of either Chinese or Indian raw silk and given the rise in import duties, freight rates and marine insurance premiums, Tooke's price data suggest that the prices paid by the East India Company for raw silk in the Orient declined.[3] In 1801 the industry began to use the Jacquard weaving loom but the adoption of this important innovation did not spread rapidly. Instead entrepreneurs responded to rising wages by employing a greater proportion of child and female labour.[4]

With the relative stability of raw material prices the ad valorem rate of duty on raw silk rose from about 13% in 1792 to around 26% in 1813.[5] On the demand side the silk industry, long subject to fluctuations in output from the vagiaries of fashion, met growing competition from cotton and linens, but competition from Indian textiles declined. With rising incomes one would expect some increased expenditure on a higher quality textile like silk.

The excise on printed goods fell upon every kind of cloth (except wool and silk) which passed through the printing section of the textile industry. Over the war years the yardage of printed cloth which paid duty rose enormously and by 1810 it amounted to 29 million yards compared with an annual average of 13 million yards in the period 1788-92.[6] It is clear from statistics in Pitt's Papers that the impetus to expansion came from the technical revolution in cotton textiles. Most of the cloth taxed consisted of cottons or a mixture of cotton and linen.[7] No doubt the adoption of Bell's machine and the relocation of the industry in Lancashire closer to its raw material supply reduced the costs of printing itself or at least helped to counteract the effects of higher import duties on dyestuffs.[8]

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1. Mitchell, Abstract of Historical Statistics, pp.205-206 and Tooke, Thoughts and Details, 1822, Appdx.2. p. 73.
2. Monthly Mag., October, 1798, p.315; April, 1802, p.306; April, 1808, p.277; May, 1808, p.379; July, 1808, p.571 and Crouzet, L'Economie Britannique, vol.1, pp.58, 59 and 391.
3. Tooke, History of Prices, vol.2, p.410.
4. Warner, The Silk Industry, pp.112-3 and 453-4 and Jordan, The Silk Industry in London, p.12.
5. Tooke, History of Prices, vol.2, p.410 and Customs, vol.10901.
6. Excise, vols. 11894 and 11863.
7. Pitt Papers, vol.301, account of quantities of printed cloth charged to tax 1791-1800.
8. Wadsworth and Mann, The Cotton Trade and Industrial Lancashire, pp.112,116, 142 and 307.

Furthermore, the spread down the social scale of the habit of wearing printed instead of plain cloth must have been helped by the Chancellor's restraint in keeping the excise on printed cottons constant after 1787. Yet the Exchequer did not derive anything like full benefit from the expansion of the industry because untaxed exported cloth paid no duty and the exports grew far more rapidly than cloth retained for domestic consumption.[1] Not until three years before Waterloo did the Chancellor observe that the industry no longer required an export bounty.[2] The Government could almost certainly have obtained a far greater share of the additional income which came from the revolution in textiles if duties on printed cloth had been raised and drawbacks and bounties on exports removed. Why printed woollens continued to be exempt from the tax in a period of financial strain is also difficult to fathom.

As a "necessity" tanned and tawed leather escaped additional taxation until 1812 when, despite strong opposition from the agricultural interest, Vansittart doubled the rate of tax.[3] About 60% of its contribution to the war effort came from increments to the volume taxed and the rate of growth appears to have been particularly rapid after 1804.[4] Unfortunately, price data are not available but total expenditure on a necessity without adequate substitutes is not likely to have been seriously affected by rising prices. Demand for leather goods by the Army, Navy and Ordnance certainly increased and part of the duty collected by the Department of Excise must have been ultimately paid by the military services in the form of higher prices for shoes, boots, knapsacks, belts, straps, saddles, harness and holsters.[5] Demand for leather also expanded with the expansion in agriculture which induced additional expenditure on horse furniture and other leather goods by farmers and landowners.

No monographs appear to have been published on the 18th century leather industry. Most of the hides and skins tanned and tawed came from domestic agriculture and improvements to the size of cattle and the new techniques which enabled farmers to keep beasts through the winter months helped to keep the prices of hides down. Nevertheless trade statistics show that British

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1. Excise, vol. 11863.
2. Parly.Debs., vol.23, p.567.
3. Excise, vol.11863; Monthly Mag., April, 1813, p.286 and Liverpool Papers, vol. 38363/66.
4. Excise, vol. 11894.
5. War Office 33/51 rept. dd. 1801; Monthly Mag., December, 1804, p.470 and 35 Cttee. on Finance, 1798, Appdx.E.3.

agriculture could not keep pace with demands by the leather industry.[1] The growing dependence on foreign supplies suggests that the prices of tanned leather probably rose after 1793, a conclusion supported by figures recorded by Beveridge on the price of shoes.[2]

Perhaps the remaining taxes listed in Table 9 might be grouped under the general heading of levies on commercial services. Of course not all paper subjected to excise was used in commerce, and newspapers were presumably objects of education and entertainment as much as vehicles of commercial intelligence. But the duties on property insured against fire, sold by auction or consigned by bills of exchange seem to fit under such a heading.

All three taxes were imposed ad valorem which provided the Exchequer with revenue not merely from changes in the amount of property assessed but also a share in any appreciation in its value. For the taxes on auctions, bills of exchange and fire insurance a far smaller share of the revenue collected for war came from additions to the rate of tax, because in a period of inflation the State automatically gained revenue from the rise in prices of goods and services sold, consigned or insured.[3]

Revenue from the stamp duty on property insured against fire rose automatically with the construction of new houses, factories, farms, transport facilities, warehouses, shops and other commercial buildings. It also rose from the appreciation in their values in a period of inflation and with the rise in the productivity of capital during the Industrial Revolution. While urbanisation and population growth pushed up the value of houses and other forms of social capital.[4]

On the supply side the increased rate of return from the investment of income in public securities enabled insurance companies to restrain additions to the premiums charged for their services.[5] Moreover, the war years saw not merely the spread of branches of London offices into the provinces but, after 1802 the establishment of several new companies.[6] No doubt the development of fire insurance came not only as a response to demand but to some extent stimulated it.

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1. Customs, vol. 10901.
2. Beveridge, Prices and Wages in England, p.295.
3. See Tables 8 and 9.
4. In 1793 £140 million of property was insured against fire; by 1815 the amount had increased to £410 million - calculated from tax yields in 1 Comms. of Inland Rev., 1857, Appdx.46.
5. See Table 19.
6. The following were founded during war years; Norwich Union, 1797, Kent, 1802, Hand in Hand, 1805, Albion, 1805, Atlas, 1807, County, 1807, Colchester, 1807 - see Raynes, History of British Insurance, pp.213 and 231; Pitt Papers, vol.277 and Drew, London Assurance, p.9.

Unfortunately, turnover figures for bills of exchange are not available but since the Treasury kept stamp duties constant until 1808 the tax yield figures are a good indication of the increased volume of internal and external trade financed through the medium of bills. Thus from 1788-92 the revenue collected amounted to £105,000 annually and by 1807 the yield equalled £458,000.[1]

Internal trade and production went hand in hand aided by improvements to the transport system which broke down local or regional trade and brought the country nearer to the status of a single market. Over the war years the volume of exports and imports also increased rapidly and London assumed more responsibility for the finance of international trade in general. From the development of London as a world financial centre the Exchequer gained revenue to finance the war.[2]

The rapid spread of financial institutions after 1793 served to render bills of exchange more liquid and stimulated their employment in the consignment of goods. While the Suspension of Specie Payments in 1797 and the high rates of interest to be earned from the extension of credit encouraged bankers and bill brokers to be more liberal in discounting bills of exchange for their clients.[3]

From 1777 certain categories of property sold at public autions paid a duty collected ad valorem by the department of Excise. Purchasers of estates, annuities, farm stock, ships and jewels paid at the rate of 3½d in the £ and purchasers of furniture, horses, goods, chattels and horses paid 7d in the £.[4] During the war years the rates of tax moved upward to 6d and 10d in 1796 and to 7d and 1/- in 1805, but the contribution of the auction duty to the war came basically from the increased value of sales at public auctions.[5] For the period 1788-92 the average amount sold each year amounted to £2.9 million and by 1811-15 the value of sales had risen to £8.9 million.[6] While the Government certainly gained from inflation it is clear that most of the increment came from the increased volume of goods auctioned.[7]

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1. 1 Comms. of Inland Rev., 1857, Appdx.41.
2. Cttee. on Credit, 1823, pp.317,319,334,343,370,373,376,377,385,409 and 429-431 and see pp. 281 and 309.
3. King, History of Discount Market, pp.9-10 and 27-28; Pressnell, Country Banking, pp.88-90 and 171 and see pp.
4. 4 Cttee. on Irish Revenue, 1822, Appdx.62 and McArthur, Political Facts, 1801, pp.47-48.
5. Excise, vol. 11894.
6. Customs 17/10-30 and Excise, vol. 11894.
7. Prices did not rise at anything like the same rate - Gayer, Growth and Fluctuations, vol.1, p.469.

Newspaper circulation suffered from rising costs over the war years. The price of paper rose, wages in the industry went up and the Treasury increased the tax on advertisements published by newspapers by 40% which lowered their revenue from that source. Above all newspapers felt the burden of the stamp duty which rose from 55% ad valorem in 1792 to 90% ad valorem in 1814. All the evidence points to a fall in total circulation as lower income classes contracted expenditure upon a luxury and as merchants probably restrained their outlays on advertising. Some writers state that the Government was not entirely swayed by considerations of revenue and intended by high taxation to arrest the publication of cheaper and possibly seditious newspapers.

Since 1712 the Government had levied an excise on paper and in 1794 Pitt simplified the tax to distinguish just three classes of the commodity, namely paper used for writing, drawing and printing coloured paper and brown wrapping paper. The Exchequer derived most revenue from the first class.[1] Demand for paper came from private households or commerce for writing purposes or was derived from the demand for books, magazines and newspapers. Demand for wrapping paper developed with production and trade but for writing and printing purposes the demand is likely to have been both income and price elastic.

Between 1793 and 1801 the price of printing paper increased from 14/- to 28/- a ream and writing paper from 26/- to 41/-.[2] Some of this rise can be accounted for by changes in the rate of tax but most can be explained in terms of the rising costs of raw materials and labour. Coleman observed that the industry did not adopt cost reducing innovations until later in the 19th century, although it did purchase 66 fourdrinier machines in 1807.[3]

Price rises of this magnitude for a commodity like paper must have affected demand, already restrained by the fall in newspaper circulation.[4] Output measured in tons hardly changed before 1801, but growth definitely occurred in the decade after 1805.[5] The industry's contribution to the war effort came almost entirely from higher rates of duty.

Although the tax base did not seem particularly well adapted to automatically tapping a considerable share of the benefits of economic growth for

1. Excise, vols. 11894 and 11863.
2. Monthly Mag., June, 1802, p.513.
3. Coleman, British Paper Industry, pp.195-197.
4. Greig, Farrington Diary, vol.1, p.228; Crawford, 'A View of the Taxes Which Impede Education', p.9 and Inland Rev., vol.10, p.1.
5. Mitchell, Abstract of Historical Statistics, p.263.

the State. With the exception of duties on starch, Indian textiles and European linens, yields from taxes did not normally decline as tax rates went up. For starch the elevation of the tax rate which added to the rising cost of its principal raw material (grain), pushed down the consumption of a commodity with an elastic demand. Given that imported textiles faced very severe competition from the domestic cotton industry in the late 18th century and the rapid rise in ocean freight rates, it may have paid the Chancellor to maintain customs duties on them at a constant level.

For several commodities, including malt, wine, brandy, timber, pleasure horses, stage coaches and newspapers, the quantities assessed fell below pre-war levels as tax rates rose. Nevertheless, the fall in the volume taxed did not outweigh the effects on yields of the rise in tax rates and they all contributed finance towards the war effort. For most commodities the quantities taxed increased over the period and their contribution to the war came both from the rise in tax rates and additions to the quantities assessed. In general the taxes available to the Chancellor proved themselves capable of meeting the demands made upon them even though, in most cases, their rates increased considerably.

Taking the period as a whole, the range of forces, apart from the elevation of tax rates, which operated upon the volume of goods and services, was extremely wide and money incomes went up more rapidly than for any previous period in the 18th century. Changes occurred in the conditions of demand and supply for many commodities. My survey attempted to reveal the major influences at work, some of which helped to increase the Government's income and others depressed it.

On the negative side everything which pushed up prices of taxed commodities kept down receipts at the Exchequer. Between 1793 and 1815 the costs of both capital and labour increased to almost all sectors of the economy. During the wartime inflation most manufacturers and farmers also found they had to raise the prices of their products because their raw material and other input costs had risen. With a tax base dominated by specific taxes the Government obtained no direct advantages from the inflation, except from the taxes on tea, bills of exchange, auctions and fire insurance, which were imposed ad valorem. As property insured against fire or sold by auction went up in price so did tax yields. While the stamp duty on bills of exchange gave the State a share in the rise in prices on all commodities consigned by that form of credit.

Apart from the inflation of prices, wages and money incomes which affected the entire economy, particular factors adversely affected particular taxes. For example, the run of bad harvests, which reduced the general level of demand in an economy with a large agricultural sector, also raised the costs of their raw materials to the manufacturers of beer, malt, spirits, starch, candles and soap. The sharp rise in freight rates for all goods imported by sea exerted downward pressure on the consumption of timber, coal, slates and stones, Indian textiles, European linens, raw and thrown silk, brandy, geneva, rum, tobacco, sugar, tea, coffee and dried fruit. Prices of imported goods, particularly timber and raw silk were also pushed upward by the attempts of France to cut off supplies of raw materials to Britain and because merchants paid higher marine insurance premiums on the carriage of goods across the seas in wartime.

The Government's commercial and welfare policies sometimes conflicted with the objective of maximising tax revenue. For example, the regulations to discourage the distillation of grain and to encourage the distillation of sugar pushed up the price of spirits and reduced the consumption of starch. The encouragement of exports through drawbacks and bounties undoubtedly prompted manufacturers to sell more of their output overseas at a time when excise duties on goods sold domestically rose often to very high levels. While the switch, on strategic grounds, from Baltic to Canadian timber reduced the income from timber duties in the closing years of the war quite considerably. Government borrowing adversely affected tax receipts from the whole group of taxes on construction. Public expenditure on several commodities like leather, timber, horses and carriages and hemp reduced consumption by the private sector and lowered <u>net</u> tax income from the taxes levied on these commodities.

Interconnections between taxes also influenced yields. For example, the rising price of sugar in the early stages of the war probably restrained the consumption of tea and coffee. After the turn of the century when sugar prices fell it probably stimulated demand for both beverages. As taxes on wine and brandy went up faster than tariffs on rum and the excises on domestic spirits or beer, consumers probably substituted between drinks. But generally speaking the tax structure had been designed to preclude the transfer of expenditure to cheaper untaxed substitutes. As the Exchequer lost income on one tax it could often recoup on another.

But if technical or other cost reducing innovations were introduced into some relatively untaxed sectors of the economy, the public revenue could be affected adversely. Thus the rapid growth of the cotton textile industry in the late 18th century probably reduced the consumption of taxed textiles like silk, Indian cloth and imported linen. While the spread of canals lowered the amount of coal which would otherwise have been carried coastwise and they may also have reduced the demand for stage carriages and post horses.

On the whole taxed commodities and services appear not to have been directly affected by technical progress. Nevertheless its positive contribution to war finance should not be underestimated. It modified the impact of inflation on prices and encouraged private capital formation. Its beneficial effects on tax receipts can be assumed for all bulky goods carried by the new canals such as bricks, glass and timber. Most of the additional revenue collected from the excise on printed textiles came from cotton cloth and the printing industry itself began to use new chemical processes and machinery. The cost of coal and salt may well have been reduced by the application of steam power and the employment of iron in both industries and an improved still enabled Lowland distillers to produce cheaper whisky at the beginning of the 19th century. In agriculture the application of new methods to the breeding of sheep and cattle may have cheapened candles, tallow, soap and leather which were by-products of animal farming. Apart from the introduction of innovations within Britain, India and the Caribbean supplied merchants with tea and sugar at lower prices.

If prices rose to check consumption, incomes also rose to stimulate demand. While the growth of population and its urbanisation probably concentrated expenditure on popular foodstuffs such as salt, beer, tea and sugar and upon other basic necessities such as housing, coal, soap and shoes and cotton textiles. Urbanisation and the growth of production and trade lead to a fairly high level of investment in the country's infra-structure for a period of war and raised revenue from duties on bricks, glass, timber, slates and stones. At the same time the inflation redistributed income from wage-earners to more affluent groups who owned industrial and commercial property which helped to maintain the demand for less basic products such as wine, spirits, tobacco, silk, coffee, dried fruit, horses, carriages and servants. Finally, if excise duties prompted manufacturers and traders to export in order to escape taxation, the risks of international trade in conditions of war and the French blockade encouraged them to sell more at home. Paradoxically the Continental System which closed European markets to products like tea, sugar, coffee, textiles and glass helped the Government to raise finance for the war.

Tax Administration and War Finance

Some part of the revenue obtained to finance the war arose from improvements to the administration. Whenever the personnel responsible for the collection of taxes became more diligent a higher proportion of the incomes, property, services and commodities liable to tax came within their purview for assessment and raised the Government's income. Efficiency in the revenue departments depended primarily upon the system of personnel selection, promotion within the service, the level and mode of payment adopted for the remuneration of revenue officials and the establishment of the kind of organisation within which negligence, corruption and inattention to duty could be detected and remedied. At the outbreak of war the revenue departments in greater or less degree displayed serious deficiencies in all these respects. Their methods of selection, training and promotion, their system of payment and the general mode of organisation fell well below levels regarded, even by contemporaries, as desirable. Many statesmen, including Pitt, recognised that the department of Excise had demonstrated what could be achieved by proper attention to administrative efficiency.

But the departments themselves laboured under serious difficulties. Parliament called upon them to administer a particularly complex system of revenue laws which would have tried the skill of any public servants however skilled and diligent. Moreover they confronted a society determined to use all means open to it to evade taxes. From all accounts the propensity of people to escape their liabilities towards Government at the end of the 18th century appears to have been far stronger than in more modern times. While the Customs Department attempted to restrain an institutionalised conspiracy of smugglers designed to profit from the country's tariff system. With every rise in duty the endeavours of smugglers increased and their skill and organisation normally proved too strong for the preventive arm of the Customs.

One way open to the Government seeking revenue was to reform the administration for the collection of revenue in order to raise its efficiency and to reduce the scale of evasion and this section will outline and analyse the changes which occurred in the process of revenue assessment and collection, in order to appraise its importance to the finance of the war. My focus will be upon changes to the administration of taxes which both helped and hindered the Government.

Even on the most favourable assumptions the selection, training and promotion of personnel during the war years could only have had a very slight impact upon the amount of revenue collected over as short a time period as 23 years. Expansion in the numbers of tax officials at work certainly occurred. Unfortunately, the available figures do not enable us to compare the numbers employed in 1793 and 1815 but the following partial and not altogether reliable data indicate that the labour force employed by the major revenue departments may have increased by as much as a third over the war years.

Department	Numbers Employed circa 1793	Numbers Employed circa 1815
Customs (1)	7,004	10,807
Excise (2)	4,777	5,511
Stamps (3)	-	512
Taxes (4)	215	378

Notes and Sources:

(1) Figures from 1 Comms. for Customs, 1857, Appdx.G., p.411. The figures relate to 1797 and 1815. The report says the figure for 1797 is not reliable and I added 1,000 to the original which did not include the establishment in London. (In 1815 the London establishment was 2.043.) It is not clear whether the figures refer to G.B. or to England and Wales only.

(2) The source is: 20 Comms. of Enquiry into the Excise, 1836, p.407. The figures relate to England and Wales only. The first figure is for 1797.

(3) From Inland Rev. vol. 10/85, p.85. The figures include the London establishment and distributors of stamps. No figures are available for the sub-distributors of stamps who were employed by the main distributors. The quotation relates to England and Wales and is for 1810.

(4) Inland Rev., vols. 385, pp. 26 and 171 and 384, p.60. The data refers to England and Wales to 1787 and 1810.

Thus the majority of officers who collected taxes were appointed under the highly deficient system of personnel selection described in Chapter 10.[1] It is impossible to judge whether or not the men appointed after 1793 were more efficient than their predecessors. Some slight reforms are, however, traceable in the methods of selection and training employed by two of the revenue departments. For example, the Board of Customs in 1812 set an age limit of 45 for admission to the service and also stipulated in its General Orders to the Service that several of the more junior posts, such as boatmen, tidewaiters and landwaiters should go either to qualified applicants or to probationers who had undertaken the necessary training.[2]

1. See pp. 347-377.
2. Customs, vol. 10148 - General Orders, vol.1, pp.105, 222, 245, 581 and 643.

But the reforms were not nearly sufficient to obviate criticism of the department's methods of selection and training by Parliamentary Committees after the war.[1] The correspondence between the Board of Taxes and the Treasury suggests that the Board continued to exercise as much influence as they could to ensure that reasonably qualified persons were appointed to the key post of surveyor in their department and in 1799 the Treasury laid down age limits and certain other qualifications for the admission of Surveyors.[2] There is no evidence that under the pressure of war the department of Excise relaxed its relatively high standards of personnel selection or failed to give its new men proper training before appointing them to junior positions.[3] It continued long after Waterloo to be a model held up by Commissioners of Inquiry to other tax departments in this respect as well as in its system of promotion from the ranks on grounds of efficiency.[4] Too many of the senior posts in the Customs continued to go to unqualified and inexperienced nominees of the Treasury, although the Board of Taxes did promote its more diligent Surveyors to the more responsible job of Inspector.[5]

Over the war years the prices of consumers' goods, especially food, rose rapidly and if the Government allowed the incomes of those it employed to lag behind prices, their diligence on behalf of the Exchequer would presumably wane. Moreover, as the Commissioners of the Excise frequently told the Treasury, failure to grant increases in salaries encouraged officials to connive at fraud, to accept bribes and to take part-time employment in order to supplement their earnings.[6]

Up to the outbreak of war Parliament and the Treasury had, however, adopted a myopically parsimonious attitude towards the pay of revenue officials.[7] During the war as the amounts of taxes collected by the departments rose, their management charges expressed as a proportion of total receipts fell.[8] Since this ratio had traditionally been regarded as an index of efficiency, the departments found themselves in a position of some strength in demanding pay

1. 13 and 14 Comms. into Customs and Excise, 1823, pp. 201 and 743.
2. Treasy. TI/794/4067; TI/802/1206; T22/10 - memo dd. 10.4.99. and Hope-Jones, Income Tax, p.62.
3. Excise - 27017, Orders of the Board.
4. 11 Comms. of Inquiry into Customs and Excise, 1822, p.20; 14 Comms., 1823, pp. 743-744; 15 Comms., 1824, p.6; 2 Cttee. on Irish Revenue, 1822, Appdx.73 and Excise, 3083, Orders, 1687-1823.
5. Treasy. TI/961/448.
6. Pitt Papers, vol.290 - memo undated; Excise 48/42, p.263; 48/31, p.509 and 48/34, p.234.
7. See p.
8. Accounts and Papers, 1821, pp.274-277.

increases from the Treasury.[1] Perhaps typically for the public service, the Treasury reluctantly granted departmental demands after a protracted period of bargaining. In 1796 impatient Excise officers themselves flooded the Treasury with petitions for a rise.[2] Normally requests reached "My Lords" through the Commissioners, who headed the various boards responsible for the collection of taxes, and the correspondence indicates that with the rise in prices and the vastly augmented sums of money passing through their hands, they were not tardy in pressing the Treasury for more pay on behalf of their departments, particularly the staff at London Offices.[3]

While it is not possible to construct proper wage indices in order to measure the movement of real wages in all four major departments of revenue, I did compare the average salaries paid to Customs and Excise Officers in 1797, 1805 and 1815 with the Schumpeter index for the price of consumers' goods and found no evidence of a lag.[4] Nor with the exception of Surveyors, employed by the Board of Taxes, does the data set out below on the wages of officials most immediately concerned with the process of tax assessment and collection contradict this conclusion.

Department and Rank	Salary for Quarter ended 10.10.92.	Salary for Quarter ended 10.10.14.
Customs Collectors	£7½ to £12½	£50 to £150
" Comptrollers	£5 to £7½	£37½ to £56
" Surveyors	£7½ to £12½	£25 to £75
" Landwaiters/Searchers	£6¾ to £8¾	£20 to £45
" Tidesmen	£3¾ to £5	£8¾ to £10
" Boatmen	£3½ to £5	£8¾ to £10
Excise Surveyors	£22½	£37½
" Officers	£17½	£28¾
" Assistants	£12½	£22½
" Gaugers	£17½	£37-41
" Permit Writers	£14	£23
" Watermen	£10	£17½
Taxes Surveyors	£65 to £70	£90
" Clerks in London Office	£75 to £100	£100 to £150

1. Excise 48/32, p.454; 48/31, p.509 and 48/50, pp.440 and 446 and Treasy. TI/897/348 and TI/843/2573.
2. Hughes, 'Salaries of Excise Officers', p.261 and Treasy. T.44/38.
3. Excise 48/32, p.453; 48/34, p.234; 48/42, p.263; 48/53, p.313; 48/55, p.379;

footnotes continued

Notes and Sources: I have attempted to present a sample of the officials directly involved in the collection of taxes and model salary or range of income in each case. The Customs data relates to Scotland and is from Treasy. 43/9; the Excise from Treasy. T.44/35 and the figures for officials of the Board of Taxes is from Inland Rev., vol. 385, pp.26 and 171 and 8 Cttee. on Finance, 1797, Appdx.A.6. The increase in salaries in the Customs came in part from the abolition of fees in 1806 and 1811 - see p. 475.

As the reports of the Commissioners of Public Accounts had revealed the modes of remuneration adopted for the payment of revenue officials were only slightly less important than the amounts actually paid and the Commissioners of Excise informed the Treasury they wanted the kind of salaries which "encouraged fidelity and industry by constant hope of reward."[1] In terms of efficiency the systems of remuneration adopted by the departments should ideally have provided incentives to duty and help to counteract tendencies towards the acceptance of bribes on the part of officers. Several pre-war investigations had revealed that the system of fees in the Customs Department lead directly to frauds on the revenue and extortions from merchants by officials.[2] Yet not until 14 years after Pitt's unsuccessful attempt to reform the system in 1792 did the Government again tackle the problem. In 1806 fees for a large class of services performed by Customs Officers in the port of London were abolished and five years later remuneration through fees in the outports also ceased to operate except in certain specific cases.[3] During the war years the Commissioners for Excise also made determined attempts to stamp out the last remnants of fees in their department.[4] The immediate effects of these changes were to increase the salaries of officials paid from the revenue and departmental management charges rose.[5] But over time the revenue undoubtedly benefited from these reforms.

In consultation with the Treasury the Boards responsible for the collection of taxes also improved the system of bonuses for displays of diligence and rewards for the apprehension of smugglers and the detection of every kind

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48/62, p.441 and 48/63, p.483; Treasy., TI/897/348; TI/838/1022; TI/1341/12219; TI/1353/15303 and Inland Rev., vol.384, p.99.

4. The data for Customs wage bill is from 1 Comms. of Customs, 1857, Appdx.G and for Excise from 20 Comms. of Enquiry into the Excise, 1836, Appdx.13. The price index is from Mitchell, Abstract of Historical Statistics, p.469.

1. Excise, 48/32, p.454.
2. See pp. 377-78 and 4 Cttee. on Finance, 1797, pp.38 and 58.
3. Customs, 10148, General Letters and Circulars, vol.1, p.620 and 4 Comms. of Inquiry into Customs and Excise, 1820, p.20 and 11 Comms., 1822, p.16.
4. Hersee, The Spirit of General Letters, p.131; Owens, Plain Papers Relating to the Excise, p.231 and Excise, 3083 - General Orders, 1687-1823 - see orders dd. 21.1.95. and 9.2.1804.
5. Customs, 10148, General Letters and Circulars, vol.1, pp.624 and 627.

of fraud on the revenue. The Commissioners for Customs paid particular attention to the payments made to the crews of their cruisers who seized the property and persons of smugglers and the Commissioners for Excise advised the Treasury on a new scale of fees for its officers who confiscated illegally distilled spirits.[1] Under the rules established for the collection of assessed taxes, surveyors became entitled to 5% of all surcharges made on citizens who attempted to evade their liabilities and they and Inspectors of the Board of Taxes often received bonuses for the revaluation of property in their districts which raised the Government's income.[2] In 1810, for example, one surveyor in North Devon managed to more than treble his salary from bonuses and surcharges.[3] For the department of Stamps the Treasury concentrated, however, against the advice of the Commissioners, in reducing the poundage rate allowed to distributors, on the correct grounds that their remuneration rose with increased turnover.[4]

Before the war all tax departments sought, with varying degrees of success, to combat frauds on the revenue, which significantly reduced the Government's income from almost all taxes. The problem was of perhaps the greatest significance to the Board of Customs who faced a highly organised and determined conspiracy of smugglers. During Pitt's tenure at the Treasury several measures had been introduced (including the Hovering and Manifest Acts, the Permit and Survey system and, not least, the systematic reduction in duties) in order to check their activities.[5]

The war itself made smuggling at once more profitable as import duties rose, and also more hazardous. At sea smugglers risked capture not merely from enemy ships but from the greatly enlarged Royal Navy which patrolled the approaches to the British Isles. The Treasury and Customs Department liaised with the Admiralty on measures to check the illicit landing of foreign merchandise, and sailors received high rewards for their seizures of contraband.[6]

1. Customs, 10148, General Orders, vol.1, pp.351-352, 391 and 409; General Orders (No. 8082) dated: 8.7.01, 4.7.05, 9.8.06, 16.12.06, 9.6.10 and 14.6.10 and Excise 48/39, p.106; 48/40, p.406 and 48/42, p.360.
2. Inland Rev., vol.818, Minutes of the Property Board, 1808-09, pp.1, 20, 32, 306 and 367; Treasy. TI/1280/15124 and TI/1323/7144.
3. Excheq. E/182/221.
4. Pitt Papers, vol.273 - memo, dd. 9.3.97; Treasy. TI/842/2238 and Accounts and Papers, 1819, p.479.
5. See pp. 381-382.
6. Customs, 10148 - General Orders, vol.1, pp. 111, 340-342, 344 and 387; Excise, 48/40, pp.134 and 137 and Hersee, Spirit of General Letters, p.346.

On land the Government made use of the Army and local militia to guard the coastline and particularly to check the gangs of armed smugglers who often openly defied the weak preventive arm of the Customs Service.[1]

Furthermore the Government passed several laws regulating the trade of the Isle of Man and the Channel Islands in order to make it more difficult for smugglers to operate from these traditional bases.[2] At least the regulations had the effect of prompting companies of smugglers to move from Guernsey and Jersey onto the European mainland.[3]

Pitt's scheme (introduced before the war) of subjecting retailers and wholesalers of commodities likely to be smuggled to regular surveys by the department of Excise may have made it more difficult for smugglers to sell contraband through the regular channels of distribution. The Permit and Survey System also brought beneficial effects to the revenue by giving the more efficient department of Excise an interest in the duties levied upon imports. But administratively the problems involved in regular checks upon the stocks and deliveries of dealers in tea, wine, tobacco and spirits proved beyond the capacity even of the Excise department. While random visits from officials may have deterred some traders from the sale of contraband, the system of checking seldom operated as Pitt intended and it may be that the costs involved outweighed any gains to the revenue.[4]

Despite the increased military force at its disposal for the repression of smugglers, the measures to close down their bases abroad and the attempt to sever their connection with regular channels of distribution, the Government continued to sustain large losses through their activities.[5] Profits from contraband rose with import duties and while the Government sought to check illegal imports into Britain, it also encouraged merchants to smuggle exports through the French blockade into Europe during the years of the Continental System. Illegal exporters to France easily became illegal importers to Britain. Moreover the Treasury's correspondence with the departments of Customs and Excise

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1. Excise 48/29, p.31; 48/40, p.428; 48/38, p.55; 48/41, pp.416-417; 48/42, pp. 156 and 503; 48/60, pp. 107 and 286 and Customs 10/43, General Orders, vol. 1, pp.340-344 and Customs, 744, p.8.
2. Customs, 7178, General Letters, p.18; Excise 48/40, p.428; Treasy. - TI/754/3678; Parly.Debs., vol.4, p.224 and vol.5, pp.629-630 and Liverpool Papers, 38363/83.
3. Treasy. - TI/995/6466.
4. 1 Comms. of Excise, 1833, pp.428 and 457; 2 Comms. into Excise, 1834, pp.4, 10 and 11; 8 Comms. into Excise, 1834, pp.249-250, 260 and 269; 7 Comms. into Excise, 1835, pp.41-43.
5. Customs 10148, General Orders, vol.1, pp.340-341.

is full of complaints against the appropriation of their preventive vessels for military purposes, and the poor quality of cruisers compared with the craft used by smugglers.[1]

Under pressure to find taxes, by 1809 the Treasury became worried enough by the scale of the losses sustained from smuggling to completely reorganise the Preventive Organisation of the Customs and Excise.[2] It divided the coastline into three major districts. Each district in turn was subdivided into stations and a revenue cruiser, assisted by cutters and other smaller craft, patrolled a given station. On board the revenue vessels conditions were improved and the pay of their crews went up considerably. To supervise the task of prevention within each district the Board of Customs appointed an Inspecting Cruiser to tour the sea lanes. Commanders of these cruisers liaised with subordinate craft and the Navy reported on movements of smugglers direct to the Board in London. They also maintained contact with the Landguard and the Army stationed along the coast. Their prime function was to ensure that subordinate vessels remained constantly at their stations, a long standing point of weakness in the service.

Two years later the Board reorganised the Landguard by defining the areas of survey more carefully, raising its pay and status and appointing Travelling Inspectors to supervise the work of patrolling the coastline. The role of the Army and local militia became even more important and the Treasury enjoined Local Commanders to give the Customs Service every aid to check smuggling.[3] As Huskisson's letter pointed out "the Army is a cost to the revenue, it can also help to raise it."[4]

It is impossible to measure the effects of the war and the various measures adopted by the Treasury, Customs and Excise on the volume of imports assessed to tax after 1793. The overall impact might have been positive. Certainly Commissioners for Customs considered that "smuggling is in a reduced state because of the laws taken to counteract it" and the Treasury anticipated an increased scale of smuggling at the close of the war when trade with Europe reopened anew.[5]

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1. Treasy. TI/454/3678; TI/755/3912; TI/755/4106; TI/723/2301; Excise - 48/28, p.200; 48/38, p.55; 48/62, p.143 and 48/31, p.506.
2. Customs, vol. 10148, General Orders, vol.1, pp.340-341.
3. The reorganisation of the Waterguard and Landguard is described in Customs, 10148, General Orders, pp.340-344, 495-497, 514-516 and 557-558; 12 Comms. into Customs and Excise, 1822, Appdxs. 1 and 2 and Customs, 744, pp.9-10.
4. Customs, 10148, General Orders, vol.1, p.342.
5. Ibid, vol.2, pp.75 and 99; 12 Comms. into Customs and Excise, 1822, pp.55-56.

Throughout the period the officials responsible for the collection of revenue constantly pressured the Treasury for enlarged powers over the industries and activities they assessed to tax. Frequently they recommended amendments to tax legislation in order to close legal possibilities for evasion and to remove opportunities for fraud.[1] On the other hand merchants, manufacturers and traders pressured for less restraint on their activities. No doubt their freedom, as the Commissioners usually informed the Treasury, was inimical to the revenue, at least in the short run. In most cases under the pressure of wartime necessity the regulations governing the assessment and collection of taxes became more stringent. For example, several acts passed onto the statute book for the "better securing of excises levied on auctions, soap, paper, tea, glass, beer and malt, and no doubt the Exchequer derived some short run benefit from the new regulations.[2] Regulations to help the farmers of the taxes on post horses and stage carriages to collect revenue also became law.[3] Yet one excise - the tax on spirits in Scotland - seemed to defy all the efforts of Parliamentary Committees, the Commissioners of Excise and the Treasury to design a system which might reduce the widespread practice of illicit distillation.[4]

Little can be discovered in the records to suggest that any of the departments responsible for the collection of revenue undertook any extensive reorganisation of their methods of work or procedures in order to make their staff more accountable and diligent during the war years. To obvious cases of neglect or inefficiency Commissioners usually responded in the traditional manner by appointing highly paid Inspectors to check less diligent officers lower in the hierarchy. In other words they superimposed another layer of personnel often responsible directly to the Boards in London. In some cases this technique may possibly have improved the process of tax assessment, at least for a time.[5]

Before the war Pitt divided responsibility for the collection of several

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1. Treasy. - TI/754/3801; TI/723/2332; TI/818/987; TI/982/5814; TI/754/3803; TI/868/4372; TI/984/3295; TI/897/348; Excise 48/53, p.235; 48/26, p.126; 48/54, p.310; 48/48, p.64; 48/27, p.273; 48/33, p.379 et seq.
2. Cttee. on Malt, 1804, pp.327, 334 and 339; Hersee, Spirit of the General Letters, pp.14 and 188; Excise 48/34, p.91; 48/54, p.310; 48/41, p.53; 48/51, p.155; 48/28, p.491; Treasy. - 27/44/141 and 35 G.3.c.112.
3. Inland Rev., vol.547, pp.3 and 88.
4. 5 Cttee. on Irish Rev., 1823, pp.261-263; Marsden, Spirit Duties, pp.29-32 and 37 and Cttee. on Distillery in Scotland, 1798, pp.322-323, 513-514 and 526.
5. This occurred with the new Waterguard and Landguard in the Customs in 1809-11 see p. 478 ; with the assessment of direct taxes - see p. 419 and in the assessment of certain stamp duties - Inland Rev., vol. 547, p.187 and 10/4183, p.3.

key import duties between the departments of Customs and Excise. He hoped the more efficient Excise officers would prompt their colleagues in the Customs towards greater attention to duty and that cooperation between the two departments would be fruitful for the revenue.[1] Correspondence between the Commissioners for Excise and the Treasury suggests they took their new functions seriously. It contains numerous suggestions for reforms designed to combat frauds on the revenue by smugglers.[2] Yet Committees who reported upon Pitt's arrangements after the war remained sceptical about their utility.[3]

The Board of Taxes concentrated with some success on strengthening the powers and status of permanent officials vis a vis the voluntary element in the assessment of direct taxes.[4] Some sinecures at the Board of Stamps disappeared with the reorganisation of the London office in 1810.[5] But in all, the serious deficiencies which had characterised the administrative procedures of the departments persisted well into the 19th century. Certainly the Commissioners who inquired into the management of the Customs, Excise and Stamps in the 1820's and 1830's are full of criticisms of quite a fundamental kind.[6]

To even appraise, let alone quantify, the role played by revenue administration in raising taxes to pay for the war is exceedingly difficult. Forces operated both to facilitate and to hinder the task of the administration. War itself helped, in that the hazards of smuggling increased and the Government made full use of the Army and Navy to curb the introduction of contraband and the Government under pressure was always more willing to acquiesce in the demands of the Revenue Boards for greater powers over taxpayers. Pitt's reforms to the administration in the years immediately before 1793, such as the division of functions between the Boards of Customs and Excise, his Hovering and Manifest Acts and the Permit and Survey system, may also have made smuggling more difficult. Except perhaps for short periods, the salaries of revenue officials appear not to have lagged behind prices and they could take advantage of the bonus and incentive schemes devised by the Treasury and the Boards to encourage

1. 15 Comms. into Customs and Excise, 1824, pp. 5 and 6 and 4 Cttee. on Finance, Appdx. A.
2. Excise series 48 passim and Treasy. - series TI - Excise.
3. 15 Comms. into Customs and Excise, 1824, p.6 and 14 Comms., 1823, p.201.
4. See pp. 418-421.
5. Cttee. on Stamps, 1821, p.273.
6. See 13-15 Comms. into Customs and Excise, 1823-1824; Comms. on Stamps, 1821, and 14-15 Cttee. on Irish Revenue, 1826 and 1828.

diligence and more vigorous efforts to counteract attempts to defraud the revenue. No attempts were made to reform seriously the system of personnel selection, promotion or procedures of administration between 1793 and 1815, apart from the reform to the organisation of the Waterguard and Landguard in 1809-11. Overall the deficiencies of administration remained to arouse the criticism of Parliamentary Committees decades after Waterloo. The contribution of the revenue departments to war finance might be described as positive but minor.

CHAPTER 12

SUMMARY AND CONCLUSIONS

Between 1793 and 1815 the British Government collected approximately £1,028 million in revenue. During this period Ministers and their advisers responsible for the finance of the war had to decide upon the methods to be employed to finance the wars against France. Briefly, they became concerned with questions of taxes or loans, with techniques for borrowing funds, with the credit policies of the Bank of England and with the range and rates of taxes levied upon the population at large. Most of the additional revenue required to conduct other wars over the 18th century had been borrowed through the issue of irredeemable bonds, but 58% of the money used to pay for the Revolutionary and Napoleonic Wars came from taxes. Reasons for the reversal of traditional policy can be found in the antipathy and alarm of Ministers, Members of Parliament and the wider public towards the size of the National Debt at the end of the 18th century - an attitude which lead to the re-establishment of the Sinking Fund after the American War of Independence. Predictably, the view that the National Debt must be contained lead to a mood of despondency at its rapid accumulation during the early years of the war, and enabled Pitt between 1797-99 to persuade Parliament to accept the policy of raising more supplies within the year and its corollary - a general tax upon incomes.

Borrowing money involved a whole range of decisions concerned with techniques for raising funds (bills and bonds) and with the redemption of matured debt, through its repayment in cash, funding bills and the operations of the Sinking Fund. Essentially debt management, conducted by the Treasury, sought to provide the Government with the funds it needed to borrow at the lowest possible cost to the public. To this end the Treasury tried to regulate the flow and composition of securities onto the money market in order to reduce the Government's annual interest bill.

By the late 18th century debt management had developed into a matter of timing, of providing the market with the kinds of assets in high demand, of stimulating competition for those assets and finally of restraining the issue of securities which could not be brought within the calculus of planning, such as bills issued to meet lags between receipts of revenue and its disbursement by public departments or deficiencies in either the supply or ways and means estimates.

Since the terms and facility upon which the Government marketed securities depended to a large extent upon the credit policies pursued by the Bank of England, debt management also included all aspects of relations between the Treasury and the Bank. If the Bank curtailed purchases of Government bills or rationed credit to the private sector, monetary conditions became stringent and interest rates increased. If the Bank discounted liberally either for the public or the private sector, debt management became easier and interest charges declined. Before the French Wars the Government had never interfered with the Bank's credit policies, but in February 1797, after 14 months of stringent credit conditions, it Suspended Specie Payments by the Bank of England and thereafter gave the Directors every encouragement to pursue an expansionary monetary policy.

To obtain more revenue from taxes the Government broadened the tax base by the introduction of new levies, raised the rates of taxes on the Statute book at the outbreak of war and improved the quality of the administration for tax collection in ways which brought a greater share of goods, services and incomes legally liable to tax into the scope for assessment. Finally it automatically gained revenue through the operation of economic forces which raised the levels of wealth, income, production and consumption in the private sector.

To understand and appraise the methods used to provide the Government with funds to pay for the war it is essential to place the relevant decisions in the context of the British financial system as it operated at the end of the 18th century. Thus, to borrow money the Treasury had to sell securities through the well-established channels of the London money market. The prices obtained depended upon careful timing to take advantage of changes in the disposition of the market towards public securities, upon the creation of conditions for competition among buyers and upon providing the kind of assets most acceptable at particular moments of time. Borrowing funds consisted of transactions which involved the Treasury, the Bank and the capital market, and each separate transaction can only be properly analysed within its immediate context. Any chronological and detailed investigation of debt management will reveal the difficulties of rational planning. Sudden accessions of bills frequently made all calculation impossible and volatile changes in demand rendered all prediction highly vulnerable. Criticism can be made of the Treasury's neglect of bill finance between 1797 and 1808 and the failure of successive Chancellors to force bonds other than consols upon the market over the same decade. Nor perhaps did the Treasury experiment nearly enough with methods to stimulate competition in the money market and several transactions were clearly not timed in the public interest. But in general those who managed the debt under such difficult conditions should be commended rather than criticised for their efforts to restrain the accumulation of the Government's interest bill.

One aspect of debt management traditionally singled out for particularly vehement criticism is the operation of the Sinking Fund over the war years. There is, however, little evidence that the Ministers who managed the country's finances held many of the outlandish views attributed to them by association with the originator of the Fund - Richard Price. For example, they did not believe that the National Debt was in a state of progressive decline after 1793. Pitt and his fellow Chancellors conceived of the Sinking Fund partly as a psychological device to allay fears about the accumulation of the debt, to make taxes more palatable to the public and above all to transform the Government's debt from irredeemable into terminable annuities. Losses to taxpayers may have occurred from persisting with the Fund in wartime, but their scale, if positive, was certainly exaggerated by Hamilton and his followers. It can be argued that, even in the context of 18th century public finance, to persist with the redemption of bonds in wartime was misconceived and against the public interest, but the idea was never as ridiculous as many commentators on the subject have imagined.

Apart from the Sinking Fund, the other aspect of policy which aroused strong criticism both among contemporaries and historians was the management of the money supply by the Bank of England and the Treasury. While the facts are difficult to state unequivocably the available indications certainly suggest that the Bank, assisted and encouraged by the Government, pursued an expansionary monetary policy.

After 1797 the Government refused to be hampered in the finance of war by the constraints of convertibility and in 1810-11 strongly resisted an attempt by the bullionists to force the Bank to resume cash payments.

It is also clear from their continued support of the Bank, their public remarks and the fact that the State itself on several occasions extended loans to the private sector, that Ministers did not favour any policy which restricted credit to merchants and manufacturers. The Directors of the Bank, with few precedents and little in the way of monetary theory to guide them, after the Suspension of Cash Payments fell back upon traditional rules for the regulation of their liabilities. Experiments with credit restriction in the period 1795-97 and their failure to lend freely during the commercial crisis of 1793, had engendered nothing but criticism from almost all sides, including the Government. Yet bullionists attacked them for not abiding by the rules of monetary management established before the Suspension and blamed them for the fall in the exchange rate and the elevation in the market price of gold - tests of a depreciated currency. Their rather extreme position simply antagonised the Government, particularly as they failed to discuss seriously the implications for war finance of an early resumption of specie payments. Surprisingly, the Government and its supporters did not dismiss the bullionist attack on pragmatic grounds but tried to refute them on their own terms, partly because they shared the same assumptions as their critics about the efficacy of the gold standard, and partly because Ministers were most anxious to maintain internal and external confidence in the paper pound.

Critics of monetary policy also exaggerated the role of the banking system in the wartime inflation of prices. Although it can confidently be maintained that private investment expenditures may to some extent have been stimulated by the liberal policy pursued by the monetary authorities. On the other hand redistribution of income from profits to wages and from creditors to debtors probably assisted the Government to finance the war. Furthermore, given the nature of the international economy during the wars against France, the liberal supplies of credit made available to merchants and manufacturers undoubtedly helped them to maintain trade and production at high levels, particularly during the years of the Continental System and the conflict with the United States, 1806-12. Through its tax revenue the Government possessed ~~the~~ a vital interest in the level of economic activity.

The tax structure and administration available to the Government for their assessment and collection in 1793 did not appear particularly well adapted to the task of raising large sums for the finance of war. The structure was dominated by outlay taxes which in general did not fall upon commodities or services expanding rapidly in production or consumption. For administrative reasons the Government preferred to levy specific rather than ad valorem taxes, and thus in a period of inflation, revenue would lag behind prices. Furthermore, the disposition of the population towards tax evasion and the low quality of the administration available to check fraud, together with the sheer complexity of tax law, reduced the Government's income well below the legal maximum. Parliament and public opinion remained resolutely opposed to the introduction of an income tax, to the extension of excises and adhered firmly to ethical principles which circumscribed the initiative of Governments in the selection of taxes.

Yet, in the circumstances of the conflict against Revolutionary France and by political dexterity, Pitt managed to persuade Parliament to accept direct taxes upon incomes and property. His innovations to the tax base produced no less than 36% of the revenue needed to pay for the war. Yet pressure group activity in defence of sectional interests in agriculture, shipping, iron, and above all in the West Indies, continued to hamper Chancellors' attempts to find taxes to pay for their defence. Pleas of necessity often mitigated resistance, or one interest group sometimes countervailed the influence of a rival. Even under the pressure of an expensive war the Government did not seriously depart from the ethical ideals of the age in the imposition of taxes. Pitt's war for "the defence of property" by and large came to be financed by taxes levied on the more affluent groups in British society. The necessities of the poor continued to be lightly taxed.

How far the development associated with the Industrial Revolution helped to provide revenue for the war is impossible to measure. While trade, agriculture and industry did not develop at pre-war rates, their growth was unusually rapid for a period of war. There is, however, no obvious link between tax revenue and economic development. Rapidly growing sectors of the economy, in transport, textiles, iron and pottery, linked to export markets, remained either untaxed or were lightly taxed through their inputs or duties upon construction materials such as timber, bricks and glass. With minor exceptions, the Treasury apparently derived more benefit from the effects of the Industrial Revolution on the general level of demand than through taxes levied directly upon activities undergoing technological change.

A tax by tax analysis reveals that the inflation in prices and costs did not help the Government to obtain income from taxes and that bad harvests, high freight rates, and the dislocation of the international economy also complicated its task. At the same time the rise in incomes and, paradoxically, the Continental System, helped to stimulate the level of demand for taxed goods and services. Improvements to the administration helped, but probably in some small degree.

To appraise the taxation policy as an instrument of war finance is difficult. Innovations in direct taxes might perhaps have gone further towards more progressive taxes. In some cases the Chancellor raised rates to the point where yields fell. No doubt in others a judicious lowering of rates may well have increased revenue. Unfortunately, in wartime Governments cannot experiment with policies which usually require time for success. Military expenditure must be financed over the financial year and the pressure simply to push up tax rates is probably overwhelming.

Appendix 1. Price Data.

I have used quotations of commodity prices in order to calculate ad valorem rates of taxes and to compare wage and price movements over the period 1793 to 1815. The prices used were wholesale prices and most related to commodities purchased on contract and were, therefore, likely to be more stable than retail prices. Where several price quotations for given commodities were available in the sources listed below my practice was to take an average.

The following sources were used:

1. Beveridge, Prices and Wages for the following commodities: bricks, candles, cement, woollen cloth, serge, fustian, shoes, coal, malt, rum, beer, sherry, port, butter, cheese, eggs, milk, mutton, pork, beef, bacon, salt, dried fruit, hops, and leather butts.
2. Tooke, History of Prices for the following: lead, iron, tin, timber, copper, tobacco, hops, sugar, butter, silk and coffee.
3. Tooke, Thoughts and Details 1822 - for the following: wheat, rye, barley, oats, beans, peas, beef, pork, butter, hops and iron.
4. Committee on Resumption, 1819 - for the following: beer, shoes, coal, butter, cheese, salt and malt.
5. Ellison, Cotton Trade - for raw cotton.
6. Bliss, Timber Trade - for timber.
7. James, Woollen and Worsted Industries - for wool.
8. Marshall, Digest of the Accounts - for wool.
9. Report on U.K. Tariff, 1898 - for tea and Indian textiles.
10. Ashton, 'Some Statistics of the Industrial Revolution' - for cotton yarn.
11. Lloyd, Cutlery Trade - for files.

Appendix 2. Taxation Data, 1788-1815.

The data used on British Taxation in this thesis covers three kinds of figures: the first the legal rates of tax in operation at particular points of time; secondly, the annual yield or incomes from taxes and thirdly the quantities of commodities and services taxed annually. This information can be found in a variety of published and unpublished sources for the period 1788-1815 but it is often difficult to reconcile figures from one source with those in another. Original sources are often not cited and details about the statistics quoted are usually inadequate. Yet confusion can arise, particularly in relation to yields and quantities taxed, for several reasons. A number of taxes were collected jointly by both the Customs and Excise departments and the yield cited in some publications relates not to total yield but the sum collected by a single department. Accounts were not made up with reference to the same time periods or financial years and this leads to a variety of figures. Finally distinctions are not always made in the sources between: the gross sum collected under the heading of a given tax; the net sum collected, which excludes discounts for prompt payment, drawbacks for exports and repayments for incorrect assessment by the administration; and the net sums paid into the Exchequer which further excludes the management charges for tax collection and other expenditures made by the revenue departments, such as subsidies to various industries, pensions, militia payments, bounties and odd administrative charges - for details see: Customs 17/10-30 States of Navigation Revenue and Commerce ~~for details.~~

The term tax yield or tax revenue used in the thesis is the net amount collected by the department from private citizens before the payment of management and other charges. It is <u>net</u> revenue transferred from the private sector to the Government.

Where possible I have used the original manuscript sources of the departments responsible for the collection of revenue for figures of yields and quantities of commodities and services assessed. When adequate information could not be found in departmental records, I turned to Accounts in Parliamentary Papers and to the House of Common's Journals. When quantities were not available they could often be calculated from the statistics of yields and details on the rates of tax applied. The manuscript sources for Customs and Excise duties related in many cases to England and Wales, which made it necessary to use other sources for figures related to Great Britain as a whole. While yields for Britain could usually be traced, quantities of commodities and services taxed in Scotland were more difficult to find and in several calculations I had to assume that the relationship between quantity and yield for England and Wales held true for Scotland.

The sources used for the yield, quantity assessed and the rate pertaining to each tax cited in the thesis are as follows:

C/17: Customs Ledger on the State of Navigation, Revenue and Commerce, 1788-1808.

C/1691o: Customs Report on the Yield, Quantity Taxed and Rate of Tax for all customs duties, 1787-1806 (the rates of tax are quoted up to 1815).

E/11863 and E/11894: Excise Ledgers on the yields, quantities taxed and rates of tax of commodities subject to excise, for England and Wales covering the entire period.

E/1169: information related to the excise duties in Scotland, 1806-16.

I.R./384,385,767, and I.R.10/86,87 - Inland Revenue Ledgers related to yields and quantities assessed to tax of taxes collected by the Boards of Stamps and Taxes over the period.

Annual Finance Accounts in Accounts and Papers, 1801-1816.

Accounts and Papers in Parliamentary Papers, 1830 (25).

Timber: 1803 (6), 1805 (5), 1806 (9), 1806-7 (5).

Advertisements: 1803/4 (8), 1810 (13), 1814/15 (8).

Hemp: 1809 (8).

Marine Insurance: 1810 (4), 1824 (17).

Glass: 1825 (14).

Salt: 1836 (18), 1810 (12), 1812 (8), 1812-13 (11), 1813/14 (10)
1816 (11).

1 Report of Commissioners for Customs, Parliamentary Paper, 1857 (3).

1 Report of Commissioners of Inland Revenue, Parliamentary Paper, 1857 (4).

Report on U.K. Tariff, 1801 to 1898, Parliamentary Paper, 1898 (75)

Blackader, The Rates and Duties on Excise, various editions to 1810.

Dowell, History of Taxation.

Lowndes, Book of Rates and Duties on Customs.

Mascall, Digest of Duties of Customs and Excise, various editions.

Mitchell, Abstract of Historical Statistics.

Nodin, British Duties on Customs and Excise, 1792.

Pope, A Practical Abridgement of Customs and Excise Laws, 1812.

Tooke, Thoughts and Details, 1822.

Table 13. Nominal Capital of the Unredeemed Funded Debt of Great Britain, 1788-1816.

Year	In 3% Annuities £m.	In 4% Annuities £m.	In 5% Annuities £m.	Total £m.
at 5 January,				
1788	183.9	32.8	17.9	234.6
1789	182.3	32.8	17.9	233.0
1790	180.8	32.8	17.9	231.5
1791	179.2	32.8	17.9	229.9
1792	177.2	32.8	17.9	227.9
1793	181.4	32.8	17.9	232.1
1794	189.5	35.5	19.8	244.9
1795	226.0	50.0	21.4	297.4
1796	259.7	41.9	48.3	349.9
1797	282.1	44.8	48.3	375.2
1798	313.8	44.8	48.3	406.9
1799	320.4	44.8	48.3	413.5
1800	342.0	44.8	48.3	435.1
1801	386.2	48.5	50.5	485.2
1802	411.3	47.1	50.5	508.9
1803	417.6	47.1	50.5	515.2
1804	434.2	47.1	50.3	531.6
1805	464.1	47.1	48.4	559.6
1806	483.6	47.1	47.4	577.8
1807	490.3	47.1	48.6	586.0
1808	476.2	58.1	52.5	586.8
1809	471.2	64.9	60.3	596.4
1810	473.9	63.7	68.8	606.4
1811	468.2	66.1	81.2	615.5
1812	479.9	66.1	94.3	640.3
1813	538.3	71.3	107.9	717.5
1814	541.4	71.3	115.1	727.8
1815	580.9	74.9	136.2	792.0
1816	562.0	74.9	135.9	772.8

Notes and Sources:

Nominal capital is simply a legal concept which refers to the amounts written on the face of bonds which made up the National Debt. This is funded debt only and excludes unfunded debt in bills. It does not include debt held by the Commissioners for the Sinking Fund. The debt can be further broken down into categories classified according to the original purpose of issue or by the original creditors. These classifications have only administrative or historical interest.
The source is Accounts and Papers, 1857-58, pp. 199-209.

Table 14. Nominal Capital of Stocks Issued in Loan and Funding Operations, 1793-1815.

	3% £m.	4% £m.	5% £m.
Year to 1 February			
1794	6.3		
1795	11.0	2.8	1.9
1796	44.1	6.0	1.6
1797	29.2	0.8	26.8
1798	22.8	2.6	-
1799	37.9	-	-
1800	21.9	-	-
1801	29.0	-	-
1802	44.8	4.4	2.2
1803	30.3	-	-
1804	16.0	-	-
1805	18.2	-	-
1806	34.4	-	0.4
1807	29.9	-	-
1808	21.9	2.9	1.3
1809	9.5	0.2	4.0
1810	7.0	7.4	7.9
1811	13.2	-	8.6
1812	14.4	2.4	12.5
1813	27.5	-	13.2
1814	74.6	5.2	13.9
1815	19.1	-	5.5
1816	50.0	2.7	21.2
Totals:	613.0	37.4	121.0

Notes and Sources:

These figures exclude the stocks issued for the Austrian Loans of 1795 and 1797.
Source Accounts and Papers, 1822, pp. 131-139.

Table 15. Issues and Redemption of Exchequer Bills, 1793-1815.

Year	Issued on Land and Malt Taxes	Issued on Current Revenue	Issued on Future Revenue	Funds allocated for the Redemption of Bills
	£m.	£m.	£m.	£m.
1793	2.8	3.5	5.5	5.5
1794	2.8	2.7	6.0	5.5
1795	2.8	2.9	6.0	7.5
1796	2.8	3.5	6.0	10.8
1797	2.8	9.0	3.5	12.8
1798	2.8	10.8	7.5	3.5
1799	2.8	13.8	9.5	10.0
1800	2.8	17.7	9.5	8.5
1801	2.8	6.1	15.0	15.5
1802	2.8	2.0	14.6	17.1
1803	2.8	5.0	12.5	6.5
1804	2.8	7.8	12.0	12.5
1805	2.8	13.3	10.5	12.0
1806	2.8	12.1	12.0	16.5
1807	2.8	15.7	16.5	12.0
1808	3.0	15.0	18.0	16.5
1809	3.0	15.0	21.0	24.5
1810	3.0	14.9	21.0	26.0
1811	3.0	14.7	22.5	29.0
1812	3.0	18.8	20.0	31.0
1813	3.0	20.0	28.6	27.2
1814	3.0	17.0	26.0	29.5
1815	3.0	28.2	26.5	38.0

Notes and Sources:

For a discussion of the Treasury's operations related to the sale and redemption of exchequer bills, see ch. 2.
Complete information of all the operations in exchequer bills is difficult to find in any one source and the above figures were gathered from Resolutions of the Committees of Supply and Ways and Means in Commons Journals, 1793-1815, the acts of Parliament which authorised the issue of exchequer bills, Committee on Resumption, 1819, appendix 5 and Treasury accounts - T.30/20. Bills Issued on the Land and Malt taxes were paid off from their revenues as they came into the Exchequer. Bills Issued on Current Revenue were used to anticipate revenue from taxes and loans which accrued within a given financial year and Bills Issued on Future Revenue were employed to anticipate revenue ("Aids and Supplies") of the following financial year. Every year the chancellor planned to redeem bills and the funds allocated by the Committee of Supply for this purpose have been tabulated in column 4 above.

Table 16. The Unfunded Debt of Great Britain, 1788–15.

Year circa 5 January	Exchequer Bills £m.	Navy Bills £m.	Treasury Bills £m.	Ordnance Debentures £m.	Barrack Bills £m.	Army Debentures £m.	Total £m.
1788	7.6	1.9	–	–			9.5
1789	8.8	2.2	–	–			11.0
1790	9.6	2.4	–	–			12.0
1791	10.5	1.8	–	0.1			12.4
1792	9.6	2.3	–	–			11.9
1793	11.4	2.7	0.1	0.1			14.3
1794	11.8	5.4	0.7	0.3			18.2
1795	10.1	7.1	2.1	0.8			20.1
1796	13.8	10.8	0.7	1.2			26.5
1797	13.2	4.2	1.5	0.8	–		19.7
1798	13.4	6.4	–	0.5	–		20.3
1799	14.3	5.6	1.0	0.9	0.1	1.3	23.2
1800	20.4	6.0	1.1	0.6	0.1	1.1	29.3
1801	26.1	8.7	1.0	0.6	0.1	1.4	37.9
1802	20.6	7.1	1.2	0.5	0.1	0.9	30.4
1803	16.5	3.1	0.7	0.3	0.2	0.8	21.6
1804	19.1	4.0	0.8	0.6	1.5	0.7	26.7
1805	25.3	5.0	1.2	1.3	1.0	0.7	34.5
1806	27.2	5.9	1.1	1.1	0.6	0.9	36.8
1807	27.2	5.9	0.7	1.3	0.5	1.3	36.9
1808	31.9	6.6	0.7	1.2	0.5	1.1	42.0
1809	39.7	7.2	1.3	0.9	0.5	0.8	50.4
1810	39.2	8.3	0.9	1.0	0.4	0.9	50.7
1811	38.3	7.6	2.0	1.1	0.4	1.2	50.6
1812	41.5	7.9	1.7	1.1	0.3	1.5	54.0
1813	45.4	7.7	2.0	0.9	0.2	1.5	57.7
1814	47.5	8.6	2.5	0.7	0.2	1.5	61.0
1815	59.2	6.4	2.3	0.8	0.1	1.0	69.8
1816	41.4	3.7	1.6	0.9	0.1	1.0	48.7

Notes and Sources:

In calculations of the Unfunded Debt it is necessary to scrutinise sources with great care because Governments of the day published a great many accounts purporting to be a record of the Unfunded Debt which in fact seriously underestimate it. Some accounts omit the debt other than Exchequer Bills outstanding and some historians of public finance have used Exchequer Bills to represent total Unfunded Debt. Furthermore, many of the accounts in Parliamentary Papers which are presented as a record of Exchequer Bills outstanding are incomplete because they only include bills where Parliament had not provided funds for redemption - that is bills issued on the "Aids and Supplies" of subsequent financial years. (The commonly used figures in Accounts and Papers, 1857-58, p. 71 et seq, are a case in point and in the Chisholm Rept., 1868-69 makes the same mistake). Similar confusion can arise in relation to the Navy's debt which was sometimes presented as the debt in Navy bills only and thus neglects to include the debt of the Transport and Victualling sub-departments of the Navy - see Chisholm Rept. 1868-69, p. 695 and Accounts and Papers, 1819, p.114.

A complete record of the outstanding Unfunded Debt of the Government should include the short term debt of every public department, at particular points in time over the financial year. (see 1 Cttee. on Finance, 1797, p.5). It is, however, very difficult to build up this total from the information now available. My figures are drawn from a variety of sources and are still incomplete.

For Exchequer Bills the source is Accounts and Papers, 1819, p. 113 which agrees with the Annual Finance Accounts presented to Parliament which can be found in Accounts and Papers, 1799-1815 and in appdxs. to Commons Journals 1793-1815 and appdxs. to Parliamentary Debates for the period.

The source used for Naval Debt were Pitt Papers, Vol. 247, Committee on 11 Naval Report, 1805, appdx. 5 and Annual Finance Accounts cited above. The Naval Debt is recorded as at 31 December in each year.

For Treasury Bills it was impossible to find a record of the amount outstanding before 1799 when the Annual Finance Accounts began to publish figures. My data before that date are the amount of Treasury Bills held by the Bank of England as at 25 February in each year. Since the Bank probably held most bills issued on the Treasury this is probably not a serious underestimation of the total. The figures are from: Committee on Suspension, 1797, appdx. 10 and Accounts and Papers, 1795-96, p. 845.

Ordnance Debt is from Accounts and Papers, 1819, p. 113. The debt before 1791 never amounted to more than £61,000 - Accounts and Papers, 1790-91, p. 741.

Barrack Bills and Army Debentures are from Annual Finance Accounts cited under Exchequer Bills above. No information could be found before 1799.

Table 17. Estimates and Expenditure of the Military Force, 1793-1815.

Year	Estimated Specified Expenditure			Estimated but unsafe cited Expenditure			Expenditure Incurred Without Estimate			Vote of Credit
	Army	Ord-nance	Navy	Army	Ord-nance	Navy	Army	Ord-nance	Navy	
	£m.	£m.	£m.	£m.	£m.	£m.	£m.	£m.	£m.	£m.
1793	3.2	0.2	3.4	-	0.4	-	0.8	0.6	1.9	1.5
1794	4.7	0.3	5.3	-	0.4	-	3.1	1.1	1.5	2.5
1795	7.3	0.4	6.3	-	0.8	-	3.5	1.1	4.7	2.5
1796	6.5	0.4	7.1	1.4	0.5	-	3.8	0.6	16.6	2.5
1797	6.9	0.4	8.0	4.0	0.6	-	1.4	0.2	-	0.3
1798	7.4	1.1	13.4	3.2	-	-	-	0.2	-	1.0
1799	8.2	1.3	13.7	2.4	-	-	-	0.2	-	3.0
1800	7.8	1.5	13.6	2.5	-	-	-	0.1	-	1.4
1801	11.1	1.8	15.9	3.1	-	-	1.8	0.1	2.0	2.0
1802	7.8	1.3	11.8	1.9	-	-	2.0	-	-	-
1803	7.7	1.1	10.2	2.0	-	-	0.3	0.4	-	2.0
1804	11.0	3.3	12.4	2.0	-	-	0.7	0.8	-	3.3
1805	11.1	3.6	15.0	3.6	-	-	0.3	0.6	-	3.5
1806	11.9	3.8	15.9	3.6	-	-	0.8	0.6	-	3.0
1807	12.2	2.8	17.4	3.6	-	-	0.1	0.4	-	5.0
1808	13.4	3.3	18.3	3.3	-	-	0.2	0.6	-	2.7
1809	13.3	4.7	19.5	3.0	-	-	0.4	0.3	-	3.0
1810	12.3	3.5	19.8	2.7	-	-	0.6	0.4	-	3.2
1811	13.2	4.0	20.9	3.2	-	-	2.3	0.2	-	3.2
1812	14.6	5.4	20.4	5.2	-	-	4.7	0.1	-	3.2
1813	14.4	4.3	21.2	9.5	-	-	6.4	0.2	-	5.2
1814	13.1	3.3	19.3	9.0	-	-	12.0	0.1	-	3.2
1815	12.6	4.0	19.0	12.0	-	-	-	0.1	-	6.0

Notes and Sources:

Estimated Specified Expenditure is that part of military expenditure which formed the subject of detailed estimates - submitted annually to Parliament. Unspecified Expenditure formed the subject of estimates which did not give details about the objects of expenditure but came under such headings as "Unforeseen Contingencies". "Extraordinary Expenditure" etc - see Annual Supply Estimates in Commons Journals, 1793-1815. Expenditure incurred Without Estimates never received prior approval by the House of Commons. Votes of Credit were sums of money granted by Parliament to the Government to allocate among the military forces if and when ~~they~~ required in the course of a financial year. The above figures are from Chisholm Report, 1868-69, pp. 1179 and 1185-87.

Table 18. The Rate of Interest on Borrowing and Funding Operations, 1793-1815.

Date of Contract or Negotiations	Amount Nego-tiated £000	Net Received £000	Annual Interest Bill £000	Rate of Interest %
25. 3.93.	4,500	4,371	188	4.29%
3. 2.94.	11,000	10,486	503	4.79%
12. 4.94.	1,907	1,883	96	5.11%
12.12.94.	18,000	17,903	783	4.60%
1. 5.95.	1,491	1,471	80	5.47%
25.11.95.	18,000	17,324	865	5.00%
15. 4.96.	7,500	7,207	324	4.49%
1. 7.96.	4,227	4,138	221	5.33%
7.11.96.	11,595	11,366	626	5.50%
7.11.96.	1,434	1,405	78	5.53%
5.12.96.	18,000	17,162	1,006	5.86%
25. 4.97.	14,500	13,893	877	6.31%
20. 4.98.	17,000	16,397	1,020	6.22%
4.12.98.	3,000	2,976	169	5.67%
5. 6.99.	15,500	15,128	814	5.38%
21. 2.00.	20,500	19,680	966	4.91%
12. 2.01.	28,000	26,515	1,476	5.57%
11.11.01.	8,910	8,887	423	4.75%
5. 4.02.	25,000	24,766	990	4.04%
13. 6.03.	12,000	11,784	576	4.88%
25. 4.04.	14,500	13,905	792	5.69%
15. 2.05.	22,500	21,459	1,161	5.41%
15. 2.05.	1,500	1,481	93	6.28%
25. 3.06.	20,000	19,172	996	5.18%
27. 2.07.	14,200	13,858	672	4.84%
27. 2.07.	1,500	1,469	73	4.90%
18. 3.08.	4,000	3,948	210	5.31%
27. 5.08.	10,500	10,316	496	4.80%
20. 3.09.	7,932	7,834	409	5.22%
8. 5.09.	14,600	14,272	678	4.75%
20. 3.10.	8,311	8,204	429	5.23%
11. 5.10.	12,000	11,777	505	4.30%
7. 5.11.	7,018	6,928	364	5.25%
8. 5.11.	4,981	4,909	258	5.19%
15. 5.11.	12,000	11,891	569	4.79%
7. 2.12.	5,432	5,334	293	5.40%
4. 3.12.	6,790	6,631	367	5.83%
12. 6.12.	20,000	19,627	1,056	5.38%
7. 4.13.	12,000	11,827	693	5.86%
7. 5.13.	3,756	3,739	209	5.39%
3. 6.13.	27,000	25,804	1,492	5.79%
12.11.13.	22,000	21,260	1,168	5.25%
3. 6.14.	24,000	23,426	1,105	4.72%
26. 4.15.	10,313	10,112	603	5.96%
26. 4.15.	7,008	7,002	409	5.83%
9. 5.15.	815	799	48	5.97%
10. 6.15.	36,000	34,944	2,023	5.79%

Notes and Sources:

The Amount Negotiated is the original amount proposed by the Government for a given loan or funding operation. Net Received is the Amount Negotiated minus administrative charges, defaults on the loan, interest bonus, tax concessions and discounts for prompt payment. It is the net sum actually transferred to the public from the private sector. The Annual Interest Bill includes payments of interest and long annuities on the stocks which made up the loan or funding operation. Rate of Interest was calculated on the information of the previous two columns. Dates of contracts and all other information required to work out this table are from Bank of England Report Books, 1793 to 1815, Commons Journals, Resolutions of the Committee of Ways and Means, 1793 to 1815 and Accounts and Papers, 1822, pp. 131-139. Detailed references to particular negotiations can be found in chapter 5.

Table 19. Bond Prices, 1793-1815.

Month	1793 3%	1793 4%	1793 5%	1794 3%	1794 4%	1794 5%	1795 3%	1795 4%	1795 5%
January	73-79	88-92	103-106	66-73	82-87	100-101	61-65	78-80	95-100
February	70-75	85-90	100-104	65-68	82-85	100-101	61-63	79-79	94- 96
March	72-78	88-89	103-111	65-68	82-83	100-102	61-63	78-79	94- 95
April	75-81	89-90	106-111	67-71	84-85	100-106	61-66	77-80	94- 99
May	74-77	87-90	106-109	70-71	84-85	103-104	64-66	78-80	97- 99
June	76-77	89-91	109-109	67-71	82-84	103-104	66-68	79-81	97- 98
July	76-99	91-94	108-110	66-69	81-85	100-102	66-70	81-83	96-100
August	75-78	92-95	107-110	66-68	84-85	101-101	66-70	82-85	97-100
September	75-75	73-75	92-93	64-67	83-85	100-102	67-69	84-86	99-101
October	73-75	89-89	106-106	63-68	81-85	99-103	67-69	87-85	99-102
November	73-75	83-90	106-109	65-69	82-84	101-103	67-69	82-86	101-103
December	73-75	87-90	108-109	64-68	79-84	100-103	67-72	82-87	101-104

Month	1796 3%	1796 4%	1796 5%	1797 3%	1797 4%	1797 5%	1798 3%	1798 4%	1798 5%
January	67-71	83-85	100-104	54-56	71-74	82-84	47-49	59-59	69-69
February	67-69	83-84	99-100	50-54	65-73	75-81	47-49	59-61	69-71
March	67-70	84-85	99-100	50-52		72-77	49-51	61-63	72-74
April	66-69	81-85	98-100	48-52	62	72-76	48-49	58-60	71-73
May	60-67	78-83	94- 98	48-49	59-61	73-76	48-49	58-60	72-75
June	62-65	79-81	94- 95	48-55	59-65	73-78	49-49	61-61	75-76
July	59-64	77-80	88- 92	52-54	64-65	76-77	49-50	61-63	74-75
August	55-60	74-79	85- 89	50-53	63-65	74-77	48-50	63-66	75-78
September		72-75	81- 85	47-52	61-67	71-75	49-50	65-65	77-79
October		73-73	84- 90	48-50	59-62	71-73	66-70	79-83	80-83
November			83- 87	48-49	58-59	71-72	52-57	64-71	80-87
December	56-59	72-74	85- 88	49-49	59-60	72-73	52-56	64-68	81-83

Table 19 (continued). Bond Prices, 1793-1815.

Month	1799 3%	1799 4%	1799 5%	1800 3%	1800 4%	1800 5%	1801 3%	1801 4%	1801 5%
January	52-55	66-68	81-81	60-63	76-78	90-91	54-68	73-80	80-96
February	52-54	67-70	80-83	60-62	77-80	90-94	55-57	75-77	89-91
March	53-54	69-71	81-84	62-64	80-83	94-98	55-58	75-75	90-96
April	53-55	69-71	81-86	63-65	80-81	98-98	57-61	77-78	94-97
May	54-56	68-70	85-87	63-64	80-81	97-99	60-61	77-79	96-96
June	56-62	70-76	87-88	63-65	80-84	98-98	60-62	78-80	95-96
July	61-66	75-83	93-96	62-65	81-85	97-99	58-62	78-80	92-94
August	61-68	80-86	92-99	61-67	83-85	97-99	58-61	79-81	93-96
September	60-69	83-85	93-99	64-65	84-84	97-99	58-60	81-81	93-96
October	58-63	74-76	88-93	63-64	80-82	98-100	59-69	85-86	94-103
November	59-63	74-77	90-95	63-63	80-80	98-99	67-68	83-85	99-103
December	62-63	76-77	94-94	62-63	77-80	98-99	67-69	83-85	99-100

Month	1802 3%	1802 4%	1802 5%	1803 3%	1803 4%	1803 5%	1804 3%	1804 4%	1804 5%
January	67-68	84-85	97-100	69-71	85-87	99-100	55-56	70-73	89-90
February	68-69	85-87	98-100	69-71	86-88	100-101	54-56	71-73	87-89
March	67-70	85-86	99-103	61-71	88-88	94-102	55-57	72-73	88-90
April	70-77	89-92	103-107	61-67	77-84	96-102	55-55	-	89-90
May	72-76	87-91	101-104	57-65	72-82	92-100	55-57	71-72	90-92
June	-	84-90	103-104	-	70-74	93-94	-	71-73	92-92
July	70-74	88-90	99-102	50-55	64-71	82-87	56-58	72-75	-
August	66-72	84-88	98-101	52-54	67-70	83-86	56-58	75-75	91-92
September	67-70	85-86	99-102	52-54	70-70	85-87	56-57	75-76	91-92
October	67-70	83-86	99-101	52-54	66-68	85-87	56-57	72-72	89-90
November	67-68	82-83	100-101	53-55	67-69	86-89	57-58	72-74	89-91
December	67-67	82-87	100-101	-	69-71	88-90	58-59	74-75	-

Table 19. (continued). Bond Prices, 1793-1815.

Month	1805 3%	1805 4%	1805 5%	1806 3%	1806 4%	1806 5%	1807 3%	1807 4%	1807 5%
January	57-61	74-78	89-92	59-61	75-79	89-90	59-61	77-79	91-95
February	57-60	76-77	89-91	60-61	79-80	90-92	61-62	79-81	95-96
March	57-58	-	89-89	59-60	79-80	91-92	61-62	80-81	95-96
April	57-58	73-74	88-89	59-60	77-77	92-93	61-63	80-80	95-97
May	57-58	73-74	89-90	59-60	77-78	92-94	62-63	80-81	97-99
June	-	74-75	-	59-60	77-78	92-93	63-64	80-81	-
July	57-60	75-78	88-90	62-66	81-82	95-95	61-63	79-80	74-95
August	57-58	75-77	88-89	61-65	80-85	94-99	61-63	80-81	95-96
September	57-58	-	88-89	63-63	81-81	95-96	62-62	81-81	96-96
October	58-59	74-75	88-89	60-63	78-78	92-95	62-62	79-79	96-96
November	59-60	74-76	89-92	60-61	78-79	94-96	62-63	80-81	97-98
December	-	76-78	-	58-60	76-78	94-95	62-64	80-82	-

Month	1808 3%	1808 4%	1808 5%	1809 3%	1809 4%	1809 5%	1810 3%	1810 4%	1810 5%
January	62-64	80-82	96-98	65-67	81-83	97- 98	68-70	84-85	99-102
February	63-63	82-82	96-97	65-67	82-84	98- 90	67-68	83-84	99-99
March	63-64	82-83	96-97	67-68	83-84	97- 99	67-69	83-84	97- 99
April	64-66	82-83	96-98	67-68	81-83	98- 98	68-69	83-85	99- 99
May	66-68	83-85	98-100	67-68	81-83	98- 98	70-71	84-85	100-101
June	67-70	83-86	-	68-69	82-83	99-100	70-71	84-85	100-102
July	68-70	84-86	99-99	67-69	83-84	98- 99	68-71	83-85	98-102
August	66-68	82-85	97-99	67-68	84-84	98- 99	68-69	85-85	90- 99
September	65-66	82-83	97-98	68-68	84-84	98- 99	65-68	82-85	98- 99
October	65-67	79-81	97-99	68-69	82-84	99-101	64-66	81-83	97-100
November	65-67	81-83	99-100	69-70	83-84	100-102	66-67	81-82	99-100
December	66-67	81-82	-	70-71	80-84	101-102	66-67	81-82	100-100

Table 19 (continued). Bond Prices, 1793-1815.

Month	1811 3%	1811 4%	1811 5%	1812 3%	1812 4%	1812 5%	1813 3%	1813 4%	1813 5%
January	65-67	81-83	98-100	62-63	78-79	93-96	59-59	75-77	89-90
February	65-66	82-83	97- 98	61-63	78-79	92-93	58-59	75-76	88-89
March	64-65	82-83	96- 98	59-62	75-78	89-93	58-59	75-75	88-89
April	64-64	79-80	96- 97	59-60	76-78	90-91	58-60	73-73	87-89
May	64-65	79-80	96- 97	60-62	74-75	91-92	58-59	71-73	87-88
June	63-64	79-80	97- 97	60-61	71-75	87-92	58-58	70-71	88-88
July	61-62	-	93- 97	55-56	71-73	86-88	56-56	71-72	85-86
August	62-64	79-80	94-96	56-59	73-76	88-90	57-57	72-73	87-87
September	62-64	80-81	94- 96	56-60	76-76	87-92	57-58	72-72	87-88
October	63-63	78-80	94- 96	57-58	72-73	87-90	57-59	71-72	88-88
November	64-64	78-79	96- 97	58-59	73-74	89-91	58-61	71-76	88-93
December	63-63	78-78	96- 97	58-58	72-77	89-89	61-61	75-80	92-92

Month	1814 3%	1814 4%	1814 5%	1815 3%	1815 4%	1815 5%
January	64-67	-	94-95	65-65	82-83	94-95
February	66-72	-	95-99	64-65	81-82	93-94
March	64-71	-	93-98	58-63	81-81	84-94
April	62-72	84-89	91-98	56-58	71-73	86-89
May	66-67	81-82	95-97	57-59	71-73	86-87
June	67-67	81-86	-	58-59	69-74	87-87
July	67-69	84-84	96-97	56-59	72-74	84-86
August	65-68	82-84	95-97	55-57	71-73	83-85
September	62-66	82-84	93-97	56-57	71-72	84-85
October	64-66	-	95-96	57-61	72-75	85-90
November	63-66	79.81	95-97	61-62	74-75	90-92
December	66-66	81-82	97-97	60-60	74-75	92-92

Notes and Sources:

The prices quoted are the monthly highest and lowest. The 3% stock is consols, 4% is consolidated 4% and the 5% is 5% Navy. Source: Appendix to Annual Register chronicle.

Table 20. Short Term Interest Rates, 1792-1815.

Year	Rates fixed by Treasury and Bank of England for Exchequer Bills	Average Rate Calculated by Silberling for Exchequer Bills	Rate on Navy Bills	Discount rate allowed to subscribers who anticipated their installments on the loan
1792	£3- 0-0%	3%	-	-
1793	£4-11-3% and £5-6-5½%	3%	-	3%
1794	£3- 6-0% and £3-10-0%	3%	-	3%
1795	£4-11-3%	5.3%	-	3% and 13¼%
1796	£5- 0-0%	5.3%	-	3% and 5%
1797	£5- 6-5½%	5.3%	£5- 6-5½%	4% and 5%
1798	£5- 6-5½%	5.3%	£5- 6-5½%	5%
1799	£5- 6-5½%	5.3%	£5- 6-5½%	5%
1800	£5- 6-5½%	4.6%	£5- 6-5½%	4%
1801	£5- 6-5½%	4.6%	£5- 6-5½%	5%
1802	£4-11-3%	5.3%	£5- 6-5½%	4%
1803	£4-11-3% and £5-6-5½%	5.3%	£4-11-3%	5%
1804	£5- 6-5½%	5.3%	£4-11-3%	5%
1805	£5- 6-5½%	5.3%	£4-11-3%	5%
1806	£5- 6-5½%	5.3%	£4-11-3%	5%
1807	£5- 6-5½%	4.4%	£4-11-3%	5%
1808	£4-18-10% and £5-6-5½%	4.5%	£4-11-3%	4%
1809	£4-18-10% and £5-6-5½%	4.2%	£4-11-3%	3%
1810	£4-11-3% and £5-6-5½%	4.3%	£4-11-3%	3%
1811	£4-18-10% and £5-6-5½%	4.7%	£4-11-3%	4%
1812	£5- 6-5½%	4.8%	£4-11-3%	4%
1813	£5- 6-5½%	4.9%	£4-11-3%	5%
1814	£5- 6-5½%	4.8%	£4-11-3%	4%
1815	£5- 6-5½%	4.3%	£4-11-3%	4%

Notes and Sources:

Short term rates of interest on public securities varied from day to day between different types of assets (Navy bills, Treasury bills, Exchequer bills, Ordnance debentures and bills issued by the Paymaster General of the Army) and depended upon whether the Government borrowed from the Bank of England or the money market.

Rates negotiated with the Bank for Exchequer bills were contract prices and tended to remain more stable than rates in the capital market. Rates charged by the Bank for accommodation depended upon the type of loan under negotiation. For example for its traditional anticipation of income from the Land and Malt taxes the Bank usually received a lower rate than it charged to anticipate revenue on the revenue of the following financial year. My figures relate entirely to contracts for Exchequer bills issued on "The Aids and Supplies" of a subsequent financial year. That is they relate to bills issued for short term loans which could be outstanding for a maximum period of 24 months. Most of the Government's short term borrowing during the French Wars took place through the issue of bills of this kind.

The figures are from: Exchequer, Ex.406/218-219 which are the original contracts between the Government and the Bank. Rates of interest on Exchequer bills, expressed at pence per day per cent are also often mentioned in the Acts of Parliament which authorise their issue. A list of acts related to the period 1792-1815 can be found in Committee on Resumption, appdx. 5. A further list of rates is in Accounts and Papers, 1841 p. 245.

Silberling calculated an average rate of interest on Exchequer bills for 1789-1830 by expressing the interest charge on the unfunded debt in Exchequer bills as a percentage of its capital value - Silberling, 'British Financial Experience', table 10, p.291.

The market rate of interest on Exchequer bills at particular points of time can be calculated from the figures of premiums and discounts on the value of bills sold in the money market. For example if the Government sold a £100 Exchequer bill bearing a rate of interest fixed by the Treasury and Bank of England at 3d% a day at a discount of 20/- the market rate of interest would be £4-12-2% and not £4-11-3%, the nominal rate on the face of the bill. Discounts and premiums on Exchequer bills varied from day to day but the monthly range has been tabulated in table 21.

The Navy bill rate is from Beveridge, Prices and Wages, p. 527. Navy bills were issued to creditors of the Navy for goods supplied. Discounts were given to subscribers of long term or funded loans, who paid installments into the Exchequer before the due date - the rates allowed can be found in loan contracts in Bank Report Book and Commons Journals. The rates cited are from Accounts and Papers, 1813-14, p. 107.

Table 21. Premiums and Discounts on Exchequer and Navy Bills, 1793–1815.

	1793 Exchequer	1793 Navy	1794 Exchequer	1794 Navy	1795 Exchequer	1795 Navy	1796 Exchequer	1796 Navy	1797 Exchequer
	/-	%	/-	%	/-	%	/-	%	/-
January	+23	6½	+ 8	9½	+7	2¾	-14	4	- 2
February	+20	7½	+ 6	6	+6½	2½	-20	5	- 2½
March	+10	7½	+ 6	4½	0	3½	-16½	5	-13
April	+ 9½	8½	+ 7½	2½	-2½	3	-12½	5¾	- 2½
May	+13½	9½	+11½	1½	0	2¾	- 2½	5	- 2½
June	+32½	9½	+ 6½	2	-½	3½	- 2½	6½	
July	-7½	7	+ 8½	2	+½	3	- 5	8½	
August	+ 1½	8½	+10½	1½	+4	2	- 1	12	
September	+ ½	9	+14	1½	+8½	2	- 8	14½	
October	+ 2½	9	+12½	2	+5	2½	- 1	8¼	
November	+ 2	9½	+17	1½	-1	3	- 1½	5¾	
December	+ 8½	7½	+12½	2	-4½	4	-2	-	

	Exchequer 1799	Exchequer 1800	Exchequer 1801	Exchequer 1802	Exchequer 1803	Exchequer 1804	Exchequer 1806
	/-	/-	/-	/-	/-	/-	/-
January		+2	0	+1	-	+2	0
February		+ ½	+4	+5	-1	+1½	0
March	-1/8	+4½	+7½	+2½	-2½	+1	-3
April	-½	+4½	+7	+5	-	+1	+2½
May	+2	+4	+5	0	-	+2	+ ½
June	-1½	+3½	+3½	-1½	-1½	+3	0
July	+ ½	+3	+1½	+4½	-4½	+1	+1
August	+4	+5	+2½	+2½	-2½	+1½	+1½
September	+1¾	+2½	+1	-	-3	+ ½	- ½
October	+3	+1	+6½	-	-1½	+1	0
November	+6	+1½	+12½	+2½	-	-1	0
December	+5½	+1½	+4¾	-2	-	-1	- ½

Table 21 (continued) Premiums and Discounts on Exchequer and Navy Bills, 1793-1815.

	1807 Exchequer /-	1808 Exchequer /-	1809 Exchequer /-	1810 Exchequer /-	1811 Exchequer /-
January	+1½	+ ½	+ 7½	+9	+7
February	0	+2½	+10	+5½	+3½
March	-1	+3½	+ 8½	+18	+6½
April	+1	+4½	+ 9	+5½	+4
May	+1	+4	+10	+7	+1
June	+1½	+2	+ 7	+8	+1
July	- ½	+2½	+ 7½	+2	+2
August	0	+1½	+ 9	+2	+3½
September	0	+1½	+ 9	+ ½	+3
October	0	+3	+ 9	+4	- ½
November	- ½	+6½	+12	+9½	+1½
December	+1½	+5	+10	+5	+2½

	1812 Exchequer /-	1813 Exchequer /-	1814 Exchequer /-	1815 Exchequer /-
January	+2	+9½	+5½	+4½
February	+5½	+7½	+6	+4
March	+3	+5½	+4½	+1
April	+2½	+8½	+1½	+2½
May	+ ½	+7½	+4	+8
June	- ½	+2½	+3½	+ ½
July	+1	+ ½	+4½	-2
August	-2½	+2	+5	-2
September	- ½	+2½	+2	-2½
October	0	+2½	+1½	-4
November	+1	+5½	+4½	+3½
December	+1	+5½	+3½	0

Notes and Sources:

Discount is preceded by a minus sign and Premium by a plus sign. Discounts and Premiums on Exchequer bills are expressed in shillings and pence per cent. Naval bills are rates %. Until April, 1794 holders of Navy bills were not paid interest, but Pitt reformed the bills and made them redeemable after 15 months. In January, 1797, the Navy bill was again reformed into 90 day bills, becoming interest at 3½d% per day and in January, 1803 the rate became 3d a day - Beveridge, Prices and Wages, pp. 519 and 527.

Sources: appdx. to Annual Register and see also Committee on Bank Charter, 1831-32, appdx. 94 and Army, P.M.G. 1/31 fol. 487. No information is available on Navy bills after April 1797 when the reformed format came into operation. Presumably they circulated at par thereafter. No information is available for 1798 and 1805.

Table 22. Liabilities and Assets of the Bank of England, 1720-1815 in £ millions.

Year	Notes in Circulation	Drawing Accounts	Private Deposits	Total Deposits	Bullion	Public Securities	Private Securities: Bills & Notes Discounted	Securities: Total	Rest
	£m.	£m.	£m.	£m.	£m.	£m.	£m.	£m.	£m.
1720	2.5	1.6			1.0				0.1
1721	1.9	1.1			1.0				0.1
1722	2.8	1.2			1.2				0.2
1723	3.3	0.8			1.7				0.4
1724	3.8	1.5			1.9				0.5
1725	4.5	1.2			1.2				0.3
1726	3.0	1.7			1.8				0.3
1727	4.5	2.1			3.0				0.3
1728	4.3	2.3			2.4				0.3
1729	4.2	1.9			3.2		0.3		0.3
1730	4.4	1.9			2.2		0.3		0.3
1731	5.2	1.8			2.7		0.2		0.3
1732	4.6	2.5			2.5		0.2		0.3
1733	4.5	2.0			3.4		0.2		0.3
1734	4.6	2.9			3.7		0.3		0.3
1735	4.7	2.9			3.7		0.1		0.3
1736	5.1	2.6			4.0		0.1		0.3
1737	4.4	2.6			3.3		0.1		0.3
1738	4.6	2.5			3.0		0.2		0.3
1739	4.1	2.7			4.1		0.1		0.3
1740	4.4	2.8			4.8		0.1		0.3
1741	4.1	3.2			4.1		0.1		0.3
1742	5.0	2.7			3.4		0.1		0.3
1743	4.2	2.7			2.6		0.1		0.4
1744	4.2	2.9			1.7		0.1		0.4
1745	3.5	2.1			0.8		0.1		0.3
1746	3.9	1.9			2.3		0.1		0.3
1747	3.7	2.4			1.9		0.1		0.3
1748	3.8	1.7			2.2		0.2		0.3

Table 22 (continued). Liabilities and Assets of the Bank of England, 1720-1815 in £ millions

Year	Notes in Circulation	Drawing Accounts	Private Deposits	Total Deposits	Bullion	Public Securities	Securities: Private Bills & Notes Discounted	Securities: Total	Rest
	£m.	£m.	£m.	£m.	£m.	£m.	£m.	£m.	£m.
1749	4.2	1.9			2.0		0.2		0.3
1750	4.3	1.9			2.0		0.1		0.4
1751	5.2	1.9			3.0		0.2		0.3
1752	4.7	2.1			2.7		0.1		0.3
1753	4.4	1.7			2.3		0.2		0.3
1754	4.1	1.7			2.8		0.3		0.3
1755	4.1	2.3			3.8		0.2		0.3
1756	4.5	2.8			4.0		0.2		0.3
1757	5.1	3.0			3.7		0.1		0.3
1758	4.9	2.3			2.2		0.2		0.3
1759	4.8	1.6			2.2		0.4		0.3
1760	4.9	1.9			2.6		0.3		0.3
1761	5.2	1.8			2.0		0.6		0.4
1762	5.9	2.1			3.1		1.2		0.5
1763	5.3	1.6			0.4		1.6		0.5
1764	6.2	1.5			1.9		2.0		0.5
1765	-	-			-		-		-
1766	5.8	1.5			1.9		1.6		0.5
1767	5.6	1.6			0.8		1.8		0.4
1768	5.8	1.8			1.6		1.6		0.5
1769	5.7	1.8			1.4		2.0		0.4
1770	5.2	1.8			2.9		2.4		0.6
1771	6.8	1.7			2.3		1.9		0.6
1772	6.0	1.6			1.5		2.5		0.7
1773	6.0	1.8			1.2		1.2		0.6
1774	-	-			-		-		-
1775	8.7	2.1			6.8		0.7		0.9
1776	8.6	2.1			5.1		0.8		0.9
1777	8.0	1.9			3.3		1.2		1.0
1778	7.1	2.2		4.7	2.6	7.2	2.1	3.2	1.2
1779	8.1	2.2		4.8	3.8	8.2	1.0	2.2	1.3
1780	7.4	2.3		5.7	3.9	7.9	1.1	2.7	1.4

Table 22 (continued). Liabilities and Assets of the Bank of England, 1720-1815 in £ millions

Year	Notes in Circulation	Drawing Accounts	Private Deposits	Total Deposits	Bullion	Public Securities	Private Bills & Notes Discounted	Securities Total	Rest
	£m.	£m.	£m.	£m.	£m.	£m.	£m.	£m.	£m.
1781	6.7	2.6		5.9	3.1	7.6	1.7	3.5	1.7
1782	7.4	2.5		6.4	2.1	10.0	2.1	3.9	1.9
1783	7.0	1.9		5.3	1.0	9.8	2.5	3.5	2.0
1784	5.9	2.0		5.1	1.1	8.1	2.7	3.9	2.1
1785	6.2	2.3		6.5	4.1	7.0	3.4	4.1	2.5
1786	7.9	2.5		6.0	6.1	7.4	2.6	3.4	2.6
1787	9.0	2.3		5.8	6.0	7.9	2.6	3.7	2.8
1788	9.8	2.4		5.4	6.3	8.3	2.8	3.3	2.9
1789	10.5	2.8		6.0	7.9	9.0	1.2	2.3	2.8
1790	10.8	3.0		6.2	8.5	9.2	0.7	2.0	2.7
1791	11.6	3.3		6.4	8.0	10.7	0.5	2.1	2.7
1792	11.2	2.6		5.5	5.9	10.3	1.4	3.2	2.7
1793	11.4	3.0		5.9	4.7	10.0	3.5	5.4	2.8
1794	10.5	2.8		6.9	6.9	9.4	2.5	4.1	2.9
1795	12.4	3.7		7.1	5.6	13.2	2.9	3.7	3.0
1796	10.0	2.5		6.2	2.3	11.9	3.5	5.2	3.2
1797	10.4	2.6		6.3	2.6	10.2	5.4	7.3	3.4
1798	12.6			7.2	6.2	11.1	5.0	6.0	3.4
1799	13.2			7.9	7.3	10.5	5.4	6.5	3.2
1800	15.9			7.7	5.6	13.8	6.4	8.0	3.8
1801	15.8			9.4	4.5	13.9	7.9	10.4	4.0
1802	16.7			8.3	4.0	13.9	7.5	10.7	4.1
1803	16.5			8.9	3.7	11.4	10.7	14.0	4.5
1804	17.4			9.2	4.6	14.8	10.0	11.6	4.7
1805	16.9			13.1	6.8	14.2	11.4	14.1	4.8
1806	16.8			9.8	6.1	14.5	12.4	13.5	4.9
1807	16.7		1.6	14.2	6.3	13.4	13.5	15.3	4.9
1808	17.1		1.9	13.6	6.9	14.6	12.9	13.8	5.1

Table 22 (continued). Liabilities and Assets of the Bank of England, 1720-1815 in £ millions

Year	Notes in Circulation	Drawing Accounts	Private Deposits	Total Deposits	Bullion	Public Securities	Private Securities: Bills & Notes Discounted	Securities: Total	Rest
	£m.	£m.	£m.	£m.	£m.	£m.	£m.	£m.	£m.
1809	18.9		1.5	12.5	4.1	15.0	15.5	16.3	5.1
1810	22.5		1.4	13.4	3.3	15.8	20.1	22.4	5.6
1811	23.3		1.6	11.7	3.3	19.5	14.3	17.6	5.8
1812	23.3		1.6	12.0	3.0	21.6	14.3	16.5	6.2
1813	24.0		1.8	12.2	2.8	25.3	12.3	13.7	6.6
1814	26.9		2.4	14.5	2.2	29.3	13.3	15.9	7.0
1815	26.9		1.7	13.5	2.7	25.9	14.9	18.9	8.0

Notes and Sources:

a) Notes in Circulation to 1778 from: Clapham, The Bank, Vol. 1, pp. 295-296. From 1778, Committee on Bank Charter, 1831-32 appdx. 5. For 1720-64 the figures are for 31 August each year; for 1766-73 for 28 February each year and for 1773-1815 they are the averages for 31 August and 29 February. Figures for February and August are in appdx. 5 of Committee on Bank Charter, 1831-32.

b) Drawing accounts from Clapham cited above - they are the major part of deposits, and no figures are available for total deposits before 1778, and total liabilities can be represented before that date as Notes in Circulation plus Drawing Accounts. Balances struck as for note (a) above.

c) Private Deposits 1807-15 from Committee on Bank Charter, 1831-32 appdx. 32. No figures for this item are available before 1807. The difference between Total Deposits and Private Deposits is Government Deposits. Balances struck as for note (a) above.

d) Total Deposits 1778-1815 from Committee on Bank Charter, 1831-32, appdxs. 24 and 32. Balances struck as for note (a) above.

e) Bullion, same sources as note (a) above. Bullion covers gold and silver. Balances struck as for note (a) above.

f) Public Securities from Committee on Bank Charter, 1831-32 appdx. 5. No figures available before 1778. Balances struck as for note (a) above.

Notes and Sources (Table 22, continued)

g) Bills and Notes Discounted for 1720-1792 the figures are an estimate based on the capitalised value of the Bank's annual income from Bills and Notes Discounted - the figures from Clapham, The Bank, Vol. 1 appdx. E.
The conversion at an assumed rate of 5% was done by Lovell, 'Role of the Bank of England' T.1 p.9 and see pp. 18-19.
For 1793-1815 - Committee on Bank Charter, 1831-32, appdxs. 58 and 59.

h) Total Private Securities from Committee on Bank Charter, 1831-32 appdx. 5. It includes Notes and Bills Discounted and other Private Securities. Balance struck as in note (a) above.

i) Rest is a reserve fund at the Bank instituted in 1720 as a kind of working capital - Andreades, History of the Bank, p. 147 and Committee on Bank Charter 1831-32 paras. 2820-21. Sources as in note (a) above.

Note: The balances for notes outstanding on a quarterly basis 1790-1815 was published by Committee on Bank Charter, 1831-32 appdx. 82 and on a weekly basis 1792-97 in appdx. 83. Balances of commercial discounts on a quarterly basis 1794-1815 are in Silberling, 'British Prices' p. 256.

Table 23. Unfunded Debt Held by the Bank of England, 1788-1815.

Year at 25 February	Exchequer Bills Purchased in the Market	Total Exchequer Bills Held	Treasury Bills	Navy Bills	Other Bills	Total
	£m.	£m.	£m.	£m.	£m.	£m.
1788	-	7.3	-	-	-	7.3
1789	-	7.9	-	-	-	7.9
1790	-	7.9	-	-	-	7.9
1791	-	9.5	-	-	-	9.5
1792	-	9.4	-	0.5	1.1	11.0
1793	0.3	9.6	0.1	0.8	1.0	11.5
1794	0.2	8.0	0.7	1.2	0.9	10.8
1795	-	8.6	2.1	1.7	0.7	13.1
1796	0.8	10.8	0.7	0.7	0.6	12.8
1797	0.4	8.2	1.5	-	0.5	10.2
1798	1.6	9.4	-	-	0.4	9.8
1799	1.2	9.7	-	-	0.4	10.1
1800	3.4	12.9	-	-	0.3	13.2
1801	3.6	14.8	-	-	0.4	15.2
1802	4.3	13.9	-	-	0.4	14.3
1803	4.0	9.2	-	-	0.4	9.6
1804	7.1	14.4	-	-	0.4	14.8
1805	5.2	16.8	-	-	0.4	17.2
1806	6.2	14.2	-	-	0.4	14.6
1807	8.1	13.4	-	-	0.4	13.8
1808	8.5	14.0	-	-	0.4	14.4
1809	8.7	14.6	-	-	0.8	15.4
1810	8.7	14.2	-	-	0.8	15.0
1811	8.5	17.2	-	-	0.8	18.0
1812	9.1	21.7	-	-	0.8	22.5
1813	9.9	25.0	-	-	0.8	25.8
1814	10.0	23.6	-	-	0.8	24.4
1815	8.5	27.2	-	-	0.8	28.0

Notes and Sources:

The source is Committee on Resumption, 1819, appdx. A.5 and A.9. Other bills include American debentures and short term advances to pay dividends on the National Debt.

The figures are averages of the Banks holdings at 31 August and 28 February.

Table 24. Profits of the Bank of England, 1790-1815.

Date	Amount of Capital £000	Annual Profit £000	Annual Dividend £000	Occasional Bonuses £000
1790	11,642	753	815	2,757
1791	11,642	823	815	2,765
1792	11,642	780	815	-
1793	11,642	908	815	-
1794	11,642	985	815	-
1795	11,642	930	815	-
1796	11,642	951	815	-
1797	11,642	1,041	815	-
1798	11,642	758	815	-
1799	11,642	1,464	815	1,164
1800	11,642	1,822	815	-
1801	11,642	1,345	815	582
1802	11,642	1,425	815	296
1803	11,642	1,357	815	-
1804	11,642	1,523	815	582
1805	11,642	1,522	1,397	-
1806	11,642	1,461	1,397	-
1807	11,642	1,094	1,164	-
1808	11,642	1,347	1,164	-
1809	11,642	1,284	1,164	-
1810	11,642	1,662	1,164	-
1811	11,642	1,374	1,164	-
1812	11,642	1,600	1,164	-
1813	11,642	1,595	1,164	-
1814	11,642	1,559	1,164	-
1815	11,642	2,257	1,164	-

<u>Sources:</u>

Quin, The Trade of Banking in England, appdx. E, and Committee on Bank Charter, 1831-32 appdx. 34.

Table 25. Imlah's Volumes and Values of Exports, Imports and Re-exports, 1796-1815.

	1	2	3	4	5	6
	Volume Figures for:			Computed Values for:		
Year	Exports £m. at 1880 prices	Imports £m. at 1880 prices	Re-exports £m. at 1880 prices	Exports £m.	Imports £m.	Re-exports £m.
1796	9.3	17.7	5.6	30.1	39.6	8.5
1797	7.9	14.4	5.7	27.5	34.4	9.3
1798	8.7	21.4	6.4	32.2	49.6	11.3
1799	10.4	23.0	5.4	36.8	50.9	9.4
1800	10.5	23.4	9.1	37.7	62.3	14.7
1801	11.2	26.0	7.9	40.6	68.7	12.9
1802	11.3	23.5	9.5	45.9	54.7	12.9
1803	9.5	24.2	6.0	36.9	53.9	9.1
1804	10.1	24.6	6.6	38.2	57.3	11.0
1805	10.2	26.1	5.4	38.1	61.0	10.0
1806	11.2	24.0	5.4	40.9	53.3	9.2
1807	10.0	25.2	5.2	37.2	53.8	8.3
1808	9.9	22.6	4.1	37.3	51.5	6.5
1809	13.4	25.1	8.2	47.4	73.7	14.3
1810	13.7	34.1	7.4	48.4	88.5	12.5
1811	9.1	24.4	4.4	32.9	50.7	6.7
1812	11.8	22.2	6.2	41.7	56.0	9.1
1813	-	-	-	-	-	-
1814	13.8	22.0	12.3	45.5	80.8	24.8
1815	17.2	25.1	10.2	51.6	71.3	16.8

<u>Source</u>:

Imlah, Economic Elements, pp. 37/38 pp. 94-95 - columns 4-6 are in current prices.

Table 26. Regional Distribution of British Trade 1788–1815 (Official Values in £ Millions)

Year	EUROPE Exports	EUROPE Re-exports	EUROPE Imports	UNITED STATES Exports	UNITED STATES Re-exports	UNITED STATES Imports	BRITISH NORTH AMERICA Total Exports	BRITISH NORTH AMERICA Imports	BRITISH WEST INDIES Total Exports	BRITISH WEST INDIES Imports	FOREIGN WEST INDIES AND SOUTH AMERICA Total Exports	FOREIGN WEST INDIES AND SOUTH AMERICA Imports	REST OF THE WORLD Total Exports	REST OF THE WORLD Imports	TOTALS Exports	TOTALS Re-exports	TOTALS Impor
	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m
1788	5.1	2.7	6.4	1.5	0.3	1.0	0.9	0.3	1.8	4.1	-	0.3	5.0	5.9	12.7	4.6	18.0
1789	5.2	3.0	6.3	2.1	0.4	1.1	0.9	0.2	1.8	3.9	-	0.3	5.8	6.0	13.8	5.4	17.8
1790	4.8	2.9	7.7	3.0	0.4	1.2	0.8	0.2	2.0	3.9	-	0.2			14.9	5.0	19.1
1791	5.3	3.4	8.0	3.7	0.5	1.2	0.9	0.2	2.6	3.7	0.1	0.2			16.8	5.6	19.7
1792	5.7	3.5	8.4	3.8	0.5	1.0	1.1	0.3	2.9	4.2	0.1	0.3			18.3	6.1	19.7
1793	3.2	4.2	6.8	3.1	0.4	0.9	0.9	0.2	2.7	4.4	-	0.3			13.9	5.8	19.3
1794	4.2	7.1	7.0	3.5	0.4	0.6	1.0	0.2	3.6	4.8	0.1	0.3			16.7	8.4	22.3
1795	4.1	8.0	6.7	4.7	0.5	1.4	1.0	0.3	2.5	4.1	0.2	0.4			16.5	8.5	22.7
1796	4.3	8.6	8.8	5.5	0.5	2.1	0.8	0.2	3.2	4.0	1.0	0.9			19.1	8.9	23.2
1797	3.6	9.4	6.2	4.5	0.6	1.2	0.8	0.2	3.1	4.3	0.7	1.1			16.9	9.4	21.0
1798	3.9	10.7	7.8	4.9	0.7	1.8	1.1	0.2	5.2	5.4	1.3	1.2			20.0	10.6	27.0
1799	4.7	7.5	9.1	6.3	0.7	1.8	1.1	0.2	5.9	6.1	1.0	1.4			24.1	9.6	26.8
1800	7.3	14.9	9.4	6.1	1.8	2.4	1.0	0.4	4.1	7.4	0.5	1.5			24.3	13.8	30.6
1801	-	-	9.5	7.2	0.3	2.7	1.0	0.5	4.4	8.4	0.6	2.6			25.7	12.1	32.8
1802	11.4	11.5	9.1	5.1	0.2	1.9	1.4	0.4	3.9	8.5	0.3	1.7			27.0	14.4	31.4
1803	8.0	7.2	8.8	5.1	0.2	1.9	1.1	0.3	2.4	6.1	0.2	0.4			22.1	9.3	28.0
1804	8.2	7.5	8.6	6.2	0.2	1.7	1.1	0.4	4.3	7.7	0.3	0.3			23.9	10.5	29.2
1805	8.9	6.4	10.0	6.9	0.2	1.8	0.9	0.3	3.8	6.7	0.3	0.7			25.0	10.0	30.3
1806	7.2	5.9	8.2	8.3	0.3	2.0	1.0	0.3	4.7	8.8	1.8	1.2			27.4	9.1	28.8
1807	6.1	6.4	8.0	7.7	0.2	2.8	1.1	0.5	4.6	8.0	1.3	1.3			25.2	9.4	29.9
1808	6.5	4.6	4.2	3.9	0.1	0.8	1.1	0.8	5.9	8.8	4.8	2.8			26.7	7.8	29.6
1809	11.6	11.3	9.5	5.0	0.2	2.2	1.7	0.7	6.0	7.8	6.4	5.1			35.1	15.2	33.8
1810	12.0	7.6	12.5	7.6	0.2	2.6	1.8	0.9	4.8	8.3	6.0	7.0			34.9	10.9	41.4
1811	9.7	5.3	4.4	1.4	0.0	2.3	1.9	0.8	4.1	8.5	3.0	3.8			24.1	8.3	28.6
1812	12.0	8.8	6.2	4.1	0.0	1.3	1.4	0.7	4.8	7.5	4.1	2.5			31.2	12.0	28.6
1813	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-
1814			9.8	-	-	-	4.1	0.3	6.3	8.5	4.3	6.2			36.1	20.5	36.6
1815			8.2	11.4	-	2.4	3.1	0.4	6.9	8.5	3.8	3.4			32.9	16.9	32.9

Notes and Sources: The basic sources used were: Moreau, State of Trade of G.B.; McPherson, Annals of Commerce; Marshall, Digest of all the Accounts and Mitchell, Abstract of Histroical Statistics, p.281. I calculated the Rest of the World as a residual. The basis for recording official values is discussed in Clark, Guide to English Commercial Statistics and Schlote, British Overseas Trade. My sources for Europe are also included in the references under Tables 27-29. Official values provide indicators of changes in volume - Clark, Guide to English Commercial Statistics, pp.33-42. Their defects even for this purpose have been outlined by Schlote, British Overseas Trade, pp.7, 16 and 17 and Deane and Cole, British Economic Growth, pp.43-44.

Table 27. Official Values of Great Britain Exports and Re-exports to Europe, 1793-1815 - Broken Down by Country.

Year	Russia £m.	Sweden £m.	Norway & Denmark £m.	Prussia £m.	Germany £m.	Holland & Belgium £m.	France £m.	Portugal £m.	Spain £m.	Gibraltar & Malta £m.	Italy £m.	Turkey & Legant £m.	Total £m.
Average 1784/1792	0.4	0.1	0.3	0.1	1.6	2.3	0.9	0.7	0.7	0.2	0.8	0.1	8.2
1793	0.3	0.1	0.3	0.2	2.5	2.4	0.2	0.6	0.5	0.1	0.5	0.1	7.8
1794	0.5	0.1	0.5	0.3	5.9	2.3	-	0.6	0.7	0.1	0.6	0.1	11.7
1795	0.9	0.1	0.5	0.4	8.1	0.1	0.1	0.7	0.5	0.1	0.9	0.2	12.6
1796	0.7	0.1	0.4	0.5	6.2	0.4	-	0.9	0.6	0.1	0.8	0.1	10.8
1797	0.4	0.1	0.5	0.5	6.6	1.1	0.7	0.7	-	0.1	0.1	-	10.8
1798	0.6	0.1	0.4	0.3	8.1	0.7	-	0.9	-	0.2	0.2	0.1	11.5
1799	0.8	0.1	0.3	0.3	6.5	0.0	-	1.2	-	0.4	0.4	0.2	10.0
1800	0.9	0.1	0.4	0.6	9.5	2.8	1.2	1.2	-	0.3	0.6	0.2	17.7
1801	0.8	0.1	0.3	0.5	8.8	3.9	1.2	0.8	0.6	0.5	0.4	0.2	17.0
1802	1.3	0.1	0.4	0.8	8.0	4.4	2.4	1.3	1.4	0.5	2.0	0.2	22.7
1803	1.3	0.1	1.7	1.5	5.1	1.7	1.2	0.6	0.8	0.6	0.6	0.2	15.3
1804	1.2	0.1	3.8	3.9	1.3	2.3	-	0.9	1.0	0.7	0.4	0.1	15.8
1805	1.5	0.1	4.4	5.0	1.7	0.4	-	1.4	0.1	0.3	0.5	0.1	15.5
1806	1.7	0.2	1.4	0.5	5.6	1.2	-	1.4	0.1	0.8	0.3	0.1	12.2
1807	1.7	0.7	4.9	0.2	0.4	1.7	-	1.0	0.4	1.6	0.5	-	12.7
1808	0.4	2.4	0.0	0.1	1.5	0.3	-	1.1	0.9	4.3	0.3	-	11.3
1809	0.9	3.5	0.3	0.6	6.0	2.5	-	1.4	2.4	5.8	0.3	0.1	23.7
1810	0.9	4.9	0.2	2.6	2.2	0.5	0.1	2.0	1.4	4.0	0.2	0.1	19.6
1811	0.8	0.5	0.7	0.1	0.1	0.3	0.4	5.1	1.2	5.4	0.3	0.3	15.0
1812	1.8	2.3	0.8	0.1	0.2	0.3	1.0	3.8	1.1	8.7	0.4	0.6	21.0
1813	-	-	-	-	-	-	-	-	-	-	-	-	-
1814	1.4	0.9	0.4	1.6	9.8	8.9	2.2	2.5	2.7	2.5	2.3	0.2	35.2
1815	1.2	0.6	0.7	1.1	8.1	8.2	1.4	2.1	0.8	2.6	1.9	0.2	28.9

Sources: See Table 26 and Crouzet, L'Economie Britannique, Vol. 2 table 5.

able 28. Official Values of British Products and Manufactures Exported to Europe, 1784–1812.

ear	Russia £m.	Sweden £m.	Norway & Denmark £m.	Prussia £m.	Germany £m.	Holland & Belgium £m.	France £m.	Portugal £m.	Spain £m.	Gibraltar & Malta £m.	Italy £m.	Turkey & Levant £m.	Total £m.
erage 784/1792	0.2	-	0.1	0.1	0.7	1.2	0.6	0.6	0.6	0.1	0.6	0.1	4.9
793	0.2	-	0.1	-	0.7	0.7	0.1	0.5	0.4	0.1	0.4	-	3.2
794	0.2	-	0.2	0.1	1.6	0.5	-	0.5	0.5	0.1	0.4	0.1	4.2
795	0.4	-	0.2	0.1	1.7	-	-	0.6	0.3	0.1	0.6	0.1	4.1
796	0.4	-	0.2	0.2	1.5	-	-	0.8	0.4	0.1	0.6	0.1	4.3
797	0.2	0.1	0.2	0.3	2.0	0.1	-	0.6	-	-	0.1	-	3.6
798	0.4	-	0.2	0.2	2.1	-	-	0.7	-	0.1	0.2	-	3.9
799	0.4	-	0.2	0.2	2.0	-	-	1.3	-	0.3	0.2	0.1	4.7
800	0.5	-	0.2	0.3	4.4	0.1	0.1	1.0	-	0.2	0.4	0.1	7.3
802	0.8	-	0.2	0.4	4.0	0.8	0.6	1.5	1.0	0.5	1.5	0.1	11.4
803	0.9	-	0.9	0.9	2.5	0.3	0.3	0.5	0.6	0.5	0.5	0.1	8.0
804	1.0	-	2.2	1.6	0.6	0.3	-	0.8	0.7	0.6	0.3	0.1	8.2
805	1.1	-	2.5	2.5	0.7	0.2	-	1.2	-	0.2	0.4	0.1	8.9
806	1.2	0.1	0.9	0.2	2.5	0.1	-	1.3	-	0.6	0.2	0.1	7.2
807	1.2	0.1	2.0	0.1	0.1	0.1	-	0.8	-	1.3	0.4	-	6.1
808	0.2	0.9	-	-	0.5	0.1	-	0.8	0.6	3.2	0.2	-	6.5
809	0.5	1.3	0.1	0.4	1.7	0.7	-	1.1	1.8	3.7	0.3	-	11.6
810	0.5	2.6	0.1	1.7	1.2	0.1	0.1	1.3	1.0	3.4	0.2	-	12.0
811	0.4	0.4	0.3	-	-	-	-	3.8	0.9	3.6	0.2	0.1	9.7
812	0.7	0.8	0.4	-	-	-	-	3.2	0.8	5.5	0.3	0.3	12.0

Sources See tables 26 and 27.

Table 29. Official Value of Re-exports from Great Britain to Europe Broken Down by Country, 1784-1812.

Year	Russia £m.	Sweden £m.	Norway & Denmark £m.	Prussia & Poland £m.	Germany £m.	Netherlands £m.	France £m.	Portugal £m.	Spain £m.	Gibraltar £m.	Italy £m.	Malta £m.	Total £m.
1784	0.1	-	0.1	-	0.6	0.8	0.2	-	-	-	0.1		1.9
1785	0.1	-	0.1	-	0.7	1.2	0.4	-	0.1	-	0.1		2.7
1786	0.1	-	0.2	-	0.7	0.9	0.2	-	0.1	-	0.1		2.3
1787	0.1	-	0.1	-	0.7	0.9	0.3	-	0.1	-	0.1		2.3
1788	0.1	-	0.1	0.1	0.8	1.0	0.4	-	0.1	-	0.1		2.7
1789	0.1	-	0.1	-	0.8	1.4	0.4	-	0.1	-	0.1		3.0
1790	0.2	-	0.1	-	0.9	1.2	0.3	-	0.1	-	0.1	2.9	2.9
1791	0.3	-	0.1	0.1	1.1	1.1	0.5	-	0.1	-	0.1		3.4
1792	0.4	0.1	0.1	-	0.8	1.3	0.5	-	0.1	-	0.2		3.5
1793	0.1	0.1	0.1	0.1	1.7	1.6	0.2	0.1	0.1	-	0.1		4.2
1794	0.3	0.1	0.3	0.1	4.3	1.5	-	0.1	0.2	-	0.2		7.1
1795	0.5	0.1	0.3	0.2	6.3	0.1	0.1	-	0.1	-	0.3		8.0
1796	0.4	0.1	0.3	0.3	6.6	0.6	-	0.1	0.1	-	0.1		8.6
1797	0.2	0.1	0.4	0.3	6.3	1.3	0.7	0.1	-	-	-		9.4
1798	0.3	-	0.4	0.3	8.6	0.9	-	0.1	-	0.1	-		10.7
1799	0.3	-	0.1	0.1	6.6	-	-	0.1	-	0.1	0.2		7.5
1800	0.5	-	0.4	0.5	8.2	3.8	1.2	0.1	-	0.1	0.1		14.9
1802	0.4	0.1	0.2	0.4	4.0	3.6	1.8	0.1	0.2	0.1	0.5	-	11.5
1803	0.3	0.1	0.7	0.6	2.6	1.3	0.9	-	0.2	0.1	0.1	-	7.2
1804	0.2	0.1	1.6	2.3	0.7	2.1	-	0.1	0.2	0.1	0.1	-	7.5
1805	0.4	0.1	1.8	2.5	0.9	0.2	-	0.1	0.1	-	0.1	-	6.4
1806	0.5	0.1	0.6	0.3	3.1	1.0	-	0.1	-	0.1	-	-	5.9
1807	0.5	0.5	2.9	0.1	0.3	1.5	-	0.2	0.1	0.2	0.1	-	6.4
1808	0.2	1.5	-	-	1.1	0.2	-	0.2	0.2	0.3	0.1	0.7	4.6
1809	0.4	2.3	0.2	0.2	4.1	1.8	-	0.3	0.5	0.6	-	0.6	[illegible]
1810	0.3	2.3	0.1	0.9	0.9	0.4	0.7	0.6	0.3	0.6	-	0.3	7.6
1811	0.3	0.2	0.4	-	-	0.2	0.4	1.2	0.2	0.7	-	1.1	[illegible]
1812	1.1	1.5	0.3	0.1	0.2	0.3	1.0	0.4	0.2	1.0	-	2.2	5.8

Source: See Tables 26 and 27.

Table 30. Official Values of Selected British Imports in 1792, 1797, 1802, 1807 and 1815 in £000.

Raw Materials	1792 £000	1797 £000	1802 £000	1807 £000	1815 £000
Ashes	-	122	148	-	171
Barilla	-	28	85	-	41
Cochineal	-	17	283	-	89
Flax	480	401	529	821	633
Hemp	520	415	406	640	620
Indigo	21	48	68	-	774
Madder	-	166	-	-	245
Oil	-	253	314	-	134
Quicksilver	-	27	45	-	136
Linseed	-	88	133	146	-
Silk	720	536	686	743	1,030
Tallow	220	269	605	391	696
Tar	-	71	87	155	209
Timber	543	577	488	864	601
Bar Iron	580	361	517	-	208
Raw Cotton	1,130	734	2,002	2,610	3,318
Raw Wool	270	278	392	659	654
Linen Yarn	470	359	418	228	251
Foodstuffs					
Grain	840	1,179	1,160	920	396
Rice	-	88	74	-	76
Sugar	2,720	2,770	5,799	4,972	5,440
Coffee	500	2,392	3,035	2,822	5,303
Tea	1,300	1,624	2,736	1,239	2,560
Alcohol & Tobacco					
Wines	863	382	730	952	761
Spirits	-	310	655	713	762
Tobacco	424	261	254	244	414
Finished Goods					
Indian Piece Goods	697	-	1,750	541	985
Foreign Linens	1,700	-	312	356	136
Skins and Furs	-	244	295	-	199
Total Imports	19.7	27.0	31.4	29.9	32.9

Notes and Sources:

I gathered these figures from a variety of sources including Marshall, a Digest of the accounts; appdx. to Annual Register Chronicle for 1790-92; Appdx. to Cobbett's Parly. Debs. Vol. 1; Accounts and Papers, 1808-1817 passim.

Table 31. Official Values of Imports and Re-exports of Sugar, Coffee and Tea, 1792-1815.

Year	Sugar Imports	Sugar Re-exports	Coffee Imports	Coffee Re-exports	Tea Imports	Tea Re-exports
	£000		£000		£000	
1792	2,721	560	482	850	1,303	340
1793	2,955		651		1,589	
1794	3,348		1,396		2,365	
1795	2,901	770	2,214	4,370	2,693	460
1796	3,057		2,302		617	
1797	2,886	1,138	2,297	3,919	1,624	219
1798	3,663	1,276	2,748	5,404	4,487	392
1799	4,637		2,678		1,508	
1800	4,301		3,988		1,510	
1801	5,436		4,608		2,980	
1802	5,878	2,740	3,169	3,324	2,736	622
1803	4,356	1,817	1,498	1,613	3,085	589
1804	4,440	1,085	3,513	2,885	2,668	523
1805	4,337	1,060	2,394	2,472	2,854	600
1806	5,205	688	3,608	3,027	2,216	515
1807	4,972	1,539	2,821	3,143	1,260	610
1808	5,128	784	4,899	1,848	3,568	715
1809	5,451	1,713	4,711	5,845	2,164	704
1810	6,558	1,472	5,330	1,455	1,961	569
1811	5,346	1,215	3,765	1,418	2,121	631
1812	5,033	1,570	2,574	4,383	1,826	664
1813	-	-	-	-	-	-
1814	5,493	2,394	6,448	8,072	2,611	1,548
1815	5,440	1,984	5,340	6,074	2,560	891

<u>Sources</u>: Mitchell, Abstract of Historical Statistics, pp. 289 and 296; appdx. to Annual Register Chronicle, 1792; Parly. Debs. Vol. 1 appdx. Accounts and Papers, 1797-98, p.925 Accounts and Papers, 1798-99, p. 951.

Table 32. Imports of Raw Materials, 1792-1815.

Year	Flax tons 000	Tallow cwts. 000	Raw Wool lbs.m.	Raw Cotton lbs. m.	Hemp cwts. 000	Raw Silk 000 lbs.	Thrown Silk 000 lbs.	Timber (000 loads) From Baltic	From Canada
1792	12.0	202	4.5	34.8	614	900	426	277	3
1793	13.5	235	1.9	18.9	554	991	239	190	3
1794	17.5	202	4.5	24.2	583	599	307	170	1
1795	11.5	181	4.9	26.3	575	676	307	147	-
1796	16.0	331	3.5	32.0	618	999	360	199	1
1797	10.5	244	5.1	22.7	488	202	384	117	2
1798	19.5	440	2.7	31.2	648	688	351	141	2
1799	21.0	450	5.2	43.2	753	1,161	429	148	2
1800	20.5	416	8.6	55.6	596	804	303	189	3
1801	13.5	333	7.4	55.9	749	705	248	159	3
1802	14.0	557	7.7	60.0	488	527	360	253	5
1803	14.5	537	6.0	53.7	730	780	364	281	12
1804	17.5	534	8.2	61.3	727	979	375	275	15
1805	23.3	394	8.5	58.8	611	1,164	364	249	13
1806	17.7	537	7.3	57.5	730	784	463	144	16
1807	21.0	367	11.8	74.7	757	748	287	214	27
1808	11.0	148	2.4	43.5	260	297	393	27	60
1809	26.0	353	6.8	92.4	859	677	450	54	91
1810	25.5	479	10.9	131.6	956	1,328	401	136	125
1811	11.5	293	4.7	91.4	459	573	300	125	154
1812	18.0	309	7.0	62.8	852	1,272	532	27	172
1813	-	-	-	50.9	-	-	-	-	-
1814	25.5	589	15.7	56.4	545	1,601	585	126	51
1815	17.5	642	15.0	98.7	732	1,349	306	195	122

Sources:

Flax: Oddy, European Commerce 1805, p. 564 and Heckaher, Continental System, p. 242.
Tallow: Tooke, Thoughts and Details 1822, appdx. 2 p. 73.
Wool: Marshall, Digest of the Accounts, p. 110 and Hartwell, Yorkshire Woollen and Worsted Industry, T.3.
Cotton: Mitchell, Abstract of Historical Statistics, p. 178.
Hemp: Tooke, History of Prices, Vol. 2, p. 391.
Silk, Raw and Thrown: Mitchell, Abstract of Historical Statistics, p. 205 and Customs - 23289.
Timber: Accounts and Papers, 1826-27, p. 267 and Bliss, Timber Trade, p. 70.

Table 33. Price Indices for Exports, Imports and Domestic Products, 1790-1815.

Year	1 Export Price Index 1880 = 100	2 Index of Import Prices 1880 = 100	3 Domestic Products Price Index 1821-25 = 100	4 Index of Import Prices 1821-25 = 100	5 Index of Domestic and Import Prices 1821-25 = 100
1790			87	88	89
1791			85	95	90
1792			81	99	88
1793			92	101	97
1794			96	96	99
1795			114	110	115
1796	324	176	116	109	116
1797	348	174	101	114	106
1798	370	179	100	123	108
1799	354	180	117	130	125
1800	359	203	157	123	151
1801	363	215	162	127	156
1802	406	178	122	113	122
1803	388	185	120	126	124
1804	378	188	120	133	124
1805	373	195	134	139	136
1806	365	184	132	138	135
1807	372	181	128	137	131
1808	376	199	141	152	145
1809	354	237	154	157	155
1810	353	223	154	151	153
1811	362	180	149	133	145
1812	353	211	172	141	164
1813	-	-	173	156	169
1814	329	255	149	167	154
1815	300	217	125	144	130

Notes and Sources:

Indices 1 and 2 are merchandize price indices from Imlah, Economic Elements, pp. 94-98.

Indices 3, 4 and 5 from Gayer, Growth and Fluctuations, pp. 468-470. Gayer discusses the method of computing these indices at pp. 475-485.

Table 34. Annual Average Quotations of London Exchange on Hamburg and Deviations from the Par of Exchange, 1792-1815.

Year	Actual Quotations	Ratio of Gold to Silver	True Par	Percentage Deviation
1792	34.50	15.17	35.16	- 2.0
1793	36.33	15.00	34.77	+ 4.6
1794	36.65	15.37	35.63	+ 0.1
1795	33.67	15.55	36.04	- 6.7
1796	33.92	15.65	36.28	- 6.6
1797	36.75	15.41	35.72	+ 2.9
1798	37.58	15.59	36.14	+ 3.9
1799	34.92	15.74	36.48	- 4.4
1800	31.67	15.68	36.34	-12.9
1801	31.67	15.46	35.83	-11.7
1802	33.00	15.26	35.37	- 6.8
1803	34.25	15.41	35.72	- 4.2
1804	35.50	15.41	35.72	- 0.6
1805	34.83	15.79	36.60	- 4.9
1806	34.17	15.52	35.97	- 5.0
1807	34.58	15.43	35.76	- 3.4
1808	34.08	16.08	37.27	- 8.6
1809	29.75	15.96	37.00	-19.5
1810	29.92	15.77	36.56	-18.0
1811	24.92	15.53	36.00	-30.9
1812	28.17	16.11	37.34	-24.6
1813	27.75	16.25	37.67	-26.2
1814	30.42	15.04	34.86	-12.6
1815	31.67	15.26	35.37	-10.5

Notes and Sources:

The source is Silberling, 'British Financial Experience', p. 287.

In the 18th century England was on a gold standard and the rest of Europe on a silver standard. The par of exchange was determined by the market price of one metal in terms of another (see Ashton, An Economic History, p. 253 and Mushet, 'An Inquiry', 1810, p. 96). Between 1793 and 1815 the relative price of gold and silver fluctuated and Silberling found it necessary to calculate the true par of exchange on Hamburg for each year. Figures on the exchange rate between London and Paris and Lisbon are in Marshall, A Digest of the Accounts, p. 53., and Angell, Theory of International Prices, appdx. A. Monthly high and low quotations for the Hamburg exchange are in Committee on Resumption, 1819, appdx. 14.

Table 35. Annual Average Prices (in Paper and in Gold) of Spanish Dollars per Ounce, and Deviations from Par, 1790-1815.

Year	Actual Price (paper) (pence)	Theoretical Price (gold)	Deviation (pence)	Percentage Deviation (Units of 1%)
1792	63.9	60.2	+ 3.7	+ 6.2
1793	60.6	60.9	- 0.3	- 0.5
1794	60.0	59.4	+ 0.6	+ 1.0
1795	62.4	58.7	+ 3.7	+ 6.3
1796	63.4	58.4	+ 5.0	+ 8.6
1797	61.6	59.3	+ 2.3	+ 3.9
1798	60.0	58.6	+ 1.4	+ 2.4
1799	63.3	58.0	+ 5.3	+ 9.1
1800	67.2	58.2	+ 9.0	+15.5
1801	69.7	59.1	+10.6	+18.0
1802	65.8	59.8	+ 6.0	+10.0
1803	64.4	59.2	+ 5.2	+ 8.8
1804	63.8	59.2	+ 4.6	+ 7.8
1805	63.7	57.8	+ 5.9	+10.2
1806	65.4	58.8	+ 6.6	+11.1
1807	65.2	59.2	+ 6.0	+10.1
1808	63.5	56.8	+ 6.7	+11.8
1809	65.6	57.3	+ 8.3	+14.5
1810	67.4	58.0	+ 9.4	+16.2
1811	71.6	58.8	+12.8	+21.8
1812	75.1	56.7	+18.4	+32.4
1813	81.2	56.2	+23.0	+40.9
1814	75.3	60.7	+14.6	+24.1
1815	69.2	59.8	+ 9.4	+15.7

<u>Notes and Sources:</u>

Silberling, 'British Financial Experience', p. 287.

Spanish dollars or Doubloons were silver coins. For other indicators of the fall in the mint relative to the market price of gold see Mushet 'An Inquiry', 1810, pp. 103-105 and Viner Studies, pp. 143-144.

Table 36. Indicators of Capital Formation, 1750-1815.

Years	Timber Imports £000 official values	White Glass Production (000 tons)	Enclosure Bills Passed	Brick Production millions	Canals Authorised Capital £000	Ships Built 000 tons
1746-50	140	2.3	-		-	
1751-55	168	3.6	8		-	
1756-60	164	4.2	23		-	
1761-65	199	5.2	45		-	
1766-70	220	5.5	41		-	
1771-75	254	7.7	61		-	
1776-80	242	6.5	67		-	
1781-85	256	5.8	13		-	
1786-90	334	7.3	26	620	209	63
1791-95	471	8.2	33	763	1,600	62
1796-1800	539	7.6	68	526	446	88
1801-05	627	9.2	91	771	514	91
1806-10	485	9.2	91	852	416	-
1811-15	579	7.6	108	868	861	-

Notes and Sources:

Timber Imports: Mitchell, Abstract of Historical Statistics, p. 286. The figures relate to England and Wales to 1790 and G.B., thereafter. They provide a volume index.

Glass Production: Mitchell, Abstract of Historical Statistics, p. 267. This is glass other than bottles. Figures relate to England and Wales.

Enclosure Bills Passed: number of bills passed by Parliament from Committee on Agricultural Distress, 1836, appdx. 16.

Brick Production: Shannon, 'Bricks', p. 314.

Canals: capital authorised by Parliament for expenditure on canal construction - Gayer, Growth and Fluctuations, Vol. 1, pp. 35, 69, 95 and 121.

Ships built in Britain: Mitchell, Abstract of Historical Statistics, p. 220.

The figures are annual averages for the 5 year periods.

Table 37. Government Expenditure Abroad, 1793-1815.

Year	For the Army in Europe	Subsidies, Loans and Payment to Foreign States
	£m.	£m.
1793	0.6	0.8
1794	2.3	3.0
1795	4.4	5.1
1796	1.0	3.4
1797	0.2	1.4
1798	0.2	0.2
1799	1.3	2.1
1800	1.1	3.4
1801	1.7	2.2
1802	0.6	0.8
1803	0.2	0.1
1804	0.1	0.6
1805	0.8	1.9
1806	0.7	1.1
1807	1.7	0.9
1808	3.9	2.8
1809	5.6	2.7
1810	6.8	2.3
1811	11.6	2.2
1812	13.0	1.8
1813	17.9	8.2
1814	15.5	6.8
1815	7.0	4.9

<u>Source</u>:

Silberling 'Financial and Monetary Policy of G.B.', p. 227. Details of Subsidies to foreign powers can be found also in Chisholm Report., 1868-69, p. 681; Committee on Suspension, 1797, appdx. 20 and Commons Journal, 1801, p. 897.

Table 38. The Inflationary Impact of Government Expenditure, 1793-1815.

Year	1 Total Government Expenditure £m.	2 Total Wartime Expenditure £m.	3 Additions to the Interest Bill £m.	4 Increment to Expenditure on Goods and Services (1-2) £m.	5 Additional Loans from the Bank of England £m.
1793	27.7	7.9	0.8	7.1	0.5
1794	33.5	13.3	0.5	12.8	-
1795	45.3	24.9	1.0	23.9	3.7
1796	56.6	35.5	1.9	33.6	2.4
1797	56.2	33.3	4.0	29.3	0.7
1798	49.0	25.8	7.9	17.9	1.6
1799	59.3	35.2	9.5	25.7	1.0
1800	62.4	37.8	7.2	30.6	4.3
1801	64.1	38.8	8.0	30.8	4.4
1802	50.7	30.4	8.2	22.2	4.4
1803	54.5	28.0	10.5	17.5	1.9
1804	68.0	40.5	10.3	30.2	5.3
1805	77.2	48.4	11.8	36.6	4.7
1806	74.5	45.2	12.5	32.7	5.0
1807	81.2	50.5	13.3	37.2	3.9
1808	87.3	55.6	12.8	42.8	5.1
1809	88.5	55.8	13.9	41.9	5.5
1810	91.1	57.2	14.3	42.9	6.3
1811	94.7	60.1	14.4	45.7	9.0
1812	102.9	66.0	16.0	50.0	12.1
1813	116.5	77.7	17.8	59.9	15.8
1814	127.4	89.6	19.1	70.5	19.8
1815	107.8	70.7	21.9	48.8	16.4

Notes and Sources:

1. Total Government Expenditure is defined as equal to Total Government Revenue taxed or borrowed from the private sector. The figures are from table 4 columns 1, 4, 5 and 10.

2. Total Wartime Expenditure is equal to all additional expenditure over and above the average annual level, 1788-92 - see table 4, column 13.

3. Interest Payments are the only "transfer" payments readily calculated from published accounts. It is clear, however, from the Supply Estimates that expenditure under the headings of Military and Civil Government should also be classified as transfer payments - particularly pensions. The figures in column 3 (from table 15) underestimate transfer payments.

Column 4 includes additional expenditure by the Government on imported goods and services for which no figures are available. Total expenditure thus overestimates the inflationary potential of wartime public expenditure by the degree to which it includes transfer payments and expenditure in imports.

Column 5 is the average value of public securities held by the Bank of England as at 28 February and 31 August in each year minus the amount held as annual average for the period 1788-92. In so far as the Bank financed loans by the private sector to the Government this figure would be an underestimate of "inflationary borrowing" in wartime. It is clear that some of the private securities held by the Bank represented the extension of its credit to the State through the medium of loan contractors and other intermediaries.

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