
*Taxation in Britain and France, 1715-1810.
A Comparison of the Social
and Economic Incidence of Taxes Collected
for the Central Governments**

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I. Introduction

Recent quantitative studies into rates of growth and levels of productivity in the French and British economies in the late eighteenth and nineteenth centuries have cast doubt on traditional interpretations of the economic performances of the two countries, interpretations which have resulted from a tradition of historical research based on the individual national experience as the foundation for evaluation. Systematic quantitative studies, which seek to provide a comparative analysis of different national economies, raise formidable conceptual, methodological and statistical problems. But if such exercises in comparative analysis reach different conclusions from the independent studies at the least this may indicate the need for new research programmes for each national tradition of research. We hope that the questions raised by the conclusions of this paper are important enough to pose such challenges.

* We acknowledge, with gratitude, a grant from the Faculties of Modern History and Social Studies at Oxford for research assistance. A preliminary version of this paper was given at the VIII Settimana di Studi, Istituto Internazionale di Storia Economica Francesco Datini, Prato in May 1976. Prof. S. L. Engerman and Prof. F. Crouzet kindly read drafts for us.

Equivalent investigations need to be made into public expenditure and public borrowing before the analysis of public revenue from taxation can be judged in its context. But taxation is a subject of major economic and political importance in its own right for any country and the implications of the statistical tables contained in this articles may well suggest modifications of widely accepted current interpretations of major aspects of French and British history in the eighteenth century.

At the outset it must be stressed that our investigations have been limited to the taxes collected for central governments (*au nom du roi*) with no account being taken of regional or local taxation (*au compte des provinces et au profit des particularités communautés*) feudal dues or church levies. We are aware that other economic burdens imposed by the activities of government have consequences equivalent to taxation, for example the higher prices which could be charged by state-licensed monopolies or other administrative effects of the rôle of government in the economies. There was also a wide gap between payments made by tax-payers and revenue eventually received by the public exchequer. In all these circumstances great differences existed between France and Britain in the eighteenth century which have to be borne in mind when considering the conclusions of this comparison between the incidence of "formal" central government taxation in the two countries.

We also recognise that a complete evaluation of the social and economic effects of public finance involves consideration of government borrowing and expenditure. Borrowing will certainly require separate investigation. As far as public expenditure is concerned, we do not expect our analysis of taxation to be vitiated by significant variation in the pattern of central government expenditures by the two states. In broad terms the figures available for the eighteenth century suggest that the central governments of France and Britain used most of the revenue they acquired from taxes to support their respective military establishments and to pay interest on debt which had been incurred in large part also to enlarge their armies and navies in wartime. The two countries engaged in war for nearly half the years in the century between

1715 and 1815.¹ When patterns of expenditure are broadly similar and reflect the overwhelming emphasis on the military function of government it may be more acceptable in an initial investigation to concentrate attention on taxes.

II. *Levels of Taxation in France and Great Britain: a Comparison.*

Tables 1-8 below contain the main available data on *levels* of taxation in France and Great Britain in the eighteenth century, statistically processed in terms of current prices, constant prices and wheat equivalents. The estimates have also been expressed in terms of their incidence per head of the two populations and in relation to the levels of estimated total commodity output in the two economies. It is important to bear in mind the sorts of levies which are excluded from these tables when drawing conclusions from them. As always, statistical manipulation has been necessary — with great labour — to bring the various series into comparable terms; but many qualifications have still to be made when making the actual comparisons. There is no space to discuss these at length here but the authors are very conscious of their importance. Sources and notes have been set out in the Appendices.

Tables 1 and 2 reveal the changes in the incidence of taxation in the two countries, expressed in terms of constant prices and levels per capita. When coupled with the expression of tax revenues in terms of wheat equivalents given in Tables 7 and 8 this allows both *trends* and *levels* of taxation to be compared between France and Great Britain. The use of wheat equivalents to provide a common measure of value for the two economies has its problems, but at this stage of investigation converting monetary values into "wheat equivalents" has advantages over other possible common measures such as silver or gold — equivalents or the trading exchange rate as a device for comparing absolute monetary

¹ In this period Britain was at war for the 46 years 1739-48, 1756-63, 1775-83, 1793-1815 and France for the 45 years 1733-38, 1740-48, 1756-63, 1778-82, 1792-1815.

TABLE I

TRENDS IN THE BURDEN OF TAXES IN FRANCE, 1715-1808

Year Circa	Tax Revenue in livres tounois m. current prices	Grain Price Index 1721-45 = 100	Tax Revenue in constant prices of 1721-45 livres (2 ÷ 3) Index 1715 = 100		Population (000's)	Tax Revenue per head in livres at prices of 1721-45 (4 ÷ 5) Index 1715 = 100	
(1)	(2)	(3)	(4)		(5)	(6)	
1715	166	121	137	100	19,250	7.1	100
1725	198	116	171	125	20,403	8.8	124
1730	186	94	198	144	21,625	9.2	130
1735*	236	99	238	174	21,600	11.0	155
1740*	201	106	190	139	21,600	8.8	124
1745*	245	112	219	160	21,568	10.2	144
1750	207	119	174	127	21,535	8.1	114
1755	253	118	214	156	20,507	9.5	134
1765	320	135	237	173	24,257	9.8	138
1770	318	169	188	137	25,035	7.5	106
1775	362	161	225	164	25,640	8.8	124
1780*	419	154	272	199	26,455	10.3	145
1785	424	169	251	183	26,640	9.4	132
1790-91	500	174	287	209	27,022	10.6	149
1803-04*	570	182	313	228	28,857	10.8	152
1807-08*	750	187	401	293	29,237	13.7	193

* means a war period

Notes and Sources:

Column 2, see appendix 1. The figures represent the gross sum collected in direct levies, "leases" of indirect taxes and miscellaneous revenue. It is usually an average of several years.

Column 3 is a base-weighted index of 4 grains (wheat, oats, barley and rye) specially constructed for P. K. O'Brien's forthcoming paper on the Intersectoral Terms of Trade in European Industrialization. The index is described in appendix 2.

Column 5 represents estimates of total population described in appendix 3.

levels in two different countries. Much time would be required to produce such ratios and tables of rates of exchange. Wheat did not, of course, have an identical importance in the consumption patterns of the two countries. It fitted into a different structure of prices and preference-patterns in France than in England. But that structure was not dramatically different and we believe it to be as good a measure of common value as can be employed with convenience at present.

The first conclusion to be drawn (about the trends of taxation before the Revolution) is that the burden of taxation did not increase dramatically in *real* terms in France, relative to population

TABLE 2

TRENDS IN THE BURDEN OF TAXES IN BRITAIN, 1715-1812

Year Circa	Tax Revenue in £m current prices	Cost of Living Index 1700 = 100	Tax Revenue in constant prices of 1700 £m. (2 ÷ 3) Index 1715 = 100		Population (000's)	Tax Revenue per head in £. at prices of 1700 (4 ÷ 5) Index 1715 = 100	
(1)	(2)	(3)	(4)		(5)	(6)	
1715	5.76	99.4	5.82	100	7,129	0.82	100
1720	6.11	95.4	6.40	110	7,141	0.90	110
1725	5.92	101.4	5.84	100	7,079	0.83	101
1730	6.23	94.4	6.60	113	7,077	0.93	113
1735	5.71	91.0	6.27	108	7,035	0.89	109
1740*	5.93	104.0	5.70	98	6,993	0.82	100
1745*	6.55	88.9	7.37	127	7,191	1.02	124
1750	7.25	97.7	7.42	127	7,390	1.00	122
1755	7.21	105.6	6.83	117	7,603	0.90	110
1760*	8.67	102.4	8.47	146	7,817	1.08	132
1765	10.04	117.9	8.52	146	8,104	1.05	128
1770	10.42	120.2	8.67	149	8,392	1.03	126
1775	10.66	127.8	8.34	143	8,676	0.96	117
1780*	12.57	126.8	9.91	170	8,961	1.11	135
1785	14.57	131.6	11.07	190	9,354	1.18	144
1790	17.51	133.0	13.21	227	9,700	1.36	166
1800*	31.03	200.4	15.48	266	10,686	1.45	177
1803-12*	54.70	222.0	24.64	423	11,607	2.12	259

* means a war period

Notes and Sources:

Column 2 is payment of taxes and miscellaneous revenue into the Exchequer. It is an average of 5 years centring on the year cited. These totals are described in appendix 1.

Column 5: Population estimates are detailed in appendix 3.

and wealth, between 1725 and 1785. In terms of *current* prices tax revenues increased between two and three fold in France between 1715 and 1785; and slightly less on trend in Britain. (Table 1, col. 2; Table 2, col. 2). Comparing peace-time years at the beginning of the period with peace-time years towards its end, and war-time years equivalently, the trend of tax revenue in *constant* prices moved up only slowly (Table 1, col. 4) in France. Estimates reveal levels of 238m. livres in 1735, 237m. livres in 1765, 237m. livres in 1765 and 272m. livres in 1780 for war years, — the peak of 1735 was not reached again, or passed, until 1780. Equivalent peace-time years do show a greater increase in trend but this was in large measure associated with the “hang-

over" from war-time financial pressures. In terms of tax revenue per head of the population the trend is even more stable — when conversions into constant prices take account of monetary changes and cost of living trends (as expressed through the index of grain prices (Table 1, col. 6). Peaks in war years vary from 11 livres per capita in 1735 to 10.3 livres in 1780; and in peace-time years from 8.8 livres in 1725 to 9.4 livres in 1785.

Thus, in real terms, the impact of taxation in France for most of the eighteenth century, did *not* increase significantly as a burden upon the economy or as a burden upon the populace, when assessments are made against the "base" year of 1725, judged in these aggregate terms (of course, such calculations do not take into account issues affected by changes in the distribution of taxation among different groups in French society).

Table 2 shows what contrasts there were with Great Britain. There tax revenue in constant prices was broadly stable on trend until 1740 — in aggregate terms (£ 5.82m. to £ 5.70m. between 1715 and 1740) and also in *per capita* terms (there being no trend rise in population in this period) — but then increased cumulatively on trend for the rest of the century (Table 2, cols. 4 and 6). Up to the outbreak of war in the 1790's the burden was rising more rapidly than in France, on the whole, but not dramatically so.² The index numbers for 1790 for total tax revenue in constant prices of 1700 stand for Great Britain at 227 and for France at 209 (from a common base of 100 in 1715) and the equivalent per capita tax index numbers at 166 for Great Britain and 149 for France.

A much more dramatic contrast is revealed by the fiscal consequences of the long wars which began in 1792-3. It will be seen that tax income in current prices more than tripled in Great Britain in a generation, while in France income from taxes rose by only 50 per cent. In "real" terms the total tax burden almost doubled in Britain and in per capita terms rose by 86 per cent.

² In a preliminary version of this paper, presented at the Settimana di Studi at Prato in May 1976, a mistake was made in deflating the current values of taxation for England. We are grateful to Professor Morineau for pointing out this error.

The equivalent increases in France were probably of the order of 40 per cent in aggregate and 30 per cent in per capita terms. The fiscal burdens on the two countries had sharply diverged. This greatly increased burden of taxation came, directly and indirectly, from the increasing costs of financing the new wars, which were on a greater scale than any which Europe had hitherto experienced — directly from the increased taxes imposed during wartime; indirectly — and more permanently — to cover the long-term and ever-increasing costs of paying interest on the national debt, which accumulated as a result of the government borrowing required to finance wars, beyond the immediate increase in taxable capacity. Thus, in Britain the increasing pace of industrial growth, urbanisation and population growth after 1775 — all of which were making increasing demands in different ways upon the financial resources of the nation — were processes taking place in a context of a steeply rising real burden of taxation. And the rate of increase of this burden was much faster than in France.

The information conveyed by Tables 3 and 4 reinforces these conclusions by measuring the burden of taxation on the two economies in terms of the growth of commodity output. The estimates for the growth of total physical output in both France and Great Britain are less firmly established than the other series, but probably reflect the trends without major distortions.

One caveat needs to be made at this point. The economic incidence of taxation calculated here is in relation to total *physical* output — the only measure of national income available for France. This may exert a certain bias in the ratios, maximising the incidence of taxation in Great Britain. The structure of the national income in Britain would have had a higher proportion of income created by the output of services (relative to physical outputs) compared with France — trading, commercial and financial activities being relatively more important in the flows of the British economy than the French during the eighteenth century. The fact that incomes from services are not included thus influences the calculation of tax revenues relative to national income. The extent of the bias cannot be calculated in the absence of estimates of the annual

TABLE 3

TAXES AND THE GROWTH OF COMMODITY OUTPUT IN FRANCE, 1715-1808

Year Circa	Hypothetical Growth Curve for total physical output	Commodity Output in Constant prices of 1781-90 (m. livres)	Commodity Output in current prices (m. livres) (Col. 2 reflatd)	Share of Commodity Output in current prices appropriated as taxes as taxes
(1)	(2)	(3)	(4)	(5)
1715	100	2,038	1,467	11%
1725	107	2,174	1,500	13%
1730	110	2,252	1,261	15%
1735*	113	2,310	1,363	17%
1740	116	2,368	1,492	13%
1745*	121	2,465	1,627	15%
1750	130	2,640	1,848	11%
1755	138	2,814	1,970	13%
1765	167	3,416	2,733	12%
1770	176	3,591	3,591	9%
1775	190	3,882	3,688	10%
1780*	195	3,979	3,621	12%
1785	199	4,057	4,057	10%
1790-91	210	4,290	4,418	11%
1803-04*	247	5,042	5,445	10%
1807-08*	260	5,284	5,738	13%

* = war period

Notes and Sources:

Column 2 is a hypothetical growth curve based upon the research of Marzewski *et al* into the long-run growth of the French economy. The index for circa 1785-1807-08 were derived directly from Marzewski's article (see appendix 4). For all other years the index numbers have been interpolated (see appendix 4).

Column 3. Marzewski's estimate for commodity output in 1781-90 was extrapolated backward to 1715 and forward to 1807-08 to produce a run of estimates of commodity output in constant prices.

Column 4. To construct column 3 for 1715-85 the constant price estimates in column 2 were multiplied by the index of grain prices (presented in table 1) with the index recalculated onto a reference base of 1781-90 = 100. See appendix 4. The figures after 1785 are based directly upon Marzewski's estimates.

Column 5 is tax revenue in current prices (column 2 of table 1) expressed as a % of commodity output again in current prices.

value of income from services in the French economy. According to Arthur Young's — very dubious — calculations for the British economy in 1770 income from services represented 32 per cent of total national income. It is, of course, an arguable point about whether the level of commodity output or gross national product is the better measure of changing national wealth.

It will be seen that, in the French case, physical output is expanding faster than real tax income, so that the real costs of taxation, relative to the size of the commodity output, increases

TABLE 4

TAXES AND THE GROWTH OF COMMODITY OUTPUT IN BRITAIN, 1715-1812

Year Circa	Hypothetical Growth Curve for total physical output	Commodity Output in Constant price of 1798-1802 £m	Commodity Output in current prices (Col. 3 reflatd) in £m.	Share of Commodity Output in current prices appropriated as taxes as %
(1)	(2)	(3)	(4)	(5)
1715	100	72	35	17%
1720	102	73	35	17%
1725	101	73	37	16%
1730	101	72	34	18%
1735	102	73	34	18%
1740*	103	73	38	16%
1745*	107	77	35	20%
1750	111	80	39	18%
1755	116	83	44	16%
1760*	120	86	44	20%
1765	123	88	52	19%
1770	127	91	55	18%
1775	130	93	60	18%
1780*	133	95	61	21%
1785	145	104	69	22%
1790	157	113	76	24%
1800*	182	130	130	24%
1803-12*	—	—	155	35%

* means a war period

Notes and Sources:

Column 2 is a hypothetical growth curve taken from the research of Deane and Cole into the long term growth of the British economy - see appendix 4.

Column 3: Deane and Cole's estimate for commodity output (agricultural production, plus industrial output) was extrapolated backward to 1715 (using their growth curve) to produce a series of estimates for physical output in constant prices of 1798-1802 - see appendix 4.

Column 4: These estimates in constant prices were multiplied by Gilbo's cost of living index (column 3 of table 2) to generate a series of estimates for commodity production in current prices. The Gilbo index was recalculated onto a 1798-1802 reference base - see appendix 4.

Column 5 is tax revenue in current prices (column 2 of table 2) expressed as a ratio of commodity output in current prices.

between 1715 and 1735 but then falls over the course of the century — from levels of 15-17 per cent to levels of 10-11 per cent. (Table 3, col. 5). Again, the contrast to the British experience, particularly after 1775, is made clear by the equivalent statistic in Table 4, col. 5. This shows that the real incidence of taxation was higher in the British economy than in France, running at levels of 17-19 per cent and increasing faster than physical output was expanding after 1775. The burden of taxation then increased steadily to no less than 35 per cent of commodity output by 1803-12,

despite the expansion of the economy which industrialisation encouraged. Thus economic expansion in Britain was not off-setting the rising real burden of taxes during the early decades of the Industrial Revolution.

Tables 5 and 6 translate these aggregate figures for real output into *per capita terms*, to judge the burden of taxation relative to both the growth of the economy and the rise in numbers in France and Britain. Again, the conclusions of the earlier tables are confirmed, and strengthened. The share of income per head collected as tax revenue by central government in France fell on trend in the course of the century, after a phase of rising incidence in 1715-35. (Table 5, col. 4). Between 1735 and 1775 the share of commodity income per capita appropriated as taxes fell from 17 per cent to 10 per cent, and under the great stresses of renewed war did not rise beyond 13 per cent by 1807-8. In Great Britain the same ratio rose gradually from 16 per cent in 1715-30 to c. 20 per cent in 1740-80, and then increased steeply to 36 per cent by 1803-12. The levels as well as the rates of increase, were much higher than in France.

When these figures are converted into wheat equivalents in Tables 7 and 8, to allow a comparison of the absolute levels of taxation between France and Britain on a similar base, the other series can be seen in a new comparative perspective. Total tax revenues were greater in France than in Britain, because of the much greater scale of the French economy and the size of the French population relative to Britain (Table 7, col. 4; Table 8, col. 4). From a low point of 13.4m. hectolitres-of-wheat-equivalents in 1713 these revenues in France built up to 35m. hectolitres in 1807-8. By that point the rate of increase of taxation in Great Britain during the wars after 1793 had been so great that total revenues received were absolutely greater than in France, whereas they had been less than two-thirds of the French total before war began. In *per capita* terms the comparison of the real burden of taxes on the French and British populations (Table 7, col. 5; Table 8, cols. 5, 6) shows the relative position even more clearly. On a *per capita*

TABLE 5

TAXES AND PER CAPITA INCOME IN FRANCE, 1715-1808

Year Circa	Per Capita Commodity Output in current prices (in livres)	Tax Revenue per Capita in current prices (in livres)	Share of Commodity Income as tax revenue per head collected (2 ÷ 3) (4)
(1)	(2)	(3)	(4)
1715	76	9	12%
1725	74	10	14%
1730	59	9	15%
1735*	63	11	17%
1740*	69	9	13%
1745*	75	8	11%
1750	86	10	12%
1755	88	11	13%
1765	112	13	12%
1770	143	13	9%
1775	144	14	10%
1780	137	16	12%
1785	152	16	11%
1790-91	164	19	12%
1803-04*	189	20	11%
1807-08*	196	26	13%

* means a period of war

Notes and Sources:

Column 2 is commodity output in current prices (column 4 of table 3) divided by total population (column 5 of table 1) see appendices 3 and 4.

Column 3 is tax revenue in current prices (column 2 of table 1) divided by population (column 5 of table 1) see appendices 1 and 3.

basis, in Britain taxes were more than double the level attained in France at the beginning of the century (1715-30), remained at about twice the level of those in France for most of the rest of the period up to the Revolution and during the wars thereafter reached almost three times the level imposed on the French population.

III. *The Structure of Taxation in Great Britain.*

Table 9 reveals the basic facts about the distribution of taxation in Great Britain and France. For Great Britain a relatively small, and, on trend, declining, proportion of the public revenue of central government derived from taxation levied directly upon income and

wealth, during the eighteenth century.³ Direct taxes had accounted for over 35 per cent of total revenue from taxation during the Marlborough wars in the first decade of the century; and about 18 per cent in the final decade, before the enhanced direct taxation (notably through the income tax) pushed up the proportion again to over 30 per cent in 1800-1810: This decline in the proportion of public revenue from direct taxes, between the two great periods of war which sandwiched the eighteenth century, was principally a phenomenon of long years of peace and the fiscal policies pursued by government in peace-time. To pay for the increased burdens of war (both directly from increased revenue from taxation and indirectly with increased revenue from taxation required to service the increase in money borrowed by the state) direct taxation was increased to a greater extent than indirect taxation. Thus the high proportion of direct taxation at the beginning of the eighteenth century may be attributed to the length and intensity of these wars against France which involved extensive land campaigns as well as naval commitments. The increase from 17 per cent to 32 per cent between 1735 and 1745 and the increase again from 21 per cent to 26 per cent between 1755 and 1760 is explained by succeeding but shorter, principally naval and colonial European wars.

The principal form of direct taxation in Britain during the eighteenth century was the land tax, in theory levied on wealth but in practice falling mainly on the ownership of land. This tax replaced the hearth tax, poll taxes and other levies falling upon households or directly upon wealth and income, which had sought in different ways to relate the burden to capacity to pay. Furthermore, during various wars direct taxation was expanded to fall upon a variety of objects associated with an affluent style of living, including houses, windows, male servants, non-farm or waggon horses, hair powder, carriages, playing cards and the like.⁴ Strictly

³ For the complete table see B.R. MITCHELL, *Abstract of British Historical Statistics* (1962), pp. 386-8.

⁴ See S. DOWELL, *A History of Taxation and Taxes in England from the Earliest Times to the Present Day* (1884); W. KENNEDY, *English Taxation, 1640-1799* (1913, reprinted 1964); J.E.D. BINNEY, *British Public Finance and Administration, 1774-92* (1958).

TABLE 6

TAXES AND PER CAPITA INCOME IN BRITAIN, 1715-1812

Year Circa (1)	Per Capita Commodity Output in current prices £. (2)	Tax Revenue per Capita in current prices £ (3)	Share of Per Capita Output Collected as taxes (2 ÷ 3) % (4)
1715	5	0.8	16%
1720	5	0.8	16%
1725	5	0.8	16%
1730	5	0.8	16%
1735	5	0.9	18%
1740*	5	0.9	18%
1745*	5	1.0	20%
1750	5	0.9	18%
1755	6	0.9	15%
1760*	6	1.2	20%
1765	6	1.2	20%
1770	7	1.2	17%
1775	7	1.3	19%
1780*	7	1.5	21%
1785	7	1.6	23%
1790	8	1.9	24%
1800*	12	2.9	24%
1803-12*	13	4.7	36%

* = war period

Notes and Sources:

Column 2 is commodity output in current prices (column 4 of table 4) divided by population (column 5 of table 1) see appendices 3 and 4.

Column 3 is tax revenue in current prices (column 1 of table) divided by population (column 5 of table 2) see appendices 1 and 3.

speaking the assessed taxes should be counted as indirect taxes on outlays or expenditures. However, certain assessed taxes — such as those on houses, windows, carriage horses, servants — may be judged to apply to the manifestations of a certain level of wealth and capital assets in property. As Sir John Sinclair observed, « It is natural to suppose that every individual nearly in proportion to his property would procure for himself the convenience of being well-lodged ».⁵ The receipts from all assessed taxes are thus grouped here with revenue from the land tax as direct taxes on income and wealth — following the usual conventions which have

⁵ J. SINCLAIR, *History of the Public Revenue of the British Empire* (1802-4), Vol. III, p. 78.

governed this grouping. Until an effective income tax was introduced by Pitt in 1799, the land tax was the only effective levy directly assessed on income and wealth. For example, in the decade 1770-9, of the average yield of land and assessed taxes of £ 2m., the land tax provided £ 1.5m.

It may seem paradoxical in view of prevailing assumptions that the French political system was more "reactionary" than the British before 1789 and that direct taxation is often regarded as more "progressive" than indirect taxation, that a far higher proportion of the revenues received by central government in France should have been drawn from direct taxes. But care has to be taken in distinguishing the social incidence of direct taxes, no less than indirect, in the two countries.

In the British case there is no doubt that direct taxation was generally "progressive" — which is doubtless why it formed so small a proportion of the total public revenue. Parliament strongly resisted an increase in the land tax above rates of two shilling in the pound (10 per cent), except in war time when it was tolerated at four shillings in the pound.⁶ Only the extreme national danger of 1797-9 could persuade the representatives of the nation to accept an income tax.⁷ This was abolished as soon as peace came in 1802 and again in 1816. The land tax produced diminishing yields as the eighteenth century advanced, because property, particularly land, was not re-valued in accordance with its changing real value. At the beginning of the century yields did reflect actual values, particularly in the southern parts of England; subsequent increments in the value of real estate were not reflected in the yield of the land tax levied upon a stereotyped real value; whereas the yield of indirect taxes on commodities and services collected by the departments of Customs and Exercise and Stamps did reflect increases in the extent of consumption. The failure to tax wealth and rising incomes effectively — which was at bottom a political

⁶ W.R. WARD, *The English Land Tax in the Eighteenth Century* (1953); S. DOWELL, *op. cit.* Vol. III, pp. 93-7.

⁷ A. HOPE-JONES, *Income Tax in the Napoleonic Wars* (1939); B.E.V. SABINE, *A History of Income Tax* (1966), Chs. II-III.

decision — accounts for the increasing proportion of public revenue contributed by indirect taxes. During the Napoleonic wars, however, the proportion of total revenue from taxation derived from direct taxes did rise significantly in Great Britain, to reach 33 per cent in 1810. In these years the pattern of taxation became more similar in France and Britain because this trend in Britain coincided with the French government increasing its dependence on outlay taxes.

The economic effect of this atrophy of tax yields on wealth and income are clear. The fiscal burden falling upon the principal sources of savings in the economy, and upon those higher-income groups whose capacity to save was highest, declined as national wealth expanded in the course of the century. This decline is obvious for direct taxation as a whole, whether measured as a proportion of total public revenue, in *per capita* terms or relative to the expansion of the national income. It was also clear within the distribution of direct taxation itself. The element of "progression" was most clearly apparent in the assessed taxes, but their incidence was much more slight than the land tax. This tax was hated because of its inequality and inequity. As Walpole acknowledged in 1732: « The landowners bear no proportion to the body of the people . . . The land always paid a third of the charge in time of war, tho' not pretended to be a 1/20th part of the people . . . Great towns not sensible of the land or the land tax . . . Moneyed men pay little or nothing . . . the land tax the most partial and grievous, laid on about 400,000 men only ».⁸ Capital assets in any form other than land virtually escaped and with retained profits being the principal sources of capital investment in manufacturing business the fiscal burdens levied directly upon funds for capital accumulation were negligible. Even for rents from landed property (the source for most investible funds for agricultural investment, much capital for mining and one third of shareholdings in canal companies) the land tax absorbed a diminishing share of total

⁸ BM. Add. MS. 33052 (quoted E. HUGHES, *Studies in Administration and Finance*, 1558-1834 (1934), pp. 299-303).

incomes (whether expressed as landowners' rents or farmers' profits). Even though its exact incidence between the landlord and the tenant farmer, who remained responsible for investment in "movable" stocks — implements, animals, seed, etc. — cannot be determined, the main conclusion must be that the burden of the land tax was light and diminishing relatively with time — the burdens of war-time finance excepted.⁹ Comparing the yield of the direct taxes with the value of commodity output in Great Britain (both in terms of current prices) reveals that the ratio fluctuated between 3 and 4 per cent for most of the eighteenth century, rising to 13 per cent only in 1803-12 with the imposition of an effective income tax.¹⁰ The significance of the ratio between national income and tax yields, of course, depends on trends in the distribution of income. If eighteenth-century England experienced growing inequality in the distribution of income (an assumption which has often been made but never tested) the constancy of the ratio between the value of commodity output and the yield of direct taxes between 1770 and 1790 would indicate that the tax burden on the rich was not only low but declining on trend until the Napoleonic Wars. Thus the main economic impact of taxation in Britain fell upon consumption and demand, rather than upon savings and investment, supplemented by the economic effects upon the industries subject to excises at the point of production.

⁹ S. DOWELL, *op. cit.* Vol. III, pp. 93-7.

¹⁰ Sources B.R. MITCHELL, *loc. cit.*, Table and Appendix 4. The figures are as follows:

Year (1)	Commodity Output £m. (2)	Direct Taxes £m. (3)	Ratio: (as %) (3 ÷ 2)
1715	35	1.7	5
1725	37	1.3	4
1735	34	1.0	3
1745	35	2.1	6
1755	44	1.5	3
1765	52	2.3	4
1775	60	1.9	3
1785	69	2.6	4
1800	130	8.3	6
1803-12	155	20.4	13

(Columns 2 and 3 in current prices).

Indirect taxes formed the main burden of fiscal levies in Britain during the eighteenth century, and sustained the main increments in the yield of taxes, which wartime economic necessities demanded, until the trend was temporarily reversed during the Napoleonic Wars after 1799. From 57 per cent of total income from taxation Customs and Excise receipts rose to over 70 per cent from 1750 to 1780, then declining as a proportion of the whole again to less than 60 per cent, with the impact of the rising assessed taxes, stamps and the income tax during the wars with France from 1803-15.¹¹ When peace-time principles were re-established after 1815 Customs and Excise yields once more provided three quarters of the government's income from taxation.

Within this total, excise taxes on home-produced goods generated greater revenues than Customs duties on imported articles (although it must be pointed out that receipts from taxes levied on imports are not exactly synonymous with revenue collected by the department of Customs).¹² Customs receipts remained on trend between 20 per cent and 25 per cent of total tax revenues through the century; while the yield of excise duties were between 45 and 50 per cent after 1725, or roughly double the yield of the customs. The contrast with the incidence of taxation in France is apparent — there indirect taxes were contributing 40-45 per cent of total central government revenues on trend.

The distribution of the yield of Customs and Excise, and the other main indirect tax — “stamps” — which became significant as a revenue-earner after 1760 — also reveals important contrasts with France. Whereas the *gabelle* produced 30 per cent of the revenue from indirect taxation in 1730 and 25 per cent in 1763, the excise on salt in England had a much more modest role yielding, net, only 4-5 per cent of Customs and Excise receipts on trend.

¹¹ Yields of customs, excise and stamps are given annually in Mitchell, *loc. cit.*

¹² Excise duties were placed at different times on tea, coffee, brandy, tobacco and some other commodities; with collaboration over the administration and collection of the levies between the Excise and Customs. This was also the case for salt. See S. HOON, *The Organisation of the English Customs System, 1696-1786* (reprinted 1968), pp. 86, 155-6; E. HUGHES, *Studies in Administration and Finance, 1558-1825* (1934), p. 184.

TABLE 7

FRENCH TAX REVENUE IN WHEAT EQUIVALENTS, 1715-1808

Year Circa	Total Tax Revenue livres m.	Average Price of Wheat in livres per hectolitre	Tax Revenue in wheat equivalents (m. hectolitres) (2 ÷ 3) (4)	Tax Revenue per head in hectolitres of wheat (4 ÷ population) (5)
(1)	(2)	(3)	(4)	(5)
1715	166	12.4	13.4	0.7
1725	198	11.9	16.6	0.8
1730	186	9.3	20.0	0.9
1735*	236	9.4	25.1	1.2
1740*	201	9.9	20.3	0.9
1745*	245	10.8	22.7	1.1
1750	207	11.2	18.5	0.9
1755	253	11.3	22.4	1.0
1765	320	12.7	25.2	1.0
1770	318	15.5	20.5	0.8
1775	362	15.2	23.8	0.9
1780*	419	14.3	29.3	1.1
1785	424	15.7	27.0	1.0
1790-91	500	17.7	29.2	1.1
1803-04*	570	20.1	28.4	1.0
1807-08*	750	21.1	35.5	1.2

* = a period of war

Notes and Sources:

Column 2 is column 2, table 1.

Column 3, average price in livres per hectolitre over a period of 11 years centring on the years cited. For 1790-91 the average price relates to 1786-92; for 1803-04 it refers to 1799-1808 and for 1807-08 it refers to 1803-12 - see appendix 5.

Column 5 is column 4 divided by population estimates cited in column 5 of table 1.

during the century. Within the excise system the greatest income came from home-produced spirits, beer, malt and hops; in and hops. For example in the mid-1730's taxes on malt and beer provided Walpole with c. £ 1.5m. from total indirect taxes yielding £ 4.5m. In 1760-5 £ 3m. out of £ 4.8m. received in excise taxes came from home-produced spirits, beer, malt and hops; in 1787-8 £ 4.5m. out of £ 6.75m.; in 1800 £ 4.6m. out of £ 11m. and in 1805 £ 11.5m. out of £ 22.5m.¹³ Taking imported wines and spirits into account also, over half the total revenue from indirect taxation was provided by this single group of commodities in the latter part of the eighteenth century.

¹³ See P. MATHIAS, *The Brewing Industry in England, 1700-1830* (1959), pp. 355-8; G.B. WILSON, *Alcohol and the Nation* (1940), Appendix F, table 26.

With excise taxation on malt, hops, beer and home-produced spirits the social incidence of the levies fell squarely upon the mass of consumers in the country. The miscellany of other excises were not as clearly defined in their social incidence, and the burden was spread widely in an economic sense also — for the excise duties fell on such articles as bricks, starch, glass, salt, printed fabrics, paper, soap, candles, leather and coal carried into London. Within the customs receipts, again, alcoholic drinks formed a principal staple for the revenue. Imported wines and spirits produced £ 4.3m. from the total customs yields of £ 7m. in 1800. The other main revenue earners from foreign trade were tea, sugar, tobacco, timber (particularly after the great increases in timber duties during the wars at the end of the century), foreign cloth (particularly silk), iron bars, and grain in the occasional years of short harvests which produced large imports.

The social incidence of indirect taxation in England was mixed, but in aggregate its effects were regressive because the major revenue-earners were inevitably commodities in mass demand. As Lord North acknowledged when having to increase indirect taxes as well as levying the assessed taxes during the American War of Independence: « where great sums were to be borrowed the burden must lie upon the bulk of the people ».¹⁴ As so often, this was proved by result, even though politicians and commentators were agreed that “necessities” should be free of tax, or suffer only a light fiscal burden.¹⁵ This is particularly the case with the taxation of the main alcoholic drinks beer (with the excises on malt and hops pyramiding the beer excise), gin and imported rum. The only socially progressive and important revenue-earners in indirect taxation were the Customs duties on imported wines and brandy, silk and other high quality cloth. Other indirect taxes — such as that on imports of tobacco as well as excises on soap, candles, salt — fell principally upon the mass market. Spirits and tobacco, although principally consumed by the mass of the nation, were

¹⁴ W. KENNEDY, *op. cit.* p. 162; W.R. WARD, *op. cit.* p. 124.

¹⁵ W. KENNEDY *op. cit.*; J. SINCLAIR, *History of the Public Revenue of the British Empire* (1802-4) Vol. II, pp. 367-9.

not regarded as necessities in the same sense as salt, candles, soap, coal, leather, hops, malt and beer.¹⁶ Contemporaries held that the social incidence of tea and sugar changed in the course of the century. Although at its outset it could be argued that these exotic commodities, in common with such things as East Indies muslins and silks, were the luxuries of the rich, consumption moved steadily

TABLE 8

BRITISH TAX REVENUE IN WHEAT EQUIVALENTS, 1715-1812

Year Circa	Tax Revenue in £m.	Average price of wheat in £. per hectolitre	Tax Revenue in wheat equivalents m hectolitres (2 ÷ 3)	Tax Revenue per head in hectolitres of wheat (4 ÷ population! France = 100 British Burden as % of French	
(1)	(2)	(3)	(4)	(5)	
1715	5.76	0.50	11.5	1.62	231
1720	6.11	0.48	12.7	1.78	—
1725	5.92	0.49	12.1	1.71	214
1730	6.23	0.49	12.7	1.80	200
1735	5.71	0.49	11.7	1.66	138
1740*	5.93	0.49	12.1	1.73	192
1745*	6.55	0.45	14.6	2.02	184
1750	7.25	0.50	14.5	1.96	218
1755	7.21	0.55	13.1	1.72	172
1760*	8.67	0.59	14.7	1.88	—
1765	10.04	0.65	15.5	1.91	191
1770	10.42	0.75	13.9	1.66	208
1775	10.66	0.72	14.8	1.71	190
1780*	12.57	0.71	17.7	1.98	180
1785	14.57	0.78	18.7	2.00	200
1790	17.57	0.93	18.9	1.95	193
1800*	31.03	1.41	22.0	2.06	206
1803-12*	54.70	1.50	36.5	3.14	283

* = period of war

Notes and Sources:

Column 2 is copied from column 2 table 2.
Column 3 is the average price of wheat over a period of 10 years centring on the year cited - e.g. 1725 price = average price for Great Britain for 1721-30. The price for 1803-12 is the mean price for those ten years. We converted wheat prices expressed in shillings per quarter into pounds per hectolitre at 1 gr. = 2.91 hectolitres. See appendix 5.

¹⁶ Adam Smith, in fact, considered beer and ale in England and wine — even in “the wine countries” — as luxuries, unlike the four taxed “necessaries of life”, salt, leather, soap and candles, adding “and, perhaps, that upon green glass”. He argued that only taxes on these necessaries affected the price of labour (*Wealth of Nations*, Book V, Ch. II “Taxes on consumable commodities”).

down the social scale, so that by the end of the eighteenth century, they were universally recognised, even by politicians, (and not uncommonly bewailed) as burdens on the poor. Indirect taxation falling on bricks, timber and glass affected the housing standards of the poor, but did not affect purchasing power in the mass market to the same degree as taxes falling upon consumer goods. One other "socially progressive" indirect tax was the revenue from stamps (all legal documents, insurance certificates, bills of exchange and newspapers had to carry official stamps) which became a major revenue earner in the latter part of the eighteenth century: by 1800 this tax yielded £ 2.5m. annually — 13 per cent of indirect taxation and 7.5 per cent of total revenue.

The main economic incidence of taxation in Britain — and the main increments in tax income — thus fell upon consumption, particularly upon the level of effective demand in the mass market. The majority of the nation paying tribute through Customs and Excise levies were not (and could not have been, given prevailing income levels and institutional development) important sources of saving in the economy. Had indirect taxation been lower they would doubtless have consumed more of these articles and more of other things rather than have increased their savings. The fiscal burdens of the state in Britain during the Industrial Revolution thus exercised their major economic impact upon the level of demand rather than upon savings and investment. Arguments about the structure of demand encouraging the faster growth of industry in eighteenth-century England (particularly the thesis which stresses the importance of "middling incomes" in this process) need to take these important transfers involved in indirect taxation into account.¹⁷ The same is true of the standard of living debate.

Judgments about the impact of taxation on the economy in the eighteenth century depend upon one's views about the dynamics of economic change during the period. If the principal constraint

¹⁷ For a recent discussion of the structure of demand in the eighteenth century see D.E.C. EVERSLEY, "The Home Market and Economic Growth in England, 1750-1780", in E.L. JONES and G.E. MINGAY (eds.) *Land, Labour and Population in the Industrial Revolution* (1967).

TABLE 9

SHARES OF DIRECT AND INDIRECT TAXES IN TOTAL TAX REVENUE IN GREAT BRITAIN AND FRANCE, 1715-1812

Year (circa)	Direct Taxes levied on Income and Wealth		Indirect or outlay Taxes on Commodities		Other Current revenue	
	GB %	France %	GB %	France %	GB %	France %
1715	27	61	69	34	4	5
1720	26	..	69	..	5	..
1725	20	48	76	47	4	5
1730	24	48	73	47	3	5
1735*	17	59	81	37	2	4
1740	26	48	73	47	1	5
1745*	32	57	66	39	2	4
1750	28	..	71	..	1	..
1755	21	46	76	45	3	9
1760	26	..	72	..	2	..
1765	22	54	75	42	3	4
1770	18	50	75	45	7	5
1775	18	49	77	47	5	4
1780*	21	45	73	51	7	4
1785	18	48	76	46	6	6
1790	17	38	75	51	8	11
1800*	27	49	65	46	8	15
1810*	33	..	61	..	6	..

* connotes a period of war. 1735 was a war year for France but not for GB.

Notes and Sources:

Sources detailed in Appendix I. The ratios for GB represent 5-year averages centring on the years cited. The ratios of direct taxes to total revenue for GB in 1800 and 1810 are slightly overstated because they refer to *gross* revenue from direct taxes divided by *net* yields at the Exchequer.

upon economic development is thought to be a shortage of savings, or problems of mobilising savings, to meet higher requirements of investment (a viewpoint representative of contemporary economic opinion and much subsequent commentary) then the structure of taxation will be seen as beneficial to the economy, and for economic growth, although harsh in its impact upon the mass of the people. However if the level of effective demand is seen as a principal constraint (in a context of much recent research which has concluded that shortage of savings and mobilisable funds for investment was not a serious problem for the British economy after the mid-eighteenth century) then the level and incidence of taxation in Britain after 1770 will be given much greater importance as a burden

upon the pace of economic change.¹⁸ Looking at the ability of Britain to sustain a rising burden of taxation to cover rising military commitments one can also say that the rising population after 1750, and the growing ability of that population to sustain indirect taxation of commodities in mass demand, was the principal means by which the requirements of the state were met. Political constraints meant that rising national wealth in the form of capital assets and the incomes of higher echelons of the property owners, were not called upon to make equivalent contributions, until confronted with dire national emergencies like the wars with France from 1793-1815.

Apart from the resilience shown by the taxable capacity of the nation, itself compounded of economic and political constraints, the other main constituent of the national finances was that of borrowing. This subject falls beyond the limits of the present inquiry, and raises even greater difficulties in comparison with French experience than does the incidence of taxation on the two economies. But the ability of the British state to wage war effectively seems even more dependent upon the ability of governments to raise loans through the accumulation of a permanent National Debt than it was upon increasing revenues from taxation. Thus in the four wars fought by Britain from 1702-13, 1739-48, 1756-63 and 1775-83 approximately 75% of the extra finance raised to support the additional expenditure required to prosecute the war came from loans. For the wars from 1793-1815 the British Government reversed traditional policy of borrowing to pay for war and raised 58% of the extra finance needed from taxes.¹⁹ But over the eighteenth century war implied heavy state borrowing and over

¹⁸ See F. CROUZET (ed.), *Capital Formation in the Industrial Revolution* (1972) and Peter Mathias, "Capital, Credit and Enterprise in the Industrial Revolution" *Journal of European Economic History* II (1973) for discussion and bibliography.

¹⁹ P.K. O'BRIEN, *Government Revenue, 1793-1815* (unpublished D. Phil. thesis, Oxford University) Vol. I, p. 19. These percentages result from the comparison of tax revenue with total revenue (including borrowing) and total expenditure during the war period. On an alternative basis of calculation loans can be argued to supply a higher percentage of the extra military costs incurred during war. "Normal" peace-time financial practice ensured that tax revenue covered both interest payments on the debt and the peace-time costs of the armed services. The "extra" military costs of the

the long run, a secular rise in the share of tax revenue appropriated to pay interest on the National Debt. The contrast in taxation policy and experience.

But the economic consequences of such government borrowing for the British economy were dramatic: the redistribution of income involved was significant — with up to 40 per cent of public expenditure being mortgaged for paying interest on the debt in the eighteenth century (and up to almost 60 per cent in 1820-50). Furthermore, the capital market in Britain served its apprenticeship in the eighteenth century by being created and developed through government borrowing. The wider economic consequences of this apprenticeship for the development of financial institutions and the long run growth of the British economy in the nineteenth century were profound.

IV. *The Structure of Taxation in France.*

The problems of analysing the structure and incidence of taxation in France are considerably greater than for Great Britain. Data has not survived nearly as completely, and was not collected and formulated subsequently in the same way as the public accounts of Britain, which for the eighteenth century were drawn together into a Parliamentary Return, published in 1868. French historians have not yet attempted to reassemble the surviving material into systematic series (see Appendix I). The figures on French taxation used below, have been drawn together from a

armed services during war can therefore be assessed as total expenditure on the army, navy and ordnance during the war years less the annual average peace-time costs of the armed services for the 5-year period preceeding the outbreak of hostilities. This "extra" cost of war can then be compared with the amount of government debt raised during the war years. When calculated in this way the following proportions of "extra" military expenditure were met by loans in Britain during eighteenth-century wars: 1739-48 85 per cent; 1756-63 81 per cent 1775-83 119 per cent. The latter figure means that some borrowing was required to service the extra annual debt charges on the loans as well as the extra military expenditure. On this basis the financing of war by the British government was not dissimilar to the French experience. See J.E.D. BINNEY, *op. cit.* p. 106; R.D. HARRIS, "French Finances and the American War, 1777-1783", *Journal of Modern History*, XLVIII (no.2) (1976), esp. pp. 243-9.

variety of secondary sources and do not offer the same coverage — or the same certainties — as the equivalent British data, particularly for the period 1790-1810. We have not yet had the time or resources to pursue this material into French archives.

French figures are more indeterminate for other reasons. Where taxes were farmed, as they were for almost all indirect taxes, the fixed annual rent, running for the period of the farm, conceals the actual amount collected in a more complex way than the estimatable difference between gross payments and net yields in the British case of direct administration. The entire problem of gross and net tax revenue is discussed, however, in Appendix I and as notes to the tables. As always with tax farming, the loan operations of the farmers, and the servicing costs paid for this borrowing by government became inextricably mixed up with the tax levies and rent of the farm, to the frustration of historians seeking to isolate and assess the costs and effects of taxation and borrowing as distinct functions of the state. In addition, the exemptions from direct taxes accorded to privileged orders in France, with wide ranges of personal and local exemptions, seriously complicate the subsequent assessment of the social and economic incidence of direct taxation in France. Finally, as with the British data, only taxes collected for central government are the subject of the investigation. Regional and local taxes, feudal dues, church levies and the like are not considered, and they are collectively likely to have been more significant in France than in Britain.

With these reservations, some interesting conclusions can still be drawn from table 9 over the comparison between the shares of direct and indirect taxation to the total tax income received by the state in Great Britain and France for quinquennial years between 1715 and 1808. Direct taxation in France certainly provided greater revenue for central government than indirect taxes. In time of peace, direct taxes normally yielded almost half of total tax revenue and such taxes were pushed up during war-time to provide between 50% and 60% of total tax income. In this respect the pattern was similar to the trend in Britain, where direct taxation also increased absolutely and relative to indirect

taxation in war-time, but the shares were very different and the general trend in Britain exhibits a gradual decline in the ratio of direct taxation over the century as a whole, with interruption to this trend in war-time, while, in France, the proportion of total tax income produced by direct taxes was normally between two and three times greater than in Britain. Moreover, the French government deployed a wide range of direct taxes on wealth and income, including *taille*, *capitation*, *dixième*, *vingtième*, *foncière*, *mobilière*, *portes et fenêtres*, *dons gratuits*, payments in lieu of *corvée*, etc.²⁰ Not until 1799, did the British government possess anything like the same legal and institutional capacity for an effective levy on national wealth and on the higher income groups.

Nevertheless, the social incidence of direct taxes in France is much more complicated to assess than their incidence in Great Britain. This is partly occasioned by the complexity of the exemptions, but also because the incidence varied both with the nature of the tax and the distribution of income and wealth among social groups. The land tax in eighteenth-century Britain can be regarded as "progressive" because poor people in England did not own land which attracted the levy. Had England been a nation of peasant proprietors, the social incidence of a land tax would have been different. Furthermore, the figures of Sagnac and Boiteau reveal the unequal incidence of direct taxes levied upon the different regions of France. There is also firm evidence which suggests that the citizens of towns escaped their fair share of the burden.²¹ For France the weight of historical opinion regards the direct taxes levied by the *ancien régime* as highly regressive. Among an older generation of French historians (such as Taine, Kovalewsky, Marion, Clamageran, Lavissee, Block and others who based themselves on

²⁰ M. MARION, *Les impôts directs sous l'ancien régime* (1910); M. MINORET, *La contribution personnelle et mobilière pendant la Révolution* (1900).

²¹ A. POITRINEAU, *La vie rurale en Basse Auvergne au XVIIIe Siècle* (1965); F. LE LAY, *Histoire de la Ville et Communauté de Pontivy au XVIIIe Siècle* (1911). P. SAGNAC, *La Formation de la Société Française, 1715-89* (1946), Appendix 1, cites figures of contribution per head for different regions of France. Paris, with a total of 65 livres per inhabitant contrasts with 13 livres per inhabitant for Nancy. P. BOITEAU, *Etat de la France en 1789* (1889) has figures which illustrate the wide variation in the regional incidence of taxation.

the *cabiers de doléances* or the *rapport de la commission de l'impôt* of 1787, the direct taxes are usually categorized as highly regressive and manifestly unjust in their incidence.²² Their condemnation of the *taille* is particularly vehement and can be typified by the comment from Gomel, « La taille est généralement regardée comme la plus dure de toutes les impôts, le poids en est supporté par les citoyens les plus pauvres et les utiles; l'arbitraire y regne . . . ».²³ This tradition of castigation the *impôts royaux* finds eloquent, if somewhat more guarded, support from Soboul, who is particularly concerned with the burdens laid upon the peasants: « La paysannerie en supportait la part la plus lourde. La taille pesait essentiellement sur les paysans. Le clergé et la noblesse en étaient exempts; la bourgeoisie ne payait pas sa part, bien des villes étant exemptées. La capitation et les vingtièmes, qui théoriquement devaient supprimer le privilège fiscal, étaient payés essentiellement par les paysans, noblesse et clergé étant taxés à part, par les intendants qui les menageaient. D'autre part, la richesse mobilière payait proportionnellement moins que la propriété foncière ».²⁴

It is not our intention to traverse the minefield of French historiography on this topic of social incidence, or to defend the taxes of the *ancien régime*. Nevertheless, in the end, the incidence of taxes can only be properly evaluated on the basis of estimates that reveal the proportions of total tax revenue paid to the state by different groups in society classified in terms of the share of national income that accrued to these groups at specified levels of family or personal income. A « progressive » tax structure appropriates a higher proportion of the incomes of groups at the upper end of an income scale and a « regressive » tax structure collects a higher proportion from social groups in the lower-income brackets. A piecemeal approach tax by tax is not conclusive simply because

²² M. KOWALEWSKY, *La France économique et sociale* (1909-11); H. TAINÉ, *Les Origines de la France contemporaine - l'ancien régime* (1976), M. MARION, *Les impôts directs sous - l'ancien régime*, *op. cit.*; M. BLOCK, *Statistique de la France* Vol. IX (1910); J. CLAMAGERAN, *Histoire de l'impôt en France* (1868-76).

²³ C. GOMEL, *Les causes financières de la révolution française* (1892), p. 381.

²⁴ A. SOBOUL, *La France à la veille de la Révolution* (1974), p. 260.

in any tax structure some taxes are regressive and others progressive in their incidence.

Up to the Revolution, and beyond, the very richest groups in French society escaped from direct taxes and transferred relatively low proportions of their incomes to the state. They certainly avoided or evaded *taille* but finance ministers of the *ancien régime* did try to tax income and wealth in accordance with some criteria of ability to pay and over the eighteenth century deployed other and more « equitable » levies, such as the *capitation*, *dixième*, *vingtième*, *cinquantième*, etc., in an attempt to bring a far wider share of wealth and income into the net for taxation.²⁵ Thus, over time the share of direct tax revenue which came from the *taille* declined from around half in 1725-26 to less than 30% in the 1780's.²⁶ There is no doubt that the benevolent intentions of finance ministers were frequently frustrated by the incompetent and often corrupt administration available to them for the assessment and collection of taxes on income and wealth.²⁷ Like Turgot they sometimes ran foul of (or more frequently avoided overt conflict with) powerful vested interests concerned above all to defend their privileged position.²⁸ But the great work of Moreau de Beaumont (himself a *conseiller d'état*) shows they did try to tax the rich more heavily than the poor.²⁹ The extent of their failure and the degree to which the direct taxes of the *ancien régime* departed from modern canons of equity and progression can only be determined by careful measurement of incidence. The tide of complaints against injustices of the tax system which emerged in the 1780's are not a reliable basis for judgment and, as Bailly as early as 1830, Marion seventy

²⁵ BOITEAU, *op. cit.*; MARION, *Les impôts directs... op. cit.*; P. GAXOTTE, *Le Siècle de Louis XV* (1933).

²⁶ Figures from sources cited in Appendix I.

²⁷ E. ESMONIN, *La taille en Normandie au temps de Colbert* (1913); C. AMBROSI, 'Repartition et perception de la taille' in *Revue d'Histoire Moderne et contemporaine* (1961); A. COBBAN, *A History of Modern France, 1715-1815* (1961); A. POITRINEAU, *La vie rurale en Basse Auvergne... op. cit.*

²⁸ P. GAXOTTE, *op. cit.*; D. DAKIN, *Turgot and the Ancien Régime in France* (1965).

²⁹ MOREAU DE BEAUMONT, *Mémoire sur les impositions et droits en Europe*, Vol. V (1768-9).

years later and others suggest, some of the *cabiers de doléances* seem more concerned to terminate privilege and to simplify the mode of assessment than to attack unequal incidence *per se*.³⁰

Modern research which recognises that the taxes of the *ancien régime*, in common with direct taxes in other European states, were riddled with abuses, exemptions and privileges of all kinds, is beginning to measure the overall burden of taxation and to assess its incidence on different social groups more accurately. Labrousse paved the way with his careful study of *dîmes et droits seigneuriaux et aides et autres droits sur les boissons* [levied on viticulture] from 1769 to 1790.³¹ His example has been followed in an interesting local study by Lizerand which demonstrates for the Election de Sens, that poorer parishes contributed a lower proportion of their income in direct taxes than richer parishes.³² Morineau's figures suggest that the poor paid rather low proportions of their incomes as *taille*, *capitation* and *vingtième*.³³

As always, regional and local variations within France make comparisons with Britain difficult and the quantitative evidence remains very thin. But when we consider differences in the overall proportions of tax revenue collected directly from levies upon income and wealth in the two countries (see table 9), while recognizing the anomalies, abuses and rank injustices associated with the administration of direct taxes in France, particularly the *taille*, we would argue that the overall incidence of direct taxes in France probably bore more heavily upon the wealth and incomes of the more affluent classes than comparable taxes in Britain. Like Miss Behrens we are not prepared to accept as obvious the pro-

³⁰ M. MARION, *Histoire financière de la France*, *op. cit.*; 'Transcriptions of *Cabiers de doléances* for Libourne and Barjas' in *Arch. hist. du Département de la Gironde* (1900).

³¹ E. LABROUSSE, *La crise de l'économie Française* (1944), pp. 479-83, 492, 500-1.

³² G. LIZERAND, 'Observations sur l'impôt foncier sous l'ancien régime', in *Revue d'histoire économique et sociale* (1958).

³³ M. MORINEAU, 'Budgets populaires en France au XVIIIe Siècle' in *Revue d'histoire économique et sociale* (1972).

position that such taxes in France could be described as socially more regressive than British taxation.³⁴

Turning now to the comparison of indirect taxes, several contrasts with Britain seem clear. In the first place, there is no trend increase in France in the proportion of revenue derived from taxes levied indirectly on commodities and services over the eighteenth century, and in war-time that proportion declined. Secondly the structure of such taxes reveals as marked a contrast to Britain as does the mix of direct taxes. Thus, while the range of direct taxes was much greater in France, for indirect taxes that range seems far more circumscribed. In Britain (excise taxes were imposed on a large number of commodities at the place of production and the state levied import or customs duties upon foreign products at the point of entry into the country. In France most revenue from indirect taxes came from royal monopolies for the distribution and sale of salt (*gabelle*) and tobacco or from levies imposed upon the transit of commodities (particularly wine) within the kingdom of France. The French government also levied the equivalent of British stamp duties (*contrôle et domaine de France*) upon a variety of services and transactions that required some kind of legal registration. It is extremely difficult to classify the structure of indirect taxes into groups for proper comparison with Britain, simply because the administrative categories employed in the revenue accounts are not equivalent to the analytical categories required by economic historians. Nevertheless, in a rough and ready way it is possible to use Clamageran's figures for 1730, 1734 and 1760-63, Vernier's figures for 1789, Bailly's *Tableau général des impositions* for 1786, and Marion's study for the period after 1790 to build up a picture.³⁵ From their estimates, it seems that the salt and tobacco monopolies provided on average something like 40 per cent of revenue from indirect taxes (salt 25 per cent, tobacco 15 per cent). Taxes on legal transactions (*droits d'enregistrement*) supplied a share rising

³⁵ J. CLAMAGERAN, *op. cit.*; M. VERNIER, *Eléments des Finances* (1789) A. BAILLY, *Histoire financière... op. cit.*; MARION, *Histoire financière... op. cit.*, Vols II-IV.

³⁴ B. BEHRENS, 'Nobles, Privileges and Taxes in France at the end of the *Ancien Régime*', in *Economic History Review* (1962-3).

from around 15 per cent in the 1730's to over 20 per cent before the Revolution and a far higher share under Napoleon.³⁶

Internal tolls or transit dues (*aides, traites, droits de marque, droits de Paris, octrois, péages*, etc.) supplied perhaps a further 40 per cent. *Octrois* were levied upon domestically produced commodities as they moved into and out of certain towns and cities, particularly Paris (the *droits de Paris* alone accounted for 5 per cent of all royal income from indirect taxes). Beginning with *traites*: we observe that under the *ancien régime* *traites* fell upon a variety of commodities as they traversed the three great customs regions of France — the *cinq grosses fermes, provinces réputées étrangères* and *provinces à l'instar de l'étranger effectif*.³⁷

This particular type of toll did not provide the monarchy with much revenue (perhaps less than 5 per cent of all receipts from indirect taxation) because *ad valorem* rates seem to have been kept rather low, but they certainly imposed costs, risks and delays upon internal commerce and distribution and undoubtedly exercised a negative influence upon the unification of the internal market of France.³⁸ In Britain the only "internal" toll levied by the state was the duty paid upon coal shipped by sea into London. All other tolls and transit dues had disappeared by the late seventeenth century. However, the British government certainly imposed a wide range of duties upon imports from abroad, whereas in France this particular source of revenue provided only 7-8 per cent of income from indirect taxation in France before the Revolution compared to 30-35 per cent in Britain. Even under Napoleon *douanes* never yielded more than 12-15 per cent of state income from indirect taxes. This difference undoubtedly reflects the greater proportion of trade to national income in Great Britain, a ratio which was itself partly a function of the relative size of the two

³⁶ MOREAU DE BEAUMONT, *Mémoire... op. cit.* Vol. IV.

³⁷ MOREAU DE BEAUMONT, *Mémoire... op. cit.* Vol. III; R. STOURM, *Les finances de l'ancien régime et de la Révolution* (1885).

³⁸ J. E. BOSHER, *The Single Duty Project: a Study of the Movement for a French Customs Union* (1964).

countries in terms of population, wealth and extent of indigenous resources.

By far the largest revenue earners of all internal tolls imposed by the *ancien régime* were the *aides*, accounting for around 30 per cent of income from indirect taxes. *Aides* fell upon wine, cider and other alcoholic beverages, as they moved across « *frontiers* » into the *pays des aides*. They originated as a toll on the transshipment of wine and, although extended to include other drinks, gold and silver work, iron, oil, leather, starch, cards and paper up to the Revolution, the tax on wine consumed in the *pays des aides* provided most of the income from this source.³⁹

To sum up, it appears that the monarchy probably derived up to 70 per cent of receipts from indirect taxation from three levies on wine, salt and tobacco, all « *food-stuffs* » widely consumed by the masses in France. Under the *ancien régime*, the state imposed unequal tax burdens upon different regions of the kingdom, by charging differential prices for salt and tobacco and by taxing wine delivered into the *pays des aides*.⁴⁰ Thus, historians will agree with Gomel's opinion that « *les contributions indirectes frappent le pauvre plus que le riche, car, afin de les rendre productives, on les a établies sur des objets de première nécessité, tels que le sel, le vin, le cidre; elles sont très onéreuses au peuple . . . elles arrêtent la production et le commerce par des inquisitions vexatoires; elles démoralisent la nation en excitant à la fraude et à la contrebande* ». ⁴¹

While there is little doubt that the incidence of these taxes was regressive, and that geographical and social differentials in tax rates were deeply resented by the inhabitants of France and contrary to the liberty of its people, it might still be argued, in their favour, that the rates levied upon different regions of the country represented a kind of « *rough justice* ». Were the *pays des aides*, the towns (including Paris) and *pays des grandes gabelles* (all of which paid relatively high rates of tax on wine, salt and tobacco)

³⁹ See sources cited in Appendix 1, especially Boiteau, *Etat de la France en 1789* *op. cit.*; and M. BAILLY, *Histoire financière . . . op. cit.*

⁴⁰ R. STOURM, *op. cit.*

⁴¹ C. GOMEL, *Les Causes financières . . . op. cit.* p. 471.

coterminous with the wealthier and, agriculturally, the most productive parts of the kingdom? Only careful estimation of tax burdens in relation to personal and regional incomes will answer relevant questions of this kind. Meanwhile we simply raise the possibility that, like the direct taxes of the *ancien régime*, indirect taxes levied in France might on investigation turn out to be less regressive than comparable taxes levied in Britain. It is apparent that the British government not only taxed gin, beer, tobacco and salt at high rates, but during the course of the eighteenth century widened the range of duties on the "necessities of the poorer classes" to include sugar, tea, soap, candles, coal, leather, certain textiles and building materials. Given the marked differences in the ratio of taxation to per capita income in the two countries, as well as the greater reliance by the British government upon a wider range of indirect taxes and the greater reliance in France on direct taxes on wealth and higher incomes, it is difficult not to see the taxes of the *ancien régime* in France as less regressive.

V. Conclusion.

Such interest or importance as this paper contains lies not so much in its text as in the conclusions which are to be drawn from the tables. Numbers can sometimes speak more forcibly than words. Indeed the consequences which these figures have for some of the debates concerning the comparison of France and Britain in the eighteenth century are little short of dramatic.

The caricatured interpretation of the rôle of taxation in French and English history during the eighteenth century might run as follows. In France the *ancien régime* was able, by force of absolutist authority, to impose a crushing burden of taxation upon the economy and the French nation at large. The exemptions granted to the rich and privileged orders in society increased the arbitrariness and the injustice of such crippling taxes — what De Tocqueville referred to as « cette taxation violente et arbitraire ». The inexorable rise in the weight of taxation pressing upon the French economy

and the French people, as war succeeded war in the eighteenth century led inexorably to crisis. From such a context of taxation and public finance in France political revolution in 1789 was provoked and the modernization of agriculture and the progress of industry frustrated.⁴² In England, on the other hand, a "minimum state" is often thought to imply that the burden of taxation remained minimal (subject only to the demands of war) which facilitated the industrial revolution and emphasised the *laissez-faire* character of the evolution of the British economy and British society. Autocratic power enabled greater resources to be mobilised by the state in pursuit of political objectives in France; parliamentary constraints perennially limited the attainment of such objectives by governments in Britain.

In reality, these figures suggest that the objective economic truth about taxation in the two countries was very different. In France the burden of taxation was less than in England, and for much of the eighteenth century it did not increase, either in terms of its economic burden relative to the expansion of the French economy or its social incidence upon the people. De Tocqueville was less than perceptive when he asserted « au dix-huitième siècle c'est le pauvre qui jouit en Angleterre du privilège d'impôt, en France c'est la riche ».⁴³

His statement ignores indirect taxes which fell so heavily upon the poor in Britain, and although the very rich and privileged orders of French society escaped with light burdens of direct taxes it may well be the case that, in comparative terms and taking the whole structure of taxation into account, a higher percentage of the tax burden fell upon wealth and higher incomes in France than in Britain. Across the channel, the level of taxation was double that in France, given the size of the economy and the population, and its burden on Britishers increased substantially again between 1780 and 1803-12, whereas it remained constant in France. In terms of social incidence, the burden of taxation in constitutional

⁴² A. DE TOQUEVILLE, *L'Ancien Régime* (1888), p. 133. See also C. MAXWELL (ed.), A. YOUNG, *Travels in France, 1787-84* (1950), introduction, p. 21, n. 1.

⁴³ Quoted by B. BEHRENS, 'Nobles Privileges and Taxes...' *op. cit.*

bourgeois, parliamentary Britain was more regressive than in absolutist France. The weakness of the *ancien régime* was not too much, but too little, taxation.

On trend, the French state failed to increase the share of output collected as taxes between 1715 and 1803-4, this share being at its highest in the period 1730-1745. Certainly these figures confirm the financial crisis facing the régime in the 1780's, when coupled with the poor credit-rating of the state seeking to off-set the limitations of taxable capacity by borrowing. The French government could not — or did not — appropriate an increased share of a rising national income in the same way as the British government proved able to do — and did. Even Napoleon, with all the administrative and institutional modernisation which was promoted under his rule, did not increase the rate of extraction in comparison with what the British government was doing at this time. If we assume that *in the absence* of higher rates of tax, increased efficiency of collection and new sources of revenue, tax yields will increase as fast as national output (i.e. making an assumption of unitary elasticity) then tax revenues in Britain would have risen by 180 per cent between 1770 and 1803-12. In fact they rose by 425 per cent, putting a much greater strain upon the economy and the population.

How this « statistical reality » squares with the historiography of taxation in relation to the two great revolutions of eighteenth-century Europe — the political revolution in France and the industrial revolution in Britain we leave to subsequent discussion. But the political consequences of taxation in France must be judged principally according to the political and administrative hostilities aroused by taxes, not so much by the economic burden they imposed upon the economy. This was, of course, the considered opinion in 1776 of Adam Smith who concluded his analysis of French fiscal policy as follows:

« ... it might be expected that in France a revenue of thirty millions might be levied for the support of the state, with as little inconveniency as a revenue of ten millions is in Great Britain. In 1765 and 1766, the whole revenue paid into the

treasury of France... did not amount to fifteen millions sterling, not the half of what might have been expected, had the people contributed in the same proportion to their numbers as the people of Great Britain. The people of France, however, it is generally acknowledged, are much more oppressed by taxes than the people of Great Britain... ».⁴⁴

The direct taxes not only had a lower economic incidence in Great Britain but — more important for judging their consequences — were levied in a manner which produced less resentment. Land and assessed taxes were paid by all the social groups affected, including the clergy and nobility, with no one exempt by virtue of a privileged position before the law. Moreover property assessments were made and the tax collected by local commissioners and receivers, who were unpaid representatives of the gentry and magistracy upon whom the burden of the tax fell. Corruption was not avoided, but amateur self-administration largely removed the political resentment which would have been aroused by the presence of a professional state bureaucracy, or the employees of private sub-contractors such as the *fermiers-généraux* in France, acting under far-reaching legal authority. The social structure of English rural society was also important in keeping the presence of the land-tax “invisible” for most people. Landowners paid the tax, not tenant farmers or labourers, or other artizan and *petit bourgeois* groups.

It remained “invisible” when passed on as an element in rents. Had England been a nation of peasant proprietors paying *taille*, collected by tax officials, the direct presence of the tax gatherer would have created an identifiable object of hostility for most families in rural society, creating and focussing political hostility.

A similar contrast between the political and administrative incidence of taxation between the two countries concerns the indirect taxes — they remained much less “visible” in political and administrative terms in Britain, despite their greater economic weight. In France the structure and mode of administration of the

⁴⁴ A. SMITH, *An Inquiry into the Nature and Causes of the Wealth of Nations* (1796), 8th, edn.), Vol. III, p. 392.

indirect taxes maximised their political consequences. With a far narrower range of indirect taxes than in Britain, salt, tobacco and wine produced the most revenue. Rates of taxation were not uniform throughout the country, with large regional differences, for example, in the price of salt. Social groups, towns and regions were not equal before the tax-laws. The *gabelle*, in certain regions (*pays de grandes gabelles*) contrived to conflate the most oppressive features of direct and indirect taxation, with families forced to buy fixed minimum quantities of salt. The General Farm employed a large bureaucracy and a large private army to administer the complex indirect taxation, with a savage tax-code to deter fraud and evasion. The *gabelle* involved the direct confrontation between tax-gatherer and ordinary household; the heavy reliance on internal customs dues meant a complicated system of policing internal trade in the interests of the tax yield.

In Britain the customs and excise were also administered by a large number of officials with powers of search and detailed regulatory authority over the units of production in industries subject to excise taxation. These powers were laid down in detail in the various customs and excise statutes and subject to challenge in the courts. The excise system in particular was opposed by many exactly because of its administration by a centrally-controlled professional bureaucracy, and such opposition on constitutional and political grounds forced Walpole to abandon his plan for a general excise in 1733. There was occasional local skirmishing against customs officers, and — of course — much evasion in certain import trades, particularly from France. But indirect taxation in Britain still roused much less opposition and could raise much more revenue than in France. Import taxes were widely regarded as taxes on foreigners and luxuries (in some cases luxuries competing with British-made products) and hence a proper object for taxation. With most foreign trade centred on a few ports customs duties were relatively easy to administer, and were paid by a relatively small number of people. When the tax was passed on by the importing merchant it ceased to be visible and all internal trade was free from the presence of the tax gatherer. No social group

was exempt: all paid as they consumed. Because Britain's foreign trade was greater in relation to the size of her economy than was the case in France there was a wider base for such taxation of imports through customs duties.

Excise taxation in England (although not in Scotland or Ireland) had similar advantages. The products subject to such taxation at the point of manufacture were produced by commercial firms operating in relatively well-developed commodity markets, even if organised on a local basis. Excise taxation did not usually apply to commodities prepared within the household for private consumption (distilled liquor being an exception). With malt, beer and gin, for example, being made in specific plants (usually urban or close to a town) by well-identified firms the excise system could become a most efficient means of raising revenue. The larger the scale of production technology, the more permanent the sites of production, the more well-established the firms, the greater the degree of concentration in the industry, the more urban the location of production, then the more efficient could be the excise survey. Indeed, in established industry with a developed structure, producers had a certain vested interest in the maintenance of the excise taxes on it (which acted as a barrier against new entrants in the trade) and the efficient prosecution of fraud by illicit manufacturers. When the tax was passed on to consumers in general, as with customs, it ceased to be visible. The relatively small number of manufacturers were interposed between the tax officials and the people as a whole. By the last quarter of the eighteenth century, for example, there were less than 200 wholesale brewers in London and very few "brewing victuallers" (publicans who brewed what they sold retail over their own counters). Almost two thirds of beer production in London was in the hands of eight or nine firms. About one third of the total production of beer paying duty in the kingdom was brewed in London.⁴⁵ The distillery in England was even more concentrated by the end of the eighteenth century.

⁴⁵ PETER MATHIAS, *The Brewing Industry in England, 1700-1830* (1959), esp. chs. I and X.

In these circumstances the excise could be an effective tax. In Scotland and Ireland, where production units were individually small, widely scattered in small rural communities, with much household production for self-subsistence, the excise raised little revenue and could not cope with evasion. Well-developed internal commodity markets for products in common use were thus a prerequisite for raising a large revenue from internal excise taxation. Britain had a wider economic base for indirect taxation of this sort than France because a larger share of output and consumption passed through the market.

A full analysis of the explanations for the higher levels of taxation in Britain than France would require an assessment of taxation in relation to other transfer payments such as rent, feudal dues, church levies, and local levies. The question is also posed as to whether the ceiling on the tax revenues of French governments was set by the limits of taxable capacity (economic and political) or by needs. It could be argued that, with France being so much larger and wealthier than Britain in the aggregate during the eighteenth century, the French government did not need to impose as high a level of taxation to maintain its military and civil establishments. But successive crises of public finance, problems of public credit in the 1780's and many attempts to reform the French tax system with a view to raising greater revenues suggest that taxable capacity, broadly interpreted, imposed a vital constraint. It is beyond the scope of this paper to discuss these wider issues, which raise considerations of many fundamental aspects of French and British history during the eighteenth century. We would argue, however, that the differences in levels of taxation between the two countries is not principally to be explained by differences in the level of national income per capita: certainly that the level of taxation in Britain being double that in France in this period is not to be explained by the supposition that national income per capita in Britain was double that in France. Possibly other transfer payments in Britain — notably rents and tithe — were lower, thus allowing greater scope (other things being equal) for transfers by taxation. But we would argue that the principal explanations for

the differences are to be found, first, within the political and administrative contexts of taxation in the two countries and, second, upon the structures of their economies, which enabled British governments to draw far higher revenues from indirect taxation. It is perhaps not just coincidental that the other country in Europe where tax levels were high (far higher than in Britain) and where excise was a principal source of revenue was the United Provinces — where internal commodity markets were even more highly articulated than in Britain.⁴⁶

⁴⁶ See C. WILSON, 'Taxation and the Decline of Empires - an Unfashionable Theme', in *Economic History and the Historian* (1969); J. MOKYR, 'Capital Labor and the Delay of the Industrial Revolution in the Netherlands', *Economisch - en - Social - Historisch Jaarboek* (The Hague, 1975).

APPENDICES: NOTES, SOURCES AND STATISTICS

Appendix 1: Tax Revenue

The totals for tax revenue cannot be readily defined and the French estimates have been obtained from a variety of secondary sources.

For Britain the definition of total tax revenue seems reasonably clear because Chisholm in his report to Parliament in 1869 defined it as "receipts at the exchequer". He admitted, however, (p. 320) that « owing to the confused state in which the public accounts were kept before 1800 no accurate view of income and expenditure could be made out ».

The British figures approximate to a series of *net* flows into the exchequer over a given financial year. These years ended at 29 September up to 1751, 10 October to 1801 and 5 January from 1802. They are available for the XVIIIth century in a parliamentary paper (B.P.P. 1868/69 [XXXV]). The figures set out in our tables are basically *net* flows of taxes but include a small percentage of other revenue that is *not* taxes. Other Revenue includes post office receipts, first fruits and tenths, hereditary revenue, imprest money repaid, Exchequer fees, conscience money, over-issues of dividends, lottery money, sales of commissions and other sales revenue, Crown lands, hackney carriages and seizures. This revenue is fully specified in P.R.O. Customs 17/10 - 30, « States of Navigation Revenue and Commerce, 1788-1808 ». It is also discussed in B.P.P. 1868-69 (XXXV).

Net receipts at the Exchequer are less than the gross amount of taxes collected by the departments of Customs, Excise, Stamps and Assessed Taxes (the departments responsible for gathering taxes) by deductions made from taxes collected before they were paid into the Exchequer. These deductions (listed in B.P.P. 1868-69 [XXXV] appendix 1 and fully specified in P.R.O. Customs 17/10 - 30) included payments for the costs of tax collection, expenditure from specially appropriated taxes for miscellaneous civil and military services such as Courts of Justice in Scotland, drawbacks and discounts on exported commodities, bounties on exports, bounties for the promotion of fisheries, linen, silk and refined sugar, payments to the militia, etc. etc. No systematic publication of the *gross* sum collected is available before 1802 (see J. E. D. BINNEY, *British Finance and Administration, 1774-92* [1958] appendix 5).

It is possible to estimate the gap between the gross sum collected and net payments into the Exchequer for the years 1788-1815 by comparing the Chisholm Report with the States of Navigation Revenue and Commerce (available at the P.R.O. Customs 17/10 - 30). The purpose of the latter report was « to present to Government at one view the *gross* sum collected from the subject and the various deductions therefrom until net produce is paid into the Exchequer » (P.R.O. Customs 17/11 for 1789). The annual

finance accounts for years ended 5 January 1802 to 1815 also distinguish between gross and net revenue. From this information it can be estimated that 10% was the upper limit between gross tax income and net payments into the Exchequer.

Our figures are net flows into the Exchequer and are 5 year averages centring on the year cited in the tables. The figures for 1803-12 are a ten-year average for those years.

For France

It is unfortunately impossible to compile a systematic and consistent run of tax revenue figures for France. The figures used in the tables are estimates derived from secondary sources on the history of public finance and relate to a number of years from 1715 to 1810. The sources used were as follows:

1715: J. J. CLAMAGERAN, *Histoire de l'Impôt en France* (1868-76), vol. III, pp. 119 and 232. Similar figures for 1716 are in M. MARION, *Histoire Financière de la France depuis 1715* (-1914), vol. I, p. 64.

1725: 1725 and 1726 averaged from CLAMAGERAN, *Histoire de l'Impôt*, *op. cit.*, pp. 232. See also pp. 228 and 234 and 248, and P. BOITEAU, *État de la France en 1789* (1889), p. 417.

1730: CLAMAGERAN, *Histoire de l'Impôt*, *op. cit.*, p. 275.

1735: *Ibid.*, pp. 248, 254 and 275. The figures refer to 1734.

1740: *Ibid.*, pp. 232, 275 and 276. The figures refer to 1739 and 1740.

1745: *Ibid.*, pp. 248, 267, 275 and 297. The figures refer to 1742. See also MARION, *Histoire Financière de la France*, *op. cit.*, p. 512.

1750: *Ibid.*, pp. 275-276. The figures refer to 1751.

1755: *Ibid.*, p. 324 and C. GOMEL, *Les Causes Financières de la Révolution Française* (1892), vol. I, p. 7. The figures refer to 1756.

1765: CLAMAGERAN, *Histoire de l'Impôt*, *op. cit.*, pp. 363 and 375. The figures are for 1763.

1770: *Ibid.*, p. 408. The figures are for 1768.

1775: GOMEL, *Les Causes Financières*, *op. cit.*, p. 116 and J. F. BOSHER, *French Finances, 1770-95* (1970), pp. 90-91, who cited a run of estimates for *compte rendu* from Mathon de la Cour. Our figure is an average for 1773-1776.

1780: The estimated total was built up from figures cited by BOITEAU, *État de la France*, *op. cit.*, pp. 426-427 and MARION, *Histoire Financière*, *op. cit.*, p. 467. Their data is based upon Necker's *compte rendu* for 1781.

1785: is an average based upon a series of accounts for 1785-1789

published by BOITEAU, *État de la France*, *op. cit.*, pp. 433-441; A. BAILLY, *Histoire Financière de la France* (1830), pp. 275-286; F. BRAESCH, *Finances et Monnaies révolutionnaires* (1936), pp. 210-211 and BOSHER, *French Finances*, *op. cit.*, pp. 90-91.

1790-91: This "guess" is based upon a series of estimates published by MARION, *Histoire Financière*, *op. cit.*, vol. 2. His estimates consist of a budget for 1791 presented to the constituent assembly and a number of figures for 1791 and 1792 quoted by Lebrun, Le Rochefoucauld and others in speeches to the assembly (see pp. 250-258). Marion is clear that tax evasion was rampant during the early years of the Revolution. Our total of 500 million francs is an attempt to guess at the *maximum* collected. It is undoubtedly an outer bound figure.

1803-04: The basis for this estimate is MARION, *Histoire Financière*, *op. cit.*, vol. IV, pp. 237-39 and pp. 268-69. Marion's figures appear to be budget estimates and are, therefore, an outer bound estimate for tax revenue collected in the years 1802-05 inclusive. We excluded sales of *domaines nationaux* from tax revenue. We attempted to adjust Marion's data to represent taxes collected from residents of France, plus such other revenue as *postes* and *loterie*. These figures are not likely to be as inaccurate as those for 1790-91 because the administration for tax assessment and collection was reformed under Napoleon — see below and MARION, *op. cit.*, vol. IV, pp. 170, 196, 206-12.

1807-08: MARION, *op. cit.*, pp. 300-35, contains a series of figures for direct and indirect tax revenue (gross) for the years 1806-12. We used these figures to formulate a plausible guess for tax revenue collected in 1807-08. Our guess of 750 million francs can be regarded as an outer bound estimate in line with the *Annuaire Statistique's* figure of 729 million for 1815.

We tried to construct a consistent series of estimates of French tax revenue from 1715 to 1808 but it is difficult to define the figures. Unlike the British totals the estimates do *not* represent net payments into the Royal Treasury in Paris. While such figures (« Recettes faites au trésor royal ») are available (in CLAMAGERAN, *Histoire*, *op. cit.*, vol. III, p. 456, for 1773 and 1774 and for 1781 in MARION, *Histoire Financière*, *op. cit.*, p. 467 and can be obtained from BOITEAU's study *État de la France*, *op. cit.*, pp. 433-441, for the years just prior to the Revolution) they are not comparable with the British definition because a far higher proportion of tax revenue in France was spent before it reached the royal treasury. Bosher suggests that over the years 1773-88 about 45% of gross tax revenue was spent before it reached the Treasury (BOSHER, *French Finances*, *op. cit.*, p. 90 and see BOITEAU, *État de la France*, *op. cit.*, pp. 426-428).

The figures presented in this article represent an attempt by historians of public finance to estimate the *gross* amount of taxes collected from the

residents of France (what BOITEAU refers to as *Charges réelles de la nation*). They are based upon two types of source; one related to indirect taxes (*perceptions*) and the other to direct taxes (*impositions*).

For direct taxes (*impôts de répartition*) under the *ancien régime* the gross sum assessed was decided by the Royal Council on Finance and Receivers General of Taxes had the amount they had to collect for the King from a given *Généralité* recorded in *soumissions des receveurs généraux*. Taxes upon income and wealth were levied in the first instance, geographically upon the 48 *Généralités*, covering France. That is to say the Government decided in advance on the contribution that must be collected each year from each *Généralité*, sub-divided by Elections and parishes. At the parish level the collector divided the parish assessment between individual residents and property owners - according to the law. Thus the records for assessments (*brevet de la Taille* etc.) form a fairly accurate record of the gross sums assessed for the direct taxes imposed on the people of France. (MARION, *Histoire Financière*, *op. cit.*, p. 454 and CLAMAGERAN, *Histoire de l'Impôt*, vol. III, pp. 248 and 315, BOITEAU, *État de France*, *op. cit.*, p. 427).

During the Revolution the machinery for tax assessment and collection ceased to function and the state found it more and more difficult to obtain tax revenue (MARION, *Histoire Financière*, *op. cit.*, vols. II and III). But as Boshier's careful research shows the French Revolution did create a central bureaucracy for tax collection (« the French revolutionaries transformed the system of government finances from a capitalism into a bureaucracy » - BOSHER, *French Finances*, *op. cit.*, p. 312).

Under Napoleon this bureaucracy was strengthened and became (according to MARION) steadily more efficient. (See also R. STORM, *Les Finances du Consulat* (1902). Napoleon even reverted to some of the more dubious expedients and administrative devices of the *ancien régime* and although « imperial commitments sowed confusion in the processes of collecting and spending, yet the machinery for public accounts and control never ceased to work at producing statements of public business and final accounts ». (BOSHER, *French Finances*, *op. cit.*, p. 317). Thus on administrative grounds we expect our figures for the Napoleonic period to be more reliable than earlier figures.

The real difficulty of formulating estimates for total tax revenue collected in France relates to the figures available for indirect taxes levied on outlay. During the XVIIIth century the *ancien régime* failed to establish a public administration for the collection of customs and excise duties, sales taxes and stamp duties. Instead the Bourbon Monarchy preferred to persist with the traditional system of farming its rights to indirect taxation to private individuals, in particular to a private syndicate or corporate *fermes générales* (the Company of General Farmers). This company in return for the rights

to levy and collect taxes levied on commodities, guaranteed to pay a fixed annual sum to the Royal Treasury. Thus the Bourbon state alienated its rights to collect revenue in return for an assured and stable yield, free from short-run fluctuations of the kind generated by bad harvests, war, pestilence and cyclical movements in the economy. For the King, tax farming avoided the difficult managerial tasks involved in the collection of indirect taxes and stabilized Royal income at a predictable level. The system is described in the sources cited above and has been analysed extremely well in two recent books by American scholars (BOSHER, *French Finances, op. cit.*, and G. T. MATHEWS, *The Royal General Farms of XVIIIth Century France* [1958]).

The figures used by historians of French public finance to estimate revenue from indirect taxation are usually based upon the annual sums that Tax Farmers guaranteed to pay to the monarchy. It seems clear that Clamageran, Gomel, Boiteau, Bailly *et al* used records of lease prices to formulate their estimates of revenue from indirect taxes. Thus Clamageran obtained his figures from « mémoires sur les impositions et sur fermes » and considered « Les chiffres que nous donnons au sujet des tailles ordinaires et des fermes générales peuvent être considérés comme absolument exacts... » (CLAMAGERAN, 234, 254, *Histoire de l'Impôt*, vol. III, *op. cit.*, pp. 324 and 375). We also continued to use lease price figures.

But the trouble with such figures is that they underestimate the gross yield from indirect taxes by an amount equal to the costs of collection plus the profits acquired by tax farmers for their « enterprise and risk ». Clamageran is clear that « Le produit des Fermes était un produit net... » (p. 437). Fortunately, it is possible to produce an estimate for collection costs for the years 1768-72 from figures that the chemist Lavoisier submitted to Turgot. There is no reason to doubt their accuracy because Lavoisier was a member of the General Company of Tax Farms and knew the business from the inside. His figures suggest that for 1768-72 the collection costs for the major indirect taxes (*gabelles tabacs, traites* and *aides*) averaged 10.2% of their gross yield. Lavoisier's estimates are in line with figures cited by Marion and Boiteau for collection costs for *aides, traites domaines*. (BOITEAU, *État de France, op. cit.*, p. 406, quotes Necker's estimates as 13.45% for *les objets des fermes*, 10.7% for *les objets en régie* and 10.95% for *les domaines*, while MARION, *Histoire Financière, op. cit.*, put collection costs for *aides* in 1786 at 13.7% and *domaines* at 14.5%). Lavoisier's figures are 15% for *traites*, 13% for *aides*. The collection costs for *domaines* are complicated to estimate but when placed under the General Administration for Domains in 1781 they cost about 14% to collect (see MATHEWS, *The Royal General Farms, op. cit.*, p. 174).

Profits earned by tax farmers for risk and enterprise in the management of royal taxes were also paid from the gross sum collected and are not

included in the annual lease prices used by historians to estimate revenue obtained from indirect taxes. Without further research it is impossible to be precise about the share of revenue retained by Tax Farmers as income and profits. The existing monographs have not clarified the accounts in the way that would enable us to separate costs of collection from profits. It is not clear, for example, whether the salaries and personal expenses of farmers have been quoted as costs of collection or as "profits". It is also difficult to distinguish interest on loans made by farmers to the monarchy from profits. Naturally enough the Tax Farmers of the *ancien régime* were a much despised body of men and several contemporary estimates of their profits are definitely wild. One General Farmer, Delahanté, estimated that during the "Lease David", 1774-80 (and according to contemporary accounts, the profits on this particular contract between the King and his Tax Farmers were flagrantly abusive) came to 18.8m. livres a year or 12.4% on a lease price of 152 million livres per annum payable to the Royal Treasury (MATHEWS, *The Royal General Farms, op. cit.*, p. 268). Delhanté's estimate includes profits, salaries, and interest on bond money lodged with the Treasury as a surety against default. Profits proper came to about half that percentage.

A rough but reasonable way of estimating the share of gross income from indirect taxes retained by Tax Farmers is to assume that the General Company of Tax Farmers made 20% as an upper bound on the Company's capital contributed in equal proportions by each farmer or member of the company. On that basis the share of the yields from indirect taxes retained by tax farmers varied from a low of 9% in 1786 to a high of 14% in 1768 and the modal ratio was about 10-11% (calculated from figures in MATHEWS, *op. cit.*, pp. 231-233 and 284).

But the central point is to specify the degree to which the gross sums collected as taxes in Britain and France differed from the totals of tax revenue cited in our tables. For Britain it seems that the gross amount collected as direct and indirect taxes differed from « net receipts at the Exchequer » (the figures used in the tables) by a ratio of not more than 10%. For France the assessment figures for direct taxes seem to be higher than the gross amount collected and the estimates for indirect taxes could be marked up by 10% to take account of collection costs and a further 11% to take account of the profits, interest and salaries paid to tax farmers. This mark up of 21% is very much an outer bound estimate but on this basis the calculations for 1725-85 indicate that the totals set out in the tables fall short of the gross tax revenue collected from the French population by ratios of between 8-10%. Thus if there is a bias in the figures used in our tables it is that compared to France we *understate* the gross tax revenue of Britain, but for our purposes that bias can be safely ignored.

Appendix 2: The Deflators.

For France

We constructed a weighted index of the price of 4 grains: wheat, oats, barley and rye. The weights are from J. C. TOUTAIN, *Le Produit de l'agriculture française de 1700 à 1958* (« Cahiers de l'Institut de Science Economique Appliquée » No. 115, July 1961), pp. 79 and 91. The gross production in quintaux for 1781-90 was multiplied by average prices (for 1781-90) from E. LABROUSSE, *Esquisse du mouvement des prix et des revenus en France au XVIII^e siècle* (1933) to obtain weights.

Prices are averages for the whole of France and refer to a decennial average centring on the year cited (e.g. 1725 = average for 1721-30, 1790-91 = 1786-95, 1803-04 = 1799, 1807-08 = 1805-14). The data extracted from published sources on the history of French prices refer to the price of a grain at a particular place or to an average of prices at a location. Our prices are arithmetic means of as many quotations as we could find in the following sources:

E. LABROUSSE *et al.*, *Le Prix du Froment en France, 1726-1913* (1970).

H. HAUSER, *Recherches et documents sur l'histoire des prix en France de 1500 à 1800* (1936).

G. et G. FRÊCHE, *Les Prix des grains, des vins et des légumes à Toulouse 1486-1868* (1967).

R. BAEHREL, *Une croissance La Basse provence rurale fin du XVI^e siècle à 1789* (1961).

E. LABROUSSE, *Esquisse, op. cit.*

J. FOURASTIÉ, *Documents pour l'Histoire et la Théorie des Prix* (1970).

For Great Britain

We used E. Gilboy's index « Annual Indices of the Cost of Living in London (Base = 1700) in *Review of Economics and Statistics*, August 1936. This is a base-weighted index with weights taken from investigations by Eden and Davis into the diets of the poor at the end of the XVIIIth century. Consequently it is heavily weighted by grain prices and by prices of food made from grains.

Appendix 3. Population Growth Curves or Hypotheses about Growth.

For Great Britain

We based our figures upon Brownlee's estimates cited in P. Deane and W. A. COLE, *British Economic Growth, 1688-1939* (1962), p. 6. The

figures between decades have been interpolated and we assumed the population of Scotland grew at the same rate as the population of England and Wales.

For France

We used J. Dupaquier, « French Population in the 17th and 18th Centuries » in R. CAMERON (ed.), *Essays in French Economic History* (1970), p. 164, for the estimates for 1770-1785. 1750-70 seems to have seen a relatively rapid growth in the population of France. On the basis of growth calculated for 9 rural departments by Henry [L. HENRY, *The Population of France in the 18th Century* in D. V. GLASS and D. E. C. EVERSLEY (eds), *Population in History* (1965), p. 444] we interpolated the population of France backward to 1740. This gave a total of 21.6 million for 1740. The early estimates are based upon J. C. TOUTAIN, *La Population de la France, 1700 à 1959*. « Cahiers de l'Institut de Science Economique Appliquée », N. 133, January 1963, p. 15 and Dupaquier's analysis of population growth from 1700 to 1740 - DUPAQUIER, *French Population*, *op. cit.* pp. 155-157. The figures for 1790-91, 1803-04 and 1807-08 are linear extrapolations of figures for 1806 and 1811 in appendix II of J. BOURGEOIS-PICHAT, *The General Development of the Population of France since the 18th Century* in Glass and Eversley (eds.), *Population in History*, *op. cit.*

Appendix 4. Commodity Output in Constant and Current Prices.

The figures refer to commodity or physical output. Output from services is not included. Commodity output has been measured as the sum of agricultural and other primary produce, minerals, industrial goods and the products of the construction sector valued at factor cost for Britain and *prix à la production* (farm and factory gate prices) for France. Both sets of estimates can be defined as gross national commodity output at factor cost. (They have been reviewed in detail in P. K. O'BRIEN and C. KEYDER's forthcoming book, *Economic Growth in Britain and France, 1780-1914*, ch. 2).

For France

For the period 1715-1785 we constructed an index of physical output in livres at constant prices of 1781-90. Marczewski and his associates constructed estimates of agricultural and industrial production in current prices and published implicit price deflators for 1701-10, 1791-90 and 1803-12 - J. MARCZEWSKI, *Some Aspects of the Economic Growth of France, 1660-1958*, in « Economic Development and Cultural Change », April, 1961, pp. 371, and 378. From their estimates it is possible to plot a linear growth trend over the XVIIIth century (1701-10 to 1781-90). We

preferred to construct a growth curve that accorded with the qualitative views of French historians [as expressed in: F. BRAUDEL and E. LABROUSSE (eds.), *Histoire Economique et Sociale de la France*, 1970] part 3, chapters 2-5, and especially chapter 6. See also E. LABROUSSE, *La Crise de l'économie Française à la Fin de l'Ancien régime* etc. (1944). We also used Toutain's estimates for agricultural production for 1751-60 and 1771-80. In broad terms our hypothetical growth curve is in line with the periodization of economic development suggested by French historians. They apparently believe that a fairly slow rate of growth up to the Austrian War of Succession was followed by rapid growth from mid-century to the American War of Independence and succeeded by slower growth from mid-century to the American War of Independence and then by even slower growth for several years immediately before the Revolution [see J. Marczewski, « The Take-Off Hypothesis and French Experience » in W. W. Rostow (ed.), *The Economics of Take-Off into Sustained Growth* (1963), pp. 131 and 134.

The figures for 1790-91 and 1803-04 were derived by linear interpolation based upon Marczewski's estimates for 1781-90 and 1803-12. The estimates for these decades were assumed to refer to « median » years, 1786 and 1808. We then reflatd the constant price estimates by our grain price index in order to offer a consistent run of figures in constant prices of 1781-90 and also in current prices. Since grain prices moved upward more rapidly than the general price level over the XVIIIth century, the effect of reflatng by a grain price index is to depress the estimates of commodity output in current prices and to *exaggerate* the share of commodity output collected as taxes by the French state.

We are aware that the estimates for French economic growth in the XVIIIth century, formulated by J. MARCZEWSKI and his colleagues in their *Histoire Quantitative de l'Economie Française* are not accepted uncritically by French historians but they do seem to be in line with qualitative writing on that century and the critical reviews by Vilar, Vidalenc, Chaunu and Furst concentrate more on method than the factual basis of the figures. (See *Revue Historique*, April 1965, *Revue d'Histoire Economique et Sociale*, 1969, *Revue Historique*, vol. 243, 1970, *Annales*, vol. 26, 1971 and *Cahiers Vilfredo Pareto*, No. 3, 1964).

For Britain

We used the estimates compiled by P. Deane and W. A. COLE, *British Economic Growth, 1688-1959*, p. 166 for agricultural and industrial output in 1801 and 1811. We then deployed their indices for the growth of real output (p. 78) to extrapolate the estimates for 1801 backward to 1715. To obtain interdecennial estimates we assumed linear rates of change between decades. For 1803-12 we assumed a constant rate of growth

of commodity output measured in current prices for 1801-12; averaged over 1803-12 this gave £ 155 million as total commodity output.

Appendix 5. Wheat Prices per Decade.

For France

The calculations are an arithmetic mean of all the quotations and estimates available in the sources cited in Appendix 2, particularly E. LABROUSSE, *Le Prix du Froment en France, 1726-1913*, and *Esquisse du mouvement des prix*, *op. cit.* in appendix 2.

For Britain

The calculations again refer to an arithmetic mean of all the quotations from widely scattered locations from most parts of the country including Exeter, Eton, Winchester, London, Birmingham, Oxford, Cambridge, Plymouth, Portsmouth, Perth, Fife, Aberdeen, Edinburgh, Berwick, York, Hull, Haddington, Maidstone, Lincoln. The sources used were:

W. BEVERIDGE, *History of Prices and Wages in England* (1939).

Beveridge Papers at the London School of Economics.

B. MITCHELL and P. DEANE, *Abstract of British Historical Statistics* (1962).

E. W. GILBOY, *Wages in 18th Century England* (1934).

R. C. MOSSMAN, « Prices in Haddington », *The Accountant*, May 1900.

T. TOOKE and W. NEWMARCH, *History of Prices* (1838-57).

F. HILL, *GEORGIAN LINCOLN* (1934).