CHAPTER 7

GROSS TRADING PROFITS AND NON-FARM INCOME FROM SELF-EMPLOYMENT

7.0 PROFITS AND INCOME FROM SELF-EMPLOYMENT

DEFINITION OF THE SERIES

Chapter 7 is devoted to estimates of the gross trading profits of companies, public corporations, local authority trading enterprises and self-employed persons other than farmers. It is restricted to enterprises operating in the United Kingdom and covers all such enterprises, whether they are British or foreign owned.[1] The precise scope of the four constituent types of enterprise has already been defined in their respective chapters (e.g. for companies and public corporations see Chapter 3.0) and these chapters also include the estimates for 1939–65. The present chapter covers new estimates for the period 1855–1938: Chapter 7.1 deals with 1920–38 and Chapter 7.2 with 1855–1920. As elsewhere, Southern Ireland is included in the estimates for the pre-1920 period but not thereafter.

The C.S.O. estimates of trading profits are measured:

(*a*) Before provision for depreciation, stock appreciation, direct taxes or dividends

(*b*) Before payment of debenture interest

(*c*) Before payment of bank and other interest charges

(*d*) Before remuneration of proprietors of unincorporated business but after payment of directors fees etc.

(*e*) After payment of new issue expenses and other financial charges

(*f*) Without any deduction for imputed rent of owner-occupied trading property

(*g*) Including subsidies from the Central Government

(*h*) Excluding all non-trading income

In the case of financial concerns income is adjusted to exclude net receipts of interest and dividends and so is significantly less than their 'commercial profit'.[2]

The same definition is followed in the present estimates for 1920–38 but in addition royalties and long lease rents are deducted from trading profits and included in rent (see Chapter 8). As explained on p. 139, below, these payments are included in profits as assessed for income tax, but are not explicitly mentioned in *Sources and Methods* as one of the adjustments required to the assessed profits [**73**, pp. 223–6]. It seems preferable that royalties on patents, mineral rights etc. and ground rents should be treated as an operating expense; and the inclusion of royalties with rent of land and buildings is recommended in the standard United Nations manual.[3]

For 1855–1919 it is not possible to follow exactly the same definition. Item c, bank interest, is not deducted and item f, imputed rent of owner-occupied property, is not included here but as part of rent in Chapter 8.[4] Royalties etc. are not deducted and the profits of financial concerns include interest received to the (unknown) extent that this was not taxed by deduction at source and so came into the Schedule D assessment.

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[1] For more detailed definition of enterprises operating in the United Kingdom see Chapter 6.0. As noted there, there are certain differences in classification between the pre-1938 and post-war estimates.

[2] See p. 141, below, for further discussion of this point.

[3] United Nations, *A System of National Accounts and Supporting Tables*, 1964, [**107**] para. 239.

[4] This is subject to the qualification that the annual value of buildings owned and occupied by mines, railways, quarries and other 'concerns No. III, Schedule A' *is* included in profits, since these properties were assessed under Schedule D, not Schedule A. See Stamp [**247**], p. 37.

7.1 GROSS TRADING PROFITS OF COMPANIES AND PUBLIC ENTERPRISES, PLUS NON-FARM INCOME FROM SELF-EMPLOYMENT, 1920–1938

SOURCES AND METHODS OF ESTIMATION

The profits series have been defined in Chapter 7.0 and we proceed directly to the derivation of the estimates. The principal objective is an estimate of gross trading profits from 1920 to 1938, classified firstly by trade group and secondly by type of enterprise. The tax assessments which provide the basis for the estimates cover companies, public corporations, local authority trading enterprises and unincorporated (non-farm) businesses. Farmers' income and the gross surpluses of Central Government trading enterprises are dealt with elsewhere (Chapters 2.2 and 4.2) and do not enter the present chapter at any point. The tax assessments generally distinguish between corporate and non-corporate income, and this distinction was preserved throughout the subsequent adjustments.[1] Within the corporate sector it is possible from other data to make separate estimates for public corporations and local authority trading enterprises, and the series for company profits can then be obtained as a residual. The total can thus be allocated to four constituents, and the scope of each of these is fully defined in its individual chapter. The procedure adopted in obtaining the desired estimates can conveniently be described in the following stages:

(*a*) The initial derivation of estimates from the tax assessments

(*b*) Adjustment of assessed gross trading profits for the timing of assessments and of relief for losses

(*c*) Allocation of the adjusted gross trading profits to trade groups classified according to the 1948 S.I.C.

(*d*) Additions for income not covered by the tax assessments

(*e*) Adjustments to obtain estimates corresponding to national accounting concepts and definitions

(*f*) Adjustments for differences in estimation

(*g*) Allocation of the final total by type of enterprise

The detailed derivation of the estimates is illustrated for four selected years in Table 7.1. The results for the main industrial orders are set out for 1920–38 in Table 26 with more detailed classification by trade group in Tables 27 and 28. An allocation by type of enterprise is given in Table 29 and for two selected years (1927 and 1937) an allocation by both industry and type of enterprise is provided in Table 30.

The basic source from which the estimates are derived is the information collected (and in part published) by the Commissioners of Inland Revenue for the purposes of assessment to income tax under Schedule D. Certain details of the scope of Schedule D and the terminology used by the Inland Revenue at various periods are described in Appendix 7.1, and the reader who is interested in having the full story should consult this before proceeding further.

(*a*) *The derivation of the total 'assessed gross trading profits' from the tax assessments*

The type of information available regarding the *total* of income assessed under Schedule D differs to some extent from the information available for *individual trade groups*, and is in certain respects further removed from the concept of trading profits which we must ultimately reach. However, it is the total which was most rigorously checked by the Inland Revenue and which, therefore, provides the most accurate source for the required estimates, serving as a control figure with which the sum of the individual trade group estimates must be reconciled. (See p. 135, below). We begin, therefore, with a discussion of this total.

The two primary concepts which are published in the inter-war *Reports of the Commissioners of H.M. Inland Revenue* are 'gross income' and 'actual income', the difference representing various categories of exemptions and reductions. However, as explained in Appendix 7.1, the gross income is larger, and the actual income smaller, than the required estimate of aggregate gross trading profits as defined for the present study.

What we require for the first stage of the estimation process is a series lying roughly midway between gross and actual income which may be termed 'assessed gross trading profits'. This represents that part of Schedule D *gross income* which relates to trading profits less that part of 'other reductions and discharges' which relates to trading profits. It is thus necessary to exclude from the published aggregates for both gross income and 'other reductions and discharges' all items relating to:

(i) Interest on war securities etc., deposit and other interest assessed under Schedule D,

(ii) Income from Dominion and foreign securities and possessions,

(iii) Income from employment (until 1927/8);

and, in addition, to exclude from the reductions and discharges the so-called 'non-trade deductions' such

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[1] The term 'corporate enterprise', as used in the present chapter, covers also local authority trading enterprises and is accordingly wider in scope than the 'corporate sector' of Chapter 3.

as management expenses of financial concerns and bank interest.[1]

Estimates of total assessed gross trading profits for five benchmark years can be derived directly from Inland Revenue *Reports* or reconstructed from valuable unpublished material kindly made available for this study by the Statistics and Intelligence Branch of the Inland Revenue. For each of the assessment years 1928/9 and 1933/4, broadly representing profits accruing in the calendar years 1927 and 1932,[2] the Inland Revenue had undertaken a special census and trade classification of all Schedule D gross assessments, and of the various reductions and discharges, so providing the material necessary to estimate what we have termed 'assessed gross trading profit'. This unpublished data was used to obtain the estimates given below.

For the years of assessment 1937/8, 1938/9 and 1939/40, broadly representing profits accruing in the years 1936, 1937 and 1938,[3] the *92nd Report* [**30**, pp. 55–76] contains estimates based on a 20% sample of assessments adjusted to the appropriate basis and controlled by an unpublished census of all gross assessments for 1938/9. The aggregate figures given in Table 40, p. 57, of this *Report* have been adopted, subject only to the exclusion of certain amounts relating to interest paid by building societies and local authorities.[4]

The resulting figures for these benchmark years are:[5]

	£ m.
1927	1,039.1
1932	763.3
1936	1,080.0
1937	1,161.4
1938	1,082.8

The figures for 1927 and 1932 are not absolutely consistent in definition and timing with those for 1936–8, but some of the discrepancies cancel out and the remaining difference is trivial.[6]

To complete the annual series for 1920–38 it is first necessary to deduct from the published totals of Schedule D gross income the unwanted interest, dividends and employment income (items (i) to (iii) on p. 129). For the most part the necessary amounts are available in the annual *Reports* but the published figures for interest on war securities etc. for 1934/5 to 1936/7 were adjusted downwards in the light of the more accurate information (which only became available after publication of the relevant *Reports*) given by the unpublished census of Schedule D assessments taken by the Inland Revenue for 1938/9.

[1] The deduction for management expenses arises because life insurance companies, and other financial concerns which derive the greater part of their income from investments, are charged to tax by deduction at source, and so are effectively taxed on their gross income, i.e. before deduction of allowable expenses. To remedy this they were given relief (under section 33 of the Income Tax Act 1918) by repayment of tax on the amount of the expenses. This would be relevant to the estimate of the profits of the financial concerns (but see pp. 141–3, below) but clearly has no connection with the calculation of the assessed profits of non-financial trading concerns, even where the investment income is derived from them. Equally irrelevant as a deduction from profits (as we define them) is the allowance given to taxpayers (under Section 36) for payments of bank interest not charged as an allowable expense in connection with a business and so permitted to be set off against other income.

[2] For 1927/8 onwards the standard basis of assessment for trading profits was that profits for accounting periods ending at any time in say, the year to 5 April 1928 would be assessed in the tax year ended 5 April 1929. The weighted average terminal date of accounts made up to dates ended in the year to 5 April 1928 was fairly close to the calendar year 1927. (See, e.g., Bowley and Stamp [**131**], p. 16). Strictly speaking, some correction should be made for the fact that for all years except 1936/8 the basic source is assessments made *in* a particular year rather than those made *for* the year. Some of these assessments will, therefore, relate to earlier years and some assessments for the year will be omitted, but the net effect of this is very small. Cf. G. D. N. Worswick and D. G. Tipping, *Profits in the British Economy, 1909–1938*, 1967, [**261**], pp. 15–18, and Appendix B, p. 140.

[3] See *92nd Report* [**30**], para. 92, p. 55.

[4] For these years the total given in the *92nd Report* includes, as an element in profits, amounts which in effect cover the interest paid by building societies and the interest paid on loans to local authorities. These amounts form part of the figure given in Table 73, p. 73, of the *Report* and are included in the total in Table 40, p. 57.

[5] There are some small differences between these estimates and the broadly comparable figures recently published by Worswick and Tipping for the Oxford University Institute of Economics and Statistics [**261**]. Both estimates were derived from the same basic Inland Revenue material and for 1927 the difference arises from the inclusion in the present estimate, but not the Oxford Institute's, of so-called unassessed income (i.e. income on which tax was in effect collected in the shape of penalties, the taxpayer having originally understated or failed to declare the income). For 1932 the amount of unassessed income was very much smaller and roughly cancels out a difference in the calculation of overcharges etc. For 1936–8 the only difference is the final timing adjustment made for the *92nd Report* but not followed by the Oxford Institute [**261**, p. 6].

[6] This statement is based on a comparison of the *92nd Report* estimates for 1936–8 with others obtained by starting from the originally published gross income figures for 1937/8 to 1939/40 and making adjustments for these years similar to those described below for 1934/5 to 1936/7. The average difference over the three years is £7 m. p.a.

TABLE 7.1 DERIVATION OF GROSS TRADING PROFITS OF COMPANIES, PUBLIC CORPORATIONS AND LOCAL AUTHORITY TRADING ENTERPRISES, AND NON-FARM INCOME FROM SELF-EMPLOYMENT, SELECTED YEARS, 1920–38

	1922	1927	1932	1938
1. Gross assessment, Schedule D[a]	1,327	1,400	1,071	1,409
2. *Less* interest on war securities etc. and income from Dominion and foreign securities and possessions[a]	160	200	170	178
3. Employees	7	—	—	—
4. Reductions and discharges	224	156	136	140
5. Adjustment for timing and for excess of losses incurred over losses allowed	+26	−5	49	−6
6. *Equals* assessed gross trading profits (less losses) in calendar year	962	1,039	716	1,085
7. *Add* small incomes not assessed	64	65	51	60
8. Evasion	90	88	85	100
9. Co-operative societies	15	26	20	27
10. Income from small holdings	7	6	6	6
11. *Less* continuous or excessive losses not brought into assessment	30	20	15	10
12. New issue expenses etc.	7	14	6	8
13. Royalties, ground rents etc.	18	18	19	24
14. Concerns operating outside the U.K.	80	109	39	96
15. Farming income assessed under Schedule D	2	2	2	2
16. *Add* E.P.D., C.P.T. and national defence contribution	−60	—	—	33
17. Bank interest etc	37	51	42	47
18. Rent of owner-occupied trading property	42	56	68	84
19. Depreciation of mills, factories etc.	2	3	4	5
20. Allowance for renewals of plant and machinery	13	17	12	16
21. *Less* assessed gross grading profit of financial companies	34	39	20	3
22. *Add* national income estimate of profits of financial companies	−36	−33	−41	−35
23. Adjustment to railways, coal mines and local authority enterprises	33	12	5	5
24. Gross trading profits	998	1,127	867	1,289

SOURCE: See text. [a] Income of following year of assessment, i.e. 1923/4, 1928/9, 1933/4 and 1939/40.

Secondly, it is necessary to estimate the amount to be excluded from the total given in the *Reports* for 'other reductions and discharges'. The main source for this was unpublished Inland Revenue material available for each year and relating to the amount allowed for management expenses, bank interest and other non-trade deductions; but there are a few items for which the estimates depend on freehand interpolation between the benchmarks, e.g. for subsequent reductions from the original gross assessments on interest or war securities, etc.[1]

For years up to 1922/3 it was also necessary to deduct the amounts relating to Southern Ireland and this was done on the basis of the figures for 1922/3 given for both the United Kingdom and for Great Britain and Northern Ireland in the *68th Report* [**30**, p. 83].

(b) Adjustment of assessed gross trading profits for the timing of assessments and of relief for losses

1920–1926

For each year of assessment up to and including 1926/7 the basis of assessment for most categories of Schedule D income was the average profits of the three preceding years. There were a few categories for which it was the income of the preceding year and some where it was the

[1] The unpublished information available for this purpose for 1920–7 was generally more detailed than for later years (because certain very useful returns from districts were abolished during an economy campaign) and it was, fortunately, not necessary to extrapolate any of the items in the 1927 benchmark back to 1920, a procedure over which there would have been no check.

average of the five preceding years. The assessments have, therefore, to be converted to a calendar year basis. For 1927/8 assessments were in general based on the income of the preceding year, corresponding broadly to the calendar year 1926, but the Finance Act 1926 included transitional provisions which gave firms the option of assessment on the basis of the three-year average.

Fortunately the Inland Revenue had by this date begun to assemble large samples of accounts and extracted various data from these, including the final profit as assessed for the current and preceding accounting years.[1] Work-sheets have survived on which the summaries of these sample profits were cast into the form of index numbers for each of 37 trade groups; and the indices were subsequently used to interpolate between the benchmark which became available for 1928/9 and a corresponding existing benchmark for 1911/12. The annual series were then further adjusted with a note explaining that this was done in the light of a reconciliation with the aggregate profits as published in the *Reports*. This reconciliation allowed for the averaging of the assessments; the interest and other income not covered by the 196–6 samples; the effect on timing of the special relief for losses given under Section 34 of the Income Tax Act 1918;[2] and the fact that the published figures for 1924/5 and 1925/6 included small amounts of income which were really a much delayed assessment of profits arising in the depressed years 1921/2 and 1922/3.

This adjusted series was never published (or even typed) and was presumably constructed solely for internal Inland Revenue purposes. As the actual reconciliation was not available to me it seemed advisable to check the adjusted annual series against the scrambled series of total assessed gross trading profits constructed in stage (*a*). For this it was necessary to convert each trade group in the unpublished series into its appropriate scrambled (preceding year, three-year or five-year average) form, and to allow for the effect of Section 34[3] and for the fact that the annual series were net of wear and tear allowances and did not include the 'unassessed income' (see p. 130, n. 5). When this was done the reconciliation proved to be extremely satisfactory, with a discrepancy of more than 2 % in only one year (1922/3, 4 %). It was, therefore, only necessary to make a few very minor adjustments, to add back the wear and tear allowances and include the unassessed income, and thus arrive at a reliable calendar year series both for total gross trading profits and for profits in each of 37 trade groups. The separate trade group series reappear below in stage (*c*) of this exercise.

1927–1938

For this period the basic time reference for the year of assessment was the profit of the preceding accounting year, and as noted on p. 130, n. 2, above, this corresponds broadly to a calendar year so that there is no problem of unravelling the assessments. It is, however, necessary to take account of the new method whereby relief for losses could be obtained. Under Section 33 of the Finance Act 1926 a loss not otherwise relieved could be carried forward and set off against the next assessment on the same business for the six following years. In consequence, the assessments reflect the amount of

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1 Sample returns from districts were collected by Somerset House from about 1908. From the early 1920s these took on a more systematic form and an annual statement of liability (form 196–6) was required for all concerns (corporate and non-corporate) with profits over £2,000. Even if profits subsequently dropped below this level the districts were supposed to continue sending in a 196–6 form. In addition to the basic information on profits (and losses) the 196–6s were used at various times to collect other information, particularly for companies; see, for example, Chapter 3.3. For a general comment on the scope and reliability of the 196–6 returns see p. 134, below.

2 Under Section 34 a concern which sustained a business loss was able to recover an amount, equal to the tax on the loss, in the year in which the loss was incurred. The effect of this on the assessments, as compared with the standard procedure for dealing with losses, can be seen from the following example:

Year	Actual profit or loss (£)	Assessed on the average of the 3 preceding years, (£): With no relief under Section 34	With relief given under Section 34
1	10		
2	35		
3	30		
4	40	25	25
5	−30	35	5 [35 − loss of 30]
6	20	$13\frac{1}{3}$	$23\frac{1}{3}$ [$\frac{1}{3}$ (30+40+nil)]
7	25	10	20 [$\frac{1}{3}$ (40+nil+20)]
8		5	15 [$\frac{1}{3}$ (nil+20+25)]

In neither case was there any provision for losses to be carried forward if they exceeded the profits available for set-off in any year. (See p. 138, below, for an adjustment for this factor and for the cases where a firm had a series of losses so that there was no profit against which the losses could be offset).

3 The amount of relief actually given under Section 34 is available from 1921/2 onwards in the Inland Revenue files and it was thus possible to carry out the necessary reconciliation procedure.

loss *allowed*, whereas we are interested in the loss *incurred*. In a period of trade depression losses incurred will exceed those allowed and the assessed profits will overstate the true position; during the recovery losses carried forward and allowed will exceed those incurred and the assessed series will understate the level of profits. It seemed likely that this phenomenon could have had a serious effect in dampening the actual fluctuations during the cycle of 1929–32–37, and so an attempt was made to adjust for this.

Fortunately the Inland Revenue archives were found to contain information gathered from the 196–6 returns which provided the basis for the necessary correction. The summaries compiled from these forms (i.e. from a large sample of concerns which had made a profit of £2,000 or more *in any year*) showed for each accounting period from 1927/8 onwards, for each of 37 trade groups, the amount of loss available to be carried forward from previous years and set off against future assessments. These sample figures were grossed-up by a factor derived from the total profit for the trade group (see part (*c*), p. 135, below) and the corresponding sample profit as given by the 196–6 form. This was done separately each year for each of the trade groups,[1] and for corporate and non-corporate enterprises. It was then possible to get a reasonably accurate approximation to the actual losses incurred each year in each trade group by means of the equation:[2]

Loss carried forward at end of previous year
Plus loss incurred during year
Less loss allowed during year
Equals loss carried forward at end of year

From this it follows that the required series for profit less loss incurred is equal to the assessed series of profit less loss allowed minus the increase in the amount of loss carried forward between the beginning and end of the year.

The main effect of this correction was to reduce profits in each of the years 1931 and 1932 by some £45 m., and to increase them in 1936 and 1937 by about £10 m. Losses available to be carried forward increased by over £100 m. over the period 1927 to 1938, and therefore the total sum deducted as a result of this adjustment exceeded by this amount the sum added on.[3]

(*c*) *Allocation of the adjusted gross trading profits to trade groups classified according to the 1948 S.I.C.*

Up to this point the description of the estimates has in the main referred to estimates of total profit. It is now convenient to introduce the corresponding estimates made for individual trade groups. As with the total estimates it was first necessary to estimate assessed gross trading profits and then to adjust for timing and for the treatment of losses. The estimates in these first two stages were based on the Inland Revenue trade classification; despite the additional margin of error involved it was thought worthwhile to process the estimates one stage further and reclassify the data according to the orders of the 1948 *Standard Industrial Classification* [**76**].

In the inter-war period the Inland Revenue used the following three versions of one basic trade classification: a very broad division into 12 groups designated by letter, a finer division into 37 groups designated by number, and an even more detailed breakdown with more than 100 groups designated by letter and number. It is this last classification which is used, with minor modifications, in the Oxford Institute study [**261**, Appendix A, pp. 136–40]; but for our purpose it was for the most part only possible to use the 37 group classification. Though the degree of detail differs, the basic principles are the same, and the present series are subject to the reservations noted by the Oxford Institute [**261**, pp. 18–21]. In particular, where individual companies carried on more than one activity the income was allocated in total to the trade in which the company was mainly engaged. The main effect of this procedure is probably to have increased distribution at the expense of manufacturing.[4]

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1 Grossing-up each trade group separately gives a more accurate estimate and the separate series were in any event needed for the following stage of the exercise.

2 Strictly speaking the equation should include a term for losses ceasing to be available for set-off against future assessments because the six-year time limit had expired but for several reasons this was not a significant aspect and can be neglected. It is also possible that the sample data may understate total losses (since firms with persistent losses would not be covered by the 196–6s) and a rough allowance is made for this on p. 138 below.

3 There were two other forms of relief for losses which should be noted. Firstly, losses made by one business could be set off (under rule 13) against a profit made in another business under the same ownership. This could effect the allocation of total profits by trade group but the amount of such transfers between different trade groups is believed to be small [**261**, p. 10]. Secondly, Section 34 continued in force after the transition to the preceding year basis of assessment and where relief was obtained in this way (rather than by carrying the loss forward under Section 33) the true timing of the assessed profits and losses would be distorted. However, information from the 196–6 returns is available for the 1930s for a sample of concerns in certain trade groups showing profits before and after adjustment for loss relief under Section 34 and this suggests that the amounts involved were not large.

4 Cf. *92nd Report*, [**30**], para. 95, p.56.

Quite apart from this problem of concerns which carried on two or more trades there are some significant problems involved in allocating the 37 trade groups of the inter-war Inland Revenue classification to one or other of the 24 orders (or narrower minimum list headings) of the Standard Industrial Classification drawn up by the C.S.O. in 1948 and used elsewhere in this volume (for example, for wages and salaries) for the period 1920–38. The most important of the differences between the two systems is the classification by the Inland Revenue as retail distribution of concerns which on the 1948 S.I.C. would be variously classified as building and contracting, manufacturing (particularly food, clothing and engineering) or services. There are also numerous smaller discrepancies: for example, in the 1948 S.I.C. Order VII, Vehicles, covers not only the Inland Revenue categories of railway carriage, wagon and tramcar building (C.6) plus cycle and motor trades (C.7) but also the manufacture of vehicle components and of carts and carriages, which the Inland Revenue classified as engineering (C.3) and timber trades (D.19) respectively. It further includes all repair work on cars, buses etc., which was allocated by the Inland Revenue to semi-industrial retail distribution (E.4) or road transport (F.4). Each of these additional items is fairly small but the combined effect is a significant increase in the overall 1948 S.I.C. estimate of profits in the vehicles industry.

For the five benchmark years discussed in stage (*a*) above estimates of the assessed gross trading profits were immediately available for the 37 trade groups.[1] For 1920–6 the adjusted annual series (p. 132, above) for each of the 37 trade groups has already been described and nothing further is required.

For 1928–31 and 1933–5 it was necessary to interpolate between the 1927, 1932 and 1936 benchmarks, and for the majority of trade groups[2] I again relied on the sample data available from the annual summaries of profits in the current and preceding year compiled from the 196–6 forms. The movements of these samples have been described by Hart as 'perverse' and 'idiosyncratic' [**174**, pp. 38–9] but on close scrutiny of the series this verdict does not appear to me to be justified. Moreover, the 196–6 returns possess three major advantages as compared with the samples of published company accounts previously used for the inter-war period:

(i) They are based on accounts which have all been carefully processed by the tax inspectors and so must be consistent with regard to the treatment of such items as tax, debenture interest, depreciation and transfers from reserves. The original company accounts published before the coming into force of the 1948 Companies Act were, by contrast, extremely inconsistent in their treatment of these items.[3]

(ii) They provide very much larger samples than are otherwise available: roughly 35,000 concerns, accounting for 40–50% of the assessed gross profits of companies (excluding railways and public utilities), and about 20% of non-corporate profits.[4] This may be compared with the 2,300 companies whose accounts were collected and summarised by *The Economist*[5] and the sample of less than 350 companies used by Hart [**174**, pp. 90–1] for all manufacturing and distribution.

(iii) They are a much more representative sample since they cover not only companies but also the accounts of individuals and firms (in roughly equal numbers): and also because the size range covered is much wider – reaching down to a minimum of £2,000 – which is well below the profits of the large companies for which accounts are generally available.

Thus even though the returns may be incomplete (e.g. if there was a long delay in agreeing the assessment the 196–6 may have been omitted) and may be distorted by such factors as the acquisition of companies below the £2,000 limit they almost certainly provide a reasonable basis for interpolation.

The 196–6 summaries were used to interpolate between 1927 and 1932 and between 1932 and 1936 and this procedure was subject to a two-stage process of correction. Firstly, an adjustment factor was calculated separately for each trade group for each year (working separately with corporate and non-corporate enterprises) on the basis of the extent to which the first approximation for the end year (1932 or 1936) fell above or below the corresponding benchmark.[6] Secondly,

[1] The figures as published for 1936–8 in the *92nd Report* are classified according to the 1948 S.I.C. but the original figures from which these were derived were classified on the old Inland Revenue basis and it is these which were used at this stage in the exercise.

[2] The exceptions relate mainly to the railways and public utilities for which comprehensive published data were generally available. See pp. 144 and 150–1 below.

[3] Cf. Hart [**174**], pp. 41–2. See also the comments in *The Economist*, 25 May 1940, p. 936.

[4] The coverage is particularly poor for retail distribution (as classified by the Inland Revenue); excluding this trade group it would be about 30% of non-corporate profits.

[5] See, in particular, the article by Hargreaves Parkinson in the issue for 17 December 1938, p. 597.

[6] This is the standard interpolation procedure described on p. 34, n. 3, above.

all those trade groups in which this initial discrepancy was both more than £1 m. and more than 10% of the benchmark were subject to a further proportionate adjustment each year. This represents the correction factor required to make the year's total for these trade groups, plus the total for the remaining groups not subject to further adjustment, equal to the total for the year as estimated in part (*b*) above;[1] and there is thus only one such factor for all groups for each year.

The amount of loss available to be carried forward at the end of each year has already been estimated (pp. 132–3, above) for each of the 37 trade groups; and the assessed series of profits less losses allowed could be adjusted each year to reflect profits less losses incurred for each trade group by deducting the increase in the loss available to be carried forward.

For the final task of reclassifying the 37 trade groups in accordance with the 1948 S.I.C. three documents were available, each showing the percentages in which the old groups would be divided among the new S.I.C. groups. For 1936–8 the Inland Revenue had prepared two different conversion tables. The first was used for the *92nd Report* and was based principally on the reallocation of the old trade groups in the proportions indicated by the detailed data on profits available from the 1935 Census of Production. The second was prepared for the tables on companies' costs and appropriation of income in the *94th Report* and where it differs from the first is more reliable since it was obtained by a detailed reclassification on the basis of the 1948 S.I.C. of each concern (or in some cases of a sample of concerns) for which a 196–6 return was available. The third conversion table was made in 1951 for the profits of 1927 and was again based on a detailed reclassification of all 196–6 returns.

The process of conversion to the new basis can be summarised as follows: for 22 of the 37 old trade groups no splitting was needed and each could be allocated in total to one of the new S.I.C. orders or minimum list headings (although it did not necessarily constitute the whole of a new group). For the remaining 15 old trade groups a good deal of sub-division was necessary. A first step was to move down from this level to the finer Inland Revenue classification and some of these finer groups again corresponded exactly with all or part of one of the new groups. For example, the old trade group number 19 covered paper, printing, publishing, stationery etc., and this was sub-divided in the finer Inland Revenue classification into D15, D16, D17 and D18. D15–17 belongs entirely to Order XV of the 1948 S.I.C. D18, however, consists partly of income which should be classified to Order XV and partly of other categories (Orders IV, IX and XVI) and was split in the proportions shown by the conversion tables for 1927 and 1936–8.

The first stage of this division of the 15 trade groups into the (40) sub-groups was based on the detailed breakdown available for the five benchmark years, and for 1928–31 and 1933–5 it was possible in most cases to interpolate on the basis of summaries of the 196–6 returns which for this period had been classified both on the 37 groups and on the finer basis. For 1920–6 the sub-division was much more approximate and it was often necessary to assume that each of the components moved in the same way as the trade group total. The further division of the sub-groups in those 15 cases (such as group D18) where it was necessary was made in the same proportions each year if there was no significant difference between the proportions shown for 1927 and for 1936–8; or by interpolation between the 1927 and 1936–8 ratios where there was a clear indication of a trend. In general, the 1927 percentages were applied for the whole period 1920–7.

The end result of all this reallocation was a series of profits for 34 orders or minimum list headings in the 1948 S.I.C., 15 in manufacturing and 19 in other industries and services, including concerns operating abroad. This was thought to be the maximum subdivision possible without resorting to an unacceptable degree of approximation in reclassification and in interpolation between the benchmarks. After further adjustment in parts (*d*) to (*f*) below (including the exclusion of concerns operating abroad) the individual series are given in Tables 26–8. For Table 27 the detailed series for manufacturing and other industries have been grouped so as to show sub-totals which are appreciably more reliable than the components; for example, the interpolation between benchmarks can be performed much more accurately for the combined metal manufacture and engineering group than for the separate components, and there will also be fewer errors in the transition to the new classification at the more aggregate level. A classification of profits by both industry and type of enterprise is given for two years (1927 and 1937) in Table 30, and since these are benchmark years it is possible to use a more detailed classification, including 20 separate manufacturing industries.

(*d*) *Additions for income not covered by the tax assessments*

We have now proceeded as far as it is possible to go on the basis of the income assessed for tax purposes and it is necessary to complete the estimates by means of a

[1] The average annual adjustment required in this second stage (ignoring sign) was 3.3% and the largest correction was −6.3% in 1934.

variety of additions and amendments. The first batch of these consists of five items not covered by the assessments: small incomes not assesssed for tax; income evading taxation; income of co-operative societies; incomes from small holdings, and continuous losses not brought into the assessments.

Small incomes not assessed for tax

Up to 1919/20 a bachelor was entitled to total exemption from tax if his income did not exceed a specified figure (for 1919/20 it was £130). From 1920/21 onwards there was no formal exemption limit specified in the Finance Acts and in principle all trading profits were liable to be assessed. However, the new provisions for earned income relief and personal allowances created an effective limit below which no tax was payable by persons.[1] The precise limit would depend on whether or not the person was married, the number of children, and so on. The lowest effective limit, applicable to a bachelor, varied over the inter-war period as follows:

Assessment years	Income all earned (£)	Income all from investment and property (£)
1920/1 to 1924/5	150	135
1925/6 to 1930/1	162	135
1931/2 to 1939/40	125	100

In the case of an income partly earned and partly from property the effective exemption limit for a bachelor would lie between these figures, the exact point depending on the relative amounts of earned and investment income. Thus someone with an earned income slightly below the limit would nevertheless be liable for tax if his income from all sources was above the effective limit for his combined income, and the earned income would already be included in the assessed trading profits.

For the year of assessment 1928/9 there is an unpublished Inland Revenue classification of assessments by size which shows a total gross assessment of £18.5 m. from 219,000 assessments on individuals and firms in the range of £1–£159.[2] It is clear from this and other evidence that many small unincorporated businesses were assessed even where the income was well below the minimum exemption limit. This would be necessary because, for example, the profits from these small firms were known or suspected to be only *part* of the income of the man – or man and wife – in question. Equally, however, there would be other cases where the profits were not assessed because it was known that no tax would be payable.

In order to estimate the aggregate income from self-employment of persons with earned income not assessed we require estimates of (i) the total number of non-farm self-employed (employers and independent workers), (ii) the number assessed for tax, and (iii) the average earned income of those not assessed. Three benchmark estimates of (i) are given in the top part of Table 7.2; the figures for 1921 and 1931 are derived mainly from the Census of Population, and 1938 is based on estimates by H. Frankel.[3] This suggests a slow rise over the

TABLE 7.2 NUMBER OF UNASSESSED NON-FARM SELF-EMPLOYED PERSONS (thousands)

(i) *Total number of non-farm self-employed*			
	1921	1931	1938
1. Employers – Great Britain	735	749	760
2. Independent workers – Great Britain	1,207	1,272	1,300
3. Employers and independent workers – Northern Ireland	118	118	118
4. Total self-employed – Great Britain and Northern Ireland	2,060	2,139	2,178
5. *Less* farmers	383	362	360
6. *Less* fishermen, nurses etc.	25	25	25
7. *Equals* non-farm self-employed persons	1,652	1,752	1,793
(ii) *Number of unassessed non-farm self-employed*			
	1927	1932	1937
8. Number of non-farm self-employed	1,710	1,755	1,785
9. *Less* self-employed 'persons' assessed Schedule D	1,065	1,115	1,135
10. *Equals* number unassessed	645	640	650

SOURCE: Row 1: Chapman [**146**], p. 37 (note o) and p. 40, Table 21.
2: *Census of Population*, 1921 and 1931, and Chapman [**146**], p. 40, Table 21.
3: *Census of Population of Northern Ireland*, 1926 [**41** (*d*)].
5: F. D. W. Taylor, [**252**], p. 40.
6: These groups are treated by Chapman as employees; see [**146**], p. 37, notes m, n and o.
8: Interpolation between estimates in row 7.
9: See text.

[1] None of these allowances applied to corporate enterprises and they would generally be assessed even in years when they made little or no profit (or a loss).

[2] See Worswick and Tipping [**261**], p. 23 and also pp. 13–14.

[3] H. Frankel, 'The Industrial Distribution of the Population of Great Britain in July, 1939', *J.R. Statist. Soc.* CVIII 1945 [**164**].

inter-war period in the number of non-farm self-employed, and the intervening years were filled in by linear interpolation.

New information regarding the numbers paying tax is given for 1927 in the Worswick and Tipping study [**261**, Appendix E, pp. 147–55]. There were 815,000 assessments on individuals and 107,000 on firms, and the number of partners in these firms was 250,000, i.e. an average of 2.34 per firm. This gives a total of 1,065,000 assessed self-employed 'persons'.[1] The number of assessments on individuals and firms is also known for 1932 and 1937 (from the unpublished censuses of assessments) and by assuming that the average number of partners per firm was the same as in 1927 it is possible to estimate the number of self-employed 'persons' assessed in these years. These estimates are used in the lower part of Table 7.2 to derive the estimated number not assessed; and estimates for the remaining years were made by reference to the trend in the total number of non-farm self-employed and the changes in the allowances which affected the limit below which there was exemption from tax.[2]

There is very little information on average incomes. The average gross assessment of the 219,000 persons caught in the 1927 assessment was £85. On the basis of a sample enquiry into the earnings of independent workers (made by H. J. Parker in the course of the *Social Survey of Merseyside*) Colin Clark[3] estimated that the average earnings of those below the minimum limit of £125 were £72; and that with limits of £150 and £162 the average earnings given by the same frequency distribution would be £86 and £92 respectively [**149**, p. 79]. Bowley and Stamp [**131**, p. 17] suggested a little over £100 when the limit was £150; and Bowley [**134**, p. 79] used £83 for 1931 with the limit at £125. I have taken £100 for 1927 and £80 for 1931 and extrapolated by reference to the movement in wages and the changes in the minimum exemption limit. The final estimate of the total income not assessed fluctuates between £75 m. (in 1920) and £51 m. (in 1933).

As a basis for a rough allocation of this total the number of self-employed persons assessed to tax in 1927 in the main trade groups [**261**, Appendix E] was compared with the 1921 and 1931 Census of Population figures of the total number of self-employed in the corresponding trades. Roughly 40% was allocated to manufacturing (particularly clothing), 30% to retail distribution and the balance to building, road transport, professions and hotels and other services.

Evasion and Fraud

It is naturally exceedingly difficult to get even a moderately reliable indication of the amount of income evading taxation by a variety of techniques ranging from the one extreme of failure to declare minor sources of income through under-statement of cash takings by small businesses to the other extreme of deliberate fraud.

Lord Stamp gave his careful attention to this problem before the 1914–18 war [**247**, pp. 315–24] and later heard all the evidence on this point as a member of the Royal Commission on the Income Tax of 1920.[4] For 1924 he suggested a figure of £75 m. ± 15 m. [**131**, p. 17]; this would represent an addition of 18% to the estimate of assessed non-corporate gross trading profits.[5] Writing at a later date with reference to the years 1928 and 1935 he expressed the view that evasion was unlikely to exceed 15% 'over the area in which it can reasonably exist'; this area was not precisely defined by Stamp but was broadly identified as unincorporated businesses and small companies.[6]

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1 The number of assessments does not correspond exactly with the number of persons for various reasons, e.g. persons making a loss would be omitted, and a husband and wife might be treated as 'one person', but on the other hand a trader engaged in more than one branch of activity might, if he wished, be assessed separately in respect of each activity [**261**, p. 148].

2 The resulting estimate of 615,000 for 1924 agrees remarkably well with the estimate of 620,000 (100,000 employers and 520,000 independent workers) arrived at by Bowley and Stamp [**131**, p. 26] by an entirely different route; and for 1931 the present estimate of 640,000 is consistent with Bowley's figure of 600,000 for independent workers only [**134**, p. 79] but is considerably higher than Colin Clark's estimate of 440,000 independent workers [**149**, p. 34].

3 Colin Clark, 'Further Data on the National Income', *Economic Journal*, XLIV, 1934 [**148**], pp. 385–7.

4 See *Report of the Royal Commission on the Income Tax*, Cmd. 615, 1920 [**52**], pp. 135, and *Minutes of Evidence*, 1919, Cmd. 288. Stamp was easily able to knock down some of the higher estimates of the extent of evasion (see Q. 11, 113–33) and was generally keen to show that the amount was much less than was often supposed. For useful evidence by a Chief Inspector of Taxes (E. Stanford, London) see Q. 12,376–769. See also A. Victor Tranter, *Evasion in Taxation*, 1929 [**255**].

5 Stamp's estimate applied to all sources of income but there was little scope for evasion except under Schedule D. Evasion and fraud was not, of course, confined exclusively to non-corporate concerns but the opportunities were very much less for companies. In part (*g*) below an arbitrary 10% of the total is in fact allotted to the corporate sector.

6 *The National Capital*, 1937 [**248**], p. 27. In this study Stamp suggested an addition of 5% to cover both evasion and the assets of firms making losses but this ratio was applied to the value of the assets and is not relevant as a guide to the amount of *income* since the multiplier applied to income by Stamp was very much lower for individuals and firms than for companies. The same applies to the estimates of 2% in 1928 and 3% in 1935 quoted by H. Campion, *Public and Private Property in Great Britain*, 1939, [**144**], p. 56.

There are numerous references to the problem of evasion and fraud in the annual inter-war *Reports and Minutes of Evidence* taken before the Select Committee of Public Accounts, but no attempt was made to estimate the overall amount of income escaping assessment.

It can, however, be roughly estimated that the current Blue Book estimate of evasion for income from self-employment in 1938 is of the order of £120 m.,[1] which would be 37% of the assessed non-corporate gross profits. This seemed to me to be slightly on the high side in the light of Stamp's estimates but it does seem plausible that evasion should have risen over the period as tax rates increased and I have taken £75 m. (18%) in 1924 and £100 m. (30%) in 1938, assumed a linear increase in the percentage between these years and applied this rate to the annual estimates for assessed non-corporate gross trading profits.[2] It was further assumed that the amount of evasion was higher in the immediate post-war years than in 1924.[3]

A very arbitrary allocation of this very arbitrary total was then made in the light of the Oxford Institute figures [**261**, Appendix E] for the numbers of self-employed persons assessed under Schedule D. 80% of the total was allocated to three trade groups: retail distribution, hotels, inns and other services and professions, and the remainder was divided between building and various manufacturing industries.

Co-operative societies

For many years the trading surplus of co-operative societies was not subject to tax despite the complaints of private traders, but the Finance Act 1933 amended the law so that they were assessed at the standard rate on the amount of their retained profits plus share and loan interest, i.e. amounts paid in dividends continued to be exempt. For 1920–31 it is therefore necessary to add on the total surplus of retail, wholesale and other co-operative societies, and from 1932 (the first assessment year under the new arrangement being 1933/4) to 1938 only the amount of the dividend must be included.[4] The series for retail co-ops was allocated to retail distribution and the balance to wholesale distribution.

Income from small holdings

The income from gardens and holdings of less than one acre would not appear in the tax assessments and is also excluded from the estimate of income from farming in Chapter 2.2 (see p. 38, above). The value of the output of small holdings, allotments and market gardens was estimated by Stone and Rowe [**249**, 1] for meat, eggs, fruit and vegetables, but most of this produce was consumed by the growers and in the present estimates is not treated as part of consumers' expenditure (see p. 45, above) or of personal income. The balance was, however, sold, and an estimate (based on Stone and Rowe) of the income from these sales has been added to other income from self-employment. This is in accordance with C.S.O. procedure [**73**, p. 147].

Continuous or excessive losses not brought into assessment

As has been noted there were various systems by which losses could be set off against the profits of another year or of another enterprise under the same ownership. Where, however, firms made continuous losses over a run of years, so that there was no profit against which to offset the losses, the total of assessed profit would be too high as a basis for national income estimates; and under the system in force prior to the Finance Act 1926 (see p. 132, above) there was no provision for carrying forward losses in excess of the profits available for set-off in any one year. Stamp suggested £50 m. for this and certain other minor items in 1924 [**131**, p. 17]; and had earlier proposed a sum of £16 m. for the pre-1914 period [**247**, pp. 181–6].

With no more than this to go on, a token deduction has been made in the present estimates, beginning at £30 m. in each of the years 1920–4 and declining to £20 m. in 1925–7, then to £15 m. for 1928–33, and finally, with the recovery in trade, to £10 m. by the end of the thirties.[5] The deduction is lower from 1928 onwards because of the change in tax treatment of losses and because the correction made for losses incurred (as opposed to losses allowed for tax purposes) on p. 133, above, already includes a sizeable deduction from the assessed series. Some further deduction is still required, however, since, as noted on p. 133, n. 2, the correction may understate the losses incurred.

It is only possible to guess at the allocation by type of enterprise and by industry, but for the latter there is no attempt to go beyond the broad industrial groups in Table 26.

[1] This can be deduced from a comparison of the gross true income of individuals and firms as given in the *92nd Report*, Table 40, with the Blue Book estimate of income from self-employment, after allowing for my estimate of income below the exemption limit and certain other adjustments.

[2] See pp. 145–7, below.

[3] Cf. Stamp [**248**], p. 26.

[4] The figures were obtained from the *Report of the Chief Registrar of Friendly Societies*, Pt. 3, Industrial and Provident Societies [**28**].

[5] The figure for 1927 includes an adjustment of £10 m. for coal mines referred to on p. 144–5 below.

(*e*) *Adjustments to obtain estimates corresponding to national accounting concepts and definitions*

There are some nine adjustments which must be made in order to move from the tax-based concept of assessed gross trading profit to a national accounts concept as defined in Chapter 7.0. It is necessary to deduct from assessed profits certain financial charges, royalties, long lease rents etc., the profits of British concerns operating outside the United Kingdom, and the small fraction of farming income assessed under Schedule D; to add back taxes such as the excess profits duty and national defence contribution, bank interest, imputed rents of owner-occupied trading property, and amounts allowed for repairs and renewals; and to adjust the estimated profits of financial concerns.

The reasons for, and source of, each of these adjustments is explained below:

New issue expenses etc.

Expenditure incurred in connection with the formation of a company or an increase in its share or loan capital is not allowed as a deduction in calculating profits for income tax, but is treated as an operating expense by the C.S.O. [**73**, p. 224]. An estimate of £8 m. is available for 1938 and was extrapolated back to 1920 by means of the Midland Bank series for new issues for production, trade, transport and finance.[1] This series has been allocated to the main industrial orders (Table 26) but not to the individual trade groups in Tables 27, 28 and 30.

Royalties, ground rents etc.

As part of the Inland Revenue system of collection of tax at the source items such as patent royalties and ground rents are not deductible in computing profits for income tax purposes.[2] They should, however, be treated as an operating expense for our purpose.

For 1927, 1930–2 and 1934–8 the information on companies' appropriation of income which is discussed in detail in Chapter 3.3 above provides data on royalties etc. paid, and from this the necessary estimates can be derived for each industry. This data covers only companies and a small addition (10%) was made to allow for non-corporate enterprises. Missing years were estimated by freehand interpolation and extrapolation, except for the important case of coal mining, where the series given in the *Annual Report of the Secretary for Mines* [**14**] was used.

Concerns operating outside the United Kingdom

The tax assessments cover the profits of all concerns which are resident in the United Kingdom (basically those for which the central management and control are located in this country) irrespective of whether the profits are earned from trading at home or abroad. For the national income estimates, however, it is necessary to measure separately the gross trading profit of concerns operating in the United Kingdom as it is this concept which forms part of the gross *domestic* product.[3]

One of the industry groups distinguished in part (*c*) above was British concerns operating outside the United Kingdom and it is this series which is deducted from the total. It should be noted that for the purpose of this classification each subsidiary company was considered separately by the Inland Revenue; but the series covers only the profits of concerns (railways, mining, oil, plantations etc.) which were clearly identifiable as 'operating mainly abroad'. The overseas share of profits of concerns which traded mainly at home but also carried on trading operations abroad (e.g. by means of an overseas branch) is not known and such concerns are in effect treated as operating in the United Kingdom.[4]

Farming income

Most farming income was assessed under Schedule B and so is not covered by the assessed gross trading profits, but a few farmers were assessed under Schedule D, and were classified as a separate minimum list heading in part (*c*) above. Since all farming income is covered in full in Chapter 2.2 it is necessary to remove the Schedule D assessments in order to avoid double-counting.

Excess profits duty and other taxes

Income tax itself is not allowed as a deduction from profits for the purpose of computing tax liability, but the excess profits duty (E.P.D.), corporation profits tax (C.P.T.) and national defence contribution (N.D.C.) were all allowable deductions and the Schedule D assessments would exclude payments of these taxes and include amounts repaid. The payments of E.P.D.,

[1] R. F. Henderson, *The New Issue Market and the Finance of Industry*, 1951 [**176**], pp. 157–61.

[2] The taxpayer recoups the tax on such items when he pays the royalty, rent etc. since he is entitled to deduct tax at the standard rate from the amount paid. The royalties etc. thus appear in the Inland Revenue data as part of the income of the enterprise paying and do not appear in the income of the recipient enterprise.

[3] Profits and other property income from abroad represent an element in the gross *national* product and are treated separately (see Chapter 6). They are also covered in the corporate appropriation account in Chapter 3.3, but this does not affect the estimates of domestic income.

[4] See Chapter 6.0 for further discussion of this issue, and also Worswick and Tipping [**261**], Ch. 5.

C.P.T. and N.D.C., have, therefore, to be added back and the repayments of E.P.D. have to be deducted.

For E.P.D. and C.P.T. the Inland Revenue have kindly supplied an estimate (made in 1927) of the amounts accruing and amounts due to be repaid each year from 1914 onwards.[1] For the period with which we are here concerned, the net effect of payments of E.P.D. was to lower the assessed gross trading profit for 1920 by £105 m. while for 1921 to 1923 the effect of repayments of E.P.D. in excess of payments of E.P.D. and C.P.T. was to raise the assessed series by £20 m., £60 m. and £18 m. respectively. Thereafter the net sums involved are very small.

There is insufficient information available on which to base an allocation of these amounts by industry and it is shown as a global deduction at the foot of Table 26. In view of the uneven incidence of the excess profits this may seriously affect the comparability of the individual industry figures for 1920 and perhaps also 1922.

N.D.C. (the forerunner of the profits tax) was imposed by the Finance Act 1937 with effect from 1 April 1937. It was charged at a rate of 5% on corporate and 4% on non-corporate enterprises subject to certain abatements on profits below £12,000, and public utilities and professional incomes were exempt.[2] The *90th Report* [**30**, p. 88] gives the profits assessed *in* each year from 1937/8 and the amount of tax charged, but delays in assessment were common and it is better to use this information simply to calculate the average rate of tax charged. This rate (4.6%) was then applied to the net true income *for* assessment years 1938/9 and 1939/40 as given in the *92nd Report*[3] [**30**, p. 57] adjusted to exclude public utilities and professional incomes. The figure for 1938/9 must then be reduced by one-quarter to exclude the three months of 1937 for which N.D.C. was not chargeable. This yields total estimates of £25 m. for 1937 and £33 m. for 1938. This can be compared with figures of £18 m. and £26 m. for companies only, obtained from the tables in the *94th Report* [**30**, pp. 66–73] by the procedure described in Chapter 3.3 above.

An allocation by industry was made from the information in the *92nd* and *94th Reports.*

Bank interest etc.

Bank interest and other interest on short loans is payable without deduction of tax and is allowable as an expense for tax purposes. For national income estimates such interest payments are treated as a transfer of profits not as an operating expense [**73**, p. 224] and the amount paid has to be estimated and added back. An estimate of £47 m. is available for 1938 and was extrapolated back to 1920 by reference to the advances of the London clearing banks and a rate of interest equal to the higher of 5% or bank rate plus 1%.[4]

Some information about the composition of advances exists for 1929 and 1936–8[5] and was used for the allocation by main industrial orders and by type of enterprise, but it is not sufficient to permit a useful allocation by industry in Tables 27, 28 and 30.

Rent of owner-occupied trading property

Owner-occupied trading property was in this period assessed to tax under Schedule A, and in order to avoid a double assessment an owner-occupier was allowed to deduct the net annual value on which tax was paid under Schedule A in computing his profits for the purposes of Schedule D. For national income purposes the C.S.O. estimates trading profits including the imputed income from owner-occupied business premises [73, p. 224], and the schedule A net annual value has therefore to be added back.

For companies there is one published estimate,[6] for 1922/3; and for 1927, 1930–32 and 1934–38 the sample data on companies' appropriation of income (see Chapter 3.3) provides information on this point from which the necessary estimates can be derived in total and for each industry group.[7] Details of these samples

[1] For brief details of E.P.D. (and munitions levy) and C.P.T. see [**30**]: *63rd Report*, pp. 86–91, *64th Report*, pp. 142–151, and *68th Report*, pp. 114–17. E.P.D. was imposed on excess profits (defined relative to a pre-war standard profit) earned in accounting periods ended after 5 August 1914, and liability terminated at varying dates between 4 August 1920 and 5 August 1921. A special provision permitted repayment of E.P.D. where profits fell below the standard in accounting periods ended in the four years up to 31 August 1925. Estimates of the approximate true excess profits accruing in each accounting period were published in the *64th Report*, p. 148, and the estimates of tax accruing are consistent with these figures and the corresponding rates of duty.

C.P.T. was levied (on companies only) on profits accruing on or after 1 January 1920 and ceased to be chargeable after 30 June 1924.

[2] See *81st Report* [**30**], p. 68, for further details.

[3] The principles on which profits were computed for NDC are broadly the same as those for income tax.

[4] Cf. Balogh [**112**], p. 75. [5] *Ibid.* pp. 83–5.

[6] *Report of the Committee on National Debt and Taxation* [**61**], Appendix XI, p. 97.

[7] In estimating gross trading profits the Schedule D assessments are taken before deduction of wear and tear allowances. These were given for plant, vehicles etc.; but depreciation of mills, factories and similar buildings was granted (until 1937/8) by allowing owner-occupiers to deduct the *gross* annual value from Schedule D profits instead of just the *net* annual value. Since the samples show the net annual value separately for mills etc. and for other buildings and N.A.V. was generally obtained by deducting

and of the methods used to gross-up the data are given in Chapter 3.3. Freehand interpolation was used to complete the estimates but with allowance for the effects of the change in net annual values in re-assessment years. The series rises from £25 m. in 1920 to £55 m.in 1938.[1]

For non-corporate enterprises the C.S.O. estimate for 1938 is £14 m. for professions and £20 m. for other sole traders and partnerships. The former was extrapolated by reference to the movement of professional incomes, and the latter extrapolated and allocated by reference to the series for companies.

Allowances for renewals

To the extent that allowance for depreciation of plant and machinery etc. was granted for tax purposes by means of the wear and tear allowances, the estimates obtained from the assessments taken before deduction of these allowances will correspond to profits before depreciation.[2] Where, however, renewals and repairs were charged as an expense in arriving at the gross income for assessment under Schedule D there would be no allowance granted for wear and tear and our estimates will be an understatement of profits before depreciation.[3]

The railways were by far the most important industry using the renewals method and only changed to the wear and tear system in 1938.[4] Fortunately the annual *Railway Returns* [**26**] give the amount of expenditure on complete renewals of permanent way and rolling stock. As explained in part (*f*) below the net receipts from railway working as stated in the *Returns* have been adopted in preference to the assessed series and it is a simple matter to add back the expenditure on complete renewals to get a proper measure of gross profits.

The two other sectors within the United Kingdom where the renewals system was widely used were gasworks and waterworks. Rough estimates were made for these industries on the basis of the series for depreciation at historical cost for plant, vehicles etc. given in our study of capital formation [**162**, pp. 95 and 99]. A notional £1 m. p.a. has also been allowed for iron and steel works. Railways and other concerns operating abroad are excluded from the estimate of gross domestic trading profits so it is not necessary to make any adjustment in their case.

Financial concerns

In making the allocation of trading profits by industry in part (*c*) above the financial sector was split between those activities which are almost entirely conducted by unincorporated enterprises (stockbrokers, jobbers, billbrokers and certain financial agencies) and those such as banking and insurance undertaken by companies. No problems arise in the case of the former group but the estimates for the latter group are for various reasons unsatisfactory (see Worswick and Tipping [**261**], pp. 48–50) and must be revised.

This revision presents an important conceptual problem which has been much discussed in the literature and which permits no really satisfactory solution. Banks, insurance companies and other financial intermediaries derive only a small part of their income by making direct charges for the services they provide; most (or all) of their profits are gained because the interest etc. they receive from their investments is greater than the interest they pay on the money deposited with them. If, for example, banks are treated like other enterprises, so that only their 'trading profits' are included, while incomes from advances and investments is excluded as non-trading income, it will typically be the case that the contribution to national income of the whole enterprise will be small (and may even be negative), i.e. their income from bank charges, commissions etc. is only just sufficient to cover the current expenses of stationery, rent etc. Profits are almost certain to be negative since wages and salaries will exceed value added as defined in this sector.

To avoid this paradox of a prosperous industry showing a loss and making a negligible (or even negative) contribution to the national product it is recommended by both O.E.E.C.[5] and the United Nations [**107**, p. 31] that a charge should be imputed to the customers of financial concerns, equal to the excess of interest etc. received over interest paid to depositors. This imputed net interest becomes part of the profit of the financial concerns so that their total profits are equivalent to what is normally understood. If the customers were all households the national income would also be increased by the amount of the net interest; and the imputed charge would appear as an element in consumers' expenditure so that there was an increase in national expenditure to match the increase in national

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one-sixth from G.A.V., it was possible to estimate the additional amount allowed for depreciation of mills etc., and this is incorporated in the amounts added back for owner-occupied property.

1 This includes the allowance for depreciation of industrial buildings explained in n. 7 above.

2 Subject to the further adjustment explained on p. 140, n. 7, above.

3 See Stamp [**247**], p. 179; and also Worswick and Tipping [**261**], p. 11, who quote an estimate made in 1930 of the written down value of plant and machinery (in various industries) on which repairs and renewals were allowed instead of wear and tear.

4 Cf. the *92nd Report* [**30**], p. 70.

5 O.E.E.C., *A Standardised System of National Accounts*, 1958 [**105**], p. 52–3.

income. In so far as the customer is another enterprise however, there will be a corresponding increase in expenses and reduction in profits, so that there is no net effect on the estimate of national income.

A method for allocating the imputed net interest charge between enterprises and households, and within enterprises between different industries, is suggested by the U.N. and O.E.E.C., but the Central Statistical Office have argued that a purely hypothetical distribution of these imputed charges 'would be more misleading than the paradox of financial concerns appearing to make a steady annual loss' [**73**, p. 205]. They therefore make both an estimate for profits as normally understood (which can be used for comparison of profits in this and other sectors) and an estimate of profits (usually negative) equal to the excess of all charges for specific services over all management expenses, but only the latter is carried into the estimate of national income [**73**, pp. 204–6 and 226–7]. The difference between these two estimates is equal to the adjustment for interest etc. received less interest paid. In order to maintain consistency with the Blue Book estimates the same procedure is followed here for the inter-war period. National income is, therefore, lower than it would be on the alternative, internationally recommended, system of presentation.

The actual estimates are rather uncertain because of lack of reliable data and the fact that banks were not required to make accurate disclosure of their profits in their published accounts. The principal concerns covered by the estimates for the inter-war period are banks, insurance companies (but excluding the life assurance companies, industrial assurance and collecting societies which are included in Chapter 2 in the personal sector), building societies, investment and unit trusts and other financial companies (including hire-purchase and property companies and companies holding investments in land or securities or holding shares that carry control of subsidiary companies). It is this last miscellaneous group for which least information is available.

The starting point for the estimates is the data for 1938 given in the 1957 Blue Book [**75**, 1957, Table 29] for companies in insurance, banking and finance. First, gross trading profits (in the special national income sense defined above) are given as −£35 m. and this estimate was extrapolated back to 1920 by a series based on premiums less claims of non-life insurance companies[1] plus a rough estimate of receipts from bank charges and commissions[2] less the management expenses of non-life insurance companies[1] and building societies[3] and Chapman's estimates [**146**, p. 154] of wages and salaries in this sector. This series was substituted in the estimates of gross trading profits in place of the series derived from the Inland Revenue assessments.

Secondly, an estimate of profit as normally understood was made by adding an adjustment for net interest. This requires estimates of both receipts and payments, and it is not possible to cover comprehensively all the relevant items, but the following estimates should give a reasonably close approximation. Interest and dividends received in 1938 are given in the 1957 Blue Book as £183 m. (this would exclude any dividends etc. received from other financial companies) and rent (less repairs) of property let as £37 m. The figure for interest and dividends received was extrapolated by a series built up as follows: for the banks annual series for the assets of the London clearing banks, Scottish banks, and certain private banks and discount houses were constructed, and broadly appropriate interest rates applied to each type of asset.[4] For non-life insurance companies interest and dividends received are given in the *Assurance Companies' Return* [**18**] but must be grossed-up for tax deducted; and interest received on mortgages by the building societies is given in the *Report of the Chief Registrar of Friendly Societies* [**28**, Pt. 5]. For investment trusts *The Economist* supplement of 1 December 1934 gives reasonably comprehensive series for post-tax profits for 1924–33 and the issue of 6 July 1940 gives pre-tax earnings in 1930, 1933 and 1936–8 for a sample of ten large trusts. The first series was grossed-up for tax and extrapolated forward to 1938 by means of the sample, and back to 1920. For unit trusts *The Economist*'s supplement for 13 May 1939 gives estimates of accumulated net sales made by certain dates and a 5 % rate of return was applied to these figures. Finally, a rough allowance for finance houses, property companies etc. was made on the basis of *The Economist*'s annual compilation of the profits of com-

[1] Board of Trade, *Assurance Companies' Returns* [**18**], e.g. 1938, p. 702.

[2] J. Sykes, *The Present Position of English Joint Stock Banking*, 1928 [**250**], p. 95, gives an estimate of £2.5 m. for 1926. This was extrapolated by means of the payments of stamp duty on cheques etc. as given in the *Statistical Abstract*.

[3] *Report of the Chief Registrar of Friendly Societies*, Pt. 5 [**28**], e.g. 1937, p. 24.

[4] For money at call the rates given by Balogh [**112**, pp. 130–1] for short money or loans for short periods; for bills the Treasury bill rate; and for advances the higher of bank rate plus 1 %, or 5 %. The most difficult item is the yield on investments, and here I relied heavily on *The Economist*'s estimates ('obviously a matter of extreme guesswork') made in the *Banking Supplements*, especially those of October 1933 and October 1934, which gave estimates for crucial dates between July 1928 and July 1934. See also Sykes [**250**, p. 92] and Balogh [**112**, p. 106].

panies in the Finance, Land and Investment sector plus the 60% of the dividends declared by South African gold mines[1] (since mining is not covered by *The Economist* series). The total of all these items came to £161 m. in 1938 so that it had been possible to cover 88% of the Blue Book estimate and this seemed a reasonably reliable basis for the extrapolation.

For rent received the position is less satisfactory. It was simply assumed that the rent received by financial companies was a constant proportion (based on the 1938 figures) of the estimate in Chapter 8 for all rent (net of repairs) received from privately owned dwellings and non-farm land and buildings rented (i.e. excluding owner-occupied) to trading concerns or public authorities.

On the payment side, interest paid by banks etc. on deposits from outside the company sector is given in the 1957 Blue Book as £10 m. for 1938 and this was extrapolated back to 1920 by reference to the total deposit accounts of the London clearing banks and a rate of interest taken as 2% below bank rate from 1920–9 and 1% below thereafter.[2]

To this can be added interest paid on shares and deposits by building societies. For shares the actual amount is given in the *Report of the Chief Registrar of Friendly Societies* [**28**, Pt. 5] but for deposits only the amount of the deposits was given until 1937 and for earlier years an estimate was made by applying to the average amount outstanding each year a rate of interest based on figures calculated by *The Economist* for 1925, 1929 and 1932–6.[3] It then remained to allow for tax on the interest paid by the building societies. There was no statutory authority for the deduction of less than the standard rate from interest paid, but arrangements were made with the building societies at various dates and these effectively provided for what from 1935 was officially called the composite rate. With minor qualifications this amounted to one-quarter of the standard rate for assessment years up to 1931/2, two-fifths of the standard rate for 1932/3 to 1934/5 and 20/54 (1/8:4/6) from 1935/6 to 1939/40.[4] The interest on shares and deposits was therefore grossed-up at these rates.

(*f*) *Adjustments for differences in estimation*

The three adjustments made here represent a correction for differences between the estimates derived from the adjusted tax assessments and alternative estimates based on other sources.

Local authority trading enterprises

Independent estimates of the gross surpluses of local authority trading enterprises are derived in Chapter 5.2 from their summarised accounts as given in the *Annual Local Taxation Returns* [**10** and **22**]. It is desirable to use this series in preference to the one derived from the tax assessments since it is consistent both with the other items in the social accounts of local authorities for the inter-war period and with the post-war estimates of their gross trading surpluses.

The amount included for local authorities in the tax assessments can be identified (in order to be deducted) in the five benchmark years and other years were estimated by interpolating on the basis of the annual series for the five main trade groups involved: electricity, gas, water, tramways and buses, and docks, harbours and canals.[5] After allowing for certain adjustments such as the share of local authority gas and water enterprises in the amount added back for renewals (p. 141, above) there was a clear discrepancy between the two series, the local authority *Returns* showing a surplus roughly 20% higher in the 1920s and 10% higher in the 1930s than the amount assessed for tax.

It is not possible to give a full reconciliation of the two estimates. One factor which would help to explain the discrepancy is that local authority trading enterprises are allowed, for tax purposes, to deduct certain expenses which would not be deducted in the estimates derived from the *Returns*. These include a proportion of establishment charges of administrative departments (e.g. town clerk's and borough treasurer's) and of the rent and general expenses of municipal offices; and interest paid in full without deduction of tax, e.g. to the Public Works Loan Commissioners or to banks.[6] The tax figures may also be affected by the provisions for set-off of trading profits against interest paid on borrowed money, but this is a complicated matter and has not been investigated.

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[1] This is a rough estimate of the proportion of the dividends received by finance houses in London. Cf. *Official Year Book of the Union of South Africa*, 1939 [**106**], pp. 851–3.

[2] See Balogh [**112**], pp. 90 and 129.

[3] *The Economist* [**277**], *Building Societies Supplement*, April 1936 and April 1938.

[4] *Building Societies' Yearbook* [**266**], 1927, p. 67, 1933, p. 325, and 1935, p. 78.

[5] In making the main estimates in parts (*a*) to (*c*) above the distinction in the underlying Inland Revenue data between corporate and non-corporate enterprises had been preserved, and for the former the distinction between companies and local authorities etc. was also maintained in those industries where the public enterprises were important. The Inland Revenue category local authorities includes also public corporations and clubs, associations etc. and these were allowed for in the estimates for the benchmark years.

[6] J. H. Burton and C. A. Newport, *Local Authorities: Income Tax and Excess Profits Tax*, 1941 [**141**], pp. 25–33.

Railways

The *Railway Returns* [**26**] give annual figures for the net profit from railway working of all railway companies. This series should be broadly comparable with the assessed profits[1] but examination of the two series reveals the extent to which the assessments are affected by the provisions of Section 11 of the Railways Act 1921. This represented a settlement of all claims for compensation arising out of the possession of the railways by the Crown during and immediately after the First World War. A payment of £60 m. (plus £3 m. for Ireland) was to be made by the government in two equal instalments on 31 December 1921 and 1922, but this income was not to be charged to income tax until it was applied by the railway companies for the payment of interest and dividends.[2] The £60 m. is not included in the net receipts from railway working, but is included in the assessed profits though the amount included each year is not stated.

In addition to this £60 m. there were further sums of £41.0 m. in 1920 and £51.3 m. in 1921 which were paid by the government as compensation for the system of control over the use of the railways in those years. These amounts were shown in the *Returns* though not as an item in the net receipts, and were assessed for tax.

Apart from the effect of the Section 11 payments the two series agree reasonably well in respect of movements but not as to level, with the net receipts about 10% higher each year from 1927 onwards.[3] In view of the impact of the Section 11 payments on the timing of the assessed series in the earlier years it seemed preferable to adopt the net receipts as the basis for the estimate, with the addition of £41.0 m. for compensation in 1920, £81.3 m. in 1921 and £30 m. in 1922.[4] A further slight adjustment to the published net receipts was necessary for 1920–6 to achieve consistency with the revised basis of the estimates for 1927 onwards (for 1927 net receipts are given on both the old and the new basis and a constant proportionate adjustment was made for preceding years); and for 1933–8 to include the profits of the railway operations of the London Passenger Transport Board [**84**].[5]

Coal mining

For coal mining the agreements made during and after the First World War provided for the collection of audited and carefully defined figures on costs (including royalties), proceeds and profits as the basis for the determination of wages. The data covered around 95% of the industry and was published in quarterly Command Papers and also in the *Annual Reports of the Secretary for Mines* [**14**]. The profits are shown after depreciation, and by adjusting for this,[6] adding back royalties and grossing-up to cover the small fraction of the industry omitted, it is possible to get a series for comparison with the tax assessments.

The two series cannot be expected to agree exactly because of a number of minor differences in definition, coverage and timing[7] but it was disconcerting to find two very large discrepancies. In 1921 there was an assessed profit of £19 m. compared with a loss of £15 m. (before depreciation and royalties) recorded by the Mines Department, and in 1927 an assessed profit of £12 m. against a Mines Department figure of only £2 m. Further investigation revealed that the Mines Department series excludes all payments and repayments of excess profits duty and of the very complex coal levies and coal awards created by the Coal Mines Control Agreement (Confirmation) Act 1918 and the Coal Mines (Emergency) Act 1920. Substantial sums

[1] Stamp [**247**, p. 222] states that before 1914 the net receipts were generally about 5% higher than the assessments because of certain charges not included in 'working expenditure' but allowed as expenses for income tax.

[2] See sub-section (5) of Section 11. However, the Act further provided that if the total amount so applied for payment of interest and dividends in respect of the three years 1921–3 was less than £30 m. the amount by which this sum fell short of £30 m. would be charged to tax in the year of assessment 1924/5. Cf. the *69th Report*, p. 89.

[3] The comparison is distorted by the treatment of the L.P.T.B. (see n. 5 below) and by the change from the renewals system to wear and tear allowances in 1938.

[4] The corresponding amounts are included as Central Government subsidies in Chapter 4.5.

[5] The whole of the profit of the L.P.T.B. appears to have been classified to road transport in the Inland Revenue assessments for this period and so the amount added to railways was deducted from the estimates for road transport. See Campion [**144**], p. 53.

[6] The amount deducted is not stated separately but it was stipulated that it should be determined in accordance with income tax principles and an annual estimate based on the wear and tear allowances has been added back.

[7] The classification of coal mines in the Inland Revenue series excludes some coal mining conducted as a subsidiary activity of concerns in other industries and includes some subsidiary activities of mining concerns, such as coking. The Mines Department series covers only profits from coal mining and after grossing-up should be comprehensive. It relates strictly to the calendar year whereas the Inland Revenue series is based on accounting periods and gives only an approximate indication of calendar year profits. Among differences in definition is the inclusion in costs for the purposes of the wage determination of an allowance for the remuneration of working proprietors. On all these points see *Royal Commission on the Coal Industry*, 1925 [**60**] vol. 3, Appendices 1, 4 and 38, and also the evidence by Stamp, vol. 2, pp. 262–80, summarised in [**248**], pp. 290–1.

were advanced to the mines under these Acts, but were never recovered, 'mainly owing to the acute depression in the Industry during the latter months of control',[1] i.e. in the first three months of 1921. These unrecoverable advances would have been assessed for tax and are sufficient to account for the huge discrepancy though the exact period to which they relate is not clear.[2] Since they are treated as subsidies in the classification of government expenditure in Chapter 4.5 it is correct to include the corresponding receipts in the estimates of profits.

The same explanation does not hold for 1927 and in that year, and also – to a much lesser extent – in 1928, 1929, 1932, and 1933 it is likely that the assessed series fails to make sufficient allowance for the heavy losses incurred by some collieries and the estimates have been adjusted downwards to allow for this.[3] In all other years the two independent series agree closely and the comparison provides an encouraging confirmation of the estimates derived from the tax assessments.

(g) *Allocation of the final total by type of enterprise*

To complete this exercise it is necessary to allocate the final adjusted total by type of enterprise. The first division made is between non-corporate and corporate enterprises, the former consisting of self-employed persons (sole traders and partnerships), the latter of companies, local authorities etc. The division was initially made at the stage of estimating the assessed gross trading profits in part (*b*) above, and is described firstly in terms of a provisional estimate for the non-corporate enterprises.

The distinction between persons and corporate bodies was required for tax purposes and was, therefore, made in the Inland Revenue assessments and in the data on which the estimates for the five benchmark years are based. For 1927–38 the procedure for interpolating between these benchmarks described in part (*b*) yields separate series for non-corporate and corporate enterprises (see pp. 132–3, above). For 1920–6 the annual series used to unscramble the moving averages did not make the distinction and a provisional estimate was made by assuming that the share of the non-corporate sector was the same in each year as in the benchmark year 1927. This assumption was applied separately to each of ten trade groups – which together account for over 90% of total non-corporate profits – and to a residual covering all other groups.

A possible check on these estimates exists in the form of the figures given in the annual *Reports* for the earned income allowance.[4] This represents a deduction for the purpose of computing tax due and was calculated as a fraction of total earned income subject to a maximum. The allowance was introduced in 1920/1 and varied as follows during the inter-war period:

Assessment year	Fraction of earned income allowed	Maximum allowance £
1920/1 to 1924/5	$\frac{1}{10}$	200
1925/6 to 1930/1	$\frac{1}{6}$	250
1931/2 to 1939/40	$\frac{1}{5}$	300

The amount of earned income assessed under Schedule D can be derived from the allowance by proceeding as shown in the calculation for 1938 (assessment year 1939/40) shown in Table 7.3.

All the data required for the estimates can be obtained from the Inland Revenue *Reports* except for rows (*c*) and (*f*) and for these items reasonable estimates can be made.[5] The final estimate (row l) may fall short of

[1] *Estimates for the Civil Services* for the year ended 31 March 1923, [**19**], Unclassified services, Vote 13, p. 25.

[2] In the report of the Comptroller and Auditor General attached to the *Appropriation Accounts* (Civil Services and Revenue Departments) [**17**] for 1921/2, p. xlviii, it was stated that 'the net cost of the statutory control of Coal Mines is estimated to be £34,250,000'. In the *Estimates for the Civil Services* for the year ended 31 March 1924 [**19**], Unclassified services, Vote 9, p. 22, this was raised to £36,550,000 made up as follows:

		£m.
Act of 1918		
Estimated total deficiency		7.100
Acts of 1920 and 1921		
Estimated total advances to industry to 31 March 1924		39.350
Less recoveries already affected	9.900	
further recoveries anticipated	nil	9.900
Estimated net irrecoverable advances		29.450
Total deficiency		36.550

This total includes £6,350,000 for unrecovered advances made in connection with the Sankey Wage Payments but does not include the 1921 wages subvention of £7 m. which (together with the subsequent subsidy in 1925/6 of £23 m.) is allowed for in the Mines Department figures.

[3] See p. 138, above.

[4] The series derived in the following paragraphs is also required for the estimates of corporate taxation in Chapter 3.3. and this in turn affects personal taxation in Chapter 2.5.

[5] The total number of persons assessed for sur-tax and the total amount of income in each size class is given each year in the *Reports* (with adjustments made and published during a period of six years following the initial assessment) but it is necessary to determine (*a*) the amount of earned income received by sur-tax payers whose *earned* income was less than £1,500 (£2,000 before 1925/6) and who could, therefore, claim only the relevant fraction of their earned income; and (*b*) the number and earned income of sur-tax payers with earned income above £1,500 (£2,000), each

the gross true profits to the extent that 'annual charges' were deducted *before* calculating the earned income allowance; this would apply, for example, in a case where payments of mortgage interest exceeded the tax-payer's unearned income. Apart from this, the resulting series for the assessed gross trading profits of non-corporate profits should be about equal to the provisional estimates (p. 145, above) obtained by interpolation for 1927–38 and to a three-year moving average of the estimates for 1920–6.[1] In fact, the series derived from the earned income allowance is consistently lower: the discrepancy is close to £25 m. each year from 1919/20[2] to 1924/5, roughly £70 m. each year from 1925/6 to 1930/1 and roughly £10 m. in each of the remaining years. It will be seen that these three sub-periods coincide with the different exemption limits for earned income (see p. 145, above) and although I have not been able to find a satisfactory explanation for the discrepancy it is possible that there was some administrative practice affecting the earned income allowance given to incomes just above or below the exemption limit for earned income.

TABLE 7.3 CALCULATION OF ASSESSED GROSS TRADING PROFITS OF NON-CORPORATE ENTERPRISES IN 1938 (£M.)

(*a*)	Earned income allowance, all schedules	438
(*b*)	*Less* age allowance included in above	4
(*c*)	earned income allowance to sur-tax payers	25
(*d*)	Earned income allowance on incomes below £2,000	409
(*e*)	Corresponding earned income (row (*d*) × 5)	2,045
(*f*)	*Add* Earned income of surtax payers	180
(*g*)	Total earned income, all schedules	2,225
(*h*)	*Less* Actual (earned) income assessed Schedules B and E[a]	1,928
(*i*)	Actual earned income assessed Schedule D	297
(*j*)	*Add* Wear and tear allowance	14
(*k*)	Incomes below the exemption limit[b]	8
(*l*)	Assessed gross trading profits, non-corporate enterprises	319

SOURCE: See text.

[a] No earned income was assessed under Schedules A and C. In the early 1920s it is also necessary to deduct the income of employees assessed under Schedule D.

[b] This represents only that fraction of the income of exempt persons which for administrative reasons came into the gross assessments and was deducted in arriving at the actual income. To the extent that it represented dividends received rather than trading income the trading income would be lower, and the addition referred to on p. 146, below, would be correspondingly higher. The other differences between assessed gross trading profits and actual income would not apply to non-corporate enterprises.

I have, therefore, taken the annual series derived from the allowances and added this average discrepancy in each of the three sub-periods, and then made minor adjustments to my provisional estimates to bring them into line with this series. For 1927 onwards this was a matter of direct comparison and of small corrections of up to ±£10 m. For 1920–6 the moving average system prevents direct comparison but a three-year moving average was formed from the provisional estimate and adjustments made in the light of the alternative series.

The next step is to allocate to the non-corporate sector the relevant adjustments in parts (*c*) to (*f*) above. The adjustment for losses incurred (part (*c*)) was made separately for the two types of enterprises; from part (*d*), 90 % of the addition for evasion, the whole of the small incomes not assessed for tax and of the income of small-holders, and a small fraction of the deduction for continuous losses is allocated to persons. Of the adjustments made in part (*e*) the deduction of royalties etc. and of farming income assessed under Schedule D and the addition of bank interest, imputed rent of owner-occupied premises and E.P.D. and NDC all apply in part to non-corporate enterprises. A reasonable basis for estimating the relevant share is available in each case except for the E.P.D. of which an arbitrary 30 % was taken. This adjusted series gives the total non-farm income from self-employment before providing for depreciation and stock appreciation, and is shown in column (2) of Table 29.

The residual thus covers all corporate income and by deducting the separate estimates for public corporations (see Chapter 3.2) and for trading enterprises of local authorities (see Chapter 5.2, and also p. 143, above) an estimate for the gross trading profits of companies is obtained. This is shown in column (3) of Table 29.

of whom was able to claim the maximum allowance. This was done on the basis of data on the amount of earned and investment income in each range of total income available for 1919/20 (*64th Report*, p. 104) and 1937/8 (*83rd Report*, pp. 32–7), and for 1922/3 for incomes over £10,000 (*Report of the Committee on National Debt and Taxation* [**61**], Appendix XV, p. 132).

[1] None of the trade groups in which non-corporate enterprises were important were assessed on the preceding year or five-year moving average basis.

[2] This was the last year of the old system under which differential rates of tax were applied to earned and unearned income and the amount of earned income was therefore shown separately in the *Reports*.

For the five benchmark years there is also sufficient information available in the unpublished Inland Revenue censuses and trade classifications of Schedule D gross assessments (see p. 130, above) and in the grossed-up samples used for the *92nd Report* to make possible a very detailed classification by both industry and type of enterprise, and estimates on this basis are given for 1927 and 1937 in Table 30.

COMPARISON WITH OTHER ESTIMATES

I know of no other estimates of aggregate gross trading profits in the inter-war period which are fully comparable with the estimates presented here. Previous estimates of national income include those by Colin Clark [**149**], Bowley [**134**] and Prest [**231**] and of these only Clark shows profits separately. Moreover, all three depart from the present concepts and definitions at a great many points and if a special correction were made for each of these differences one would simply work back to the original Schedule D series for actual income underlying all the estimates (cf. Appendix 7.1, p. 158).

Hart [**174**] has recently published annual estimates obtained by interpolation between the Worswick and Tipping [**261**] benchmarks. His estimates do not cover all sectors and apart from co-operative societies, corporation profits tax and national defence contribution omit all of the adjustments made to the tax assessments in the present estimates. It may, however, be of interest to compare the outcome of the different methods of interpolation and extrapolation and in Table 7.4 the present estimates are adjusted to Hart's concepts and coverage.

Two main points emerge from the comparison: the present estimates are on average about 9% higher in the period 1920–7 with the gap widening steadily as we move away from the 1927 benchmark, and they are about 7% lower in the period 1930–5. The discrepancy in 1927 is due to the omission of 'unassessed income' from the Oxford–Hart benchmark (see p. 130, above) and in earlier years reflects the fact that Hart extrapolated from 1927 without any control on the results whereas the present estimates were reconciled with the aggregate tax assessments and are to that extent likely to be more reliable. The omission from Hart's series of government compensation to the railways also increases the differences in 1920–2. The discrepancy in the 1930s arises primarily from the fact that the present estimates are corrected for the excess of losses incurred over the amount allowed for tax purposes.

There are a number of other comparisons that can be made for certain sectors in selected years but the alternative estimates are themselves often very uncertain. This is especially true of the two following computations and they are only quoted here because they relate to sectors for which the present estimates are most suspect and it was particularly desirable to get some independent results, even if only as a rough order of magnitude.

TABLE 7.4 COMPARISON WITH HART'S ESTIMATES OF GROSS TRADING PROFITS AND NON-FARM INCOME FROM SELF-EMPLOYMENT, 1920–38 (£M.)

	Hart's estimates (excluding agriculture) (1)	Present estimates adjusted to Hart's definition[a] (2)	Discrepancy: (1) as percentage of (2) (3)
1920	747	800	93
1921	479	583	82
1922	666	782	85
1923	703	765	92
1924	722	779	93
1925	701	758	92
1926	649	686	95
1927	725	752	97
1928	739	749	99
1929	758	744	102
1930	701	653	107
1931	632	566	112
1932	552	521	106
1933	617	589	105
1934	690	652	106
1935	772	730	106
1936	856	838	102
1937	934	930	100
1938	889	871	102

SOURCE: (1): Hart [**174**], pp. 21 and 60; (2): Tables 26–9 adjusted as indicated in note a.

[a] Hart's estimates of gross domestic trading profits exclude finance, professions, miscellaneous services, and local authority trading enterprises. They include co-operatives; and are corrected for payments of corporation profits tax and national defence contribution but not for payments or repayments of excess profits duty. They are not adjusted for evasion, small incomes not assessed, royalties, rent of owner-occupied property, bank interest or renewals. The present estimates have been adjusted to the same coverage and definition.

The weakness of the present estimates arises in both cases partly from the predominance of small unincorporated concerns, and the consequent fact that a large fraction of the estimated profits consists either of income too small to be assessed for tax or of income evading taxation, and partly from the exceptionally large differences between the 1948 S.I.C. and the Inland Revenue classification, giving rise to awkward problems of allocation.

The first, and in terms of size the most important case, is retail distribution. An alternative estimate of the likely range of profits in this sector can be attempted for 1938 on the basis of data on turnover and approximate net margins, including the remuneration of owner-managers. The results of this calculation are summarised in Table 7.5.

TABLE 7.5 ALTERNATIVE ESTIMATE OF GROSS TRADING PROFITS IN RETAIL DISTRIBUTION IN 1938

Type of shop	Number of shops (000) (1)	Average turnover (£) (2)	Total turnover (£m.) (3)	Net margin as percentage of turnover (4)	Estimated profits (£m.) (5)
Multiples and department stores	66	9,300	615	6	37
Co-operatives	24	10,700	260	10	26
Large unit retailers	160	5,300	850	8	68
Small unit retailers[a]	500	1,400	700	15	105
Barrows, stalls etc.	100	1,250	125	8	10
Total	850	3,000	2,550	10	246

SOURCE: (1)–(3): J. B. Jefferys, *The Distribution of Consumer Goods* 1950 [**183**], pp. 129 and 152.
(4): Based on A. Plant and R. F. Fowler, 'The Analysis of Costs of Retail Distribution', *Economica* VI, 1939 [**230**], pp. 132–7; A. M. Carr-Saunders, P. Sargant Florence and R. Peers, *Consumers' Cooperation in Great Britain*, 1940 [**145**], pp. 357–78; W. R. Dunlop, 'Retail Profits', *Economic Journal*, XXXIX, 1929 [**158**], pp. 363–8; Pharmaceutical Society of Great Britain, *Report of the Committee of Enquiry*, 1939 Pt. I [**275**], p. 24; H. Levy, *The Shops of Britain*, 1947 [**199**], pp. 47–135.
(5): (3) × (4).
[a] Including 'house-shops'.

Allowing for the considerable margin of error attached to the estimated net margins this might be expressed as £250 m. ± 50 m. If one uncertain estimate can be said to check another, then the present estimate of £225 m. for the gross profits of retail distribution in 1938[1] (and £237 m. in 1937) is supported but may possibly be a little too low. On the other hand, it is possible that the profit margins taken in Table 7.5 for small unit retailers may make inadequate allowance for losses.

The second sector for which an independent estimate can be made is building and contracting. The Census of Production provides a basis for estimates of net output (i.e. value of goods made less cost of materials and fuel) in 1924, 1930 and 1935, and if wages and salaries are deducted the residual represents profits before depreciation, but also before payment of rents, rates, royalties and selling costs. Moreover, the accuracy of the results is severely reduced by the same factor which weakens the estimate based on tax assessments: the lack of reliable data for the large number of small firms which operate in this industry. With these reservations the figures are set out in Table 7.6; and the comparison suggests that the present estimates for building and contracting are too high for 1924 but about right for the 1930s.

A more significant comparison can be made on the basis of the Census of Production data for manufacturing industry. For this it is necessary to deduct from the net output the expenditure on wages and salaries, rent, rates, royalties and selling costs, leaving profits before depreciation and interest. Chapman's estimates provide an adequate basis for the wages and salaries (including national insurance contributions) and rough orders of magnitude were conjured up for the other costs in the following way.

Under the industrial derating provisions of the Local Government Act 1929 the rateable value of 'industrial hereditaments apportioned to industrial purposes' was reduced to 25% of the corresponding net annual value and these rateable values were published annually from 1930/1 for England and Wales.[2] For 1930 and 1935 rent and maintenance costs for manufacturing industry (including the imputed rent of owner-occupied property) were calculated by multiplying the rateable values by four to get net annual value, adding one-fifth to get gross annual value and adding 10% to cover Scotland and Northern Ireland. The 1930 figure was extrapolated to 1924 by reference to the series for gross rents of premises not used as dwellings described in Chapter 8, p. 178.

Total rates paid by manufacturing industry were calculated for 1930 and 1935 by multiplying the rateable values of industrial hereditaments apportioned [**27**,

[1] This figure, and the one for 1937, are from Table 28, with an adjustment to add back bank interest not allocated in Table 28.

[2] Ministry of Health, *Rates and Rateable Values, England and Wales* [**27**], Table F. See also *Annual Reports of the Ministry of Health* [**13**]. The definition relates broadly to a factory, workshop or mine occupied and used as such.

p. 6], and adding 10% for Scotland and Northern Ireland. For 1924 the rate poundage was applied to five-sixths of the gross annual value estimated above.

TABLE 7.6 COMPARISON WITH CENSUS OF PRODUCTION DATA FOR GROSS PROFITS IN BUILDING AND CONTRACTING, 1924, 1930 AND 1935 (£M.)

	1924	1930	1935
1. Net output:			
Large firms (employing more than 10 persons)	81	94	100
2. Small firms making returns	21	28	43
3. Small firms not covered by censuses	21	34	33
4. Total net output	123	156	176
5. *Less* Wages and salaries	99	120	132
6. Gross profits etc.[a]	24	36	44
7. Cf. present estimates of gross profits	32	37	39

[a] Including rent, rates and selling costs.

SOURCE: 1. *Fifth Census of Production, 1935* [**42** (*d*)] Pt. IV, Section 1, *Final Report*, p. 1.

2. 1924: *Final Report on the Third Census of Production 1924* [**42** (*b*)], Building and Contracting Trades, pp. 273–4.

1930 and 1935: Numbers employed by small firms given as 163,000 and 255,000 [**42** (*d*), 1935, p. 9] and net output per head taken as £170 in light of census estimates of gross output of these small firms [*ibid.*] and of net output per head of firms employing 11–24 persons.

3. This is the weakest element and was derived by applying a net output per head of £150 to the number of persons estimated as follows: (000s)

	1924	1930	1935
(i) Chapman's estimate of employees in private firms [**146**, pp. 111–12]	622	744	856
(ii) *Less* Employees: In large firms [**42** (*d*), 1935, p. 1]	419	454	502
(iii) In small firms making returns[a] [**42** (*b*), 1924, pp. 273–4, 1935, p. 9]	95	119	188
(iv) Number of employees not covered by census	108	171	166
(v) *Add* Working proprietors [one for every three employees]	36	57	55
(vi) Total number of persons omitted	144	228	221

[a] Number employed less working proprietors estimated on the basis of one for every small firm making a return.

5. Chapman [**146**], pp. 113–14, private firms only.

Payments for royalties etc. were calculated for the present estimates (p. 139, above) and the amount allocated to manufacturing is used here.

The largest and most difficult item is selling costs.[1] For 1938 Jefferys [**183**, pp. 67–8] gives detailed estimates for each trade group of producers' distribution costs as a percentage of consumers' expenditure, and if these proportions are applied to consumers' expenditure in 1935 on goods produced by manufacturing industry we get a total of £95 m. This may be compared with an independent estimate of £46 m. for manufacturers' expenditure in 1935 on all types of advertising directed to the final consumer, and of £15 m. for trade and technical advertising (primarily by manufacturers) not directed to final consumers.[2]

Neither of these estimates is entirely satisfactory. The £95 m. based on Jefferys is almost certainly a good deal too high. First, it includes not only advertising but also such expenses as salesmen's salaries and commissions etc., market research, general selling office expenses, all payments to agents, brokers and other intermediaries, expenses of storage, packing and transport and indirect selling costs [**183**, p. 63]. There is probably some duplication with Chapman's estimates of wages and salaries for salesmen, packers, drivers etc. (though the extent to which salesmen and travellers are classified in her estimates to manufacturing rather than distribution is uncertain [**146**, p. 146]); and materials for packing are covered by the census and so are already deducted. Similarly, agents' discounts are – rather uncertainly, it is true – subtracted from census values and should not be deducted again. A further important point is that Jefferys' estimate probably includes substantial expenditures incurred by the distributing establishments of certain groups (e.g. Montagu Burton's advertising charged to shops) with the 'value' of the goods produced reckoned for purposes of the census at a (lower) price which excluded such items.

On the other hand, the Kaldor–Silverman figure of £46 m. only covers manufacturers' expenditure *directed* to final consumers, i.e. it excludes advertisements of consumer goods in trade journals; while the figure of £15 m. although consisting 'very largely of manufacturers advertising' [**185**, p. 9] will include some advertising, e.g. by wholesalers, which should not be deducted.

Faced with this uncertainty the estimate of £61 m. was accepted for 1935, with the recognition that it was likely

[1] I am greatly indebted to Mr W. B. Reddaway for his advice on this item.

[2] N. Kaldor and R. Silverman, *A Statistical Analysis of Advertising Expenditure and of the Revenue of the Press*, 1948 [**185**], p. 10.

to err on the side of being too low. Corresponding estimates were made for 1924 and 1930 in the light of the composition of consumers' expenditure in those years, and then reduced by an arbitrary 20% in 1924 and 10% in 1930 to allow for a proportionately lower level of expenditure on advertising and other selling costs at those dates.[1]

These rather shaky estimates are incorporated in the comparisons set out for the three census years in Table 7.7. The present estimate is 4% higher in 1924 and 6–7% lower in 1930 and 1935; complete agreement is not to be expected and the discrepancy is not unreasonable given the nature of the two estimates. There is, however, some suggestion that the present estimate may be too high in 1924: this could be the result of wrong allocation, so that the excess in manufacturing is offset by an underestimate in some other sector (if so, the most likely candidate would be retail distribution), or it could be due to an error in the total: for example, inadequate allowance for losses.

TABLE 7.7 COMPARISON WITH CENSUS OF PRODUCTION DATA FOR GROSS PROFITS IN MANUFACTURING INDUSTRY, 1924, 1930 AND 1935 (£M.)

	1924	1930	1935
Net output:			
1. Census, factory trades	1,076	1,064	1,182
2. Firms with less than 10 employees	92	101	107
3. *Less* Wages and salaries etc.	726	731	773
4. Rent	30	35	38
5. Rates	15	4	4
6. Royalties	5	6	6
7. Selling costs etc.	45	55	61
8. Profits before depreciation and interest	347	334	407
9. Present estimates, gross profits	362	314	379
10. 9 as percentage of 8	104	94	93

SOURCE: 1. *Fifth Census of Production 1935* [**42** (*d*)], *Final Report*, Pts. I–IV. The figures are inclusive of subsidies and exclusive of excise duties.
2. Bowley [**134**], pp. 124–5.
3. Chapman [**146**], pp. 101–3, 242, excluding railway workshops, naval dockyards, ordnance depots and H.M.S.O.
4–7. See text, pp. 148–50.
9. Table 26, with an adjustment to add back new issue expenses.

The final industries for which an estimate from another source is available are electricity and gas.[2] The profits of electricity undertakings given in the annual *Return of Engineering and Financial Statistics* by the Electricity Commission [**32**] were used earlier for interpolating between the benchmarks, but the levels of the two series are independent. As can be seen from the comparison for selected years in Table 7.8 the two series agree reasonably well in the case of company undertakings but the present estimates for public authorities are significantly lower than those in the annual *Return*, even in benchmark years. Since the present estimates for local authorities were made equal to those published in the *Local Government Financial Statistics* (see p. 143, above) there is presumably some difference in definition of revenue or, more probably, of expenses which accounts for the discrepancy.

TABLE 7.8 COMPARISON WITH ELECTRICITY COMMISSION DATA FOR GROSS PROFITS OF ELECTRICITY UNDERTAKINGS, SELECTED YEARS, 1920–38 (£M.)

	Companies		Public authorities[a]	
	Electricity Commission[b] (1)	Present estimate (2)	Electricity Commission[b] (3)	Present estimate (4)
1922	5	5	11	8
1927	9	8	15	11
1932	12	12	20	16
1937	17	16	26	20

SOURCE: (1) and (3) Electricity Commission [**32**].
(2) and (4) Work-sheets for Table 26.

[a] Including Central Electricity Generating Board.

[b] Revenue from working less working expenses, with an adjustment to exclude income tax from expenses in the years before 1931.

The profits series in the annual Board of Trade *Returns relating to all Authorized Gas Undertakings in Great Britain* [**34**] was also used for purposes of interpolation but as Table 7.9 shows the series for companies is substantially lower than the present estimates. It seems likely that the differences arise in the treatment of depreciation and renewals.

[1] Among the few scraps of information available on the growth of advertising is an increase of 37% in expenditure on press advertising between 1932 and 1938 recorded by *The Statistical Review of Press Advertising* [**278**]. See also F. W. Taylor, *The Economics of Advertising*, 1934 [**251**], pp. 213–14.

[2] Independent data for the gross profits of other local authority trading enterprises and of coal mines and railways have already been considered on pp. 143–5, above.

TABLE 7.9 COMPARISON WITH BOARD OF TRADE DATA FOR GROSS PROFITS OF GAS UNDERTAKINGS, SELECTED YEARS, 1920–38 (£M.)

	Companies		Local authorities	
	Board of Trade returns (1)	Present estimate (2)	Board of Trade returns (3)	Present estimate (4)
1922	7	10	5	5
1927	7	12	4	6
1932	7	12	4	5
1937	8	11	4	5

SOURCE: (1) and (3) Board of Trade [**34**].
(2) and (4) Work-sheets for Table 26.

CONSISTENCY AND RELIABILITY

The present estimates for 1920–38 link onto the C.S.O. estimates for 1938 and 1946–65 and to the estimates for 1855–1920 described below. The relatively minor breaks in continuity of definition and coverage at the earlier year are discussed in Chapter 7.2.

For the later year a comparison can be made with the current Blue Book estimates for 1938 as set out in Table 7.10.

TABLE 7.10 COMPARISON WITH THE BLUE BOOK ESTIMATES OF GROSS TRADING PROFITS IN 1938 (£M.)

	Blue Book (1)	Present estimate (2)
1. Professional persons	118	127
2. Other sole-traders and partnerships[a]	460	419
3. Companies	690	687
4. Public corporations	10	10
5. Other public enterprises:		
Local authority	64[b]	46
Central Government		16
Total	1,342	1,305

SOURCE: (1) 1967 Blue Book [**75**], pp. 2 and 28.
(2) Tables 26 and 29.

[a] Excluding farmers.

[b] Separate estimates are not given in the Blue Book.

The discrepancy on the first two items and its effect on continuity has already been considered in Chapter 2.2 (pp. 42–3). The only other significant difference in definition that is relevant to consistency with the post-1938 estimates is the treatment of royalties etc. As explained in Chapter 7.0, these expenses are deducted from profits in the present estimates (and treated as rent in the hands of the recipients); and if not for this the present figure for profits would be some £24 m. higher in 1938, affecting principally the company sector. The estimates of company profits for 1939–45 are obtained by interpolation between the Blue Book figures for 1938 and 1946 (see Chapter 3.1) so that the break in continuity occurs between 1938 and 1939. Other items which contribute to the discrepancy in estimates of company profits arise from adjustments which have been made to the present estimates but not to the C.S.O. estimates for 1938,[1] but which either do not apply to the post-war series or else are allowed for in the C.S.O.'s estimates from 1946 onwards; so that there is no effect on the continuity of the series. These include the addition for renewals and for depreciation of factory buildings (pp. 140–1, above) and the deduction for continuous or excessive losses (p. 138).

These apart, the discrepancy reflects differences in estimation, and the present calculations only departed from the C.S.O. figures where there seemed good reason to do so. The main item is the very uncertain allowance for evasion.

The following appraisal of the reliability of the estimate is based on an assessment of the main sources of information for the basic series and the various adjustments, and consideration of the several comparisons made with independent estimates:[2]

	1927–38	1920–26
Gross trading profits of companies and public enterprises plus non-farm income from self-employment	B	C
Allocation of this total:		
By main industrial order (Table 26)	B	C
By type of enterprise (Table 29)	B	C
By detailed industry and sector (Tables 27 and 28)	C	D

[1] The starting-point for the C.S.O.'s estimate for 1938, as for the present estimate, is the data on assessed profits given in the *92nd Report*. The C.S.O. kindly provided information on the detailed steps in the derivation of their published estimates from this data.

[2] See Chapter 1.4 for further description of the reliability grades.

7.2 GROSS TRADING PROFITS OF COMPANIES AND LOCAL AUTHORITY TRADING ENTERPRISES, PLUS NON-FARM INCOME FROM SELF-EMPLOYMENT, 1855–1920

SOURCES AND METHODS OF ESTIMATION

A definition of this series is given in Chapter 7.0. It is derived by a somewhat roundabout procedure, but the end product may be described as the gross trading profits of companies, local authority trading enterprises and unincorporated businesses (i.e. sole traders and partnerships other than farming). Beginning from 1889 it is possible to make a rough allocation of the series by type of enterprise, and these sectors are defined in Chapters 3.1, 5.2 and 2.2 respectively. Before that, and for 1914–19 the original tax statistics do not provide an adequate basis for an allocation. The results for 1889–1913 are given for each type of enterprise in Table 29, and for 1855–88 are shown as a total together with the income of farmers (from Table 23) in Table 1. For 1914–19 they are again shown in Table 1, combined with farmer's income but with local authority trading profits (from Table 13) shown separately.

1908–1920[1]

The major source on which the series relies for these years is the continuation back to 1908 of the unpublished Inland Revenue estimates of the unscrambled annual trading profits (plus Wear and tear allowances) used – and described – in Chapter 7.1 (pp. 131–2) for the years 1920–26. It accordingly requires the same corrections as are made for that period in parts (*d*) and (*e*) of Chapter 7.1. The Inland Revenue material also provides the estimate to be deducted for concerns trading outside the United Kingdom (dividends and other income from abroad are already excluded) and the correction for excess profits duty allowed in the assessments (see p. 139, above). Published figures are available for the annual surplus of co-operative societies.[2] For the five remaining items for which adjustments to the assessed profits are required: evasion (excluding overseas income) small incomes not assessed, continuous losses, new issue expenses and renewals, rough estimates were made by interpolating between the 1920 figures as estimated in Chapter 7.1 and a corresponding estimate for 1913.[3]

1855–1913

These estimates are an improved version of the property income component of the national income series presented in an earlier article [**160**] and based on my unpublished Ph.D. thesis. Those, in turn, would not have been possible without the earlier estimates by Prest [**231**] and the detailed studies of Stamp and Bowley [**247**, **127**, **131**, **132**] and others. Apart from certain improvements in coverage and estimation the present estimates represent a more systematic classification of factor incomes and, in particular, the statistically necessary but economically meaningless category of 'intermediate incomes' has been distributed among its constituent factors. In addition, the series have been made consistent with current Blue Book practice by the exclusion of interest on local authority debt and the presentation of the estimates *before* provision for depreciation.

The final objective of the present analysis is a series for gross trading profits plus non-farm income from self-employment, but this cannot be estimated as directly as it is in later years and is arrived at by the following rather devious route:

(*a*) Comparable series, on an appropriate calendar year basis, of taxable income assessed under Schedules C and D of the income tax

(*b*) *Less* adjustments to (*a*) for the excess of taxable income over the commercial (and national income) concept of profit

(*c*) *Less* interest paid in the United Kingdom and assessed under Schedules C or D

(*d*) *Less* salaries assessed under Schedule D

(*e*) *Add* small incomes not assessed for tax under Schedules C and D

(*f*) *Add* incomes evading taxation under Schedules C and D

(*g*) *Add* profits of co-operative societies and incomes of charities etc.

(*h*) *Less* profits, interest and dividends received from abroad

(*i*) *Add* depreciation of plant and machinery, vehicles, ships etc.

As the reader will soon realise many of the successive adjustments which have now to be made are extremely uncertain. However, here as elsewhere in this study, I have followed the principle that it is better to move,

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[1] This estimate overlaps with the final years of the series for 1855–1913. The two are compared, and a compromise estimate derived, on p. 156, below.

[2] *19th Abstract of Labour Statistics*, [**1**, 1928], p. 183.

[3] For the 1913 estimate for the first four of these items see pp. 153–5. For renewals the 1913 estimate was based on the difference between the published wear and tear allowance and the estimate for depreciation of plant, machinery etc. from Chapter 9.2.

TABLE 7.11 DERIVATION OF GROSS TRADING PROFITS PLUS NON-FARM INCOME FROM SELF-EMPLOYMENT, SELECTED YEARS 1860–1913 (£M.)

	1860	1870	1880	1890	1900	1910	1913
1. Taxable income, Schedules C+D	131	230	305	380	498	597	703
2. *Less* continuous losses, new issue expenses etc.	4	7	10	13	17	20	25
3. Interest paid in the U.K.	20	23	25	23	25	27	26
4. Salaries assessed under Schedule D	10	14	20	23	21	26	29
5. *Add* small incomes exempt from tax	38	42	48	67	84	109	130
6. Evasion	56	94	60	59	56	38	37
7. Co-operatives, charities etc.	—	1	3	6	11	17	20
8. *Equals* home and foreign profits after depreciation	191	323	362	453	586	688	810
9. *Less* net property income from abroad	19	36	59	95	105	173	203
10. *Add* depreciation	22	27	33	35	46	56	64
11. *Equals* gross domestic trading profits plus non-farm income from self-employment	194	314	336	393	527	571	671

SOURCE: Row 1: See Table 7.16, Appendix 7.2. Other: See text.

however uncertainly, in the right direction than to stand firmly in what one knows to be the wrong position. The detailed items are illustrated for selected years in Table 7.11.

(*a*) *Taxable income, Schedules C and D*

This constitutes the core of the final series and is derived from the incomes assessed to tax. Schedule C covers interest on British and foreign government securities and is brought in here only to be deducted later (see parts (*c*) and (*h*), below). Schedule D covers the profits of businesses (companies, firms and local authorities) operating at home or abroad; income from professions and certain 'employments'; interest and dividends from abroad; and certain miscellaneous interest and profits.

The process by which these two series were derived (with the aid of Stamp [**247**]) from the data in the annual *Reports of H.M. Commissioners of Inland Revenue* is exceedingly complicated and tedious and the description is best segregated in an Appendix (p. 161) where it can be safely ignored by the great majority of readers. The two series are given in columns (3) and (4) of Table 7.16 of Appendix 7.2. They have been processed so as to be fully consistent year by year, standardised on the basis of the tax system as it operated from 1894; and adjusted so as to correspond to the individual calendar years in which the profits were earned rather than the mixture of income tax years on the basis of which they were assessed.

(*b*) *Taxable income and commercial profit*

The statutory rules for the assessment of trade profits have a number of peculiarities which cause the taxed profits to depart in certain respects from the concept of commercial profits required for national income purposes. This latter concept is itself not, of course, an objective measure, but Stamp [**247**, pp. 174–203] has suggested a number of factors which cause the taxable income to exceed a measure which would be more appropriate for national income purposes. The relevant items can be briefly listed, with Stamp's estimate of the amount involved given in brackets: (i) the inability of the Schedule D assessments to make proper allowance for continuous losses of income which are not set off against profits (on average not higher than £16 m.); (ii) the inadequacy of the Inland Revenue allowances for depreciation and obsolescence of pitshafts, machinery and furniture (£3.5 m.)[1] and (iii) the charges for formation of limited companies and certain other costs which are not allowed as expenses for tax purposes but which are legitimate deductions in estimation of national income (£3 m.). This comes to a total of £22.5 m.

Stamp gave no date for these estimates, but I have taken them as relating to the average of the years 1911–14. The total represents 3.7 % of the adjusted Schedule D taxable income, and this proportion was deducted in all years back to 1855.

(*c*) *Interest*

Three categories of interest paid inside the United Kingdom are included in the total under (*a*) and must be deducted. The first covers that part of interest on British government securities which is assessed to tax under Schedule C. From 1872/3 the gross assessments on

[1] A further amount of £5.5 m. for buildings is taken into account in Chapter 8.0, p. 180.

this interest can be identified in the *Reports*, though interpolation is required for some years in the 1870s. The series was extrapolated back to 1855 by reference to the total payment of interest on the national debt as shown in the *Statistical Abstract*.[1] Strictly speaking it is the taxable income which should be deducted, not the gross income, but a large part of the relatively small difference between the two definitions consists of interest received by charities etc. and by persons with small incomes below the exemption limit. Since it is the gross assessment on these incomes which is added back (see parts (*e*) and (*g*), below) the correct overall result is most closely approximated by deducting the gross income at this stage.

The two other categories of interest are assessed under Schedule D: the one covers interest paid by local authorities on non-trading assets (described in the *Reports* as 'interest from loans secured on the public rates'), and the other is the miscellaneous category of 'other interest', covering small amounts of interest on government stock, and payments by banks, building societies, savings banks etc. Both these categories of interest have been ignored (i.e. *not* deducted) in previous estimates (my own included) but it seems clear that they are straightforward transfer payments, not factor incomes, and must be deducted. The amounts involved are given separately in the *Reports* from 1874/5 until 1910/11 (when they totalled £12.4 m.) and can be estimated quite accurately as the dominant component of the item 'other profits and interest' in the few remaining years. As with the national debt interest it is the gross income which is taken, and since they were included in the adjusted Schedule D series 'as the profits for the calendar year' (see Appendix 7.2, p. 167) they are deducted on the same basis.

(*d*) *Salaries*

Salaries on certain 'employments' were assessed under Schedule D and must be transferred from trading profits to salaries. The necessary estimates are described in Chapter 2.1 (p. 36, above).

(*e*) *Small incomes exempt from tax*

One of the key assumptions made in standardising the estimates to get the comparable series for taxable income (described in Appendix 7.2), was that all incomes below £160 were exempt from tax throughout the period 1855 to 1914. It is therefore necessary to add back in this section that part of incomes below £160 which consists of either trading profits i.e. non-farm income from self-employment, or assessed interest and dividends, which must be added back here because deducted (as part of a larger total) in another section (e.g. part (*c*)). Appendix 7.3 explains the rather approximate procedures used for estimating the necessary items in three benchmark years (1860, 1880 and 1911) and for interpolating between these benchmarks.

(*f*) *Incomes evading taxation*

Some allowance, necessarily very uncertain, must be made for incomes fraudulently evading taxation. The sole reliable source of information on this point in the early years is the *12th Report*.[2] In this a comparison is made between profits returned for taxation in 1864/5 and those submitted by the same parties as the basis for compensation claimed in connection with a redevelopment programme. The estimate made by the Commissioner was that the gross Schedule D assessment should be increased by the very sizeable margin of 52 % to cover evasion (this is equivalent to £76 m.). The next available estimate is a figure of £60 m. (i.e. about 22 % of Schedule D taxable income) given for 1880 by Bowley [**128**, p. 9]; and then there is the considered figure of £37 m. (5.5 %) given by Stamp [**247**, pp. 315, 320–4] for 1913 and covering both understatement of domestic profits (£17 m.) and also income earned abroad, which until the Finance Act of 1914 could easily evade tax if not remitted to the United Kingdom.

A re-reading of the *12th Report* and of the remarks about evasion in subsequent *Reports* suggests that the Commissioners did not intend their estimate to be considered as applicable only to 1864/5. The *Report* itself dealt with the year 1868/9 and the estimate was referred to in following *Reports* in a manner which suggested that something of the order of 50 % of reported income still roughly represented their view of the amount of evasion.[3] This interpretation is strengthened when it is recalled that the first major reforms in the administration and collection of the tax were introduced in the budget of 1869. In particular, a long-advocated improvement was then made whereby all local assessors and collectors were appointed by, and made directly responsible to, the government. This, together with the repeal of the assessed taxes (which left the officers more time to devote to the income tax[4]) meant that the main increase in efficiency should probably be dated from 1870.

Accordingly, I have taken the ratio of evasion to the new gross total Schedule D taxable income as 52 % for 1864, allowed a slight improvement of only ½ % p.a. until 1870, and then assumed a linear fall to 22.5 % in 1880, the proportion corresponding to Bowley's £60 m.;

[1] The difference represents unassessed interest on stock held by government departments and certain charities etc.

[2] The relevant section is quoted in Stamp [**247**], pp. 326–8.

[3] See, e.g. *14th Report* [**30**], p. 37.

[4] *15th Report* [**30**], p. 51.

and again from there to the 5.5 % indicated by Stamp's figure for 1913. For the years before 1864 a steady but slight change of ½ % p.a. is again assumed, working upwards from 52 %.

It is possible that estimates based on the 52 % suggested by the *12th Report* are still too low, since that relates only to domestic profits under Schedule D, and some addition should perhaps be made for income from abroad not remitted to the United Kingdom. There is, however, no basis for this and no correction has been made. The main scope for *legal* avoidance of tax was under Schedule B and this is eliminated by the use of estimates from the output data. In considering the importance of the estimates for evasion it should also be noted that there was very little scope for evasion under Schedules A, C and E, and that Schedule D represented a smaller proportion of taxable income in the earlier years when evasion was most serious.

(g) *Co-operatives, charities etc.*

The estimates of taxable income exclude both the surpluses made by co-operative societies and the dividends and interest received by charities, hospitals, friendly societies etc. The former were not assessed to tax; the latter were assessed with deduction at source, but were in fact exempt from tax so that the duty was subsequently repaid and the income deducted in arriving at the estimates of taxable income. Both must be included although the dividends and interest received by charities etc. are added in here only to balance their inclusion in the larger aggregates of interest and property income from abroad deducted in paragraphs (*c*) and (*h*).

The profits of co-operative societies are measured by their surpluses before payment of dividends on purchases by members or of interest on loans and shares. For 1898 onwards the relevant figures were obtained from the *17th Abstract of Labour Statistics* [**1**], and for earlier years from statistics given in the report of the Co-operative Congress.[1]

The income of charities etc. exempt from taxation under Schedule C and D is shown in the *Reports* from 1891–2. The estimates for earlier years, when the amounts involved were under £2 m., were obtained on the assumption that income under these two schedules was a constant proportion of their income from property taxed under Schedule A, for which some data on exempt income is available in the *Reports*. As explained in paragraph (*c*) it is the gross income which is added back.

(h) *Property income received from abroad*

In order to estimate the contribution of profits to the gross *domestic* product it is necessary to deduct from the tax series (as amended) the estimated total of profits, interest and dividends from abroad which is included in the series. As the Inland Revenue *Reports* were careful to point out each year only part of the income received from abroad can be identified in their statistics. Interest from foreign governments assessed under Schedule C and certain classes of overseas income assessed under Schedule D were shown separately but the remaining income from abroad (of which by far the most important component was the profit made by concerns, other than railways, operating abroad but 'having their seat of direction and management' in the United Kingdom) was not identified as such but merged with the domestic assessments.[2]

The information recently made available by the Inland Revenue does, however, enable us to make an estimate of the main element in the unidentified income for the year 1909. Worswick and Tipping [**261**, p. 101] give £63 m. for the gross true income of 'Adventures outside the U.K.'[3] Some £17 m. of this is duplicated in the amount identified in the *56th Report* [**30**, p. 114] as the profits of *railway companies* operating abroad, and the remaining £46 m. is the unidentified profit of concerns (other than railways) operating abroad but directed from the United Kingdom. The known total of income from abroad in 1909 contained in the present estimates can thus be put at about £160 m., made up as follows:

	£m.
Income from foreign government securities (Schedule C)[a]	34.1
Income from abroad disclosed by agents, bankers or coupon dealers or declared by the recipients[a]	43.5
Profits of railways and other concerns operating abroad	63.0
Estimated income from abroad evading taxation[b]	20.0
	160.6

[a] Most income in these categories was assessed on the current year basis and the figures given are those for the year of assessment 1909/10 (*54th Report* [**30**], p. 125).
[b] Stamp [**247**], p. 324.

This figure of some £160 m. may be compared with the well-known estimate made by Sir George Paish [**224**, pp. 465–80]. From an investigation of the amount of capital *publicly* invested abroad he arrived at an estimate of income from abroad of £139.8 m. in 1907.

[1] Co-operative Union, *34th Annual Report of the Co-operative Congress*, 1902 [**268**], p. 275.
[2] See, e.g. *56th Report* [**30**], pp. 115–16, or Stamp [**247**], pp. 230–5, for further details.
[3] This is for the year of assessment 1911/12 but relates to assessments on the average profits of the three preceding years and so corresponds roughly to the income of 1909.

A figure of £20 ± 5 m. should be added to this for income on capital invested privately [**224**, pp. 482 and 490]; and if the total is then extrapolated to 1909 we get a figure of some £176 m. for total property income from abroad, about £16 m. above the present estimate. Paish's estimates also exclude the overseas profits of British shipping and insurance companies and the two estimates are broadly consistent in definition, but it is possible that the higher figure may include some income from abroad which is not identified as such in the tax assessments.[1]

Although this total of some £160 m. does not represent the full total of income from abroad[2] the treatment of income from shipping, insurance etc., as domestic profits or as exports of services, is consistent with the procedure followed in the post-1913 estimates (see Chapters 6.0 and 6.3).

To obtain annual estimates it was assumed that the total income from abroad bore the same ratio to the amount identified in the *Reports* as in 1909.[3] Before 1885 the figure identified is known to be defective (see Stamp [**247**], pp. 227 and 235) and the estimate was extrapolated back to 1855 by means of the estimates of net property income from abroad compiled by Imlah [**181**, pp. 72–3].

(i) Depreciation

The problem with this item is, in a sense, the reverse of that encountered in the previous paragraphs. Here it is necessary, in order to obtain a series for profits before providing for depreciation, to add back depreciation to the taxed assessments (as amended) without knowing the amount which has been deducted. Once again the Inland Revenue *Reports* identify only an unknown part of the whole: the amounts allowed for wear and tear of machinery; and there is no way of knowing what additional amounts were allowed 'in the assessment', e.g. where the renewals method was used. (See Stamp [**247**], pp. 196–8).

In Chapter 9.2 estimates of depreciation are made on the basis of capital stock series and length of life assumptions for various types of assets and I have taken this estimate for depreciation of plant and machinery, vehicles, ships etc. as the amount to be added back.

It only remains now to compare the results of the present procedure for estimating gross trading profits with those obtained above for the overlapping period 1908/13 by the more direct route which can be followed for 1908 onwards using the unpublished Inland Revenue material. The two series are set out below.

The discrepancy between the two series is on average (ignoring sign) less than 2 %, but there is a slight divergence in their timing. The 1908–20 series is probably the more reliable of the two in this respect and I have adjusted the final results to allow for this, adding amounts totalling £25 m. over the three years 1908–10 and deducting a total of £25 m. from the estimates for 1912–13. This completes the pre-1913 estimates of gross trading profits plus non-farm income from self-employment.

	1908–1920 Series (1)	1855–1913 Series (2)	Discrepancy (1) – (2) (3)
	£ m.	£ m.	£ m.
1907	—	592	—
1908	527	509	18
1909	539	534	5
1910	577	561	16
1911	591	591	—
1912	646	652	−6
1913	671	690	−19
1914	625	—	—

It is not possible to make an allocation by industry, though a rough picture is available for 1911/12 in the tables given by Worswick and Tipping [**261**]. It must be remembered that these tables follow the Inland Revenue classification and differ from the 1948 S.I.C. used in Chapter 7.1 and also that they are before adjustment for evasion, small incomes etc.

Allocation by type of enterprise

From 1900/1 the Inland Revenue *Reports* included a table showing a fourfold division of the gross income Schedule D between persons and firms, public com-

[1] The distinction between this source of discrepancy and differences arising from errors of estimation is relevant to Chapter 6.3 where it is necessary to estimate the net property income from abroad. To the extent that the former factor is a cause of the discrepancy the addition of Paish's estimate to the present estimate of gross domestic profits would involve a measure of duplication. To the extent that they are simply errors in estimation the £160 m. would still be the appropriate figure to deduct here, as being the best estimate of the amount included in the assessed series, but it would not be inconsistent with a higher estimate in the gross national product for property income from abroad. It is the latter which is assumed to be the case in Chapter 6.3.

[2] In terms of the categories specified in the *Reports*, (e.g. 56th [**30**], p. 116) the profits still not identified are cases (*g*), (*i*) and (*j*) and part of (*h*).

[3] This method has well-established precedents. It was criticised by Stamp [**247**, p. 235] and defended by Cairncross [**143**, p. 179]. It is broadly confirmed by some unpublished statistics for 1890 and 1895 showing the gross assessments on concerns operating outside the United Kingdom; cf. Worswick and Tipping [**261**] who give the corresponding *net* assessments.

panies,[1] local authorities, and bankers, coupon dealers etc. deducting tax on behalf of the Inland Revenue. If certain items[2] – for all of which a similar division is possible – are deducted and bankers, coupon dealers etc. eliminated the residual corresponds moderately well to the estimate just made of gross trading profits plus non-farm income from self-employment *before* the inclusion of profits of co-operatives, income evading taxation and small incomes exempt from tax. Apart from differences in timing (i.e. it is still 'scrambled') this adjusted gross income exceeds the present estimates principally because it contains the amounts which are included in the gross income brought under review but must be deducted to get to gross trading profits, viz: income below the exemption limit and 'other allowances, reductions and discharges', and this is only partly offset by the exclusion of renewals etc. (i.e. the excess of the present estimate for depreciation over the wear and tear allowance).

By accepting the assumption that these differences between the adjusted gross income and the present estimates can be allocated pro rata to the adjusted gross income it is possible to make a broadly reliable division of the total. The percentage shares of the corporate (companies and local authorities) and non-corporate (persons and firms) sectors in the adjusted gross income were applied to the gross trading profits etc., excluding co-operatives, evasion and small incomes.[3] The co-operatives were then added to the corporate sector, the small incomes to the income from self-employment and the evasion was apportioned roughly between the two sectors. Finally, a separate estimate was made for local authority trading enterprises and deducted from the corporate sector, leaving a series for companies.

For 1891/2 to 1899/1900 almost as much information was given retrospectively in the *45th Report*, and although it is in a slightly different form there is very little extra estimation required to extend the series back to calendar year 1889.

The share of non-corporate enterprises in the assessed income falls steadily from 61 % in 1891/2 to 39 % in 1914/15; the series derived on this basis are shown in Table 29.

CONSISTENCY AND RELIABILITY

The differences in definition and coverage as compared with the post-1920 estimates for companies, non-farm income from self-employment and local authority trading enterprises can be seen in Table 7.12, where 1920 is reworked on the basis used for the earlier period. The net difference between rows 1 and 7 is negligible, and the exclusion of Southern Ireland is explicitly allowed for in the main tables.

It is less easy, but perhaps more relevant, to consider the magnitude of the differences in a pre-war year, say 1913. The net effect of the omission of rows 3 and 5 might reduce the estimate of profits by roughly £20 m., but the estimates of gross domestic product are not affected since the pre-1920 estimates of rent in Chapter 8.0 include the imputed rent of owner-occupied trading property and exclude royalties etc. The absence of adjustments for rows 2 and 4 might represent a further reduction of approximately £25 m. but something must be allowed for the inclusion of net interest in the profits of financial companies. On balance, the effect of all the differences is likely to be a slightly lower level of profits before 1914 than would be obtained if the post-1920 definition could have been adopted, and a marginally higher level of gross domestic product.

TABLE 7.12 RECONCILIATION OF TWO ESTIMATES OF GROSS TRADING PROFITS AND NON-FARM INCOME FROM SELF-EMPLOYMENT IN 1920 (£M.)

1.	Estimate for 1920 in Table 26	1,233
2.	*Deduct* Bank interest	67
3.	Rent of owner-occupied trading property	43
4.	Income of small holdings	10
5.	*Add back* Royalties, ground rents etc.	19
6.	Adjustment for financial companies	97
7.	Estimate on pre-1920 basis, Great Britain and Northern Ireland	1,229
8.	Add Southern Ireland, say 2 %	25
9.	Estimate on pre-1920 basis, Great Britain and Ireland	1,254

SOURCE: Work-sheets for Table 26.

The reliability of the aggregate estimates is very hard to judge but may perhaps be summarised as follows:[4]

1855–1869	D	1890–1914	B
1870–1889	C	1915–1919	C

The estimates by type of enterprise for 1890–1913 may be ranked as Grade C.

[1] This is a misleading term and in fact includes private limited companies. See Stamp [**247**], p. 244.

[2] The published gross assessments for employees assessed under Schedule D, Indian, colonial and foreign securities, railways out of the United Kingdom, loans secured on the public rates and other interest, plus an estimate for companies (other than railways) operating abroad.

[3] The percentage for the year of assessment was applied to the unscrambled gross trading profits for two calendar years earlier, e.g. the percentage found for 1911/12 was applied to 1909.

[4] See Chapter 1.4 for further discussion and for a description of the reliability grades.

APPENDIX 7.1

INLAND REVENUE CONCEPTS AND TERMINOLOGY

Until 1963/4, when Schedule A was abolished, assessments to income tax were made under five schedules:

Schedule A: Income from ownership of land and buildings

Schedule B: Income from the occupation of lands

Schedule C: Income from government securities

Schedule D: Income from businesses, professions, employments, foreign securities and possessions etc.

Schedule E: Salaries of government, corporation and public company officials.

For Chapter 7 we are primarily interested in Schedule D, but Schedule C is needed in Chapter 7.2, Schedule A forms the basis for estimates in Chapter 8 and Schedule E is used in Chapter 2.1 for 1855–1919.

1920–1938

From 1920/1 (see *64th Report* [**30**], pp. 79–85) the basic terms adopted by the Board of Inland Revenue for the compilation and presentation of the results of their assessments were related in the following way:

Gross income		
Less (i) Exemptions:		Incomes below the exemption limit[1]
		Charities, colleges, friendly societies etc.
		Dominion and foreign dividends belonging to persons not resident in Great Britain or Northern Ireland.
(ii) Reductions:		Allowances for wear and tear[2]
		Repairs – lands and houses and buildings[3]
		Other reductions and discharges
Equals	Actual income	
Less	Earned income allowance	
Equals	Assessable income	
Less	Personal allowances	
	Deductions for children, housekeeper etc.	
Equals	Taxable income	

For our purposes we are mainly interested in gross income and actual income, but it should be noted that the term 'taxable income' corresponds approximately with the expression 'net income on which tax was received' used in the period before 1920/1 (see below); and that what is referred to above as 'actual income' is what was previously called 'taxable income'. In Chapter 7 and Appendix 7.2 these terms are used for each period with the meaning assigned them by the Inland Revenue in that period.

Gross income was defined as the gross income brought under the review of the department, including certain income belonging to exempt persons, charities etc. and also to individuals above the exemption limit who do not in fact pay tax because of the operation of the allowances. It was subsequently observed [**30**, *91st Report*, p. 20] that it 'includes amounts which are not "income" in the proper sense of the term at all. Thus where an assessment is increased the increase appears as an "additional assessment" and is therefore reflected in the gross income figure; but where an assessment is reduced, the full amount of the original assessment...[is]...included in the "gross income" figure, the reduction being included under the heading "other reductions and discharges"...Similar considerations apply as regards management expenses claims, loss claims and other items.' (For this reason the *91st Report* [**30**, p. 20] introduced from 1946/7 a new term: 'gross true income' which is equal to the gross income less:

Reductions for overcharges where the original assessments are too high

Relief for losses, and adjustments which affect the basis of assessment, e.g. commencement or cessation of a business

Interest payable out of the income which is allowed as a deduction for income tax purposes (management expenses and expenses of employment)

Considered from the point of view of the estimates of trading profits required for Chapter 7.1, there

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[1] In the case of Schedule D (and also E) this represents only that small fraction of the income of exempt persons which, for administrative reasons, happened to be covered by the gross assessments of the Inland Revenue Department. See also p. 136, above.

[2] This would apply only for Schedule D.

[3] This would apply only for Schedule A.

is the further difficulty that the gross income assessed under Schedule D includes not only the assessments on profits and on income from professions or vocations, but also interest paid in full and assessable directly upon the recipient, including interest on certain British government securities and interest on bank deposits; income from Dominion and foreign securities and possessions (other than from government securities – assessable under Schedule C); income from employment (until 1927/8);[1] and miscellaneous profits not dealt with under any other schedule.

Gross income is thus too high for our purpose, but actual income – the only other series published for each schedule in the inter-war period – is too low. This is partly because it is measured after deduction of wear and tear allowances, whereas we want to measure gross trading profits, and also after deduction of certain other items which ought not to be excluded from estimates of gross trading profits;[2] and partly because it also includes the elements of interest and of non-trading income from abroad etc. referred to in connection with the gross income, but reduced by the extent of any reductions and discharges applicable to these items.[3]

The best starting point for our purposes is thus a series lying somewhere between gross and actual income, which may be termed the 'assessed gross trading profit'. This concept is defined in Chapter 7.1, p. 129.[4]

All the above discussion has related to the aggregates published in the Inland Revenue *Reports*. None of these problems apply in the case of the sample assessments for individual trade groups (pp. 132–4, above) since they relate only to trading enterprises and are after adjustment for overcharges, relief for losses etc. However, it is necessary to use the adjusted aggregates as a control on the grossed-up sample estimates (see p. 135).

1855–1919

The Finance Act 1920 brought into operation for the year 1920/1 'a radical alteration of the method for granting relief in the Income Tax charged on earned income (usually referred to as differentiation), and of the method of graduating the burden of the tax according to the size of a taxpayer's income and his family responsibilities'. [**30**, *64th Report*, pp. 79–80]. With this came a change in the presentation of the assessments and in the terms used.

From 1900/1 to 1919/20 the *Reports* had given data for each schedule from which it was possible to obtain a series for what was then called 'taxable income', (corresponding, as noted earlier, to the 'actual income' of the later *Reports*). It is this concept which forms the basis for the estimates made in Appendix 7.2 and it has then to be adjusted (see Chapter 7.2) for a number of items, including the fact that it excludes the income of exempt persons, charities etc. and is measured after deduction of wear and tear and of other allowances for depreciation.[5]

Taxable income under each of the five schedules can be arrived at from the *Reports*, in two ways, first:

Gross income brought under review
Less Incomes not exceeding £160 a year[6]
Incomes of charities, hospitals, friendly societies etc.
Foreign dividends belonging to foreign residents
Equals Gross income of persons liable to tax

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1 From 1923/4 this category of income was assessed under Schedule E, but some small arrear assessments continued to appear under Schedule D until 1927/8.

2 The items which ought not to be excluded are the exemptions listed under (i) of the equation on p. 158, together with certain similar items (management expenses, bank interest, income of superannuation funds etc.) included under the heading of 'other reductions and discharges'. All these represent part of the profits which accrued in the first instance to trading enterprises, and so must be incorporated in the estimate. The fact that the profits were subsequently paid over in the form of dividends etc. to charities, non-residents and other persons or bodies exempt from United Kingdom taxation is quite irrelevant. A similar argument applies to the so-called non-trade deductions, such as management expenses and bank interest, which are discussed on p. 130, n. 1.

3 Previous estimates of trading profits (e.g. Bowley [**134**], p. 81, and Colin Clark [**149**], p. 60) have taken the published series for actual income as their starting point. They have then adjusted for certain items, particularly income of charities etc., but not for others such as interest on war securities etc. or income from Dominion and foreign securities and possessions, both of which are therefore included in their estimates; nor for wear and tear allowances, since they were estimating net profits.

4 It may be noted here that it is similar to the concept of 'gross true income' introduced in the *91st Report* and defined on p. 158, above. It differs in that it excludes interest etc. and is measured before deduction of management expenses and other non-trade deductions.

5 See Stamp [**247**], ch. VIII, especially pp. 281–4, and 295–309.

6 With the imposition of income tax in 1842 the exemption limit was fixed at £150. In 1853/4 it was lowered to £100 and remained at that level until 1876/7 when it was increased again to £150. In 1894/5 the limit was further raised to £160. In order to construct a comparable series of income assessed to tax it is necessary to assume a constant limit below which all incomes were exempt from taxation. All the present estimates are standardised on the assumption that an exemption limit of £160 existed throughout. All years prior to 1894/5 are accordingly adjusted to exclude income assessed to tax at the lower (actual) limits.

Less Allowances for: Repairs to land and buildings[1]
Empty property
Wear and tear of machinery
Other allowances, reductions and discharges[2]

Equals Taxable income

Or, alternatively:

Net income on which tax was received

Add Allowances for: Abatements
Life insurance premiums
Children

Equals Taxable income

It will be seen that the allowances in the first definition are excluded from taxable income and that this is appropriate from the point of view of a concept designed as a first step in the estimation of trading profits. By contrast, the allowances in the second definition are those given as a method of graduating taxation (or encouraging life insurance) and so are appropriately included in taxable income.

The information available in the *Reports* gets progressively less adequate as one goes back before 1900/1, and there are certain changes in terminology; but the concepts are essentially the same as those indicated in the above definitions (subject to the date at which the various allowances were introduced), and the detailed method by which taxable income under each schedule was estimated in these years is the subject of Appendix 7.2.

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[1] The rate allowed was changed from 1894/5 and to obtain comparability the allowance is standardised for all years at the rates granted from 1894/5. See Stamp [**247**], pp. 60–3 for details.

[2] This is an umbrella heading introduced in 1900/1 to cover miscellaneous reductions and allowances under various schedules for various reasons. It would include, for example, expenditure by the owner of lands in making or repairing sea walls, an allowance under Schedule A; or general reductions on appeal against errors in assessment or double assessments.

APPENDIX 7.2

INCOMES ASSESSED TO INCOME TAX, 1855–1914

The annual *Reports of the Commissioners of His Majesty's Inland Revenue* [**30**] give details of the gross and net assessment to each of the five schedules for which tax was assessed, but until 1900/1 no details were given of taxable income, the Inland Revenue measure which for this period comes closest to the concept required for national income purposes.[1] In his great study of the pre-1914 income tax statistics Lord Stamp constructed an annual series of taxable income for each year from 1842/3, corrected for all the many changes in the scope and administration (but not, of course, the efficiency of collection) of the tax system. Unfortunately, however, his true comparative series [**247**, pp. 318–19] was calculated only for the aggregate of the five schedules. For our purpose it is essential to have the comparable series of taxable income under each of the five schedules.

The procedures by which this was obtained can be most easily described by considering four separate periods.

1900/1 to 1914/15

For this period taxable income for each schedule can be computed directly from the *Reports*, although it is not referred to as such until the *56th Report* for the year 1911/12. The *Reports* for this period also provide detailed information about the allocation to schedules of all the allowances and deductions from the gross income brought under review, and this affords precious information for use in earlier years.

1891/2 to 1899/1900

In the *45th Report* (for 1900/1) retrospective figures of the net income on which tax was received under each schedule are given back to 1891/2. To obtain the taxable income, therefore, the allowances for abatements and life insurance premiums have to be added back. (The allowance for children was not introduced until 1909/10). These allowances were made in one of three ways.[2] By far the largest part was allowed 'in the assessment', and for this the necessary details are available for each schedule. It is, however, necessary to estimate the allocation to the five schedules of the remainder, allowed 'by repayment' or 'by schedule'. This was done by reference to the analysis made of the post-1900/1 allocations; and the proportions which applied in these years were extrapolated backwards with corrections for such factors as the more rapid rate of growth of Schedule E after 1900/1, and the effect of the periodic reassessment years on the allowances for abatements under Schedules A and B. The total amount for which a rough sub-division has to be made in this way is never more than £15 m. in a total taxable income of about £600 m.

To obtain a comparable series three further adjustments are necessary as a result of legislative changes given effect as from 1894/5. The first was the allowance for repairs to lands and buildings, and for 1893/4 and all earlier years a comparable amount must be deducted, equal to one-eighth of the gross annual value for lands, and one-sixth for houses. This adjustment relates wholly to Schedule A.

The second adjustment required is for the fact that until the change in 1894/5 the exemption limit was £150. For the years from 1891/2 to 1893/4 a deduction must be made for income assessed to tax between the standardised limit of £160 and the actual limit of £150. Estimates of the amounts involved were made by Stamp and with a certain amount of estimation can be deduced from his series.[3]

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[1] See Appendix 7.1 for a full discussion of the definition and inter-relationship of all the main terms used in the Inland Revenue *Reports*.

[2] Abatements and life insurance premiums were allowed:
- (*a*) 'in the assessment', i.e. as a deduction from the gross assessments before the assessment was closed. Full details are therefore given in the *Reports*
- (*b*) 'by schedule', i.e. after the assessment had been closed but before the payment of duty
- (*c*) 'by repayment', i.e. where duty is deducted at the source and the claim for abatement etc. can only be made after duty has been paid

[3] The correction to Schedules D and E can be deduced from Stamp [**247**] as the difference between columns (3) and (4) of Table D 1 (pp. 218–19) and columns (3) and (4) of Table E (pp. 272–3) respectively. No adjustment is required for Schedule C. The total for Schedules A and B combined is then obtained as the difference between Stamp's total taxable income (column (5) of Table G4, pp. 318–19) and my corresponding estimate for the sum of the five schedules after all the necessary adjustments have been made except for this correction to Schedules A and B.

The third adjustment is a simple transfer between two schedules. Interest on certain municipal and corporation stocks was transferred from Schedule C to Schedule D in 1893/4 and the same transfer must be made in earlier years.[1]

1863/4 to 1890/1

In this and the earlier period there is very little direct help to be obtained from the *Reports* and a much longer process of calculation is required. Basically, the route followed is the second of the two given for the derivation of taxable income in Appendix 7.1, but with the added complication that the net income on which tax was received has first to be calculated (in total and for each schedule) by reference to the actual duty collected, given under the cumbrous heading 'net produce of the tax after allowance for sums included in schedules of discharge and default and for discounts, repayments and allowances in the following year'. This amount, taken together with the 'receipts for unassessed duty and recoveries from default schedules of prior years' can be converted to the net income on which tax was received by means of the ruling rate of duty.

To make things more difficult the net produce of the tax is itself not given *for individual schedules* and can only be derived by starting even further back with the official figures of the net amount charged to duty (also referred to as the net assessment) for each schedule. This has to be converted to its equivalent in duty and represents the amount which would have been received if the full duty had been paid. By working through the successive stages in which this full duty is reduced through various allowances etc. it is possible to reconstruct the net produce for each schedule.

These successive reductions of the duty can be considered under four headings:

(*a*) *Repayments of duty.* This is the category for which the most information is available. The *28th Report* (p. 258) gives an analysis of the duty repaid in each year from 1868/9 to 1884/5, and from 1887/8 a full analysis is given annually in the *Reports*. For the missing years the total amount, but no analysis, can be obtained from the annual *Finance Accounts* [**20**]. It is stated in the *Reports* that the figure for duty repaid should be taken as relating to duty paid in the preceding year, and the duty repaid can thus be converted to the equivalent income assessed at the rate of duty ruling in the preceding year.

The main allowances made by repayment of duty are specified in the *Reports*. Two of these – for abatements and life insurance premiums – need not be allocated to the schedules since they have to be added back at a later stage to arrive at the taxable income. Others, such as the 'diminution of income, Schedule D', or the 'allowances for agricultural relief', are clearly applicable to specific schedules. The remainder are allocated by extrapolating the proportions which applied in the period 1900/1 to 1914/15.

(*b*) *The statutory income, Schedule B.* This reduction in the duty relates only to Schedule B and so presents no problem of allocation. It arises from the practice of deeming farmers' statutory incomes to be a certain proportion of their gross rent. In this period this was given effect by charging the tax at the desired proportion of the current leading rate.[2]

(*c*) *Unassessed duty and recoveries from default schedules of prior years.* This is an addition to the net produce of the tax. The first part covers income on which tax is collected without regular assessment. The amounts involved have been estimated by Stamp [**247**, pp. 213–14 and 496–8] and according to him relate wholly to Schedule D. The second part is self-explanatory. It is roughly assigned to the five schedules, with the largest proportion taken as applicable to Schedule D.

(*d*) *Allowance by schedule.* The total for this category can usually be obtained only as a residual: the difference between the official net produce plus unassessed duty and recoveries and the figure arrived at before making this final correction is the amount discharged from duty 'by schedule', either by official allowance or default. In the *28th Report* the figure is given for the years 1868/9 to 1883/4 and thus provides an invaluable check on my procedures (and arithmetic). The *Report* also gives a unique breakdown by schedule for the six years 1877/8 to 1882/3. For other years the allocation to the five schedules was made in the light of the data for these six years and what can be learnt from the figures for 1891/2 onwards. The main deviation from straight extrapolation and interpolation was an allowance for the additional relief granted 'by schedule' under Schedules A and B during the agricultural depression of the 1880s.

The whole of the procedure up to this stage is illustrated for one year (1874/5) in rows 1 to 11 of Table 7.13.

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1 The amounts required are given by Stamp [**247**], p. 168.

2 For an explanation of the operation of taxation under Schedule B see Stamp [**247**], ch. II. The calculation of the amount by which the net income assessed under Schedule B must be reduced may be illustrated for the year 1874/5. In that year, the total net assessment under all schedules was £498.261 m. and the total duty charged on this was £3.988 m. If the full rate of 2d. ruling in that year had been charged, the duty would have been £4.152 m. The difference, £0.164 m. of duty, represents am amount of £19.7 m. of income. This is the amount by which the gross rent exceeded the statutory income under Schedule B.

TABLE 7.13 SPECIMEN CALCULATION OF TAXABLE INCOME BY SCHEDULE IN PERIOD 1855/6 TO 1890/1. DATA FOR 1874/5 (£M.)

	Duty		Income: Total		Schedules: A	B	C	D	E
1. Net amount charged to duty				498.26	151.4	38.2	42.4	239.1	27.2
2. Duty at 2d. in the pound		4.152							
3. *Less* repayments of duty		0.058		7.0					
3.1 Abatements	0.008		1.0						
3.2 Life insurance premiums	0.008		1.0						
3.3 Diminution of income, Schedule D	0.004		0.5					0.5	
3.4 Charities etc.	0.018		2.1		0.8		0.3	1.0	
3.5 Incomes below exemption limit	0.013		1.6		0.8		0.1	0.6	0.1
3.6 Other repayments	0.007		0.8		0.3			0.5	
4. *Less* special rate Schedule B		0.164		19.7		19.7			
5. *Less* allowances by schedule		0.097		11.6					
5.1 Abatements	0.004		0.5						
5.2 Life insurance premiums	—								
5.3 Other	0.093		11.1		4.7	0.2		5.7	0.5
6. Total reductions (3+4+5)		0.319		38.3	6.6	19.9	0.4	8.3	0.6
7. = Duty paid (2−6)		3.833		460.0	144.8	18.3	42.0	230.8	26.6
8. *Add* unassessed duty	0.053		6.3					6.3	
9. recoveries	0.004	0.057	0.5	6.8	0.1	0.1		0.2	0.1
10. Net produce of the tax		3.890							
11. Net income on which tax was received				466.8	144.9	18.4	42.0	237.3	26.7
12. *Add* abatements				35.5					
12.1 Allowed in the assessment			35.8		0.4	3.1		27.4	4.9
12.2 Allowed by repayment			1.0						
12.3 Allowed by schedule			0.5						
12.4 Correction to Schedule B			−1.8			−1.8			
13. *Add* life insurance premiums				1.7					
13.1 Allowed in the assessment			0.7					0.5	0.2
13.2 Allowed by repayment			1.0						
13.3 Allowed by schedule			—						
14. *Equals* Taxable income with £100 exemption limit, and no repairs allowance				504.0	145.3	19.7	42.0	265.2	31.8
15. *Less* income £100–£150 (1853/4 to 1875/6)				28.6	1.0	2.2	—	20.5	4.9
16. *Equals* Taxable income with £150 exemption limit and no repairs allowance				475.4	144.3	17.5	42.0	244.7	26.9
17. *Less* income £150–£160 (1853/4 to 1893/4)				11.0	1.2	2.3	—	6.4	1.1
18. *Less* repairs allowance				24.1	24.1	—	—	—	—
19. Transfer of municipal securities from Schedule C to Schedule D, until 1893/4							−0.3	0.3	
20. Transfer of 'concerns No. III, Schedule A' from Schedule A to Schedule D, until 1865/6					—		—		
21. *Equals* Taxable income with £160 exemption limit and repairs allowance				440.3	119.0	15.2	41.7	238.6	25.8

Notes

1 is given in the *Reports*.

2 is the duty which would have been received if the full rate had been paid on the whole net assessment.

3 is given in the *28th* and later *Reports*.

3.1 and 3.2, 5.1 and 5.2 are not allocated because they are added back in 12.2 and 12.3, 13.2 and 13.3 below.

3.4, 3.5 and 3.6 are allocated mainly on the basis of the proportion applying to the same items in 1900/1 to 1914/15

4 is obtained as shown on p. 162, n. 2, above.

Cont. on p. 164.

Notes (cont.)

5 is known in total for this particular year since it is given in the *28th Report*. In years where it is not known it is computed in total as 2 – (6 + 3 + 4) and 6 is obtained from 10 – (8 + 9).

8 and 9 as in Stamp [**247**, p. 498] and the *Reports*.

10 is given in the *Reports*, and 11 is calculated from 10 at the current rate of duty.

12.1 is given in the *Reports*, and there is a convenient summary in Stamp [**247**, pp. 302–3].

12.2 see p. 164, n. 1.

12.4 This deduction from the total of abatements which has to be added back arises because of the method of computing statutory income under Schedule B. The amount shown in the *Reports* as abated under Schedule B is too large and does not correspond to the statutory income. This was officially recognised in 1889/90 and the official figures were made up on a new basis from that year. It is, therefore, necessary to correct for this in preceding years, and this is done by reference to 1888/9 to 1893/4 when both the actual and the corrected figures are given in the *Reports*. In these years the correct figure is approximately 43% of the original, and this is the proportion taken for the preceding years. The 'revised figures, true amount' of abatements given by Stamp, which is the total figure which has to be added back is thus made up of:

(*a*) The official figure of abatements allowed in the assessment

(*b*) *Add* Abatements allowed by repayment

(*c*) *Less* Correction for abatements allowed in the assessment, Schedule B, until 1888/9

(*d*) *Add* Abatements allowed 'by Schedule'

(*e*) *Equals* Revised figure, true amount

(*a*) and (*b*) are given in the *Reports* and (*e*) is Stamp's figure. Thus when (*c*) has been estimated the amount of Stamp's estimate for (*d*) can be calculated. This is the amount in row 12.3.

It is then necessary to take account of the fact that up to 1888/9 the amount which was officially abated in the assessment under Schedule B and is shown in Stamp [**247**], column (3), pp. 302–3, is larger than the amount which has to be added back. The excess has therefore to be deducted from the amount added back to Schedule B.

13 See p. 164, n. 1, above.

14 *Equals* (11 + 12 + 13).

15 For 1863/4 to 1875/6 as on pp. 164–5, and for 1855/6 to 1862/3 as on p. 165.

16 *Equals* (14 – 15). The total agrees with Stamp [**247**], column (4), pp. 318–19.

17 See p. 161, above.

18 Calculated as one-sixth of the gross annual value of houses and one-eighth of the gross annual value of lands.

19 See Stamp [**247**], p. 168.

20 See Stamp [**247**], p. 495.

21 The total agrees with Stamp]**247**], column (5), pp. 318–19.

It may be helpful to emphasise the difference in calculation of the taxable income in total and its allocation to the five schedules. For the total it is possible to proceed directly from the figure for the net produce etc. given in the *Reports*. Thus for 1874/5 we have:

	£ m.
Net produce	3.833
Add Receipts for unassessed duty and recoveries from default schedules	0.057
	3.890

At the rate of 2d. in the pound this gives £466.8 m. for the net income on which tax was received. However, when making the allocation to the schedules it is necessary to start from the net amount charged to duty and reconstruct the net produce as shown in the first column of Table 7.13. The figures for duty can then be converted back to income, as in the second column, and this income allocated to the individual schedules.

Once the net income on which tax was received has been estimated for each schedule the four remaining stages in the calculation are reasonably simple. It is necessary, first, to add back the abatement and life insurance allowances.[1] The allocation of the amounts allowed 'in the assessment' (cf. p. 161, above) is taken from the *Reports*, and no allocation is required for the two other methods of allowance since no allocation was made of their deduction.

Secondly, the standard allowance for repairs to land and buildings has to be made for Schedule A, the procedure being the same as in the period 1891/2 to 1893/4 (see p. 161, above).

Thirdly, it is necessary to adjust for changes in the exemption limit. For 1876/7 to 1890/1 the actual limit was £150 and the adjustment is made in the same way as in the years 1891/2 to 1893/4 (p. 161, above). For 1863/4 to 1875/6 the limit was £100 and the adjustment to the standardised limit was made in two stages: from £100 to £150 and from £150 to £160. The second stage is carried out in the same way as in later years. The first stage was based largely on data given by Stamp. In order to ascertain the amount allowed by Stamp under Schedule D it is necessary to reconstruct his calculations and so eliminate all other items contributing to the difference between the official gross series with exemption

[1] For abatements the amount allowed by repayment is not given in the *Reports* before 1868/9 and the amount allowed by schedule is not given before 1891/2. The amounts involved have been estimated by Stamp [**247**], p. 302–3. See also the note to line 12.4 of Table 7.13. For life insurance the amount of premiums allowed by schedule has to be estimated for 1874/5 to 1890/1. This was done by reference to the information available from 1891/2. Before 1874/5 the total amount allowed in the assessments, by schedule and by repayment has to be estimated and this was done partly by extrapolation, partly in the way suggested by Stamp [**247**, p. 207].

limit of £100 and Stamp's true comparable series if exemption limit had been £150 throughout [**247**, Table DI, columns (2) and (3), pp. 218–19; see also p. 494]. The procedure is illustrated for the year 1863/4 in Table 7.14.

TABLE 7.14 SPECIMEN CALCULATION FOR SCHEDULE D INCOMES £100–£150 IN PERIOD 1863/4 TO 1875/6. DATA FOR 1863/4

	£ m.	Source[a]
1. Official gross assessment	112.24	*Reports*
2. Until 1867/8 substitute official net assessment	100.21	*Reports*
3. *Add* Abatements to net, 1863/4 to 1867/8	7.50	p. 206
4. *Add* Railways etc., concerns no. III., Schedule A, to 1865/6	26.57	p. 493
5. *Equals* Correct gross assessment (basis for 6 and 7)	134.28	
6. *Add* Allowance for life insurance premiums deducted from gross assessment, 1853/4 to 1873/4	0.23	p. 207
7. *Add* Allowance for wear and tear of machinery (to 1879/80)	0.51	p. 180
8. *Add* Unassessed duty	0.01	p. 498
9. *Add* Municipal stocks in Schedule D	—	p.168
10. *Equals* Comparable series at £100 exemption limit	135.03	
11. *Less* True comparable series if £150 limit throughout	123.2	pp. 218–19
12. *Equals* Adjustment to £150 exemption limit (1863/4 to 1875/6)	11.8	

[a] Page references are to Stamp [**247**].

6 is calculated as $\frac{0.464}{266.942} \times$ correct gross assessment in 5.

7 is calculated as $\frac{0.950}{248.990} \times$ correct gross assessment in 5.

A similar though much simpler process is followed for Schedule E. No adjustment is required for Schedule C, and the total for Schedules A and B can then again be obtained as a residual – the difference between Stamp's true comparative series of taxable income, on conditions of 1876 to 1893, and my taxable income series for the aggregate of the five schedules after all necessary corrections except this one. This residual is then allocated to the two schedules on the basis of the differential rate of tax before 1862/3 from which it is possible to form an idea of the amounts taxed between £100 and £150 under each schedule.

Finally, comparability of the time series requires two transfers. In 1866/7 the assessments of quarries, mines, ironworks, railways, gasworks etc. (sometimes referred to as concerns No. III, Schedule A) which had previously been included in Schedule A were transferred to Schedule D. The corresponding assessments have been estimated for earlier years by Stamp [**247**, p. 493] and series for these years can thus be brought into line with the later (and more appropriate) classification. Similarly the interest on municipal and corporation stocks is again transferred from Schedule C to Schedule D.

All these remaining stages are illustrated for 1874/5 in Table 7.13.

1855/6 to 1862/3

This period presents the most complications since it is not possible to work directly from the net produce figures because of the system of differential rates, with incomes between £100 and £150 paying tax at a rate below the leading rate. It is therefore necessary to eliminate from the official figures of net produce the duty obtained on incomes taxed at the lower rate, leaving the net produce from incomes above £150. This calculation is made separately for each schedule, and for the total (and for Schedule D) a further small deduction has to be made from 1855/6 to 1859/60 to eliminate the 5% composition duty which some taxpayers paid in the early years for the right to be taxed on the same assessment for three years running.[1] The calculation is illustrated for the aggregate of all schedules for the year 1857/8 in Table 7.15.

Grossing the adjusted net produce at the higher rate of duty gives the net income on which tax was received and it is then possible to proceed as for the period from 1863/4, adding the allowance for life insurance premiums;[2] deducting the repairs allowance and the income between £150 and £160; and transferring to Schedule D the 'concerns No. III' from Schedule A and the interest on municipal stock from Schedule C.

This completes the first task and provides comparable estimates of taxable income from 1855/6 to 1919/20 for each of the five schedules, summing in total to the corresponding series given by Stamp [**247**, pp. 318–19, column (5)]. To the extent that Stamp's estimates are correct any errors in my estimates for the components must cancel out. Furthermore, three of the five schedules (B, C and E) are extremely stable, both in their gross assessments and in the deductions from the gross, so that any errors are probably concentrated in Schedules A and D. At a very rough guess, the margins of error for any individual schedule are probably not greater than

[1] See Stamp [**247**], pp. 207–10.
[2] See Stamp [**247**], p. 207.

±£2 m. for 1891/2 to 1899/1900 and ±£4 m. for earlier years. These margins of error relate only to the accuracy of the estimated adjustment to, and allocation of, the official returns – the accuracy of the returns themselves is considered elsewhere (see Chapter 7.2).

TABLE 7.15 SPECIMEN CALCULATION FOR INCOMES £100–£150 IN PERIOD 1855/6 TO 1862/3. DATA FOR 1857/8 (£M.)

	Duty	Income
1. Net amount charged to duty		292.694
2. Duty, if whole amount charged at leading rate of 7d. (1 × 7/240)	8.536	
3. Actual duty charged	7.906	
4. *Equals* 'Loss' of duty (2 − 3)	0.630	
5. Amount 'lost' because Schedule B charged at only a proportion of the full rate	0.496	17.0
6. *Equals* Amount 'lost' because of the lower differential rate (4 − 5)	0.134	
7*a* Amount of tax obtained on incomes taxed at the lower rate $\left(6 \times \frac{5d.}{7d. - 5d.}\right)$	0.336	
b Corresponding amount of income		16.1
Now take:		
8. The official net produce of the tax	7.479	260.6
9. *Less* Income taxed at lower rate (7)	0.336	16.1
10. *Less* 5% composition duty	0.007	0.2
11. *Add* Unassessed duty and recoveries	0.013	0.4
12*a* Net produce excluding lower incomes after all allowances and reductions (8 − 9 − 10 + 11)	7.149	
b Corresponding net income on which tax was received		244.7

Note: For 1857/8 the leading rate of duty was 7d. and the rate on incomes of £100 to £150 was 5d.

SOURCE: 1, 3, 8 and 11: Given in the *13th* and *28th Reports*, which contain valuable summaries of prior years.

5: Estimated separately for England and Wales, Scotland and Ireland on the basis of the official figures of the net assessment and the duty payable. The rate on Schedule B on incomes of £150 or over was 3½d. in England and Wales and 2½d. in Scotland. For incomes of £100 to £150 the rates were 2¼d. and 1$\frac{65}{96}$d.

10: Calculated on the lines explained by Stamp [**247**], pp. 253–4.

The second task is to make a few technical adjustments to the taxable income statistics and to convert them from the financial year of assessment to the corresponding calendar year or years in which the profits were earned.

Schedule A

Stamp has estimated that some allowance should be made for deficiencies in the earliest valuations of land and buildings, and that an addition not exceeding 5% should be ample to make the early figures comparable with later years [**247**, p. 38]. I have added 5% to the taxable income in the reassessment year 1857/8, 4% in 1861/2 and 3% in 1864/5.

Secondly, a correction has to be made to allow for the lag in Schedule A values for England and Wales between reassessment years.[1] Some of the technicalities of the correction are explained by Prest [**231**, pp. 43–4]. For the years 1855/6 to 1870/71 Stamp [**247**, pp. xvi and 31–6] has suggested that the 'probable true line' of the gross assessments would show a linear increase passing slightly below the official figure in the reassessment years and above it in other years. An appropriate correction has been made on this basis to cover land and houses etc.

From 1870 onwards the procedure adopted follows that outlined by Prest [**231**] and is applied only to buildings used wholly or partly for residential purposes.[2] Lands are excluded in making the adjustment.[3] The amounts involved are fairly small, typically less than £2 m. at the point of greatest undervaluation in the year immediately preceding the reassessment.

The adjusted figure of taxable income under Schedule A is then converted to a calendar year basis by the conventional method of taking one-quarter of the income tax year ending on 5 April of the calendar year and three-quarters of the following financial year. The result is shown in Table 7.16, column (1).

Schedule B

This series is of no value for national income purposes. In the belief that farmers could not keep proper accounts, their statutory income for tax purposes was deemed to be an arbitrary proportion of their gross rent as assessed for Schedule A. Until 1895/6 the method adopted was to take the gross 'income' as the full Schedule A gross annual value and charge tax at the desired proportion of the current leading rate. From 1896/7 the same effect was achieved by making the leading rate payable on the

[1] See Stamp [**247**], p. 31.

[2] The overall justification for excluding trade premises is that the Schedule A value was allowed as a deduction for the imputed rent of owner-occupied property in arriving at taxable profits under Schedule D. Any understatement in the Schedule A values will be balanced by overstatement in Schedule D. The amounts involved are very small and no transfer has been made from D to A to correct for this.

[3] See Prest [**231**], p. 44, n. 1.

desired proportion (one-third until 1914/15) of the gross annual value. It is possible to overcome this change by reducing the pre-1896/7 gross incomes to their corresponding statutory income and this was done by Stamp [**247**, pp. 88–92].

Even then, the series bears little relation to the actual income of farmers as estimated directly from farm data (cf. Chapter 2.2 above); it reflects the stickiness of rents rather than the volatility of profits, and for the most part neither trend nor level are correctly measured. The adjusted comparable series of taxable income is shown in Table 7.16 only to complete the tax series and to substantiate this criticism.

Schedule C

This series has only to be converted to a calendar year basis and this is done by the usual procedure. It is shown in column (3) of Table 7.16.

Schedule D

Incomes assessed to tax under Schedule D could be assessed on the basis of:

(*a*) The profits of the current year
(*b*) The profits of the preceding year
(*c*) A moving average of the profits of the five preceding years
(*d*) A moving average of the profits of the three preceding years

In making the adjustment to the calendar year in which the profits were earned it is necessary to work first with the original gross assessments. An overall adjustment to the Schedule D taxable income series is then made at the final stage.

For (*a*) the relevant series can be obtained from the *Reports* and the profits of the year of assessment are simply taken as the profits for the calendar year. The amounts included in (*b*) can be obtained from the *Reports* or from Stamp [**247**, pp. 220–1] and the recorded assessment is shifted back one year and then taken for the calendar year, e.g. the assessed railway profits for 1878/9 are taken as the profits of 1877. (*c*) relates to the profits of mines in the United Kingdom, almost exclusively coal mines. I have followed the procedure suggested by Prest for unscrambling the five-year moving average, i.e. starting from the estimates of annual profits from 1888 to 1915 given by Stamp [**248**, p. 259] and extrapolating (backwards to 1855 and forwards to 1919) on the basis of the moving average.

It is (*d*), the three-year moving average, which accounts for by far the largest part of the total under Schedule D (about 75 %) and which has given all estimators the most trouble. The first step is to isolate the series which has to be unscrambled. The numerous administrative changes – many of which were referred to in the first part of this Appendix – make it impossible to work directly with the official recorded series of assessments based on a three-year moving average, described in the older *Reports* as 'trades and professions' and 'public companies'. From 1868/9 onwards it is probably legitimate to assume that the corrected (i.e. comparable and standardised) three-year moving average was the same proportion of Stamp's true comparable series for all Schedule D gross assessments [**247**, pp. 218–19] as the uncorrected official gross assessments on 'trades and professions' plus 'public companies' was of the uncorrected official gross total. This procedure accounts for only part of the total correction to the total gross assessments and the balance of the correction was allocated to the current calendar year. For 1867/8 it is first necessary to add back the abatements to the official figure for 'trades and professions', and only then is the gross figure comparable with that for following years. For 1854/5 to 1866/7 the series to be unscrambled is taken as Stamp's true comparable Schedule D gross series less the amount included in them for 'concerns No. III, Schedule A' (this category covers the preceding year and five year moving average components; the current year components were negligible at this stage – less than £1.5 m. – and were not identified separately).

The second step is to find a method for unscrambling a moving average when none of the original components are known. An ingenious procedure for this, due basically to D. G. Champernowne, is described by Prest [**231**, pp. 33–6 and Appendix II]. His cautionary remarks about the limitations of this method and the assumptions on which it depends are equally applicable to the present estimates for the period 1855–1903, where the same produce has been adopted. After some experiment it appeared that the most satisfactory results could be obtained if the unscrambling was done separately for 1854/5 to 1875/6 and 1877/8 to 1905/6, interpolating for the missing year.[1] For 1904–14 the unscrambling was carried out with the aid of Stamp's estimates of the annual percentage change in the profits of a sample of companies [**248**, p. 276]. The details and the comparative merits of the procedure were set out in my earlier article [**160**, pp. 377–9].

The final problem is to decide the timing of the series: having obtained the unscrambled figures, to what years do they correspond? Since the answer is of considerable importance if the estimates are to be of use on an annual basis, it is necessary to explore this in some detail.

[1] On the probable reasons why a break is necessary at these points, see Prest [**231**], pp. 34–8.

For any income tax year of assessment, say 6 April 1904 to 5 April 1905, the tax would normally be due on 1 January 1905, and would be paid on the basis of the average of the profits of the three preceding years, i.e. the years ending not later than 5 April 1902, 1903 and 1904. Stamp has estimated that the mean terminal date to which financial accounts were actually made up does not materially deviate from 31 December.[1] The profits returned for the year of assessment 1904/5 can therefore be regarded as being the average of the actual profits for the years ended 31 December 1901, 1902 and 1903.

When the moving average is unravelled it would seem, therefore, that the resulting figure corresponding to the moving average for 1904/5 should be taken as the actual profits of the calendar year 1902, and so on. (I shall refer to this adjustment as 'setting the series back two years'). When the series of Schedule D profits obtained in this way is tested it is evident that there are certain inconsistencies in the timing we show. The main test was to compare the estimates with a representative set of other series normally regarded as giving a good indication of the fluctuations in the economy.[2] There is general agreement for some years, such as 1866, 1879 and perhaps 1899; but in other years the profits series is in advance of the other indicators, for example, in 1885, 1889 and 1892. This evidence is certainly not conclusive, and there are generally some series which have turning points which are the same as, or even earlier than those of the unscrambled profits series. The overall impression, however, at least for the 1880s and 1890s, is that the profits' turning point comes one year too soon.

A similar comparison led Prest [**231**, p. 59] to argue that there must be some factor inherent in the tax system serving to advance the series, and he accordingly set the unscrambled figure back only one year. He suggested three factors to justify this:

(i) The operation of the 133rd Section of the 1842 Act, the effect of which was that the average of the three preceding years could be adjusted by introducing the actual results of the year of assessment into the average, in certain cases where there had been a fall in profits.[3] This he considered 'the most important' factor.

(ii) The existence of a clause enabling losses to be reported at once, and so deducted from the average of the three preceding years.

(iii) The assessment of new businesses, which could not be assessed on a three-year average basis, or of discontinued businesses.

In fact, however, neither (i) nor (ii) could have had any effect on the timing of Schedule D assessments. At the time the assessments were closed the profits of the year of assessment could not be known; for example, for the year of assessment 1904/5 the assessment made in late 1904 could not take into account the actual profits for the year ended December 1904 or later. Accordingly, the method whereby relief was obtained when a claim was made under either (i) or (ii) was by a repayment of tax. No change would be made in either the gross or the net assessment in such a case, and the effect of the relief would only be reflected in the amount of the *deductions* to be made from the net assessment. Since the moving average was taken from the published official gross assessment it is clear that the figures are unaffected by these forms of relief.[4]

This leaves only (iii) and it seemed evident that, except perhaps in the earliest years of the tax, the influence of new or discontinued businesses could not be significant in relation to the total assessment.

The timing suggested by the comparison with the other series was sufficiently inconclusive to suggest, at this point, that the discrepancies ought simply to be disregarded and the unscrambled series set back two years.

However, it proved possible to make one further test against some data on year to year changes given by Stamp [**248**, p. 276]. Because of the form in which the data were given this test was very uncertain, but for what it was worth it also suggested that the series ought only to be set back one year.

Renewed attempts were made to find some factor which would account for this apparent advance in the timing of the series. A thorough survey of the extensive material available on the assessment of Schedule D profits[5] failed to disclose any reasonable grounds

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1 Stamp [**247**], p. 177. See also Bowley and Stamp [**131**], p. 16, and *Report of the Departmental Committee on Income Tax*, 1905 [**47**], para. 85, on which the above paragraph is based.

2 Hoffman's [**179**] index of industrial production (excluding building), exports, unemployment (the inverted trade union percentage), bank clearings and railway tonnage.

3 The exact operation is explained in detail in Prest [**231**], pp. 39–50.

4 It may also be noted that the amount of the relief claimed under these sections was slight. This can be ascertained from the data on repayment of duty which was analysed in arriving at the taxable income under Schedule D. The corresponding amount of income was never more than £7 m.

5 See, e.g. the Departmental Committee of 1905 (especially Appendices VI and VII) [**47**], the Royal Commission of 1919–20 [**52**], the many works on this subject of Lord Stamp, and the standard *Guide to Income Tax Practice* by Murray and Carter, 1911 [**216**].

TABLE 7.16 CALENDAR YEAR ESTIMATES OF TAXABLE INCOME UNDER EACH SCHEDULE, 1855–1914

(£M.)

	Schedule A (1)	Schedule B (2)	Schedule C (3)	Schedule D (4)	Schedule E (5)	Total (6)
1855	80.0	12.5	(25.0)	85.6	13.0	216.1
1856	80.8	12.0	27.4	93.9	13.6	227.7
1857	83.5	12.9	28.9	90.4	14.0	229.7
1858	85.4	12.5	29.1	97.3	14.6	238.9
1859	86.0	13.2	29.4	95.3	14.4	238.3
1860	87.8	12.3	27.8	103.4	14.8	246.1
1861	90.6	13.0	28.5	114.2	15.3	261.6
1862	92.6	12.5	30.1	124.7	16.0	275.9
1863	93.1	11.7	31.1	133.2	16.6	285.7
1864	95.7	13.8	31.7	145.7	17.5	304.4
1865	98.2	14.2	32.6	147.3	18.9	311.2
1866	98.4	13.2	33.3	150.5	19.0	314.4
1867	99.3	12.7	33.5	142.6	18.9	307.0
1868	100.6	13.2	34.3	153.4	19.1	320.6
1869	102.0	12.7	35.2	171.2	20.9	342.0
1870	107.8	14.2	37.3	192.1	21.7	373.1
1871	110.7	14.1	38.1	221.4	22.1	406.4
1872	112.4	14.1	39.8	234.9	24.2	425.4
1873	115.9	15.3	41.1	247.9	25.0	445.2
1874	119.0	15.2	41.7	248.0	25.8	449.7
1875	121.4	15.1	41.6	244.5	26.8	449.4
1876	126.6	16.3	40.2	237.5	27.9	448.5
1877	128.9	16.3	39.4	237.9	28.7	451.2
1878	130.8	15.9	39.0	234.9	29.4	450.0
1879	130.5	15.2	38.6	241.3	29.5	455.1
1880	131.1	15.0	38.9	266.1	30.4	481.5
1881	132.0	14.9	38.7	278.7	31.6	495.9
1882	132.8	13.7	38.7	278.6	32.8	496.6
1883	132.2	13.2	39.1	269.5	34.6	488.6
1884	132.4	12.4	39.5	258.6	35.1	478.0
1885	133.5	12.4	40.2	258.7	35.3	480.1
1886	133.8	11.3	41.5	276.5	36.3	499.4
1887	133.0	11.2	43.9	291.9	37.7	517.7
1888	133.9	9.9	43.6	320.8	39.3	547.5
1889	134.8	9.6	42.0	345.2	42.6	574.2
1890	134.9	9.3	39.6	340.2	43.6	567.6
1891	134.2	7.3	36.5	324.5	44.9	547.4
1892	135.6	6.8	35.6	304.4	47.2	529.6
1893	137.0	6.3	37.2	304.9	47.9	533.3
1894	142.9	8.1	37.4	356.6	51.7	596.7
1895	146.0	7.9	37.2	365.6	51.4	608.1
1896	148.3	7.8	37.1	368.5	54.8	616.5
1897	150.3	7.8	37.0	391.9	57.8	644.8
1898	153.7	6.3	37.7	426.3	62.1	686.1
1899	156.3	6.2	37.7	464.5	65.6	730.3
1900	159.8	6.1	39.1	459.4	71.5	735.9
1901	161.8	5.8	41.8	434.3	75.0	718.7
1902	163.4	5.8	43.8	445.6	78.2	736.8
1903	165.7	5.7	42.9	422.9	81.7	718.9
1904	167.4	5.5	43.2	422.4	84.9	723.4
1905	168.0	5.4	44.2	462.0	88.7	768.3
1906	169.4	5.5	44.1	508.2	92.5	819.7
1907	170.4	5.5	45.1	538.5	97.8	857.3
1908	170.8	5.5	44.7	482.1	104.4	807.5
1909	171.2	5.4	45.4	508.3	108.4	838.7
1910	172.8	5.4	46.0	540.5	113.5	878.2
1911	173.7	5.4	46.2	573.2	120.6	919.1
1912	175.0	5.4	46.8	630.0	128.5	985.7
1913	176.7	5.4	47.5	674.9	137.9	1,042.4
1914	178.5	5.4	49.4	576.0	147.5	956.8

SOURCE: See text, Appendix 7.2.

which would justify advancing the series *in every year*. Many possibilities were considered[1] but even those which seemed at all plausible would only be likely to account for discrepancies between the unscrambled profits series and the other trade indicators in *particular* years. It is also conceivable, of course, that the unscrambled Schedule D figures give a better indication of cyclical turning points in *profits* than the other series tried as indicators.[2] All this may cast some doubt on the suitability of pre-1914 tax assessments as a basis for precise estimates of the year to year movement in trade profits, but it does not seem to constitute sufficient warrant for a mechanical manipulation of the series which would bring it forward by one year, every year. The alternative of arbitrary manipulation in certain years so as to make the series conform to the turning points in other indicators (themselves not always unanimous in their verdict) would be even more unsatisfactory. The final conclusion was, therefore, to accept the logic of the tax system and set the unscrambled series back two years over the whole period.

It is now possible to obtain the final adjusted series of taxable income under Schedule D. The total of the calendar year figures obtained for each of the four bases of assessment plus the unallocated balance of the adjustment for comparability gives a 'true calendar year of profit' series for the Schedule D gross assessments. If this is compared with Stamp's true comparable series for the Schedule D gross assessment (adjusted in the usual way to a calendar year basis) the annual differences show the overall effect of the change made by unscrambling the three- and five-year moving averages and moving the other two components onto their appropriate calendar years. These differences can then be applied to the estimates of taxable income under Schedule D before adjustment for timing to get the required series. This is shown in column (4) of Table 7.16. This stage in the derivation of the series involves the assumption that the various allowances by which the original gross series was reduced to the taxable income would not be altered by the substitution of the new gross total. This seems to be justified.[3]

Schedule E

No adjustment is made to taxable income under Schedule E and the income assessed for, say, 1866/7 can be taken as the actual income for the calendar year 1866.[4] A small proportion of the assessments were in fact based on an average of preceding years, but the amount involved was estimated by Stamp [**247**, p. 265] as not more than £10 m. out of a total of £130 m. in 1912/13 and I have made no correction for this. The final series is shown in Table 7.16, column (5).

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[1] Among those considered and rejected were: (i) that the method used to unscramble the series has a consistent bias in one direction; (ii) that the mean terminal date of the accounts on which the assessments were based was not the end of the calendar year, but something much later, say 31 March; (iii) that there is another factor inherent in the operation of the tax system which I had previously overlooked.

One further possibility might account for discrepancies in particular years. The point, suggested to me by Mr T. I. Williams of the Board of Inland Revenue, was that in many assessments, especially the larger and more important cases, the inspector making the estimate to be included in the gross assessment before the accounts were available, might have subjectively anticipated the effect of a boom or slump. Knowing, when he made the assessment, that there was, for example, a trade boom, he might have overestimated the extent to which it had already increased the level of profits. During a slump he would have an additional reason for putting the assessment low, since the provisional estimates were later corrected by appeal, and he might not want to have very much more tax in charge than might be ultimately due after the later claim under Section 133 that he might expect to get. Mr Williams added, however, that his suggestion was 'quite speculative ...and is all psychology and no fact'.

[2] There is, however, the suggestion (for which I am again indebted to Mr Williams) that most sole traders and perhaps some partnerships would not have kept accounts and would have made their returns and been assessed in round estimated figures. These estimates might well tend to be influenced as much by current trends as by a not so clear recollection of the course of trade in the three previous years.

[3] Cf. Prest [**231**], p. 47.

[4] See Stamp [**247**], p. 265.

APPENDIX 7.3

INTERMEDIATE INCOMES, 1855–1914

What has come to be the traditional method of estimating the British national income was first used by Dudley Baxter[1] in 1867, and was developed and refined by Bowley, Colin Clark, Prest and others. The estimate was built up from incomes data and required a series for 'intermediate incomes' i.e. those neither assessed to tax nor received by persons classified by their occupation as wage-earners. This intermediate category was thus partly a matter of occupation and partly a matter of income level. It included salaries, profits of small firms, incomes of persons working 'on own account' and also, rent, interest and dividends.

While it was statistically necessary to fill the gap left by the two major sources of data on incomes, the category is, in national accounting terms, a rather meaningless hybrid of property income, income from employment and transfers. The purpose of this appendix is to describe:

(*a*) The estimates of total intermediate income for three benchmark years

(*b*) The allocation of these totals to appropriate factor incomes or transfers

(*c*) The method of interpolation between the benchmarks

(*a*) *Intermediate income in 1911, 1880 and 1860*

In making the estimates of income assessed to tax (see Appendix 7.2) the limit below which incomes were exempt from tax was standardised at £160 for all years before 1914. Bowley has made estimates of intermediate income for the years 1911 and 1880 which correspond to this limit; and since it is Bowley's estimates of wages which are used in Chapter 2.1 his other boundary also coincides with the one required here. For 1911 the figure is £314 m. [**127**, pp. 14–15] and was based on an investigation carried out by Bowley as secretary of a special committee of the British Association.[2] The estimate for 1880 is £120 m. (or £130 m. including shop assistants);[3] and although it is not as well supported as the estimate for the later date it would be difficult now to improve upon it.

In the absence of a reliable figure for an earlier date I have attempted to make a comparable estimate for 1860. The actual limit of exemption from tax in that year was £100 and a differential tax rate was applied to incomes of £100 to £150. This was used in Appendix 7.2 (p. 165) to estimate the value of incomes in this range and yielded a fairly accurate estimate of £18 m. For incomes between £150 and £160 there is Stamp's estimate of £5 m. [**247**, p. 318], making some £25 m. for incomes of £100–£160.

It remains to estimate intermediate incomes below £100. For this three items are needed:

(i) The number of middle and upper class persons (i.e. those not wage-earners) in receipt of independent incomes

(ii) The number of taxpayers with incomes over £100

(iii) The average income of those in the intermediate income class with incomes below £100

Deducting (ii) from (i) gives the estimated number of persons in receipt of non-wage incomes of less than £100, and multiplying this number by (iii) gives their total income.

(i) can be estimated by working from the 1861 Census of Occupations in England and Wales, Scotland and Ireland. Bowley [**132**, pp. 127–36] has given a list of the occupations (as specified in the 1911 Census of Population) which he included in his estimates of the middle class from 1881 to 1911. These same categories were, as far as possible, identified in the 1861 classification, and this yielded figures of 1,650,000 and 1,850,000 as the lower and upper limits of an estimate for 1860 comparable with Bowley's figure for 1880.

For (ii) there is the very careful estimate made by Stamp [**247**, p. 448] of the number of taxpayers in 1860/1; with an exemption limit of £160, he gives minimum and maximum estimates of 268,000 and 280,000. He has also [**247**, pp. 443 and 448] made an estimate of 160,000 taxpayers with incomes between £100 and £150, and 40,000 with incomes between £150 and £160. This gives 468,000 to 480,000 taxpayers with incomes over £100.

Finally, it is necessary to make a guess at (iii), the average income received by those in middle class

[1] R. Dudley Baxter, *National Income*, 1868 [**117**].

[2] *J. R. Statist. Soc.* LXXIV, 1910–11 [**137**].

[3] A. L. Bowley, *The Change in the Distribution of the National Income, 1880–1913*, 1920 [**128**], pp. 10–11. See also [**132**], p. 139.

occupations (the civil service, professions, farmers, clerks etc.), who received incomes of less than £100 p.a. in 1860. In the absence of any detailed survey of such incomes,[1] one can refer to the contemporary estimate made by Baxter [**117**, pp. 34, 54 and 58] who suggested figures of £60 for England and Wales, £50 for Scotland and £40 for Ireland, average £54, for 1867 (also with an exemption limit of £100); and to Bowley's estimates of £70 for 1880 and £84 for 1911 (both with exemption limits of £160).

The figure needed would seem, therefore, to lie between £50 and £60. We then have:

	Minimum	Maximum
Number in middle and upper classes	1,650,000	1,850,000
Less Number of taxpayers £100–£160	468,000	480,000
Number in receipt of intermediate incomes below £100	1,182,000	1,370,000
Average incomes	£50	£60
	59,100,000	82,200,000

Adding the £25 m. for the incomes of £100–£160 yields an estimate within the range of £84 m. to £107 m. and a figure of, say, £95 m. may be taken as the estimate of intermediate incomes in 1860. However, this includes shop assistants, and if they are excluded the total would be approximately £90 m.

(*b*) *Allocation of the benchmark estimates*

Careful allocation of the three benchmarks is necessary both because it is desirable to obtain an economically meaningful classification of incomes and because some parts of the amounts included by Bowley in intermediate incomes are duplicated in the present volume under other headings.

1911

Bowley [**127**, p. 14, and **131**, p. 46] gave the following classification of his 1911 estimate:

	£ m.
Salaries	84
Other earned income	180
Dividends etc.	50
	314

For the present purpose this total has to be reclassified in various ways. First, it is clear from an analysis of Bowley's allocation of occupations between 'salaried' and 'employers and independent workers' that he classified as independent a number of occupations which in the post-1920 estimated used in Chapter 2.1 are treated as salaried.[2] According to my alternative estimates there are approximately 370,000 occupations which should be moved into the salaried category, the most important being nurses (cf. Bowley [**127**], p. 7), law clerks and clergymen etc. (cf. [**127**], p. 9) and the salaried members of the medical and other professions.[3] A revised allocation of non-wage occupations in 1911 which is more consistent with post-1920 series (while still having the same total and the same number of incomes above and below £160 as Bowley's) can be derived from the Census of Population data as follows:

TABLE 7.17 CLASSIFICATION OF NON-WAGE OCCUPATIONS IN 1911 (Thousands)

	Salaried	Employers and indepen-dent workers	Total
1. Male	1,390	1,890	3,280
2. Female	650	570	1,220
3. Total	2,040	2,460	4,500
4. *Less* Number with incomes above £160	430	485	915
5. *Equals* Number with incomes below £160	1,610	1,975	3,585

SOURCE: See text and Bowley [**127**], p. 11.

The aggregate income of males and females in each occupation was then calculated on the basis of the average incomes quoted in the British Association *Report* [**137**, pp. 46–66]. The approximate nature of the demarcation and estimation needs no emphasis. The final estimate is £120 m. for salaries of those with incomes of less than £160 and £144 m. for incomes of employers and independent workers below the exemption limit; more details are given for the former in Table 7.18.

To avoid duplication two deductions must now be made from this figure of £120 m. Both relate strictly to

[1] There are some scraps of information but it is difficult to evaluate these because they seldom refer only to persons in a particular occupation with incomes below £100. See, e.g. the figures for bank clerks quoted in F. D. Klingender, *The Condition of Clerical Labour in Britain*, 1935 [**193**], pp. 4–11; and those for book-keepers, clerks etc. quoted by Banks [**113**], pp. 105–6.

[2] Bowley himself later expressed some doubts about his 1911 classification. See e.g. [**131**], pp. 12 and 45.

[3] Where it was necessary to estimate the ratio of salaried to independent persons in the professions and certain other occupations I relied on the classification by industrial status in the occupation tables of the 1921 Census of Population for England and Wales [**41** (*a*)], Tables 1 and 4.

TABLE 7.18 NUMBER AND INCOMES OF SALARY-EARNERS IN 1911

(Number: thousands; income: £M.)

Occupation	Numbers				
	Male (1)	Female (2)	Total with incomes above £160 (3)	Total with incomes below £160 (4)	Total income[a] (5)
Central and local government clerks, officials etc.; army and navy officers	155	45	65	135	10.5
Teachers, lecturers etc.	95	220	20	295	23.5
Nurses, doctors and other medical	20	105	5	120	7.5
Clergymen, nuns and other clerical	70	25	25	70	4.5
Lawyers; law clerks	50	—	10	40	3.5
Other professional[b]	90	45	45	90	7.5
Commercial travellers, salesmen etc.	100	—	20	80	8.0
Commerical or business clerks	420	155	65	510	34.0
Bank and insurance clerks	95	5	30	70	5.5
Accountants, auctioneers etc.	15	—	10	5	0.5
Railway and Post Office clerks etc.	105	15	10	110	8.0
Other transport	50	5	30	25	2.0
Coffee house and inn-keepers etc.	10	30	5	35	3.0
Managers[c]	(115)	—	(90)	25	2.0
	1,390	650	430	1,610	120.0

SOURCE: (1)–(2): *Census of England and Wales, 1911* [**41** (*a*)] *Occupations and Industries*, Cd. 7018, Pt I, Table 26, and (for Scotland and Ireland) *General Report with Appendices*, Cd. 8491, Appendix C, Table 9.
(3)–(4): From columns (1) and (2) on the basis of Table 7.17 and [**137**], pp. 46–66.
(5): Column (4) multiplied by average incomes in [**137**], pp. 46–66.

[a] For those with incomes below £160.
[b] Salaried editors, musicians, actors, photographers, engineers, surveyors, architects etc.
[c] This is the one item not directly available in the 1911 Census classification. It covers managers of shops, farms, mines and all companies.

the series for salaries above the tax exemption limit, but it is more convenient to use that series as it stands (see Chapter 2.1) and to make the necessary corrections here. Firstly, the salaries taxed under Schedule E include the handful of wage-earners whose annual earnings were sufficient to bring them into the tax net. Bowley put their number in 1911–13 at 50,000 and their income at £8 m. [**127**, p. 10; **20**, p. 16]. Secondly, the salaries received by persons with *total* incomes of more than £160 include a substantial number where the actual salary was less than £160. (The employee would be brought above the exemption limit because, e.g. he was in receipt of some income from property or because of his wife's income, or possibly because he held two or more posts, each of which was assessed separately.) The gross amount assessed in 1911/12 for incomes under Schedules D and E 'not exceeding £160 but not exempt' was £13.7 m. [*56th Report* [**30**], p. 121] but as far as I can judge Bowley has only allowed £10 m. for duplication between his intermediate and taxed salaries and I have adopted this figure.[1]

The next correction which has to be made to Bowley's tripartite classification of intermediate income arises because the figure for 'other earned income' (i.e. the income of employers and independent workers, reduced by the present classification from £180 m. to £144 m.) includes the income of farmers earning less than £160. In Chapter 2.2 all income from farming is covered by estimates derived from comprehensive data on farm output and the 'intermediate income' of farmers must

[1] The gross assessment on employees under Schedules D and E for 1911/12 totalled £155 m. and deductions bring the taxable income to £148 m. Deducting £8 m. for wage-earners gives £140 m. Bowley shows £130 m. for salaries above £160 [**127**, p. 14], i.e. he appears to have deducted £10 m. for duplication. (It must be confessed that in my earlier estimates [**160**] this whole question of salaries below £160 but not exempt was overlooked).

not be taken in twice. The amount allowed by Bowley [**127**, p. 25] for this item in 1911 was £37 m. and this amount was retained in the present estimates. Deducting this leaves £107 m. earned by some 1,365,000 persons with incomes of less than £160. The three major elements in this total are:

Occupation	Number (000)	Income (£ m.)
Shopkeepers and dealers	590,000	54
Builders, dressmakers and other manufacturers etc.	565,000	36
Inn-keepers, boarding house and restaurant keepers etc.	170,000	14

For the rest there are a tiny number of professional persons, insurance agents etc. with incomes of less than £160.

Finally, it is necessary to make a three-way split of Bowley's figure of £50 m. for 'dividends etc.'. As originally described [**137**, p. 64] this is made up of £45 m. unearned income assessed under Schedules A, C and D, but exempt from tax as belonging to persons with less than £160 a year from all sources; and £5 m. for interest, pensions etc. which did not 'come under the cognisance' of the Inland Revenue. Reference to the *56th Report* shows that £35 m. of the taxed but exempt income represents rent assessed under Schedule A and £10 m. interest, dividends etc. assessed under Schedules C and D. The former must be included in the rent series described in Chapter 8.0; the latter must be included in the calculations described in Chapter 7.2, even though it represents a transfer payment, because the correction made for this (see Chapter 7.2, paragraphs (*c*) and (*h*)) is a global one covering all interest etc., taxed or exempt.

The final classification of intermediate income is set out in Table 7.19.

1860 and 1880

To obtain estimates of the salaries component of intermediate incomes in 1880 an estimate of the number of salaried employees was extracted from the 1881 Census of Population using the list of occupations covered for 1911 in Table 7.18. The division of this total into those with incomes above and below £160 and the total incomes of those below £160 was based on Bowley's data for all intermediate incomes at that date. The method of estimation for 1860 was similar and even more approximate. The results are given in row 2 of Table 7.19. It was assumed that no deduction was necessary at these dates for wages above the exemption limit or for salaries below £160 but not exempt.

Estimates of the number of farmers and of shopkeepers, small builders, makers, inn-keepers etc. at these two dates were derived from the 1861 and 1881 Censuses of Population. Estimates were then made of the aggregate income of those with less than £160 (rows 3 and 4). All this is very uncertain but is, of course, subject to the constraint of the total for intermediate incomes obtained previously. The estimate for rent (row 5) was based on income exempt from tax under Schedule A.

TABLE 7.19 INTERMEDIATE INCOMES BY TYPE OF INCOME, 1860, 1880 AND 1911 (£M.)

	1860	1880	1911
1. Salaries: Below £160 but not exempt	—	—	10
2. Below £160 and exempt[a]	25	40	102
3. Farmers' income	17	17	37
4. Other income from self-employment	35	43	107
5. Rent	10	15	35
Interest and dividends etc.:			
6. Assessed but exempt	3	5	10
7. Not assessed	—	—	5
8. Total intermediate income[a]	90	120	306

SOURCE: See text.

[a] Excluding shop assistants and excluding £8 m. deducted in 1911 to offset wages above £160 and assessed to tax.

Rows 2, 4, 5 and 6 of Table 7.19 are carried into the main body of the estimates and the next step is, therefore, to interpolate between the benchmarks to get annual series for 1855–1914. Rows 1, 3 and 7 represent duplication or transfer payments and are not further required.

(*c*) *Interpolation between the benchmarks*

Salaries

A rough indication of the pattern of growth of salaries at intermediate points between 1880 and 1911 was obtained by interpolating for two further years (1891 and 1901) on the basis of the numbers employed in the main salaried occupations as shown by Census of Population data, and the Bowley index of money wage rates. Annual estimates were then obtained by linear interpolation between the figures for the five benchmark years, and extrapolation back to 1855 and forward to 1914. This series is used in Chapter 2.1.

Non-farm income from self-employment

It was assumed that the percentage deviation from trend was the same for non-farm income from self-employment as for taxable income under Schedule D. The trend of the latter was taken as a seven-year moving average. Applying the percentage deviation in 1860, 1880 and 1911 to the benchmark estimates of independent incomes gives the benchmark *trend* estimates and the remaining years were then estimated by linear interpolation and extrapolation. The percentage deviation from trend of the taxable income could then be applied to this trend to obtain the annual series. This is used in Chapter 7.2.

Rent and assessed interest and dividends

Annual estimates for these two series were obtained by linear interpolation between the benchmarks. The series for rent is included in Chapter 8.0; that for assessed but exempt interest and dividends in Chapter 7.2.