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29 APR 1928



# REPORT

of the

## Committee on National Debt and Taxation.

*Presented to Parliament by  
Command of His Majesty*

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Appendices to the Report of the Committee.

Minutes of Evidence taken before the Committee.

#### *References.*

The following examples show the method of indicating references to the above volumes in the Report of the Committee :—

*E. in C. 3* indicates paragraph 3 of the evidence in chief in the Minutes of Evidence of the witness quoted. When the witness appeared before the Committee twice the page of the Minutes of Evidence is also inserted, thus, *Ev. p. 587; E. in C. 7.*

*Appendix VII* indicates an Appendix in the volume of Appendices to the Report.

*Ev. Appendix VII* indicates an Appendix printed at the end of the Minutes of Evidence.

## COMMITTEE ON NATIONAL DEBT AND TAXATION.

---

### MINUTES OF APPOINTMENT.

---

*Treasury Minute dated 20th March, 1924.*

The Chancellor of the Exchequer states to the Board that he proposes to appoint a Committee to consider and report on the National Debt and on the incidence of existing taxation, with special reference to their effect on trade, industry, employment and national credit.

The Chancellor further proposes that the Committee should be constituted as follows:—

The Rt. Hon. LORD COLWYN, *Chairman*;  
 Sir CHARLES ADDIS, K.C.M.G. ;  
 Sir ALAN G. ANDERSON, K.B.E. ;  
 Sir ARTHUR BALFOUR, K.B.E. ;  
 Mr. HENRY BELL ;  
 Mr. J. W. BOWEN ;  
 Mr. FRED BRAMLEY ;  
 Mr. W. L. HICHENS ;  
 Mr. J. A. HOBSON ;  
 Mr. H. B. LEES-SMITH ;  
 Sir WILLIAM McLINTOCK, K.B.E., C.V.O. ;  
 Sir JOSIAH STAMP, K.B.E. ;  
 Mrs. BARBARA WOOTTON ;

with Mr. G. R. HAMILTON of the Inland Revenue Department as Secretary and Mr. G. ISMAY of the Treasury as Assistant Secretary.

My Lords concur.

---

*Treasury Minute dated 14th April, 1924.*

The Chancellor of the Exchequer states to the Board that he proposes to appoint Professor Fred Hall to be a member of the Committee on National Debt and Taxation in place of Mr. J. A. Hobson who has resigned on account of other engagements.

My Lords concur.

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# APPENDICES

TO THE

## Report of the Committee on National Debt and Taxation.



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# COMMITTEE ON NATIONAL DEBT AND TAXATION.

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## APPENDIX I.

QUESTIONNAIRES ISSUED BY THE COMMITTEE  
TO WITNESSES.(A).—BROAD QUESTIONS RELATING TO THE NATIONAL DEBT  
AND THE INCIDENCE OF EXISTING TAXATION.\*

1. How do the National Debt (apart from the taxation which it necessitates) and movements in the National Debt through repayment, conversions, etc., affect (1) the supply of credit and (2) the supply of permanent capital for trade and industry, both in volume and direction? Does any distinction exist between the effects of the Floating Debt and the longer term debt?

2. Does the existence of the debt, or movements in the debt, affect the terms upon which capital can be raised for trade and industry?

3. Should provision be made for repayment every year of debt? In that case:—

(a) should the same amount be repaid every year, and, if so, is the present Sinking Fund of £50,000,000 satisfactory? If it is not sufficient, ought it to be increased, even if taxes have to be increased? or

(b) should the amount repaid vary, and, if so, on what principle? Should it be less in years of bad trade? Should the variation be subject to the maintenance every year of a fixed minimum repayment, and, if so, of what amount?

If any alteration of the existing annual provision for the debt (interest and redemption) is suggested, what would be its effect upon trade, conversion of the debt and credit?

Is it considered desirable to apply any Budget surplus to repayment of debt.

4. Is it thought to be desirable to convert any or all of the Floating Debt?

5. To what extent is the debt-charge held to necessitate an injurious restriction of public expenditure upon desirable objects?

6. Does repayment of the debt necessarily involve deflation of prices, such as is likely to be injurious to trade?

7. What is the effect of the existing taxes on the supply of permanent capital from the public, and on total purchasing power? Is there any evidence of a present shortage of capital for industry? Is it anticipated that there will be a shortage of capital when trade improves?

8. How far do the existing taxes act as a deterrent to saving and to enterprise on the part of the individual engaged in trade and the investor generally? Do they similarly affect joint stock companies?

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\* NOTE.—The questionnaire originally issued was in rather briefer form: it is printed in Minutes of Evidence Vol. II., page 682.

In a few cases the following additional questions were asked:—

1. Is our standard of living higher or lower than in 1914, positively, class by class and relatively to similar classes in other nations?

If you think our standard of living has risen, has our standard of production risen also? and if so, has it risen enough to offset the rise in the scale of living, or are we relatively less able to compete in the world's markets than in 1914?

2. Is our burden heavier than we and other nations have borne after great wars in the past, positively per head of population and relatively to the trade of the countries at the comparable periods?

9. How far does the high *Income Tax* (including Super-tax), withdraw money which could otherwise be counted on for the expansion of business, and which, so capitalised, would produce a rate of profit proportionate to managing ability and to the risks of personal enterprise, and higher on the average than the rate of interest on Government debt?

10. How far does the burden of the *Income Tax* fall upon the business itself and hamper its operations? What is its effect on (1) the ability of companies to build up reserves, and (2) the policy of companies as between distribution in dividend and allocation to reserve?

11. Does *Income Tax* enter into prices, and if so, how? Does it in this or in any other way handicap the exporter in competing in foreign markets against world prices?

12. How far do the *Death Duties* involve a destruction of capital? Do they inflict special damage on private businesses, and, if so, can any suggestion be made for amending the duties so as to obviate this special effect, without reducing the yield?

13. Are any of the *Stamp Duties* detrimental to trade, industry or employment, and, if so, in what manner?

14. To what extent is a *tax on commodities* borne by the consumer? How are internal and external trade affected?

15. Is importance to be attached to the maintenance of a particular ratio between direct and indirect taxation, and if so, on what principles should the ratio be determined?

16. What effects does the present system of taxation tend to have upon the distribution of wealth? Is it considered that these effects are in the best interests of the country in the long run? If any broad amendment of the system is advocated, how would such an amendment affect the distribution?

17. Can existing taxation be varied with advantage, and, if so, how far and in what ways, without increasing the total amount raised by taxation?

18. How far would increased productivity in trade and industry affect the burden of the debt?

19. To what extent can taxation (as distinguished from *changes in taxation*) be regarded as a determinant of employment or unemployment? If it is held that the aggregate demand for labour is permanently reduced by taxation, does the effect show in unemployment or in a lower level of wages?

If taxation is a cause of unemployment, to what extent is this due to (a) the effect of taxation in reducing new savings, or (b) the effect of taxation in reducing consumers' demand for goods?

#### (B).—QUESTIONS REGARDING A CAPITAL LEVY.

1. In your opinion, is the present financial and general position of the country such as to make it essential, or especially desirable, for us as a nation to make a large repayment of National Debt at an early date?

If you are in favour of such a repayment, which of the following methods would you suggest:—(a) a large increase of existing taxation; (b) a severe restriction of expenditure; (c) a combination of (a) and (b); or (d) a Capital Levy? Have you any scheme to suggest which falls outside these alternatives?

Do you anticipate that the future level of prices will differ from the present level to any considerable extent? How is the case for early repayment affected by any such anticipation?

2.—(1) Assuming that a Capital Levy for debt redemption were to be introduced, would you adopt, either as having special advantages, or as affording the most useful basis for discussion, the suggestions for a possible form of levy made by the Labour Party? Under these suggestions—

- (a) the levy would be confined to individuals;
- (b) it would be imposed on material wealth only (as distinct, e.g., from the "brain capital" of the professional man);
- (c) the limit of exemption, and the scale of assessment, would be as shown in the Annexe to these questions;
- (d) the yield contemplated would be £3,000,000,000; and
- (e) the net annual saving (in the sense indicated in question 13) would be regarded as available both for reduction of the rates of future taxes, and for expenditure.

If, or so far as, you do not adopt these suggestions, will you please formulate your own proposals under corresponding heads?

(2) The levy having been applied to the reduction of debt, would you consider it desirable to reduce the amount (£50,000,000 per annum) of the present Sinking Fund?

(3) What changes (if any) would you advocate in taxation, consequential upon a levy?

*Note.—It is requested that the succeeding questions may be considered throughout in relation to a Capital Levy (and subsequent operations) of the form adopted or proposed by you in reply to Question 2.*

3. From the point of view of equity to the individual taxpayer, and the principle of ability to pay, how would you compare the merits and demerits of a Capital Levy with those of the existing income taxation over a period of time?

4. Is it considered that the lapse of time since the war period has a bearing on the acceptability of a Capital Levy, and, in particular, on the question whether a guarantee against its repetition would be both convincing and effective? Do you consider that such a guarantee would be desirable? If so, can you suggest what practicable form it should take?

5. What would be the general effects of a Capital Levy on trade and industry?

To what extent do you think that the arguments for and against a Capital Levy are relative to the state of trade at the time when the levy might be introduced?

6. Looking first at immediate results, and then at results over a long period, how would you compare the friction and dislocation of business which might result from a levy, applied once, with the friction and dislocation caused by the present high annual taxation?

7. What would be the effect of a Capital Levy on employment?

8. What would be the direct and indirect effects of a Capital Levy for the purpose of debt redemption upon the distribution of wealth?

9. How would a Capital Levy compare with other forms of taxation in its effect on the future accumulation of wealth in the form of (a) the individual savings of those subject to the levy, (b) the individual savings of those not subject to the levy, and (c) collective savings, such as companies' reserves? What effect would you anticipate on aggregate savings?

To what extent does this question depend on the considerations referred to in question 4?

10. What, on balance, would be the immediate and ultimate effects on national credit at home and abroad of repaying a large part of the debt by means of a Capital Levy?

11. Would the imposition of a Capital Levy, in your opinion, lead to the sale of securities, and consequent depreciation in their prices, upon a large scale? How far would any such depreciation be prevented as a result of the demand for investments by holders of debt that was paid off by the levy?

12. To what extent would a Capital Levy involve deflation? Would deflation be intensified or prolonged by the psychological effect of a levy?

13. How far does the balance of advantage or disadvantage in a Capital Levy depend on the amount of the *net* annual saving which it would effect? Have you estimated the extent to which the *gross* saving—i.e., the saving in interest expenditure—would be offset by a reduction in the yield of taxes at their existing rates as a result of the disappearance of certain taxable income?

14. With regard to the practical working of a levy and subsequent operations, would you give your views upon the following points:—

(a) Have you any suggestion to make as to the methods by which property should be valued for the purpose of a levy?

(b) Would it be possible, in your opinion, to base a levy on a single valuation, not liable to review in the light of subsequent events, such as changes in the market rate of interest and in the level of prices?

What would be the position on the death of a life tenant, assuming the year of his death not to bear out the forecast of life on which his interest had been valued?

(c) Could you form any estimate

(1) of the extent to which a Capital Levy could be paid in cash, and

(2) of the extent to which payment could be accepted, and could be made,

(a) in War Loan,

(b) in other Stock Exchange securities,

(c) in other forms of property, including real property?

(d) How far would difficulties regarding the payment of a levy be likely to arise in the case of a private business, whether firm or company? How far would you regard such a case as typical of industry generally?

(e) To what extent would it be necessary or desirable to allow payment of levy to be made by instalments (a) generally or (b) in particular cases, e.g., in those of the proprietor of a private business, the life tenant under a settlement, etc.?

To the extent that payment by instalments was allowed, how far would losses or variations in the taxpayer's wealth during the period of payment affect the finality of initial valuations?

(f) Would you approve of any special treatment in the case of a private business, where the partners or proprietors could show that the whole of the resources were locked up in the business and that substantial reasons existed for not obtaining credits on the security of business assets to meet the levy?

If so, would you allow payment of a special additional Income Tax in lieu of the levy, or would you propose any other alternative?

(g) To the extent that payment was received in forms other than War Loan, have you any views as to the order in which particular parts of the debt should be repaid as cash became available? Would you advocate that powers should be taken compulsorily to redeem debt before its maturity, or would you effect reduction by purchase in the market? If the latter, what effects would you anticipate upon the general level of security prices?

15. Would you add any points you wish to make in connection with a Capital Levy not covered by your replies to the above questions?



## ANNEXE.

## EXTRACT FROM

*"Labour and the War Debt.*

## A Statement of Policy for the Redemption of War Debt by a Levy on Accumulated Wealth."

## SCALE OF THE LEVY.

The levy should be graduated so as to carry out the principle of taxation according to ability to pay. A graduated scale on the following lines is suggested:—

						<i>Levy per cent.</i>	
First	£5,000	...	£0	—	£5,000	...	0
Next	£1,000	...	£5,000	—	£6,000	...	5
"	£2,000	...	£6,000	—	£8,000	...	10
"	£2,000	...	£8,000	—	£10,000	...	15
"	£5,000	...	£10,000	—	£15,000	...	20
"	£5,000	...	£15,000	—	£20,000	...	25
"	£10,000	...	£20,000	—	£30,000	...	30
"	£20,000	...	£30,000	—	£50,000	...	35
"	£50,000	...	£50,000	—	£100,000	...	40
"	£100,000	...	£100,000	—	£200,000	...	45
"	£300,000	...	£200,000	—	£500,000	...	50
"	£500,000	...	£500,000	—	£1,000,000	...	55
Remainder	...	...	...	Above	£1,000,000	...	60

This scale would work out as follows:—

				<i>Per cent. of his total fortune.</i>
A man worth not exceeding	£5,000	would pay nothing.		
"	£6,000	would pay	£50	or 0·8
"	£8,000	" "	£250	" 3·2
"	£10,000	" "	£550	" 5·5
"	£15,000	" "	£1,550	" 10·8
"	£20,000	" "	£2,800	" 14·0
"	£30,000	" "	£5,800	" 19·3
"	£50,000	" "	£12,800	" 25·6
"	£100,000	" "	£32,800	" 32·8
"	£200,000	" "	£77,800	" 38·9
"	£500,000	" "	£227,800	" 45·6
"	£1,000,000	" "	£502,800	" 50·8
"	£2,000,000	" "	£1,102,800	" 55·1
"	£3,000,000	" "	£1,702,800	" 56·7
"	£10,000,000	" "	£5,902,800	" 59·0

## APPENDIX II.

## WAGES AND EARNINGS IN PARTICULAR INDUSTRIES, 1914 AND 1925.

*Notes by the Committee.*

1. We set out below certain figures showing, for June, 1925, the increase in rates of money wages over the pre-war level. It should be remembered that, while there were comparatively little changes in these rates in 1925, the increase in the cost of living (as shown by the Ministry of Labour index) varied from 80 at the beginning of the year to 73 at the end of June and 75 at the end of December.

The figures are based mainly on statistics supplied by the Ministry of Labour to the Committee on Industry and Trade, and published by the latter in their *Survey of Industrial Relations* (1926).

2. In the building trade weekly money wages showed an advance over the pre-war level well in excess of the rise in the cost of living. The increase varied, in approximate figures, from 81 to 86 for skilled labourers other than painters, to 101 for painters and 106 for labourers. While there was much variation in different localities, the figures given represent the average of recognised time-rates in 40 large towns. In the railway services the percentage increases vary considerably owing to the wide divergencies in pre-war rates. At one extreme some of the porters who were on pre-war rates as low as 18s. or 20s. a week had (at June, 1925) obtained advances ranging approximately from 145 to 160. The advances obtained by engine-drivers did not very greatly exceed the cost of living increase, being approximately from 85 to 95. Guards had an advance of about 110 to 132 and ticket collectors of about 115 to 135. In other industries of the "sheltered" type—road transport, tramways, printing and bookbinding, and baking—the Ministry of Labour statistics show approximate advances varying between 88 and 117 (*cf.* the Committee on Industry and Trade's *Survey of Industrial Relations*, pp. 90-91). The ratios for the railway services, quoted by way of illustration, differ somewhat from others which have been put forward officially by other bodies, but it is not very material to the summarised argument in the Report to investigate or reconcile the differences.

3. Among the export industries, we find, as we should expect, that engineering and shipbuilding show low increases in wage-rates for men other than labourers employed on time-work. In the engineering industry labourers received an advance over pre-war of 76, but other employees of only 44 to 45. In shipbuilding, labourers received an advance of 68, ship joiners of 44 and others of 35 to 38. In the heavy iron and steel trades wages fluctuate with the sale price of the finished product: for various reasons, and especially owing to the existence of separate sliding-scales for different sections of the industry, wage-movements are very complex. While certain blast furnace labourers and others enjoyed an advance in excess of the cost of living increase, in some cases, e.g., those of steel smelters and iron miners in Cleveland, the advances were only about 20 to 30 over pre-war rates of money wages. In the cotton industry, while full information is not available, calculations from piece-rates suggest that the increase (apart from special allowances, &c.) was about 61; in wool textiles an increase of approximately 80 to 90 is suggested. As regards the heavy chemical industry information is defective, but it appears that labourers had fared well. In the clothing group—boots and shoes, and ready-made tailoring—good advances are also recorded, suggesting an average increase of over 100.

4. This picture of wage-rates in the export industries,\* seems to need some correction in the light of information regarding actual earnings. The Ministry of Labour remark that in the iron and steel industry, if returns in connection with the Enquiry into Earnings and Hours of Labour, 1906, are compared with returns obtained for March, 1925, by the National Federation of Iron and Steel Manufacturers, the result is to suggest a percentage increase in weekly earnings of fully 70 to 80 over pre-war, notwithstanding the bad state of employment; the Ministry infer that the earnings of workpeople in employment may possibly have risen by rather more than calculations based on standard rates would suggest. Again, it is pointed out that in the cotton industry there is a wide divergence between the 61 per cent. increase calculated by

\* We have omitted reference to the wage-position in the coal-mining industry, in view of the full attention received by it elsewhere.

reference to piece-rates, and the results shown by a comparison of sample earnings in 1914 and in May, 1925, which point to a percentage increase of 85 to 90. The Ministry of Labour think that, even when allowance is made for the relative smallness of the two samples, and the fact that they do not cover exactly the same ground, the probability is that the increase in the weekly earnings of the employed may be appreciably higher than 61 per cent. Yet again in the wool textile industry, where employment in May, 1925, was generally bad, similar returns suggest that the average increase in earnings for those actually in employment was not fully represented by the figure of 80 to 90 per cent. based on rates.

5. The statistics from which we have quoted above do not cover agricultural labour and domestic service. In regard to the former, figures published by the Ministry of Agriculture seem to indicate that in 1923 and 1924, rates of money wages for the ordinary agricultural labourer in England and Wales averaged somewhere about 56 per cent. over the level of 1914. Owing to the fixing of minimum rates under the Agricultural Wages (Regulation) Act, 1924, wages made a substantial advance in the first quarter of 1925, and from May, 1925, onwards the rates of wages are shown to have averaged 75 per cent. over 1914. It is to be noted that in some of the districts where wages were especially low before the War, the labourer has obtained an advance over his pre-war wages considerably exceeding the increase in the cost of living, and there is less variation than before the War in the rates of wages paid in different parts of the country.

6. In regard to domestic service no statistics are available. In the Report of the Ministry of Labour Committee on the Supply of Female Domestic Servants (1923), reference is made to the "extraordinary diversity now existing in regard to hours, wages, and conditions of employment, which vary not merely from one locality to another, but from street to street, and from house to house." We may note that Professor Bowley remarked in his evidence before us, "I should have said in the case of domestic service the real wages are definitely higher now than 10 years ago." (Q. 3823.)

## APPENDIX III.

## EXTENT OF UNEMPLOYMENT, 1921-26.

TABLE A.—Numbers recorded on the Registers of Employment Exchanges in Great Britain.

Date.*	1921.	1922.	1923.	1924.	1925.	1926.
January ...	1,276,577	1,936,081	1,463,612	1,320,518†	1,240,922	1,200,827
February ...	1,465,316	1,859,137	1,353,173	1,154,504	1,236,065	1,125,760
March ...	1,697,938	1,736,457	1,266,997	1,063,519	1,201,315	1,013,609
April ...	2,246,082‡	1,712,051	1,263,665	1,047,780	1,187,068	981,877
May ...	2,558,190†	1,565,429	1,237,716	1,015,626	1,186,522	1,614,212‡
June ...	2,438,125†	1,436,100	1,223,152	1,013,782	1,304,243	1,639,776†
July ...	1,905,196	1,389,257	1,221,554	1,048,261	1,197,631	1,605,420†
August ...	1,656,432	1,359,376	1,268,828	1,149,078	1,354,302	1,549,759‡
September..	1,470,388	1,342,503	1,275,770	1,180,290	1,336,155	—
October ...	1,639,545	1,348,960	1,293,317	1,203,229	1,232,396	—
November ..	1,849,069	1,401,093	1,261,838	1,190,592	1,165,275	—
December ..	1,885,478	1,381,612	1,285,623	1,169,327	1,102,400	—

\* The figures generally relate to the last Monday in the month, but in some cases to a week earlier.

† Figures inflated by effects of strike of railway engine-men.

‡ General coal-mining dispute in progress.

TABLE B.—Percentages Unemployed among Insured Workpeople in Great Britain.

Date.*	1921.	1922.	1923.	1924.	1925.	1926.
January ...	11·0	17·5	13·1	11·8†	11·1	10·8
February...	12·9	16·9	12·2	10·5	11·1	10·2
March ...	15·0	15·8	11·5	9·7	10·8	9·5
April ...	19·9‡	15·6	11·3	9·5	10·6	8·9
May ...	23·0‡	14·4	11·1	9·2	10·6	14·2‡
June ...	21·9‡	13·5	11·2	9·2	11·6	14·5‡
July ...	17·4	12·9	11·4	9·6	10·8	14·4‡
August ...	15·1	12·6	11·7	10·3	11·9	—
September..	13·9	12·5	11·6	10·5	11·7	—
October ...	14·3	12·4	11·6	10·8	11·1	—
November..	16·9	12·8	11·4	10·7	10·7	—
December ..	17·7	12·6	10·5	10·6	10·1	—

\* The figures generally relate to the last Monday in the month, but in some cases to a week earlier.

† Figures inflated by effects of strike of railway enginemen.

‡ General coal-mining dispute in progress.

*Note.*—In any close examination of the figures in the above tables, it is necessary to pay regard to the effects of various legal and administrative changes. (See the Committee on Industry and Trade's *Survey of Industrial Relations*; pp. 228-230.)

#### APPENDIX IV.

##### POST OFFICE AND TRUSTEE SAVING BANK DEPOSITS.

Statement of amounts standing to the credit of depositors at the end of each year from 1913 to 1925, inclusive

TABLE I (a).—POST OFFICE SAVINGS BANK (GREAT BRITAIN).

Year ended 31st December.	Amount, including interest, standing to credit of all open accounts at close of the year.					
	£ millions.					
1913 ... ..	...	...	...	...	...	174·1
1914 ... ..	...	...	...	...	...	177·8
1915 ... ..	...	...	...	...	...	174·5
1916 ... ..	...	...	...	...	...	185·1
1917 ... ..	...	...	...	...	...	192·1
1918 ... ..	...	...	...	...	...	222·6
1919 ... ..	...	...	...	...	...	252·7
1920 ... ..	...	...	...	...	...	252·4
1921 ... ..	...	...	...	...	...	250·3
1922 ... ..	...	...	...	...	...	254·0
1923 ... ..	...	...	...	...	...	281·0
1924 ... ..	...	...	...	...	...	269·0
1925 ... ..	...	...	...	...	...	274·8

The figures for 1919 are exceptional because they include special transactions in connection with the payment of gratuities to demobilized men of the Navy, Army and Air Force.

TABLE I (b).—TRUSTEE SAVINGS BANKS (GREAT BRITAIN).

Year ended 20th November.	Balance due to Depositors at close of the year includ- ing Interest Earned.					
	£ millions.					
1913	...	...	...	...	...	51.6
1914	...	...	...	...	...	51.4
1915	...	...	...	...	...	48.9
1916	...	...	...	...	...	51.2
1917	...	...	...	...	...	49.9
1918	...	...	...	...	...	58.1
1919	...	...	...	...	...	68.6
1920	...	...	...	...	...	71.6
1921	...	...	...	...	...	69.6
1922	...	...	...	...	...	71.8
1923	...	...	...	...	...	75.0
1924	...	...	...	...	...	77.4
1925	...	...	...	...	...	78.6

TABLE II.—NATIONAL SAVINGS CERTIFICATES.

Year ended 31st March	Number of Cer- tificates taken out (in £ units) each year.	Value of Certif- icates taken out (purchase price) each year.	Value of Certif- icates repaid (principal only) each year.	Balance due to holders at end of each year (including ac- crued interest).*
		£	£	£
1919	126,349,959	97,921,218	8,700,001	238,471,000
1920	92,283,189	71,519,471	24,949,700	297,540,000
1921	53,156,062	41,195,948	29,741,245	319,995,000
1922	120,434,780	93,336,955	36,193,731	386,965,000
1923	49,593,813	39,675,050	27,966,804	418,841,000
1924	56,508,996	45,207,198	32,915,500	446,139,000
1925	40,281,930	32,225,544	29,529,291	458,835,000
1926	43,894,537	35,115,630	28,378,074	475,575,000

\* Approximate figures.

## APPEN-

TABLES SHOWING THE NATIONAL DEBT AT 1st APRIL, 1914; THE AMOUNTS FROM THAT DATE TO 31st MARCH, 1926; AND THE DEBT ON 31st

TABLE I. showing the changes in the National  
£ thousands

	Debt on 1 April 1914.	1914-15.		1915-16.	
		Debt created (1) for cash (2) by conversions.	Debt redeemed (1) by cash (2) by conversions.	Debt created (1) for cash (2) by conversions.	Debt redeemed (1) by cash (2) by conversions.
	£ 000	£ 000	£ 000	£ 000	£ 000
Pre-war funded debt ... ..	586,718	—	3,428	—	394
Terminable Annuities ... ..	—	—	—	—	264,436
Exchequer Bonds ... ..	29,552	—	1,511	—	1,882
	20,500	50,000	3,105	155,371	45,735
3½% War Loan, 1925-28 ... ..	—	350,000	909	—	—
4½% War Loan, 1925-45 ... ..	—	—	—	587,196	148,848
	—	—	—	313,635	834
5% War Loan, 1929-47 ... ..	—	—	—	—	—
4% (tax-compounded) War Loan, 1929-42. ... ..	—	—	—	—	—
5% National War Bonds ... ..	—	—	—	—	—
4% (tax-compounded) National War Bonds. ... ..	—	—	—	—	—
4% Funding Loan, 1960-90 ... ..	—	—	—	—	—
4% Victory Bonds ... ..	—	—	—	—	—
War Expenditure Certificates ... ..	—	—	—	—	—
National Savings Certificates ... ..	—	—	—	1,387	—
Other debt (sterling) ... ..	—	—	—	—	—
Treasury Bills ... ..	13,000	64,150	—	489,676	—
Ways and Means Advances ... ..	—	—	—	19,896	—
Floating Debt (net) ... ..	13,000	64,150	—	509,572	—
Total Internal Debt (including Floating Debt net). ... ..	649,770	464,150	8,953	1,567,161	599,598
External Debt (cash) ... ..	—	—	—	60,617	—
(conversions) ... ..	—	—	—	—	—
(set-offs, etc.) ... ..	—	—	—	—	—
Total ... ..	—	—	—	60,617	—
Total Debt :—					
Created or redeemed for cash ... ..	—	464,150	8,953	1,314,143	197,693
Conversions ... ..	—	—	—	313,635	401,905
Other transactions ... ..	—	—	—	—	—
TOTAL ... ..	649,770	464,150	8,953	1,627,778	599,598
Total Debt at 31st March ... ..			1,104,967	2,133,147	

## DIX V.

OF THE VARIOUS LOANS ISSUED AND REDEEMED (DISTINGUISHING CONVERSIONS)  
MARCH, 1928; TOGETHER WITH NOTES ON THE PRINCIPAL LOANS ISSUED.

Debt from 1st April, 1914, to 31st March, 1920.  
throughout.

1916-17.		1917-18.		1918-19.		1919-20.		Debt outstanding on 31st March, 1920.
Debt created (1) for cash (2) by conversions.	Debt redeemed (1) by cash (2) by conversions.	Debt created (1) for cash (2) by conversions.	Debt redeemed (1) by cash (2) by conversions.	Debt created (1) for cash (2) by conversions.	Debt redeemed (1) by cash (2) by conversions.	Debt created (1) for cash (2) by conversions.	Debt redeemed (1) by cash (2) by conversions.	
£ 000	£ 000	£ 000	£ 000	£ 000	£ 000	£ 000	£ 000	£ 000
—	626	—	57	—	102	—	2,676	} 314,952
—	37	—	—	—	—	—	—	
—	2,114	—	2,141	—	1,258	—	1,332	} 19,314
340,502	1,289	97,914	12,069	—	5,091	67,215	109,166	
77,082	272,988	—	14,427	—	2,987	99,532	122,068	} 318,576
—	27	—	1	—	—	—	—	
—	1	—	—	—	—	—	—	} 62,745
—	467	—	—	—	—	—	—	
26	879,566	—	3,851	—	1,791	—	1,543	} 12,805
966,659	230	8,348	37,639	—	28,082	—	38,795	
1,100,560	—	247	—	1,599	—	4,128	—	} 1,976,795
22,658	—	—	46	—	43	—	22	
29,760	—	—	—	3,969	—	7,866	—	} 64,142
—	—	521,008	8,674	963,025	55,164	41,347	57,125	
—	—	17,638	—	4,725	1,520	—	130,777	} 1,294,640
—	—	119,686	1,284	82,774	3,167	3,216	3,699	
—	—	1,138	—	90	3,969	5	13,585	} 181,205
—	—	—	—	—	—	288,967	178	
—	—	—	—	—	—	120,144	—	} 408,933
—	—	—	—	—	—	287,919	—	
—	—	—	—	—	—	71,613	—	} 359,532
29,879	—	—	—	—	22,891	—	—	
—	6,318	—	632	—	38	—	—	} —
73,100	—	63,263	—	89,222	—	71,519	24,950	
710	—	402	—	83	3	1,371	295	} 273,541
—	103,121	509,739	—	—	16,208	101,460	—	
197,630	—	—	25,255	262,721	—	—	250,105	} 2,058,696
—	—	—	—	—	—	—	—	
94,509	—	484,484	—	246,513	—	—	148,645	} 1,263,583
2,735,425	1,163,673	1,314,026	80,821	1,392,000	126,106	1,065,101	655,451	
327,726	21,179	708,693	81,494	509,923	129,426	242,940	255,795	} 6,553,031
—	—	307	307	29,297	29,297	—	—	
—	—	—	—	—	83,289	—	—	} —
327,726	21,179	708,900	81,701	539,217	242,012	242,940	255,795	
1,855,743	25,942	2,003,798	143,405	1,891,537	245,227	1,004,494	642,678	} —
1,207,408	1,158,910	19,128	19,117	39,620	39,609	303,547	203,568	
—	—	—	—	—	83,289	—	—	} —
3,063,151	1,184,852	2,022,926	162,522	1,931,217	368,118	1,308,041	911,246	
4,011,446		5,871,860		7,434,949		7,831,744		

TABLE II. showing the changes in the National  
(£ thousands)

	Debt on 1st April, 1920.	1920-21.		1921-22.	
		Debt created (i) for cash (ii) by con- versions.	Debt redeemed (i) by cash (ii) by con- versions.	Debt created (i) for cash (ii) by con- versions.	Debt redeemed (i) by cash (ii) by con- versions.
	(£000)	(£000)	(£000)	(£000)	(£000)
Pre-war funded debt ... ..	314,952	—	115	—	314
Terminable Annuities ... ..	19,314	—	1,616	—	1,507
Exchequer Bonds ... ..	318,576	—	29,012	—	50,979
3½% War Loan, 1925-28 ... ..	62,745	1	—	—	52,941
4½% War Loan, 1925-45 ... ..	12,805	—	—	—	—
5% War Loan, 1929-47... ..	1,976,795	—	48,145	—	41,844
4% (tax - compounded) War Loan, 1929-42 ... ..	64,142	84	—	10	—
5% National War Bonds ... ..	1,294,640	8,213	51,533	1	1,562
4% (tax-compounded) National War Bonds ... ..	181,205	6,738	79	11,980	12,287
3½% Conversion Loan ... ..	—	—	—	—	201,975
4% Funding Loan, 1960-90 ... ..	408,933	—	2,910	—	9,860
4% Victory Bonds ... ..	359,532	—	1,797	—	1
National Savings Certificates ... ..	273,541	41,196	29,741	93,164	2
Treasury Bonds ... ..	—	23,143	—	338,797	—
4½% Conversion Loan, 1940-44 ... ..	—	—	—	90,839	—
Other debt (sterling) ... ..	2,268	382	57	—	504
Treasury Bills ... ..	1,058,696	29,996	—	—	215,078
Ways and Means Advances ... ..	204,887	—	50,398	—	7,187
Floating Debt (net) ... ..	1,263,583	—	20,402	—	222,265
Total Internal Debt (including Floating Debt net)	6,553,031	74,757	203,941	800,877	637,099
External Debt (cash) ... ..	—	40,057	145,138	1,500	63,809
(conversions) ... ..	—	—	5,953	—	10,584
(set-offs, &c.) ... ..	—	—	6,116	—	—
Total ... ..	1,278,713	40,057	157,207	1,500	74,393
Total Debt :—					
Created or redeemed for cash ... ..	—	104,778	345,787	433,461	445,991
Conversions ... ..	—	10,036	9,245	368,916	265,501
Other transactions ... ..	—	—	6,116	—	—
TOTAL ... ..	7,831,744	114,814	361,148	802,377	711,492
Total Debt at 31st March ... ..		£7,585,410		£7,676,295	



Debt from 1st April, 1920, to 31st March, 1926.  
(throughout.)

1922-23.		1923-24.		1924-25.		1925-26.		Debt outstanding on 31st March, 1926.
Debt created (i) for cash (ii) by conversions.	Debt redeemed (i) by cash (ii) by conversions.	Debt created (i) for cash (ii) by conversions.	Debt redeemed (i) by cash (ii) by conversions.	Debt created (i) for cash (ii) by conversions.	Debt redeemed (i) by cash (ii) by conversions.	Debt created (i) for cash (ii) by conversions.	Debt redeemed (i) by cash (ii) by conversions.	
(£000)	(£000)	(£000)	(£000)	(£000)	(£000)	(£000)	(£000)	(£000)
—	303	—	193	—	269	—	253	313,505
—	2,510	—	229	—	398	—	414	12,640
—	20,887	—	25	—	52,586	—	—	15,640
—	14,477	—	—	—	82,080	—	—	62,714
—	—	—	—	—	31	—	—	12,805
—	8,471	—	4,393	—	5,260	—	3,578	2,044,053
147,011	—	74,179	—	40,366	148,407	60,646	—	—
—	1,178	—	6	—	1,096	—	8,193	64,915
646	—	945	—	1,085	—	7,247	—	—
—	43,863	—	52,682	—	6,396	—	13,859	562,910
21,315	224,017	2,551	81,948	3,603	38,348	6,679	57,614	—
—	283	—	22	—	35	—	88	142,790
—	646	—	946	—	1,085	—	7,247	—
—	9,836	—	17,389	59,660	16,960	70,000	18,916	760,015
427,372	—	—	—	—	—	—	—	—
—	2,581	—	2,686	—	2,887	—	2,965	391,909
—	1,945	—	2,022	—	2,103	—	2,187	347,609
39,843	27,967	45,213	32,916	32,226	29,529	35,118	28,378	375,576
158,526	—	84,530	—	17,830	2	6,423	24,146	481,432
14,234	214,521	11,478	—	24,303	—	—	—	210,587
—	—	—	—	210,587	—	—	—	1,753
—	336	—	—	—	—	—	—	—
—	257,604	—	27,690	—	12,710	—	10,755	564,855
46,596	—	—	7,742	—	19,571	—	27,144	139,441
—	211,008	—	35,432	—	32,281	—	37,899	704,296
808,947	779,829	168,896	330,829	389,665	419,703	186,113	205,737	6,505,148
23	23,807	4,130	19,614	3,700	4,726	—	4,932	—
—	18,830	—	2,353	—	3,137	—	5,900	—
109,597	—	—	12,103	—	—	—	—	—
109,620	42,637	4,130	33,970	3,700	7,913	—	10,832	1,110,768
198,392	349,975	83,873	167,549	113,416	154,559	111,541	145,808	—
610,578	472,491	89,153	85,147	279,949	273,057	74,572	70,761	—
109,597	—	—	12,103	—	—	—	—	—
918,567	822,466	173,026	264,799	393,365	427,616	186,113	216,569	7,615,916
£7,772,396		£7,680,623		£7,646,372		£7,615,916		

TABLE III.—*Internal Debt at 31st March, 1920, showing the dates of maturity of the several loans.*

Year.	Security.	Amount.	Total for year.
		£	£
1920-21	5% Exchequer Bonds, 1920 ... ..	25,238,735	
	6% " " 1920 ... ..	2,987,508	
	6% Swedish One-year notes ... ..	191	
			28,226,434
1921-22	5% Exchequer Bonds, 1921 ... ..	—	71,982,250
1922-23	5% " " 1922 ... ..	35,980,642	
	5% National War Bonds, 1922 ... ..	203,231,307	
	5% Exchequer Bonds (Japanese Ships).	828,000	
			240,039,949
1923-24	5% National War Bonds ... ..	—	393,494,669
1924-25	5% " " ... ..	26,369,519	
	5½% Exchequer Bonds ... ..	166,746,985	
			193,116,504
1925-26	5% National War Bonds ... ..	—	30,236,284
1927-28	5% " " ... ..	212,523,757	
	4% " " ... ..	101,676,980	
	3½% War Loan " ... ..	62,745,476	
			376,946,213
1928-29	5% National War Bonds ... ..	428,784,368	
	4% " " ... ..	79,528,227	
			508,312,595
	Total to end of 1928-29 ... ..		1,842,354,898
1929-30	3% Exchequer Bonds... ..		15,640,000
1933-34	5% Straits Settlements Sterling Loan ... ..		1,371,000
1942-43	4% War Loan, 1929-42 ... ..		64,141,643
1945-46	4½% War Loan, 1925-45 ... ..		12,804,541
1947-48	5% War Loan, 1929-47 ... ..		1,976,795,369
—	4% Victory Bonds ... ..		359,531,845
—	4% Funding Loan ... ..		408,933,375
—	Consols, &c. ... ..		314,952,215
—	Terminable Annuities ... ..		19,313,709
—	Treasury Bills ... ..		1,058,696,000
—	Ways and Means Advances ... ..		204,887,000
—	War Savings Certificates ... ..		273,540,815
—	Loans free of interest... ..		68,485
	Total Internal Debt ... ..		£6,553,030,895

(For a comparative statement as regards unfunded debt (excluding Floating Debt and certain long-term loans) as at the 31st March, 1920, see Table A in Appendix VII.)

## NOTES.

The following notes show brief particulars of the various loans included in the foregoing tables and are supplementary to the particulars of conversions and redemptions given in the Committee's Report. The totals shown in these notes for individual loans are in several cases spread over more than one year in the tables.

1. *Three-and-a-Half per cent. War Loan.*—The first loan floated for the purposes of the War was the 3½ per cent. War Loan, issued in November, 1914, at £95 per cent. for the fixed amount of £350 millions, and redeemable on the 1st March, 1923, or, at the Government's option, on or after 1st March, 1925. Conversion privileges into 4½ per cent. War Loan were subsequently offered, and the exercise of these, together with

various repayments, left the amount outstanding on the 31st March, 1920, at £62,745,000. In 1924-25 £31,000 of this stock was transferred for the purchase of life annuities and cancelled, reducing the amount outstanding to £62,714,000 on 31st March, 1926.

2. *Four-and-a-Half per cent. War Loan.*—The 4½ per cent. War Loan was issued at par in June, 1915, a small advantage being given in the first interest payment. This loan is redeemable on the 1st December, 1945, or, at the Government's option, at any time since the 1st December, 1925. No limit of subscription was fixed by the prospectus and the amount of stock subscribed for cash was £587 millions. Subscribers to this loan were given the right to convert into it, in respect of each £100 subscribed, stated amounts of 3½ per cent. War Loan, 2½ per cent. Consols, 2½ per cent. and 2½ per cent. Annuities. In respect of such conversions, £138 millions of the new loan were issued in replacement of Funded Debt, and £176 millions in replacement of 3½ per cent. War Loan, thus bringing the total issue up to £901 millions.

Holders of the 4½ per cent. War Loan were also given the right to tender the new loan at par, plus accrued interest, as the equivalent of cash for the purpose of subscribing to any future issues for the purpose of carrying on the War (other than issues made abroad and Exchequer Bonds, Treasury Bills or similar short-dated securities). The great bulk of the loan was subsequently converted under this provision into the 5 per cent. War Loan issued in 1917. On the 31st March, 1920, the amount of the loan outstanding was £12,805,000, at which figure it still stands.

3. *Exchequer Bonds.*—Various issues of Exchequer Bonds were made during the years 1914-15 to 1919-20, carrying in all cases the right to convert into subsequent war issues.

The issues were as follows:—

Date of issue.	Terms of issue.	Redeemable on	Amount issued (including conversions).
March, 1915 ...	3% by tender...	24th March, 1920	£ 50,000,000
December, 1915 ...	5% at par ...	1st Dec., 1920 ...	238,015,105
June, 1916 ...	5% at par ...	5th Oct., 1919 ...	38,353,700
		5th " 1921 ...	135,566,000
October, 1916 ...	6% at par ...	16th Feb., 1920 ...	161,000,525
April, 1917 ...	5% at par ...	1st April, 1922, with option to holders to call for repayment on 1st Oct., 1919.	82,274,435
March—June, 1918	3% at par ... (In exchange for Russian Govern- ment and Commercial Treasury Bills).	28th Jan., 1930 ...	15,640,000
January, 1920 ...	5½% at par ...	1st Feb., 1925 (with option to holder, on giving a year's notice, to obtain repay- ment in 1922, 1923 or 1924).	166,748,135

As shown in the Section of the Report dealing with conversions, a large amount of these Bonds was at maturity converted into other loans. The only issue outstanding on the 31st March, 1926, was that of 3 per cent. Exchequer Bonds maturing in 1930 (£15,640,000).

Two important privileges were first given in connexion with the issue of Exchequer Bonds in March, 1915. First, the Bonds and the interest payable thereon were exempted from all British taxation, present or future, where the beneficial owners were neither domiciled nor ordinarily resident in the United Kingdom. This privilege was attached to all later loans (except in so far as inapplicable to tax-compounded issues) up to and including the issue of 5½ per cent. Exchequer Bonds, 1925, on the 19th January, 1920. Second, the dividends were not liable to deduction of Income Tax at the source, although individuals liable to tax were required to include such income in their returns. This privilege attached to all subsequent issues (with an exception as regards tax-compounded issues) up to and including the 4th series of National War Bonds.

4. *Five per cent. War Loan and Four per cent. (Income Tax compounded) War Loan.*—The third great War Loan was offered in January, 1917, in the form of a 5 per cent. Loan issued at £95 per cent. and redeemable at par on 1st June, 1947, or, at the Government's option, on or after 1st June, 1929, and of a 4 per cent. Loan (Income Tax compounded) issued at par and redeemable on the 15th October, 1942, or, at the Government's option, on or after the 15th October, 1929. The 4½ per cent. War Loan and various Exchequer Bonds were, under the rights given at the time of their issue, accepted as the equivalent of cash for the purpose of subscribing to the 5 per cent. War Loan; in addition Treasury Bills and War Expenditure Certificates were similarly accepted, under discount.

The amount of the two loans issued under the prospectus was as follows:—

	5 Per cent. War Loan.	4 Per cent. War Loan.
	£	£
For cash ... ..	844,802,000	22,046,000
For Treasury Bills, &c., surrendered ...	130,205,000	612,000
For 4½ per cent. War Loan converted ...	820,346,000	23,199,000
For Exchequer Bonds converted ...	280,461,000	6,561,000
	<u>£2,075,814,000</u>	<u>£52,418,000</u>

An extension of the taxation privileges accorded to holders abroad was made in connexion with the 5 per cent. loan, dividends being exempted from British Income Tax by reference to the single test of ordinary residence, without regard to the question of domicile. This concession was repeated in the cases of later issues (other than tax-compounded) down to and including the 5½ per cent. Exchequer Bonds issued in January, 1920.

Two further special features of these issues should be noted—the provision of a form of Sinking Fund, and the acceptance of the stock and bonds in payment of death duties.

As regards the former, the prospectus undertook that, for the purpose of providing against depreciation in the market prices of the loans, the Treasury would set aside monthly a sum equal to one-eighth of one per cent. of the amount of each loan to form a fund to be used for purchasing stock or bonds of either loan for cancellation whenever the market price fell below the issue price. Such monthly payments were to be suspended whenever the unexpended balance of the fund—commonly known as the Depreciation Fund—reached £10 millions, but were to be resumed as soon as the unexpended balance fell below £10 millions.

Under the second provision stock and bonds of these loans are accepted by the Inland Revenue at their issue prices, with due allowance for accrued interest, in satisfaction of amounts due on account of death

duties, provided such stock and bonds have formed part of the estate of the deceased for a period of not less than six months immediately preceding the date of death.

Issues on account of the Depreciation Fund prior to the year 1920-21 were met out of fresh borrowings, and, therefore, while they reduced the amount of the 5 per cent. War Loan by about £88 millions, they did not actually reduce the total debt. The operation of this Fund, together with cancellation of bonds tendered for duties, partly offset by the creation of a further small amount of stock in respect of National War Bonds converted, reduced the 5 per cent. loan to £1,977 millions on the 31st March, 1920.

In subsequent years the conversion of National War Bonds added very substantially to the amount of this stock, some £328 millions having been created for this purpose up to the 31st March, 1926. On the other hand, in the year 1924-25 an offer of conversion into 4½ per cent. Conversion Loan was accepted to the extent of £148,407,000 5 per cent. War Loan. These transactions, combined with the effects of the Depreciation Fund and death duty provisions, left the outstanding 5 per cent. loan at £2,044 millions on the 31st March, 1926.

The 4 per cent. issue was increased and reduced by operations similar to those on the 5 per cent. loan, with the result that on 31st March, 1920, it stood at £64 millions, and on 31st March, 1926, at £65 millions.

**5. National War Bonds.**—The bulk of the borrowings in 1917-18 and the following year were effected by the continuous issue of National War Bonds. The first series were issued in October, 1917. Three classes of 5 per cent. bonds were offered, being respectively repayable at 102 per cent. on 1st October, 1922; at 103 per cent. on 1st October, 1924; and at 105 per cent. on 1st October, 1927. A fourth class was of 4 per cent. (Income Tax compounded) bonds repayable at par on 1st October, 1927. The price of issue for all the bonds was par.

In March, 1918, a second series was placed on sale similar in all respects, save that the dates of redemption were six months later, viz., 1st April, 1923, 1925 and 1928. A third series followed in September, 1918, of which the terms differed only in regard to the date of exercise of the conversion privileges mentioned below, and the price of issue of the tax-compounded bonds, which was raised from par to 101½. The redemption dates were 1st September, 1923, 1925 and 1928.

The fourth and final series of National War Bonds was issued in January, 1919, consisting of two 5 per cent. issues at par, redeemable respectively at 102 per cent. on 1st February, 1924, and 105 per cent. on 1st February, 1929, and a 4 per cent. (Income Tax compounded) issue at 101½ per cent. redeemable at par on the 1st February, 1929.

The total amount of these bonds issued for cash over the period October, 1917, to June, 1919, was £1,732 millions. In addition, holders of 4½ per cent. War Loan 1926-45 and of various issues of Exchequer Bonds were allowed to convert into the National War Bonds (excepting certain of the shortest-dated issues) on terms corresponding with the cash issues, £100 of War Loan or Exchequer Bonds being regarded as equivalent to cash. Under these conversion options, National War Bonds were issued to the amount of £23 millions, replacing £5,623,000 4½ per cent. War Loan and £17,469,000 Exchequer Bonds. The total issue of National War Bonds was thus £1,755,000,000.

With the exception of the bonds of the fourth series, holders of National War Bonds were given the right under the prospectus to convert their holdings at certain dates into 5 per cent. War Loan, 1929-47, at the rate of £100 of that loan for each £95 nominal of bonds surrendered. A similar option to convert into the 4 per cent. War Loan, 1929-42, at par, was given to holders of the tax-compounded National War Bonds. Moreover, holdings of bonds of the first three series could be tendered at par as the equivalent of cash for subscrip-

tions to future war issues (excluding short-dated issues), and bonds of all series were made acceptable at their nominal value by the Commissioners of Inland Revenue in payment of death duties and Excess Profits Duty, provided that the bonds had, in the one case, formed part of the estate of the deceased for at least six months immediately before the date of death, or, in the other case, that they had been held by the firm liable for a period of six months before the duty became due and payable.

Up to the 31st March, 1920, about £128 millions of bonds were surrendered in payment of duties, and conversions (including tender as subscriptions to Victory Bonds and Funding Loan) further reduced the amount outstanding by £151 millions. The total reduction of £279 millions thus left the amount outstanding on 31st March, 1920, at £1,476 millions. Repayments on maturity and further conversions, including special offers of exchange into Treasury Bonds and 3½ per cent. Conversion Loan, had by 31st March, 1926, reduced the total outstanding to £705 millions, of which £143 millions represented the 4 per cent. (Income Tax compounded) issues.

The amounts of the several issues outstanding on 31st March, 1926, were as follows:—

<i>Five per cent. Bonds repayable</i>					£
1st Oct., 1927	...	...	...	...	158,116,141
1st April, 1928	...	...	...	...	122,283,334
1st Sept., 1928	...	...	...	...	189,820,025
1st Feb., 1929	...	...	...	...	92,690,565
 <i>Four per cent. (Income Tax compounded) Bonds repayable</i>					
1st Oct., 1927	...	...	...	...	79,983,254
1st April, 1928	...	...	...	...	37,385,098
1st Sept., 1928	...	...	...	...	20,612,713
1st Feb., 1929	...	...	...	...	4,808,565
					£705,699,695

6. *Four per cent. Funding Loan and Four per cent. Victory Bonds.*—The final big loans raised to meet expenditure were issued in June, 1919, in the form of the 4 per cent. Funding Loan, 1960-90, and the 4 per cent. Victory Bonds. The Funding Loan was issued at 80 and the Victory Bonds at 85. In each case a specific Sinking Fund is attached to the loan, equivalent each half-year to the difference between the interest payment for the half-year and 2½ per cent. on the nominal amount of the loan originally created under the prospectus. In the case of the Funding Loan, the Sinking Fund is applied to the purchase and cancellation of stock while the loan is below par, but may be invested if the price rises above par. Any outstanding balance of the loan is to be repaid at par on the 1st May, 1990, while the Government has an option to repay on or after 1st May, 1960. In the case of Victory Bonds, the Sinking Fund is applied to annual drawings at par, a procedure which will completely redeem the loan by 1976.

Both loans are accepted by the Commissioners of Inland Revenue in payment of death duties, upon conditions laid down in the prospectuses, the Funding Loan at its issue price of 80, and the Victory Bonds at par.

Holdings of the 4½ per cent. War Loan, various Exchequer Bonds, and the first three series of National War Bonds were, in accordance with the rights given at the time of their issue, accepted at par in payment for these two issues. The total issue of Funding Loan was £409 millions (of which £289 millions was for cash and £120 millions in respect of National

War Bonds, &c., converted) and the operation of the Sinking Fund, and other minor cancellations had reduced the amount outstanding to £392 millions on 31st March, 1926. The issue of Victory Bonds for cash subscriptions was £288 millions and in respect of conversions £71½ millions, making a total of £359½ millions. Drawings at par had reduced the bonds outstanding to £347½ millions on the 31st March, 1926.

**7. National Savings Certificates.**—In February, 1916, a security with a special appeal to the small investor was placed on sale in the form of War Savings Certificates, the title being changed after the War to National Savings Certificates. The special features of this security are that it is repayable at any time on demand by the holder (subject to certain restrictions in the case of minors), together with the interest earned to date, and that the interest is entirely exempted from Income Tax. An important restriction is that no individual may hold more than 500 certificates in all, save in certain very limited exceptions such as inheritance.

In the first instance the price of issue was 15s. 6d. for each certificate accumulating to £1 at the end of five years. The price of issue has since been altered in accordance with varying financial conditions; for various reasons also the period for which certificates may be held has been extended. At the present time certificates are issued at the price of 16s., accumulating to £1 at the end of six years and to 24s. at the end of ten years, with a provision that certificates may be held for ten years from the date of issue of the last-purchased certificate of the same series.

During the War the sale of Savings Certificates realised approximately £200 millions. From the end of the War up to 31st March, 1926, a further sum of about £398 millions was raised by this means. Encashments of certificates up to the same date amounted to £223 millions, excluding the interest paid thereon. The total outstanding on the 31st March, 1926, was thus £375 millions.

It is to be noted that Savings Certificates figure in the debt accounts at their purchase price. Budget provision for interest is made only to the extent to which it is anticipated that interest will actually be paid in the year on certificates presented for repayment. A note in the Finance Accounts shows, however, the approximate liability for interest accumulated but unpaid. On the 31st March, 1926, such interest was estimated at £100 millions.

Holders of certificates of the first series have recently been given the following options:—

- (i) to continue to hold their certificates until 31st March, 1932;
- (ii) to convert all or any part of their holdings, not being less than £50, into 4½ per cent. Conversion Loan, 1940-44, at the market price of the day;
- (iii) provided that part of the holding has reached the ten years' maturity, to convert any part of the holding, not being less than £20, into a special Savings Bond. This Bond bears interest at 4 per cent. per annum, payable half-yearly, and is repayable at £103 for each £100 nominal value ten years after the date of issue. It is also encashable at six months' notice from any date at par plus accrued interest. The maximum holding is £500.

**8. Three-and-a-Half per cent. Conversion Loan.**—This loan is the sole form of funded debt issued since the War. It is repayable at par at the option of the Government, on three months' notice, on or after 1st April, 1931. A Sinking Fund equivalent to 1 per cent. of the amount of the loan outstanding at the end of each half-year must, under the Finance Act, 1921, be issued half-yearly so long as the average daily price of the loan for the half-year is below £90 per cent.

The various issues of this loan are referred to in the Sections of the Report dealing with conversion and repayment operations since 1920, and may be summarised as follows:—

Prospectus of	Terms.	Conversion Loan Resulting	Amount of Securities Surrendered.
		£	£
26th April, 1921	£163 Conversion Loan for £100 N.W.B. 1922	266,085,713	164,067,322
	£162 Conversion Loan for £100 N.W.B. 1923		
	£161 Conversion Loan for £100 N.W.B. 1924		
	£160 Conversion Loan for £100 N.W.B. 1925		
11th July, 1921 1st Oct., 1921	£146 Conversion Loan for £100 5½% Treasury Bonds 1929	313,201,453	214,521,544
18th Feb., 1922	£136 Conversion Loan for £100 Exchequer Bonds 1st April, 1922	19,688,214	14,476,628
21st April, 1922	£134 Conversion Loan for £100 5% N.W.B. 1st October, 1922 and 1st April, 1923	94,482,098	70,509,029
		693,457,478	463,574,523
1st Jan., 1925	Issue for Cash (Tender) Average price £77/10/11·58	59,660,000	Cash proceeds. 46,302,989
25th March, 1925	Issue for Cash (Tender) Average Price £76/16/11·9	30,000,000	23,079,560
23rd Sept., 1925	Issue for Cash (Tender) Average price £76/6/0·42	40,000,000	30,608,558
		129,660,000	99,991,107
	TOTAL ISSUE ...	823,117,478	—

The operation of the Sinking Fund referred to above left the amount of this loan outstanding on the 31st March, 1926, at £760 millions.

9. 4½ per cent. Conversion Loan.—No issue of this loan has been made for cash. It is redeemable on the 1st July, 1944, or, at the Government's option, on or after the 1st July, 1940, upon giving three months' notice.

The first offer of this stock was made on 1st April, 1924, to holders of 5 per cent. War Loan, 1929-47, up to an amount of £200 millions, the terms being the exchange of £100 of 5 per cent. War Loan for £103 of Conversion Loan. About £148 millions of 5 per cent. War Loan was converted into £153 millions of 4½ per cent. Conversion Loan. An offer was also made on 15th November, 1924, to holders of 5½ per cent. Exchequer Bonds maturing on 1st February, 1925, to convert into 4½ per cent. Conversion Loan at par, with a cash payment of 2½ per cent. in respect of each £100 bonds converted. As a result some £58 millions of Conversion Loan was set up. The amount of the loan outstanding on 31st March, 1926, was £210,587,000, no redemptions having been made.



10. *Treasury Bonds*.—Several issues of these bonds have been made in and since 1920-21, either in connexion with conversion operations or to provide for the repayment of other forms of debt. The various issues may be summarised as follows:—

Prospectus.	Terms of Issue.	Redeemable on	Amount issued (including conversions).
30th Apl., 1920 30th Oct., 1920	Minimum of 5% with additional interest up to 2% according to rate of discount on Treasury Bills. Issued at par.	1st May, 1935 (or 1st May in any one of years 1925-1934, at option either of the Government or of the holders, notice being given in April of year preceding that of repayment).	£ 23,646,655
11th July, 1921... 1st Oct., 1921 ... 30th Nov., 1921...			5½% at 97 } 5½% at 98 } 5½% at 99 ...
21st Jan., 1922 } Mar., 1922, et } seq. (Tender).	5% at 99 and by tender.	1st February, 1927 ...	{ 41,102,437 69,030,000
21st Apl., 1922 } 22nd Feb., 1923 } (conversion offers). May, 1922, et } seq. (Tender).			4½% ... ..
23rd Mar., 1923 } Apl., 1923, et } seq. (Tender).	4% at 94½ and by tender.	15th April, 1933 (or at any time on or after 15th April, 1931, at option of Government <i>only</i> ).	15,000,000 45,853,000 (to 31st Mar., 1926).
15th Nov., 1924...			
		Total	£ 720,101,675

Investors in the 5½ per cent Treasury Bonds issued in 1921 were, under the prospectus, given the right to convert in 1922 into 3½ per cent. Conversion Loan at the rate of £146 of that loan for each £100 bonds surrendered. The amount of Treasury Bonds so converted was £214 millions. By this operation together with small cash repayments, the total outstanding was reduced to £481 millions on the 31st March, 1926.

**APPENDIX VI.**

NATIONAL DEBT (OTHER THAN FLOATING AND FOREIGN DEBT).

CONVERSIONS AND REPLACEMENT OF MATURITIES. 1st JANUARY, 1920, TO 31st MARCH, 1926.

*(Statement furnished by the Treasury.)*

	Debt maturing and corresponding cash issues to repay.		Conversions.		Resulting Increase + or Decrease —.		Premiums saved on National War Bonds converted.
	Paid off.	Issued.	From	To	Principal.	Interest.	
<i>March Quarter, 1920.</i>	(£ thousands)	(£ thousands)	(£ thousands)	(£ thousands)	(£ thousands)	(£ thousands)	(£ thousands)
16 Feb., 1920. 6 % Exchequer Bonds, 1920, paid off ...	65,000	—	—	—	—	} — 162	—
5½ % " " 1925, issued ..	—	65,000	—	—	—		
16 Feb., 1920. Conversions into 5½ % Exchequer Bonds, 1925 :—							
3 % Exchequer Bonds, 1920, at par...	—	—	13,174	} 99,532	{ —	+ 362	—
5 % " " " " ..	—	—	21,546			+ 162	—
6 % " " " " ..	—	—	64,812			+ 162	—
	65,000	65,000	99,532	99,532	—	+ 200	—
<i>1920-21.</i>							
1 Dec., 1920. 5 % Exchequer Bonds, 1920, paid off ...	25,200	—	—	—	—	} + 17	—
5½ % " " 1925, issued ...	—	2,200	—	—	—		
5/15 year Treasury Bonds issued ...	—	23,000	—	—	—		
<i>Conversions.</i>							
5 % National War Bonds (100) into 5 % War Loan at £105.5.3.*	—	—	80	84	+ 4	—	2
4 % National War Bonds (100) into 4 % War Loan at par.*	—	—	3,213	3,213	—	—	—
5½ % Gold £ Bonds into 5 % National War Bonds (\$1,000=£232.12.0).*	—	—	5,952	6,738	+ 786	+ 10	—
	25,200	25,200	9,245	10,035	+ 790	+ 27	2



	Debt maturing and corresponding cash issues to repay.		Conversions.		Resulting Increase + or Decrease —.		Premiums saved on National War Bonds converted.
	Paid off.	Issued.	From	To	Principal.	Interest.	
<b>1922-23.</b>							
<i>Conversions.</i>							
Brought forward ...	63,700	64,701	—	—	+ 1,001	— 177	} 4,517
5 % National War Bonds (100) into 5 % War Loan*	—	—	139,660	147,011	+ 7,351	+ 368	
4 % " " " " " 4 % " " *	—	—	646	646	—	—	
5 % " " " " " 3 1/2 % Conversion Loan (134).	—	—	70,509	94,482	+ 23,973	— 218	
5 % National War Bonds (100) into 4 1/2 % Treasury Bonds	—	—	13,847	14,234	+ 387	— 52	
5 % Exchequer Bonds, 1922, into 3 1/2 % Conversion Loan at 136.	—	—	14,477	19,688	+ 5,211	— 35	
5 1/2 % Treasury Bonds, 1929, into 3 1/2 % Conversion Loan at 146.*	—	—	214,522	313,201	+ 98,679	— 837	
5 1/2 % Gold \$ Bonds into 5 % National War Bonds*	—	—	18,830	21,315	+ 2,485	+ 30	—
	63,700	64,701	472,491	610,577	+ 139,087	— 921	4,517
<b>1923-24.</b>							
1 April, 1923. 5 % National War Bonds (Series ii), paid off.	16,700	—	}	}	}	}	}
1 Sept., 1923. 5 % National War Bonds (Series iii), paid off.	14,900	—					
4 1/2 % Treasury Bonds (weekly tender), issued.	—	2,810					
4 % Treasury Bonds, 1931-33, at £94 10s. Od., issued.	—	15,000					
4 % Treasury Bonds (weekly tender) issued.	—	16,000					
<i>Conversions.</i>							
5 % National War Bonds into 5 % War Loan* ...	—	—	70,470	74,179	+ 3,709	+ 185	} 2,120
4 % " " " " " 4 % " " *	—	—	946	946	—	—	
5 % National War Bonds into 4 1/2 % Treasury Bonds, 1932 (at par with cash payment).	—	—	11,478	11,478	—	— 57	
5 1/2 % Gold \$ Bonds into 5 % National War Bonds*	—	—	2,253	2,551	+ 298	+ 4	
	31,600	33,810	85,147	89,154	+ 6,217	— 82	2,120



## APPENDIX VII.

A.—STATEMENT SHOWING THE GROSS ANNUAL SAVING IN INTEREST THAT WOULD RESULT IF THE INTERNAL UNFUNDED DEBT (OTHER THAN FLOATING DEBT) WERE RENEWED AT THE FINAL DATE FOR REDEMPTION (a) ON A 4 PER CENT. BASIS AND (b) ON A 3½ PER CENT. BASIS.

Financial Year.	Date of Redemption.	Debt.	Amount at 31st March, 1926.	Present Annual Interest.	Annual saving if converted	
					to 4%.	to 3½%.
					(£ thousands)	
1926-27	1st Feb., 1927	5% Treasury Bonds ...	109,632	5,482	1,096	1,644
1927-28	1st Oct., 1927*	5% National War Bonds	158,116	7,906	1,581	2,372
	1st Oct., 1927*	4% National War Bonds (tax compounded).	79,984	3,999	800	1,200
1928-29	1st April, 1928*	4% National War Bonds (tax compounded).	37,885	1,869	374	561
	1st April, 1928*	5% National War Bonds	122,283	6,114	1,223	1,835
	1st Sept., 1928*	5% National War Bonds	189,820	9,491	1,898	2,847
	1st Sept., 1928*	4% National War Bonds (tax compounded).	20,613	1,031	206	309
	1st Feb., 1929	4% National War Bonds (tax compounded).	4,809	240	48	72
	1st Feb., 1929	5% National War Bonds	92,690	4,635	927	1,390
1929-30	1st April, 1929	5½% Treasury Bonds ...	30,637	1,685	460	613
1930-31	15th May, 1930	5½% Treasury Bonds ...	134,741	7,411	2,021	2,695
1932-33	15th April, 1932	4½% Treasury Bonds ...	121,266	5,457	606	1,213
1933-34	15th April, 1933	4% Treasury Bonds ...	60,853	2,434	—	304
	1st Feb., 1934	4½% Treasury Bonds ...	24,303	1,094	122	243
	Total saving possible to March, 1934 ...	...	...	...	11,362	17,298
1942-43	15th Oct., 1942	4% War Loan (tax compounded).	64,915	3,246	649	974
1944-45	1st July, 1944	4½% Conversion Loan ...	210,587	9,476	1,053	2,106
1945-46	1st Dec., 1945	4½% War Loan ...	12,804	576	64	128
1947-48	1st June, 1947	5% War Loan ...	2,044,053	102,203	20,441	30,661
			3,519,491	174,349	33,569	51,167
1927-28	1st March, 1928	There would be increases on the following:			increase	increase
		3½% War Loan ...	62,714	2,195	314	—
1929-30	26th Jan., 1930	3% Exchequer Bonds ...	15,640	469	156	78
		Totals ...	3,597,845	177,013	33,099	51,089

For Notes see end of Table B.

B.—STATEMENT SHOWING THE GROSS ANNUAL SAVING IN INTEREST THAT WOULD RESULT IF THE INTERNAL UNFUNDED DEBT (OTHER THAN FLOATING DEBT) WERE RENEWED AT THE EARLIEST DATE FOR REDEMPTION (a) ON A 4 PER CENT. BASIS AND (b) ON A 3½ PER CENT. BASIS.

Financial Year.	Earliest Date of Redemption.	Debt.	Amount at 31st March, 1926.	Present Annual Interest.	Annual saving if converted	
					to 4%.	to 3½%.
					(£ thousands)	
925-26	1st Dec., 1925	4½% War Loan ...	12,804	576	64	128
926-27	1st Feb., 1927	5% Treasury Bonds ...	109,632	5,482	1,096	1,644
	1st Feb., 1927	4½% Treasury Bonds ...	24,303	1,094	122	243
927-28	1st Oct., 1927*	5% National War Bonds	158,116	7,906	1,581	2,372
	1st Oct., 1927*	4% National War Bonds (tax compounded).	79,984	3,999	800	1,200
928-29	1st April, 1928*	4% National War Bonds (tax compounded).	37,385	1,869	374	561
	1st April, 1928*	5% National War Bonds	122,283	6,114	1,223	1,835
	1st Sept., 1928*	5% National War Bonds	189,820	9,491	1,898	2,847
	1st Sept., 1928*	4% National War Bonds (tax compounded).	20,613	1,031	206	309
	1st Feb., 1929	4% National War Bonds (tax compounded).	4,809	240	48	72
	1st Feb., 1929	5% National War Bonds	92,690	4,635	927	1,390
929-30	1st April, 1929	5½% Treasury Bonds ...	30,637	1,685	460	613
	1st June, 1929	5% War Loan ...	2,044,053	102,203	20,441	30,661
	15th Oct., 1929	4% War Loan (tax compounded).	64,915	3,246	649	974
930-31	15th April, 1930	4½% Treasury Bonds ...	121,266	5,457	606	1,213
	15th May, 1930	5½% Treasury Bonds ...	134,741	7,411	2,021	2,695
931-32	15th April, 1931	4% Treasury Bonds ...	60,853	2,434	—	304
	Total saving possible to 1932 ...	...	...	...	32,516	49,061
940-41	1st July, 1940	4½% Conversion Loan ...	210,587	9,476	1,053	2,106
	There would be increases on the following:		3,519,491	174,349	33,569	51,167
					increase	increase
1927-28	1st March, 1928	3½% War Loan ...	62,714	2,195	314	—
1929-30	28th Jan., 1930	3% Exchequer Bonds ...	15,640	469	156	78
	Totals ...		3,597,845	177,013	33,099	51,089

\* These 5% and 4% National War Bonds can be converted at the option of the holder into 5% and 4% War Loan respectively.

Notes.—(1) For the sake of comparison the interest now payable tax compounded on 4 per cent. War Loan and 4 per cent. National War Bonds is assumed to be equivalent to 5 per cent.

(2) No allowance is made above for the increase in interest due to the premium payable on 5 per cent. National War Bonds on maturity.

(3) 4 per cent. Victory Bonds and 4 per cent. Funding Loan are omitted from the above statement because they will be redeemed by the special Sinking Funds attached to them.

It should be observed that the calculations in both tables assume that conversion does not take place until the date (whether optional or final)

at which the State has the right to repay. These savings could be accelerated, if suitable conditions could be produced for voluntary conversions *before* the optional or final due dates of high interest bearing stocks.

## APPENDIX VII.

### THE RATES, &c., OF INCOME TAX, SUPER-TAX, AND ESTATE DUTY.

(A).—INCOME TAX. COMPARISON OF PRESENT SYSTEM OF DIFFERENTIATION AND GRADUATION, INTRODUCED IN 1920, WITH THAT WHICH PRECEDED IT.

(*Extract from Sixty-fourth Report of the Commissioners of Inland Revenue. (Cmd. 1436 of 1922.)\**)

" 4. The Finance Act, 1920 (adopting certain recommendations of the Royal Commission on the Income Tax, Cmd. 615), brought into operation for the year of assessment 1920-21 a radical alteration of the method hitherto in force 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.

5. For some years up to and including the year of assessment 1919-20, an individual was entitled to total exemption from tax where his income did not exceed £130. The tax on incomes exceeding that amount was graduated by deducting from the income certain fixed allowances for abatement, wife, housekeeper, children and dependent relatives, and by charging the tax on the residue of the income at rates determined by the size of the income. Differentiation was effected, where the total income did not exceed £2,500, by charging earned income at lower rates than unearned income. The fixed allowances referred to were deducted so far as possible from the earned portion of the income.

\* \* \* \* \*

7. Under the new provisions of the law, the amount of tax payable by any individual taxpayer is determined as follows. The actual income computed in accordance with the Income Tax Acts having been ascertained, the assessable income is arrived at by deducting from the actual income the amount of any earned income allowance due. The differentiation in favour of earned income is made, not as heretofore by reducing the rate of tax chargeable upon such income as compared with investment income, but by deducting one-tenth of the earned income. This deduction is given irrespective of the amount of the taxpayer's actual income, but it is not to exceed £200 for any one individual. From the assessable income there is then deducted the aggregate of the various personal allowances and deductions to which the taxpayer is entitled, and the balance constitutes the taxable income. Tax is calculated upon the taxable income; the first £225 of the taxable income of an individual is charged at half the standard rate of tax, and the remainder of the taxable income is charged at the standard rate of tax. From the amount of tax so arrived at, there remains to be deducted any relief due in respect of (a) premiums paid for life insurance or for contracts for deferred annuities, and (b) Dominion Income Tax. The balance represents the amount of tax payable.

\* Certain alterations in the amount and scope of some of the reliefs were introduced in the Finance Acts of 1924 and 1925. In particular the amount of the earned income allowance referred to in paragraph 7 was increased in 1925. (See Part C of this Appendix).



8. The following tabular statement will make clear the various stages of calculation of liability of an individual taxpayer, under the provisions in force for 1919-20 and 1920-21 respectively, viz. :—

1919-20.	1920-21.
<p><i>Gross Income (brought under Review), less Exemptions, Expenses, Overcharges, &amp;c.</i></p> <hr/> <p style="text-align: center;"><i>Taxable Income.</i></p> <p>Deduct, in terms of taxable income :—</p> <p style="padding-left: 2em;">Abatement of £120, £100 or £70 according to the amount of the taxable income.</p> <p style="padding-left: 2em;">Allowance for wife.</p> <p style="padding-left: 2em;">Allowance for housekeeper.</p> <p style="padding-left: 2em;">Allowance for children.</p> <p style="padding-left: 2em;">Allowance for dependent relatives.</p> <p style="padding-left: 2em;">Allowance for life insurance.</p> <hr/> <p>Income on which tax was received :—</p> <p style="padding-left: 2em;">Charge tax on this income at the appropriate rates applicable, by reference to the amount of the taxable income, to earned income and unearned income.</p> <p style="padding-left: 2em;">Deduct tax at the allowable rate in respect of Dominion Income Tax relief.</p> <hr/> <p>Tax Payable = Net Produce.</p>	<p><i>Gross Income (brought under Review), less Exemptions (see para. 9), Expenses, Overcharges, &amp;c.</i></p> <hr/> <p><i>Actual Income, less Earned Income Allowance.</i></p> <hr/> <p style="text-align: center;"><i>Assessable Income.</i></p> <p>Deduct, in terms of assessable income :—</p> <p style="padding-left: 2em;">Personal allowance £225 or £135.</p> <p style="padding-left: 2em;">Increased Personal Allowance where wife has earned income.</p> <p style="padding-left: 2em;">Deduction for housekeeper.</p> <p style="padding-left: 2em;">Deduction for first child.</p> <p style="padding-left: 2em;">Deduction for other children.</p> <p style="padding-left: 2em;">Deduction for dependent relatives.</p> <hr/> <p style="text-align: center;"><i>Taxable Income.</i></p> <p>Charge tax on £225 at half standard rate, and tax on remainder of taxable income at standard rate.</p> <p>Deduct tax at the allowable rate on life insurance premiums and in respect of Dominion Income Tax relief.</p> <hr/> <p>Tax Payable = Net Produce.</p>

9. Up to 1919-20, the Income Tax Acts expressly provided that where the income did not exceed a fixed amount (£130 for 1919-20), the taxpayer should be entitled to exemption. The Finance Act, 1920, does not use the term "exemption." It provides instead for personal allowances and deductions which are set against the assessable income; where the total allowances and deductions due are equal to or exceed the assessable income, no tax is payable . . . ."



C.—INCOME TAX—ALLOWANCES, &C., AND STANDARD RATES OF TAX.  
1920-21 TO 1925-26.

The following allowances, deductions and reliefs were granted to individuals whatever the total amount of the income:—

Earned Income Allowance	...	1920-21 to 1924-25, one-tenth of the earned income, not exceeding £200.
		1925-26, one-sixth of the earned income, not exceeding £250.*
Personal Allowance	... ..	Married persons, £225. Other persons, £135.
Increased Personal Allowance where wife has earned income.		Up to £45.
Widower's or Widow's Housekeeper taking care of children.		1920-21 to 1923-24, £45.
Widower's or Widow's Housekeeper		1924-25 and 1925-26, £60.
Unmarried person's widowed mother taking care of children.	{	1920-21 to 1923-24, £45. 1924-25 and 1925-26, £60.
Children under 16 years of age, or over 16 if continuing full-time education.		£36 for one child and £27 for each subsequent child.
Certain Dependent Relatives incapacitated by old age or infirmity.		£25 for each such relative.
Half the standard rate of tax (see below) is chargeable on the first £225 of taxable income.		
Allowance for Life Insurance Premiums.		Tax calculated at defined rates on premiums, subject to various restrictions.
Dominion Income Tax Relief	...	Tax calculated in accordance with statutory provisions.
Standard rate of Tax	...	1920-21 and 1921-22, 6s. in the £. 1922-23, 5s. in the £. 1923-24 and 1924-25, 4s. 6d. in the £. 1925-26, 4s. in the £.

\* Where the taxpayer (or his wife) is 65 years of age or over, and the total income does not exceed £500, the allowance of one-sixth is made from the whole income whether earned or not.

D.—SUPER-TAX.—RATES OF TAX, 1909-10 TO 1925-26.

TABLE II.

Year.	Incomes Chargeable.	Rates of Super-tax.
1909-10 to 1913-14	Exceeding £5,000	6d. for every £1 of the amount by which the total income exceeded £3,000.
1914-15 ...	Exceeding £3,000	In respect of the first £2,500 of the income ... Nil. " the excess over £2,500— For every £1 of the first £500 of the excess (to £3,000) 0 6½ <sup>c</sup> " £1 of the next £1,000 of the excess (, £4,000) 0 9½ <sup>c</sup> " £1 " " £1,000 " " (, £5,000) 1 0 <sup>c</sup> " £1 " " £1,000 " " (, £6,000) 1 2½ <sup>c</sup> " £1 " " £1,000 " " (, £7,000) 1 5½ <sup>c</sup> " £1 " " £1,000 " " (, £8,000) 1 8 <sup>c</sup> " £1 " remainder " " (above £8,000) 1 9½ <sup>c</sup>

\* The amount of Super-tax payable for 1914-15 at the rates originally fixed by Parliament was increased by one-third under the provisions of the Finance Act, 1914 (Section 3). These figures accordingly represent the rates thus increased at which Super-tax was charged for the year in question.

TABLE II—continued.

Year.	Incomes Charge-able.	Rates of Super-tax.
1915-16 1916-17 1917-18	Exceeding £3,000	In respect of the first £2,500 of the income ... Nil.
		" the excess over £2,500— <i>s. d.</i>
		For every £1 of the first £500 of the excess (to £3,000) 0 10
		" £1 of the next £1,000 of the excess (" £4,000) 1 2
		" £1 " " £1,000 " " (" £5,000) 1 6
		" £1 " " £1,000 " " (" £6,000) 1 10
		" £1 " " £1,000 " " (" £7,000) 2 2
		" £1 " " £1,000 " " (" £8,000) 2 6
		" £1 " " £1,000 " " (" £9,000) 2 10
		" £1 " " £1,000 " " (" £10,000) 3 2
		" £1 " remainder " " (above £10,000) 3 6
1918-19 1919-20	Exceeding £2,500	In respect of the first £2,000 of the income ... Nil.
		" the excess over £2,000— <i>s. d.</i>
		For every £1 of the first £500 of the excess (to £2,500) 1 0
		" £1 of the next £500 " " (" £3,000) 1 6
		" £1 " " £1,000 " " (" £4,000) 2 0
		" £1 " " £1,000 " " (" £5,000) 2 6
		" £1 " " £1,000 " " (" £6,000) 3 0
		" £1 " " £2,000 " " (" £8,000) 3 6
		" £1 " " £2,000 " " (" £10,000) 4 0
		" £1 " remainder " " (above £10,000) 4 6
1920-21 to 1924-25		Exceeding £2,000
	" the excess over £2,000— <i>s. d.</i>	
	For every £1 of the first £500 of the excess (to £2,500) 1 6	
	" £1 of the next £500 " " (" £3,000) 2 0	
	" £1 " " £1,000 " " (" £4,000) 2 6	
	" £1 " " £1,000 " " (" £5,000) 3 0	
	" £1 " " £1,000 " " (" £6,000) 3 6	
	" £1 " " £1,000 " " (" £7,000) 4 0	
	" £1 " " £1,000 " " (" £8,000) 4 6	
	" £1 " " £12,000 " " (" £20,000) 5 0	
	" £1 " " £10,000 " " (" £30,000) 5 6	
	" £1 " remainder " " (above £30,000) 6 0	
1925-26 ...	Exceeding £2,000	In respect of the first £2,000 of the income ... Nil.
		" the excess over £2,000— <i>s. d.</i>
		For every £1 of the first £500 of the excess (to £2,500) 0 9
		" £1 of the next £500 " " (" £3,000) 1 0
		" £1 " " £1,000 " " (" £4,000) 1 6
		" £1 " " £1,000 " " (" £5,000) 2 3
		" £1 " " £1,000 " " (" £6,000) 3 0
		" £1 " " £2,000 " " (" £8,000) 3 6
		" £1 " " £2,000 " " (" £10,000) 4 0
		" £1 " " £5,000 " " (" £15,000) 4 6
		" £1 " " £5,000 " " (" £20,000) 5 0
	" £1 " " £10,000 " " (" £30,000) 5 6	
	" £1 " remainder " " (above £30,000) 6 0	

## E.—ESTATE DUTY—RATES OF DUTY, 1909-10 TO 1925-26.

TABLE III.

Small Estates—where the gross value does not exceed £300—a fixed duty of 30s. may be paid.

Small Estates—where the gross value exceeds £300 and does not exceed £500—a fixed duty of 50s. may be paid.

Estates not exceeding £100 net are exempt.

Inclusive of all other Death Duties.

Where the Net Principal Value of the Estate		Rate of Duty per cent. when the death occurred			
Exceeds	and does not exceed	After 29th Apl., 1909, and before 16th Aug., 1914.	After 16th Aug., 1914, and before 1st Aug., 1919.*	After 1st July, 1919, and before 30th June, 1925.*	After 29th June, 1925.*
£ 100	£ 500	1	1	1	1
500	1,000	2	2	2	2
1,000	5,000	3	3	3	3
5,000	10,000	4	4	4	4
10,000	12,500	5	5	5	5
12,500	15,000	5	5	5	6
15,000	18,000	5	5	6	7
18,000	20,000	5	5	6	8
20,000	21,000	6	6	7	8
21,000	25,000	6	6	7	9
25,000	30,000	6	6	8	10
30,000	35,000	6	6	9	11
35,000	40,000	6	6	9	12
40,000	45,000	7	7	10	13
45,000	50,000	7	7	10	14
50,000	55,000	7	7	11	15
55,000	60,000	7	7	11	16
60,000	65,000	7	8	12	16
65,000	70,000	7	8	12	17
70,000	75,000	8	8	13	17
75,000	80,000	8	8	13	18
80,000	85,000	8	9	13	18
85,000	90,000	8	9	13	19
90,000	100,000	8	9	14	19
100,000	110,000	9	10	14	20
110,000	120,000	9	10	15	20
120,000	130,000	9	10	15	21
130,000	140,000	9	10	16	21
140,000	150,000	9	10	16	22
150,000	170,000	10	11	17	22
170,000	175,000	10	11	17	23
175,000	200,000	10	11	18	23
200,000	225,000	11	12	19	24
225,000	250,000	11	12	20	24
250,000	300,000	11	13	21	25
300,000	325,000	11	14	22	25
325,000	350,000	11	14	22	26
350,000	400,000	11	15	23	26
400,000	450,000	12	16	24	27
450,000	500,000	12	16	25	27
500,000	600,000	12	17	26	28

\* The amount of duty is, where necessary, to be reduced so as not to exceed the highest amount which would be payable at the next lower rate plus the amount by which the value of the estate exceeds the value on which the highest amount of duty would be so payable at the lower rate.

Where the Net Principal Value of the Estate		Rate of Duty per cent. when the death occurred			
Exceeds	and does not exceed	After 29th Apl., 1909, and before 16th Aug., 1914.	After 15th Aug., 1914, and before 1st Aug., 1919.*	After 31st July, 1919, and before 30th June, 1925.*	After 29th June, 1925.*
£	£				
600,000	750,000	13	18	27	28
750,000	800,000	13	18	27	29
800,000	1,000,000	14	19	28	29
1,000,000	1,250,000	15	20	30	30
1,250,000	1,500,000	15	20	32	32
1,500,000	2,000,000	15	20	35	35
2,000,000	—	15	20	40	40

\* The amount of duty is, where necessary, to be reduced so as not to exceed the highest amount which would be payable at the next lower rate plus the amount by which the value of the estate exceeds the value on which the highest amount of duty would be so payable at the lower rate.

### APPENDIX IX.

#### THE RATES, &c., OF CUSTOMS AND EXCISE DUTIES.

##### A.—TEA, COCOA, COFFEE AND CHICORY: SUGAR, &c.

TABLE I.—TEA. Consumption and Duty, 1913-14 to 1925-26.

Financial Years.	Rate of Duty.*	Quantities retained for Consumption.	Total Net Receipts of Duty.	Per head of Population.	
				Consumption.	Duty.
1.	2.	3.	4.	5	6.
<i>United Kingdom—</i>					
1913-14 ...	lb.	1,000 lb.	£	lb.	s. d.
1913-14 ...	5d.	312,351	6,499,000	6·8	2 10·1
1914-15 ...	8d.	336,840	8,628,000	7·3	3 8·9
1915-16 ...	(18 Nov.) 1s.	325,897	13,962,000	—	—
1916-17 ...	(22 Sept.) "	286,290	14,312,000	—	—
1917-18 ...	"	250,444	12,519,000	—	—
1918-19 ...	"	321,125	16,055,000	—	—
1919-20 ...	"	408,934	17,747,000	—	—
1920-21 ...	"	394,561	16,861,000	8·5	7 2·9
1921-22 ...	"	413,587	17,582,000	8·8	7 5·3
<i>Great Britain and Northern Ireland—</i>					
1922-23 ...	8d.	380,458	11,144,000	8·6	5 0·3
1923-24 ...	(15 May) "	377,003	10,731,000	8·5	4 9·8
1924-25 ...	4d.	403,228	5,971,000	9·0	2 7·9
1925-26 ...	(5 May) "	406,194	5,780,000	9·0	2 6·8

\*NOTE.—About 90 per cent. of the Tea and over 90 per cent. of the Cocos consumed in the United Kingdom are of Empire production, and therefore pay (since 1916) the preferential rate of duty, i.e., five-sixths of the rates shown in the Table. The average rate of duty paid upon Tea in 1923-4 was about 6·8d. per lb., and on Cocoa 23s. 8d. per cwt., and in consequence of the reduction in the duties in 1924, the average rates of duty in 1925-26 were only about half those for 1923-24.

TABLE II.—*COCOA. Consumption and Duty, 1913-14 to 1925-26.*

Financial Year.	Rate of Duty on Raw Cocoa.	Raw Cocoa retained for Consumption.	Net Receipts of Duty.		Per head of Population.	
			On Raw Cocoa:	On all Cocoa Goods. (a)	Consumption of Raw Cocoa.	Duty on all Cocoa Goods.
1.	2.	3.	4.	5.	6.	7.
	cwt.	cwt.	£	£	lb.	d.
<i>United Kingdom—</i>	<i>s. d.</i>					
1913-14 ...	9 4	489,000	228,000	341,000	1·2	1·8
1914-15 ...	" "	570,000	266,000	354,000	1·4	1·8
1915-16 ...	14 0	905,000	556,000	698,000	—	—
	(22 Sept.)					
	56 0					
1916-17 ...	(5 April)	511,000	1,288,000	1,580,000	—	—
	42 0					
	(22 June)					
1917-18 ...	" "	859,000	1,803,000	1,922,000	—	—
1918-19 ...	" "	1,148,000	2,406,000	2,483,000	—	—
1919-20 ...	" "	1,072,000	2,030,000	2,474,000	—	—
1920-21 ...	" "	758,000	1,345,000	1,793,000	1·8	9·2
1921-22 ...	" "	844,000	1,504,000	1,865,000	2·0	9·5
<i>Great Britain and Northern Ireland—</i>						
1922-23 ...	28 0	866,000	1,016,000	1,256,000	2·2	6·8
	(15 May)					
1923-24 ...	" "	860,000	1,015,000	1,258,000	2·2	6·8
1924-25 ...	14 0	905,000	505,000	669,000	2·3	3·6
	(30 April)					
1925-26 ...	" "	985,000	582,000	735,000	2·4	3·9

(a) Dutiable cocoa goods include (a) raw cocoa; (b) cocoa butter; (c) cocoa husks; and (d) preparations containing these substances.

TABLE III.—COFFEE AND CHICORY. *Consumption and Duty, 1913-14 to 1925-26.*

Financial Years.	Rates of Duty.		Quantities retained for Consumption.			Total Net Receipts of Duty.*	Per head of Population.	
			Coffee.	Chicory.	Total.		Consumption.	Duty.
1.	2.		3.	4.	5.	6.	7.	8.
	cwt.		cwt.	cwt.	cwt.	£	lb.	d.
<i>United Kingdom—</i>		<i>s. d.</i>						
1913-14 ...	Coffee ...	14 0	} 255,000	65,000	320,000	223,000	0·8	1·2
1914-15 ...	Chicory ...	13 3						
1915-16 ...	Coffee " ...	21 0	} 309,000	89,000	398,000	361,000	—	—
	Chicory ...	19 10						
	(22nd September)							
1916-17 ...	Coffee ...	42 0	} 257,000	58,000	315,000	675,000	—	—
	Chicory ...	39 8						
	(5th April)							
1917-18 ...	"	"	465,000	41,000	506,000	1,060,000	—	—
1918-19 ...	"	"	341,000	32,000	373,000	782,000	—	—
1919-20 ...	"	"	309,000	38,000	347,000	699,000	—	—
1920-21 ...	"	"	294,000	45,000	339,000	660,000	0·8	3·4
1921-22 ...	"	"	307,000	46,000	353,000	691,000	0·8	3·5
<i>Great Britain and Ireland—</i>								
1922-23 ...	Coffee ...	28 0	} 304,000	52,000	356,000	483,000	0·9	2·6
	Chicory ...	26 6						
	(15th May)							
1923-24 ...	"	"	312,000	68,000	380,000	494,000	1·0	2·7
1924-25* ...	Coffee ...	14 0	} 317,000	55,000	372,000	250,000	0·9	1·3
	Chicory ...	13 3						
	(5th May)							
1925-26 ...	"	"	319,000	65,000	384,000	247,000	1·0	1·3

\* Including duty upon small quantities of Coffee and Chicory mixtures and substitutes which are not included in Column 5.



TABLE IV.—SUGAR, &c. Consumption and Duty, 1913-14 to 1925-26.

NOTE.—In accordance with the usual practice the consumption (total and per head, columns 3 and 6) shown in the table is that of sugar only (including sugar in composite articles imported), Molasses, Glucose and Saccharin being omitted. But the receipts from those articles are included in the total revenue and in the average duty paid per head of the population.

Financial Years.	Main Rate of Duty.	Quantities of Sugar (Refined, Unrefined and imported in Composite articles) retained for consumption.	Total Net Receipts of Duty.		Per head of Population.	
			Sugar (Column 3).	Sugar (Column 3), Molasses, Glucose and Saccharin.	Consumption, Sugar (Column 3).	Duty (Column 5).
1.	2.	3.	4.	5.	6.	7.
<i>United Kingdom—</i>						
1918-14	cwt. 1s. 10d.	cwt. 35,075,000	£ 3,100,000	£ 3,329,000	lb. 86·0	s. d. 1 5·6
1914-15		34,300,000	3,030,000	3,266,000	83·3	1 5·0
1915-16	9s. 4d. (22nd September)	31,087,000	8,345,000	9,023,000	—	—
1916-17	14s. 0d. (5th April)	25,763,000	16,960,000	18,329,000	—	—
1917-18	14s. 0d. (5th April)	21,369,000	13,654,000	15,407,000	—	—
1918-19	25s. 8d. (23rd April)	20,089,000	24,459,000	28,098,000	—	—
1919-20	" "	31,596,000	38,175,000	42,045,000	—	—
1920-21	" "	22,890,000	27,809,000	30,445,000	55·0	13 0·8
1921-22	" "	29,114,000	34,573,000	36,760,000	69·0	15 6·7
<i>Great Britain and Northern Ireland—</i>						
1922-23	25s. 8d.	30,467,000	36,373,000	38,470,000	76·9	17 4·3
1923-24	" "	30,178,000	35,885,000	38,117,000	75·8	17 1·1
1924-25	11s. 8d. (30th April)	33,657,000*	19,687,000	20,762,000*	84·0	9 3
1925-26	" "	34,935,000†	18,193,000	19,140,000†	86·8	8 5·9

\* Includes arrears of Home-grown Sugar paid in 1925-26.

† Excludes arrears of Home-grown Sugar due to 1924-25.

(Home-grown sugar was taxed, but at lower rates than imported sugar, from 1915 to 1922—when the duty was repealed—and again from 1924 onwards.)

B.—TOBACCO : SPIRITS, BEER AND WINE : ENTERTAINMENTS.

TABLE V.—TOBACCO. *Consumption and Duty, 1913-14 to 1925-26.*

Financial Years.	Main Rate of Duty.	Quantities retained for Consumption.				Total Net Receipts of Duty.	Per head of Population.	
		Un-manufactured (Imported and Home-grown).	Imported Manufactured.		Total.		Consumption.	Duty.
			Cigars.	All other kinds including Cavendish manufactured in bond.				
1.	2.	3.	4.	5.	6.	7.	8.	9.
	lb.	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.	£	lb.	£ s. d.
<i>United Kingdom—</i>	<i>s. d.</i>							
1913-14... ..	3 8	96,639	1,304	596	98,539	18,284,000	2·2	0 8 0
1914-15... ..	" "	102,895	988	596	104,479	19,302,000	2·3	0 8 4·5
1915-16... ..	5 " 6	108,804	1,032	532	110,368	25,781,000	—	—
	(22 Sept.)*							
1916-17... ..	5 6	99,765	502	412	100,679	27,372,000	—	—
1917-18... ..	6 5	102,695	383	738	103,816	33,320,000	—	—
	(16 July)							
1918-19... ..	8 2	111,914	770	1,727	114,411	45,292,000	—	—
	(23 April)							
1919-20... ..	8 2	146,448	1,108	1,269	148,825	60,871,000	—	—
1920-21... ..	" "	136,173	260	348	136,781	55,532,000	2·9	1 3 10·0
1921-22... ..	" "	135,199	533	359	136,091	55,208,000	2·9	1 3 4·3
<i>Great Britain and Northern Ireland—</i>								
1922-23... ..	8 2	124,769	577	332	125,678	50,831,000	2·8	1 2 11·1
1923-24... ..	" "	127,852	622	341	128,815	51,882,000	2·9	1 3 3·3
1924-25... ..	" "	128,169	591	343	129,103	51,913,000	2·9	1 3 1·4
1925-26... ..	" "	133,849	613	338	134,800	53,498,000	3·0	1 3 9

\* From 22nd September, 1916, to 2nd May, 1917. From 3rd May, 1917, to 15th July, 1917, the rate was 7s. 4d. per lb.

TABLE VI.—SPIRITS. Consumption and Duty, 1918-14 to 1925-26.

Financial Year.	Main rate of duty.	Totals.		Per Head of population.	
		Quantity retained for consumption. (a) (3)	Net Receipts of Duty. (4)	Consumption. (5)	Duty. (6)
(1)	(2)				
<i>United Kingdom—</i>	Pf. Gall.	Pf. Galls.	£	Pf. Gall.	s. d.
	s. d.				
1918-14 ...	14 9	32,596,000	23,975,000	·71	10 5·9
1914-15 ...	"	34,345,000	25,274,000	·74	10 11·6
1915-16 ...	"	35,597,000	26,839,000	—	—
1916-17 ...	"	23,996,000	18,015,000	—	—
1917-18 ...	"	14,681,000	10,596,000	—	—
1918-19 ...	30 0	15,591,000	24,242,000	—	—
1919-20 ...	(23 Apr.) 50 0	24,268,000	58,804,000	—	—
1920-21 ...	(1 May) 72 6	20,166,000	71,049,000	·43	30 5·9
1921-22 ...	(20 Apr.) "	17,664,000	62,831,000	·37	26 7·0
<i>Great Britain and Northern Ireland.</i>					
1922-23 ...	"	15,162,000	53,705,000	·34	24 2·6
1923-24 ...	"	15,293,000	54,037,000	·34	24 2·9
1924-25 ...	"	14,501,000	51,054,000	·32	22 8·9
1925-26 ...	"	14,188,000	49,929,000	·31	22 1·9

(a) The quantities shown do not include spirits delivered for methylation or use in arts and manufactures, but the revenue includes the differential duty paid on imported spirits used for those purposes.

TABLE VI (A).—HOME-MADE SPIRITS. Consumption and Duty, 1918-14 to 1925-26.

Financial Year.	Quantity retained for consumption.	Net Receipts for Duty.
<i>United Kingdom—</i>	Proof gallons.	£
1918-14 ...	26,795,000	19,540,000
1914-15 ...	27,811,000	20,302,000
1915-16 ...	28,949,000	21,515,000
1916-17 ...	18,796,000	13,843,000
1917-18 ...	10,325,000	7,112,000
1918-19 ...	11,890,000	18,663,000
1919-20 ...	17,826,000	42,634,000
1920-21 ...	15,463,000	53,908,000
1921-22 ...	14,546,000	51,278,000
<i>Great Britain and Northern Ireland—</i>		
1922-23 ...	12,859,000	45,162,000
1923-24 ...	12,897,000	45,144,000
1924-25 ...	12,287,000	42,825,000
1925-26* ...	12,055,000	41,990,000

TABLE VI (B).—IMPORTED SPIRITS. Consumption and Duty, 1913-14 to 1925-26.

Financial Year.	Quantities retained for consumption.				Net Receipts of Duty.
	Rum.	Brandy.	Other Sorts.	Total.	
<i>United Kingdom—</i>	Pf. Galls.	Pf. Galls.	Pf. Galls.	Pf. Galls.	£
1913-14 ...	3,429,000	1,544,000	829,000	5,802,000	4,436,000
1914-15 ...	4,334,000	1,510,000	690,000	6,534,000	4,972,000
1915-16 ...	4,263,000	1,707,000	678,000	6,648,000	5,324,000
1916-17 ...	3,024,000	1,537,000	639,000	5,200,000	4,171,000
1917-18 ...	2,671,000	1,318,000	367,000	4,356,000	3,485,000
1918-19 ...	1,968,000	1,543,000	190,000	3,701,000	5,579,000
1919-20 ...	3,673,000	1,924,000	845,000	6,442,000	16,170,000
1920-21 ...	2,743,000	1,126,000	834,000	4,703,000	17,141,000
1921-22 ...	1,803,000	796,000	519,000	3,118,000	11,553,000
<i>Great Britain and Northern Ireland—</i>	(b)	(b)	(b)		
1922-23 ...	—	—	—	2,303,000	8,543,000
1923-24 ...	1,324,000	698,000	374,000	2,396,000	8,893,000
1924-25 ...	1,148,000	653,000	413,000	2,214,000	8,229,000
1925-26 ...	1,095,000	636,000	403,000	2,134,000	7,938,000

(a) Including small quantities of perfumed and other untested spirits which were charged by the liquid gallon.

(b) As the quantity shown for 1922-23 is that corresponding to the attributable revenue, separate figures for each description of imported spirits are not available.

TABLE VII.—*BEER. Consumption and Duty, 1913-14 to 1925-26.*

Financial Year. (1)	Main rate of Duty. (2)	Retained for Consumption.		Quantity on which duty was paid. (5)	Net Receipts of Duty. (6)	Per head of Population.	
		(3)	(4)			Consumption. (7)	Duty. (8)
<i>United Kingdom—</i>	Std. Brl. s. d.	Std. Brls.	Bulk Brls. (approx.)	Std. Brls.	£	Bulk gallons.	s. d.
1913-14 ... ..	7 9	35,446,000	36,947,000	35,252,000	13,655,000	29·1	5 11·7
1914-15 ... ..	23 0 (18 Nov.)	32,575,000	34,241,000	31,088,000	15,882,000	26·7	6 10·7
1915-16 ... ..	23 0	29,646,000	31,464,000	29,234,000	33,770,000	—	—
1916-17 ... ..	24 0 (1 April)	25,923,000	29,461,000	26,478,000	31,573,000	—	—
1917-18 ... ..	25 0 (1 April)	13,471,000	18,739,000	15,436,000	19,109,000	—	—
1918-19 ... ..	50 0 (23 April)	12,721,000	23,060,000	11,592,000	25,424,000	—	—
1919-20 ... ..	70 0 (1 May)	24,757,000	34,690,000	21,692,000	71,278,000	—	—
1920-21 ... ..	100 0 (20 April)	26,284,000	34,059,000	26,885,000	123,406,000	26·3	52 11·6
1921-22 ... ..	100 0	23,201,000	29,866,000	24,356,000	121,865,000	22·7	51 6·8
<i>Great Britain and Northern Ireland—</i>							
1922-23 ... ..	100 0	19,809,000	25,322,000	20,006,000	100,035,000	20·6	45 1·4
1923-24 ... ..	100 0 less 20s. per bulk barrel, subject to a minimum of 24s. (1 April)	21,003,000	26,597,000	20,570,000	81,702,000	21·5	36 7·7
1924-25 ... ..	"	22,214,000	28,060,000	21,952,000	81,987,000	22·5	36 6·2
1925-26 ... ..	"	22,248,000	28,040,000	22,034,000	82,403,000	22·4	36 6·9

TABLE VIII.—WINE. Consumption and Duty, 1913-14 to 1925-26.

Financial Year.	Rates of Duty.	Retained for Consumption.			Net Receipts of Duty.	Per head of Population.	
		Still.	Sparkling.	Total.		Consumption.	Duty.
<i>United Kingdom—</i>	Gallon.	Gallons.	Gallons.	Gallons.	£	Gallons.	d.
1913-14 ...	n.e. 30° ... .. 1 3 30°-42° ... .. 3 0 Additional on bottled wine— Still ... .. 1 0 Sparkling ... .. 2 6	10,431,000	1,206,000	11,637,000	1,152,000	0·25	6·0
1914-15 ...	" ... .. "	9,339,000	739,000	10,078,000	1,004,000	0·22	5·2
1915-16 ...	" ... .. "	10,455,000	683,000	11,138,000	1,078,000	—	—
1916-17 ...	" ... .. "	8,352,000	577,000	8,929,000	888,000	—	—
1917-18 ...	" ... .. "	7,064,000	549,000	7,613,000	781,000	—	—
1918-19 ...	" ... .. "	12,425,000	756,000	13,181,000	1,409,000	—	—
1919-20 ...	" ... .. "	18,196,000	1,738,000	19,934,000	2,235,000	—	—
1920-21 ...	n.e. 30° ... .. 2 6 30°-42° ... .. 6 0 Additional on bottled wine— Still ... .. 2 0 Sparkling ... .. 5 0 Sparkling 33½ per cent. ad valorem (20 April)	11,666,000	664,000	12,330,000	2,913,000	0·26	15·0

TABLE VIII.—WINE. Consumption and Duty, 1913-14 to 1925-26—continued.

Financial Year.	Rates of Duty.	Retained for Consumption.			Net Receipts of Duty.	Per head of Population.	
		Still.	Sparkling.	Total.		Consumption.	Duty.
<i>United Kingdom—</i>	Gallon.	Gallons.	Gallons.	Gallons.	£	Gallons.	d.
1921-22 ...	Additional duties on Sparkling Wine replaced by a duty of 12s. 6d. per gallon (10 May). Other rates unchanged.	10,623,000	550,000	11,173,000	2,751,000	0·24	14·0
<i>Great Britain and Northern Ireland—</i>							
1922-23 ...	Ditto ... ..	—*	—*	12,316,000	3,033,000	0·28	16·4
1923-24 ...	Ditto ... ..	12,938,000	897,000	13,835,000	3,369,000	0·31	18·1
1924-25 ...	Ditto ... ..	14,715,000	939,000	15,654,000	3,752,000	0·35	20·5
1925-26 ...	Ditto ... ..	15,049,000	968,000	16,017,000	3,746,000	0·36	20·0

\* Separate figures are not available.

TABLE IX.  
ENTERTAINMENTS.\*

Rates of Duty as imposed in 1916 and altered in the years shown.

1916.		1917.		1918.		1919.		1924.	
<i>Payt.</i>	<i>Duty.</i>	<i>Payt.</i>	<i>Duty.</i>	<i>Payt.</i>	<i>Duty.</i>	<i>Payt.</i>	<i>Duty.</i>	<i>Payt.</i>	<i>Duty.</i>
2d.		2d.		2½d.		4d.-4½d.	1½d.	6d.	
and		and		under	½d.	½d.-7d.	2d.	and	
under	½d.	under	½d.	under	½d.	Other duties		under	Nil.
2d.-6d.	1d.	2d.-4d.	1d.	2½d.-4d.	1d.	unchanged		6d.-7d.	1d.
6d.-2s. 6d.	2½d.	4d.-6d.	2d.	4d.-7d.	2d.	(1 Oct.)		7d.-8d.	1½d.
2s. 6d.-5s.	3d.	6d.-1s.	3d.	7d.-1s.	3d.			8d.	
5s.-7s. 6d.	6d.	1s.-2s.	4d.	Other duties				1s. 1d.	2d.
7s. 6d.	} 1s.	2s.-3s.	6d.	unchanged				1s. 1d.	} 3d.
12s. 6d.		3s.-5s.	9d.	(1 Aug.)				1s. 3d.	
Additional		5s. 0d.	} 1s.					1s. 3d.	} 4d.
per 10s.		7s. 6d.							
above		7s. 6d.	} 1s. 6d.					Other duties	} unchange- (2 June)
12s. 6d.	1s.	10s. 6d.							
(15 May)		10s. 6d.	} 2s.						
		15s. 0d.							
		additional							
		per 5s. above							
		15s.							
		(1 Oct.) ... 6d.							

\* NOTE.—Total relief is granted in certain cases of which the following are the most important; cases where the whole of the gross takings or, subject to certain conditions, the whole of the net proceeds are devoted to philanthropic or charitable purposes; cases where the entertainment is wholly educational or, under certain conditions, partly educational or scientific; certain school entertainments; certain industrial, professional, art and public health exhibitions.

## APPENDIX X.

### THE BURDEN OF INDIRECT TAXES ON VARIOUS INCOMES.

#### Note by the Committee.

In this Appendix we show in some detail how we have built up the figures relating to the duties on foods and the duties on alcoholic drinks, which are brought together in the table on pages 94-5 of our Report.

#### I.—DUTIES ON FOODS, &c.

##### The Tea Duty.

1. With certain modifications we follow Sir Herbert Samuel's figures, which are founded in the main on the Board of Trade budgets of 1904. (*cf. paras. 221-3 of our Report.*)

2. 1903-04 (*Duty 6d. per lb.*).—Sir Herbert gives the following figures:—

<i>Income.</i>	<i>Family Consumption.</i>	<i>Duty.</i>
£	<i>lbs.</i>	<i>s. d.</i>
50	28	13 0
100	2½	14 3
150	30	15 0
200 and above	35	17 6



The first three figures of consumption were based on the Board of Trade budgets (*see para. 240 of our Report*), checked by the results of the Excise enquiry of 1908. They are not quite high enough to correspond with the 1903-04 consumption per head of population, viz., 6.02 lbs. The figure for the income of £200 and over was calculated in such a way as to make the whole table consistent with a per head consumption of 6.02 lbs.

We are inclined to suspect that the consumption attributed to incomes of £50, £100 and £150 is rather low for the *average household of five* and that it would be better slightly to increase these figures rather than to put the consumption so high for incomes of £200 and over. But we do not think it necessary to adopt either course. *The family of two adults and three children under 16*, with which we are concerned, includes a higher proportion of young children than the average household of five, or than the population as a whole, and even in the wage-earning class (mainly represented in 1903-04 by incomes up to £150) such a family probably consumes rather less tea per head than one comprising more adults. We therefore accept the figures as representing the consumption and duty payable for the family of two adults and three children.

We doubt whether the representative adult consumer in the higher income classes (£200 and over in 1903-04) drinks appreciably more tea than in the better-paid class of wage-earners; again it may probably be taken that, in the higher income classes, children drink less tea than in the lower income classes, if only because their parents can better afford to give them milk. In view of these considerations we do not attribute a higher family consumption to the income of £200 and upwards than to the income of £150.

3. 1913-14 (*Duty 5d. per lb.*).—No further budgets being available, Sir Herbert assumed that consumption, although considerably increased in amount per head, was distributed in the same proportions as in 1903-04: this assumption seems to be well justified in view of the slightness of the difference between the two years as regards (a) the retail price of tea and (b) wages whether nominal or real. Sir Herbert appears to have increased the 1903-04 consumption figures by 11 per cent. in accordance with the general per head increase in the calendar year 1913, which was about 2 per cent. lower than that of the financial year. On this account we slightly modify his figures, again cutting out the £200 step:—

<i>Income.</i>	<i>Family Consumption.</i>	<i>Duty.</i>
£	lbs.	s. d.
50	29½	12 3
100	32	13 4
150 and above	34	14 2

4. 1918-19 (*Duty 1s. per lb.*).—Tea was rationed up to December, 1918. Statistics of consumption relating to 1,308 families, collected by the Sumner Committee on the Cost of Living of the Working Classes, provided contemporary evidence, but the consumption figures were not directly related to wages. Sir Herbert was under the disadvantage of writing his paper some time before the end of 1918-19, in the last months of which there was a large expansion in the consumption of tea. His figures, inferred from Sumner Committee results, were therefore inevitably too low. We conjecture the following figures, based on total consumption and distributed mainly by reference to the 1913-14 proportions: the £50 income is omitted on account of the rise in nominal wages, and allowance is made for the much reduced purchasing power of incomes of £100 and £150. We do not attribute any increase of consumption to the family with an income of £500 or over.

<i>Income.</i>	<i>Family Consumption.</i>	<i>Duty.</i>
£	lbs.	£ s. d.
100	28	1 8 0
150	32	1 12 0
0 and above	36	1 15 0

5. 1923-24 (*Duty 8d. per lb., with rebate of  $\frac{1}{4}$ th for Empire-grown tea*).—Since the year 1913-14 provides a more satisfactory basis than 1918-19, we found our figures on an adjustment of those for the earlier year, account being taken of the comparative purchasing power of money. The consumption of tea per head was 27 per cent. higher in 1923-24 than in 1913, and the average rate of duty was about 6-8d. per lb.

<i>Income.</i>	<i>Family Consumption.</i>	<i>Duty.</i>		
		£	s.	d.
100	37	1	1	0
150	40	1	2	8
200 and above	42 $\frac{1}{2}$	1	4	0

6. 1925-26 (*Duty 4d. per lb., with rebate of  $\frac{1}{4}$ th for Empire-grown tea*).—The Finance Act, 1924, halved the duty, and the average rate was about 3-4d. per lb. in 1925-26. Consumption per head was about 6 per cent. higher than in 1923-24. The price of tea was only about 1d. per lb. lower, and about the same distribution may be assumed as in 1923-24, giving—

<i>Income.</i>	<i>Family Consumption.</i>	<i>Duty.</i>		
		£	s.	d.
100	39	11	0	
150	42 $\frac{1}{2}$	12	0	
200 and above	45	12	9	

#### *The Duty on Sugar, &c.*

7. 1903-04 (*Main rate of duty 4s. 2d. per cwt.*).—We adopt Sir Herbert Samuel's calculations (which he again bases on the Board of Trade and the Excise figures), only making an estimated addition of 9d. duty per family on account of molasses, glucose and saccharin.

<i>Income.</i>	<i>Family Consumption.</i>	<i>Duty.</i>		
		£	s.	d.
50	302	11	11	—say 12s.
100	357	14	0	
150	370	14	6	
200 and above	383	14	10	—say 15s.

In the case of sugar we do not question the increase in consumption attributed to the incomes of £200 and above; the difference is mainly to be accounted for by the greater consumption of sugar in jam, sweets, &c., by families in better circumstances.

8. 1913-14 (*Main rate of duty 1s. 10d. per cwt.*).—Sir Herbert followed the same method of converting the 1903-4 consumption figures as in the case of tea. He appears to have taken the calendar year 1914, consumption for which was 4 $\frac{1}{2}$  per cent. less than for the financial year 1913-14. The necessary modification, with an estimated addition of 6d. per family for molasses, gives the following results:—

<i>Income.</i>	<i>Family Consumption.</i>	<i>Duty.</i>		
		£	s.	d.
50	346	6	2	
100	407	7	2	
150	428	7	6	
200 and above	438	7	8	

9. 1918-19 (*Main rate of duty from 23rd April, 1918, 25s. 8d. per cwt.*).—Sugar was rationed for the whole year. Sir Herbert based his estimates on Sumner Committee figures, which showed that actual consumption closely corresponded with the rationed allowance of  $\frac{1}{4}$  lb. per

week per person, but that the better-paid working class family and the lower middle class family consumed nearly 40 per cent. more jam and syrup than the unskilled labourer class. The actual total consumption of sugar in 1918-19 was about 6 per cent. below the Budget estimate, on which Sir Herbert's figures were framed. We modify his figures accordingly, and make an addition in respect of molasses, &c., estimated to average as much as 8s. per family.

<i>Income.</i>	<i>Family Consumption.</i>	<i>Duty.</i>
£	lbs. (sugar).	£ s. d.
100	206	2 14 0
150	235	3 1 0
200	250	3 5 6
500 and above	255	3 6 6

10. 1923-24 (Main rate of duty as in 1918-19, with rebate of  $\frac{1}{4}$ th on Empire-grown sugar).—We base our figures on those of 1918-14 as adjusted, checking them also by reference to the distribution of consumption in 1918-19.

We make allowance for the probable effect of the higher price of sugar, as compared with that of 1918-14, in slightly depressing the relative consumption of the £100 and £150 incomes. 5s. per family is included for molasses, &c.

<i>Income.</i>	<i>Family Consumption.</i>	<i>Duty.</i>
£	lbs. (sugar).	£ s. d.
100	300	3 10 0
150	355	4 3 0
200	378	4 8 0
500 and above	396	4 12 0

11. 1925-26.—(Main rate of duty 11s. 8d. per cwt. with rebate of 4s. 3 $\frac{1}{2}$ d. per cwt. on Empire sugar after 1st July.) The Finance Act, 1924, reduced the duty by more than half, the average rate of duty on refined sugar being about 2-6d. per lb. in 1923-24 and under 1-2d. per lb. in 1925-26. Consumption per head was about 14 per cent. higher than in 1923-24; the price of sugar having fallen from about 6 $\frac{1}{2}$ d. to about 3 $\frac{1}{2}$ d. per lb., we allow for slightly greater expansion in the £100 and £150 incomes than in incomes of £200 and above. 2s. per family is included for molasses, &c.

<i>Income.</i>	<i>Family Consumption.</i>	<i>Duty.</i>
£	lbs. (sugar).	£ s. d.
100	356	1 17 6
150	419	2 3 9
200	434	2 5 3
500 and above	456	2 7 6

**The Duties on Cocoa, Coffee and Chicory, Dried Fruits, Patent Medicines and Table Waters.**

12. { 1903-04 } —We adopt Sir Herbert Samuel's figures of duty,  
 { 1913-14 } which are trifling in amount, viz.:—

<i>Income.</i>	<i>Duty.</i>
£	s. d.
50 ... ..	1 0
100 ... ..	2 0
150 ... ..	3 0
200 ... ..	4 0
and above.	

13. 1918-19.—The duties on cocoa, coffee and chicory, dried fruits, patent medicines and table waters yielded £6,199,000 as compared with revenue from tea duty £16,054,000. If the distribution between incomes was similar to that suggested for tea duty, the figures would be something like:

Income.										Duty.	
£										s.	d.
100	...	...	...	...	...	...	...	...	...	10	9
150	...	...	...	...	...	...	...	...	...	12	4
200	...	...	...	...	...	...	...	...	...	13	5

The revenue in detail was as follows:—

										£	
Cocoa	...	...	...	...	...	...	...	...	...	2,482,680	
Coffee and Chicory	...	...	...	...	...	...	...	...	...	782,277	
Dried fruits	...	...	...	...	...	...	...	...	...	281,014	
Patent medicines	...	...	...	...	...	...	...	...	...	1,065,694	
Table waters	...	...	...	...	...	...	...	...	...	1,586,944	

The Sumner Committee figures for cocoa, coffee and chicory, as quoted by Sir Herbert Samuel, appear to suggest that the distribution for these commodities taken together may have been very similar to that for tea. Of the remaining three, dried fruits and table waters probably affect the larger incomes more, and patent medicines the small incomes.

On the whole we have decided to graduate the figures a little more steeply than those for tea, and to attribute a rather higher figure to the incomes from £500 upwards, thus:—

Income.										Duty.	
£										s.	d.
100	...	...	...	...	...	...	...	...	...	10	0
150	...	...	...	...	...	...	...	...	...	11	6
200	...	...	...	...	...	...	...	...	...	14	0
500	...	...	...	...	...	...	...	...	...	15	0

and above.

14. 1923-24.—The yield of the duties was £4,727,000, the detail being:

										£	
Cocoa	...	...	...	...	...	...	...	...	...	1,258,270	
Coffee and Chicory	...	...	...	...	...	...	...	...	...	493,905	
Dried fruits	...	...	...	...	...	...	...	...	...	927,909	
Patent medicines	...	...	...	...	...	...	...	...	...	1,306,778	
Table waters	...	...	...	...	...	...	...	...	...	739,840	

The same sort of distribution as that proposed above for 1918-19 would give something like:

Income.										Duty.	
£										s.	d.
100	...	...	...	...	...	...	...	...	...	7	7
150	...	...	...	...	...	...	...	...	...	8	8
200	...	...	...	...	...	...	...	...	...	10	7
500	...	...	...	...	...	...	...	...	...	11	4

and above.

The yield from patent medicines being higher (and relatively to the other duties included under that heading much higher), a flatter progression is suggested:—

Income.										Duty.	
£										s.	d.
100	...	...	...	...	...	...	...	...	...	8	3
150	...	...	...	...	...	...	...	...	...	9	0
200	...	...	...	...	...	...	...	...	...	9	9
500	...	...	...	...	...	...	...	...	...	10	6

and above.

15. 1925-26.—The yield of the duties was £3,254,000, the detail being

	£
Cocoa ... ..	735,000
Coffee and Chicory ... ..	249,000
Dried fruits ... ..	565,000
Patent medicines ... ..	1,290,000
Table waters ... ..	415,000

The same sort of distribution as that proposed for 1923-24 would give something like:

Income.	Duty.
£	s. d.
100 ... ..	5 8
150 ... ..	6 2
200 ... ..	6 8
500 ... ..	7 2

and above.

The yield from cocoa, coffee and chicory has fallen owing to the halving of the rates of duty by the Finance Act, 1924; the yield from dried fruits and table waters has also fallen and that from patent medicines has slightly increased. It is probable in the light of these figures that the burden on the smallest incomes has been relatively greater: we therefore conjecture the following figures:—

Income.	Duty.
£	s. d.
100 ... ..	6 0
150 ... ..	6 6
200 ... ..	6 9

and above.

## II.—DUTIES ON ALCOHOLIC LIQUORS.

### (A).—Suggested average figures for certain income-groups.

16. At the end of this Appendix are tables based on various hypotheses, which suggest alternative sets of per head figures for 1923-24, relating to the consumption of spirits, beer and wine in Great Britain, and the duty borne thereon.

The figures represent the average consumption and duty for drinkers, male and female being shown separately.

Three income-groups are taken, those exceeding £500, those between £200 and £500, and those up to £200.

17. The approximate total consumption, total duty, and average rates of duty—adopted for these rough calculations—were as follows in 1923-24:—

—	Consumption.	Duty.	Average duty.
Potable spirits ...	14,800,000 proof gallons	£52,200,000	s. d. 70 7 (per proof gallon)
Beer ... ..	948,600,000 gallons	£77,421,000	1 7·6 (per gallon)
Wine ... ..	13,645,000 gallons	£ 3,322,000	4 10·5 " "

18. The number of drinkers, male and female, in each income-group, has been arrived at conjecturally by the following steps:—

(i) The population of Great Britain in 1923 was 43,318,000, made up roughly as follows:—

Below 18—

14,468,000.

18 and upwards—

13,400,000 males

15,450,000 females } 28,850,000

(ii) The number of households in Great Britain in 1923 was about 10,000,000. These have been divided up, very roughly, into the following groups:—

Income of head of household.	Number of households in group.	Number of individuals in group.
<i>Group A.</i> Upwards of £500 ... ..	500,000	2,000,000
<i>Group B.</i> Between £200 and £500 ...	1,500,000	6,000,000
<i>Group C.</i> Up to £200 ... ..	8,000,000	35,000,000

(iii) It has been assumed that the numbers of adults, male and female, are distributed between these groups roughly in proportion to the total population in each; a slightly higher proportion of adults has, however, been allocated to Groups *A* and *B* than to Group *C*. The following figures have resulted:—

	<i>Adult Males.</i>	<i>Adult Females.</i>
<i>Group A</i> comprises ... ..	650,000	750,000
<i>Group B</i> ,, ... ..	1,950,000	2,250,000
<i>Group C</i> ,, ... ..	10,800,000	12,450,000

(iv) Two alternative assumptions as to the proportion of abstainers (or practical abstainers) have been applied to these figures, and certain proportions have been assumed between male and female consumption within each income-group and for each class of drink. Round figures of total consumption have been taken; they are slightly less than the actual figures, and may be regarded as making some allowance for drink consumed occasionally by practical abstainers.

These alternative assumptions constitute the main *hypotheses*, I and II. Each of these main hypotheses is sub-divided under four heads (a) to (d) according to the ratio assumed between the consumption of the several groups.

19. A table is added bringing together for comparison the results of the various hypotheses, so far as concerns the average duty borne in respect of individual consumption. We may note the following points:—

(i) It is remarkable how comparatively little the average duty borne in *Group C* is altered by variation in the other groups: under *Hypothesis I* the duty borne by a man and woman together in *Group C* only varies from £11 18s. under sub-head (b) to £10 2s. under sub-head (c), while the variation in *Group A* is from £14 6s. under sub-head (b) to £32 16s. under sub-head (c). The relative narrowness of the variation in *Group C* is due to the much larger number of persons over whom the consumption is spread.

(ii) The variation in *Group A*, and to a lesser extent in *Group B*, being considerable, the margin of error must be correspondingly wide. It is not difficult, however, to judge that in each hypothesis sub-head (b) attributes too low a consumption to *Groups A* and *B*, and therefore by inference somewhat too high a consumption to *Group C*: sub-head (c)—if not also sub-head (d)—appears to err in the opposite direction.

(iii) In *Group A*—incomes above £500—it has to be remembered that something like 60 per cent. of the incomes fall between £500 and £1,000: only about 5 per cent. exceed £5,000. An average over the whole group of about £20 duty (for a male and female consumer together) would seem reasonable.

In *Group B*—incomes between £200 and £500—a great deal of the consumption must be very moderate. One well-qualified adviser gave it as his personal opinion that the average individual of this group probably spends less than the average of *Group C*, advancing the two points that non-manual workers do not find alcohol so necessary for their sustenance, and that middle-class respectability, and expenditure on education, clothes, &c., do not admit of luxury consumption. We are inclined to doubt whether this opinion does not go too far, in view of the probability that a good deal of expenditure is transferred from beer to whisky and wine. However, we think it likely that not more than £12 would be a reasonable figure to take for average duty (for a male and female consumer together).

If £20 and £12 are taken as averages for *Groups A* and *B* respectively, the final table appended would suggest that something like £11 9s. (*Hypothesis I (a)*) or £10 10s. (*Hypothesis II (a)*) might be taken for *Group C*. We are not disposed to put the figure higher than £10 10s.

(B).—*Suggested representative figures for various incomes.*

20. We thus get as average duty figures for a male and female consumer together—

							£	s.	d.
Group A	...	...	...	...	...	...	20	0	0
„ B	...	...	...	...	...	...	12	0	0
„ C	...	...	...	...	...	...	10	10	0

In working to representative figures for various incomes we assume that, as income rises, there is a decreasing consumption of beer (except at the first steps) and an increasing consumption of spirits and wine. As regards beer, the duty on which varies according to its strength, we assume an average duty of 2½d. per pint for incomes of £100, £150 and £200, of 2¼d. per pint for incomes of £500 and £1,000, and of 3d. per pint for the higher incomes. As regards wine, we assume an average figure of duty rising from 6d. per bottle (income of £150) to 1s. 6d. per bottle (incomes of £10,000 and upwards): the rates in force varied from 5d. per bottle for still light wine (including light port) to 2s. 6d. per bottle for sparkling wine.

The figures for incomes up to £200 have in view the manual worker. The representative consumption of the clerical worker might no doubt be considerably lower.

As in the case of the tobacco duty (see *para 244 (e) of Report*) an increasing margin is allowed for “excess entertainment” in the higher incomes: in the case of spirits and wine, the margin is probably a good deal wider than in the case of tobacco.

21. The following are the speculative figures we suggest:—

1923-24.

Income.	Consumption of Man and Wife.			Duty.			Total Duty, say
	Spirits (bottles).	Beer (pints).	Wine (bottles).	Spirits.	Beer.	Wine.	
100 ...	—	650	—	£ s. d.	£ s. d.	£ s. d.	£
150 ...	5½	800	6 at 6d. duty	2 6 6	7 10 0	0 3 0	10
200 ...	7½	900	12 at 8d. "	3 3 5	8 8 9	0 8 0	12
500 ...	15	350	45 at 10d. "	6 6 10	3 12 11	1 17 6	12
1,000 ...	25	225	100 at 1s. "	10 11 5	2 6 10	5 0 0	18
2,000 ...	45	125	150 at 1s. "	19 0 6	1 11 3	7 10 0	28
5,000 ...	60	75	350 at 1s.4d. "	25 7 6	0 18 9	23 6 8	50
10,000 and upwards	90	75	800 at 1s.6d. "	38 1 3	0 18 9	60 0 0	100

22. 1925-26.—The rates of duty remained as in 1923-24. Per head consumption for the two years was—

	1923-4.	1925-6.
Spirits ... ..	·34 proof gallons	·31 proof gallons.
Beer ... ..	21·5 bulk gallons	22·4 bulk gallons.
Wine ... ..	·31 gallons	·36 gallons.

On account of the slightly greater consumption of beer in the later year we make a small addition to the figures of duty for the lower incomes—5s. for the income of £100 and 3s. for the incomes of £150 and £200. For incomes of £10,000 and over, we make an addition of £5 on account of the increased consumption of wine. For the intermediate incomes the reduced consumption of spirits is taken as roughly balancing the increase in other drinks and no alteration is made.

23. 1918-19.—This is a difficult year to deal with. As consumption was compulsorily restricted and general conditions were very different, it is impossible to say how nearly drink was distributed over consumers in the same way as in 1923-24. It would seem out of place, therefore, to make refinements on account, e.g., of the higher general cost of living in 1918-19 and the lower costs of spirits. Total consumption having been roughly similar for the two years, the consumption figures for 1918-19 have simply been taken from the 1923-24 table above and the duties worked out by reference to the then current rates.

The following round figures result:—

Income.	Duty.
£	£ s. d.
100 ... ..	2 15 0
150 ... ..	4 5 0
200 ... ..	5 5 0
500 ... ..	5 0 0
1,000 ... ..	7 10 0
2,000 ... ..	11 15 0
5,000 ... ..	20 0 0
10,000 ... ..	36 0 0
and upwards *	

24. 1913-14.—The figures of consumption have been worked back from those of the 1923-24 table.



In converting from the later year, regard has been paid particularly to the following points:—

- (i) the relatively high purchasing power of money in 1913-14.
- (ii) the much lower Income Tax in 1913-14—making a big difference in the spending power of the larger incomes.
- (iii) the greater amount of excessive drinking in 1913-14—a reason for not putting the representative drinker's consumption quite as high as we might otherwise be led to by the figures per head of population.
- (iv) the fact that spirits consumption was about twice as much in 1913-14 as in 1923-24: in view of the great difference in price (about 4s. a bottle in 1913-14) much the greatest change is taken to have occurred in the wage-earner's expenditure.
- (v) the fact that beer consumption per head in 1913-14 was about one-third greater than in 1923-24: duty per head about one-sixth of that in 1923-24: the 1913-14 duty is taken at  $\frac{1}{4}$ d. per pint for all incomes, since the gravity of beer before the War varied very little.
- (vi) the fact that wine consumption in 1913-14 was about five-sixths that of 1923-24: duty per head about one-third.

The resulting table is as follows:—

1913-14.

Income.	Consumption of man and wife.			Duty.			Total duty.
	Spirits (bottles).	Beer (pints).	Wine (bottles).	Spirits.	Beer.	Wine.	
50	9	1,000	4 at 4d. duty	£ s. d. 17 7	£ s. d. 1 0 10	£ s. d. 1. 4	£ s. 2 0
100	15	1,100	8 at 4d. "	1 9 4	1 2 11	2 8	2 15
150	18	1,200	16 at 4d. "	1 15 3	1 5 0	5 4	3 5
200	22	1,200	30 at 4d. "	2 3 1	1 5 0	10 0	4 0
500	30	350	80 at 5d. "	2 18 9	7 4	1 13 4	5 0
1,000	50	175	120 at 5d. "	4 17 11	3 8	2 10 0	7 10
2,000	70	125	260 at 6d. "	6 17 1	2 7	6 10 0	13 10
5,000 and upwards.	100	125	700 at 6d. "	9 15 10	2 7	17 10 0	27 10

25. 1903-04.—Taxation per head for all duties together was 6 per cent., or 1s. 2d. in the pound, more than in 1913-14. The following rough figures of duty are suggested.

Income.	Duty.
£	£ s. d.
50	2 5 0
100	3 0 0
150	3 10 0
200	4 5 0
500	5 5 0
1,000	8 0 0
2,000	14 10 0
5,000	29 0 0

and above.

## HYPOTHESIS I.

Factors common to Hypotheses I (a)—I (d).

	Proportion of Abstainers.	Number of Consumers.	Proportion of Male to Female Consumption.			Notional Number of Male Consumers.			
			Spirits.	Beer.	Wine.	Spirits.	Beer.	Wine.	
Group A (incomes upwards of £500)	M.	15	550,000	4	4	2	662,500	662,500	775,000
	F.	40	450,000	1	1	1			
Group B (incomes between £200 and £500).	M.	15	1,650,000	4	7	3	1,987,500	2,035,714	2,550,000
	F.	40	1,350,000	1	2	2			
Group C (incomes up to £200)	M.	15	9,150,000	4	3	3	11,017,500	11,640,000	14,130,000
	F.	40	7,470,000	1	1	2			

—	Hypothesis I (a).			Results of Hypothesis I (a).										
	Ratio of Consumption for Male of each Group.			Total Consumption (in gallons).			Per head Consumption (in gallons).			Per head Duty (male and female consumer).				
	Spirits.	Beer.	Wine.	Spirits.*	Beer.	Wine.	Spirits.*	Beer.	Wine.	Spirits.	Beer.	Wine.	Total.	
Group A ...	6	1	20	2,750,000	4,194,000	4,846,000	4·15 1·04	6·33 1·58	6·25 3·13	£ s. 14 13	£ s. 0 10	£ s. 1 11	£ s. 16 14	M.
Group B ...	8	4	5	4,126,000	51,549,000	3,986,000	2·08 0·52	25·32 7·23	1·56 1·04	7 7 1 17	2 1 0 12	0 8 0 5	9 16 2 14	M. F.
Group C ...	1	12	1	7,624,000	884,257,000	4,418,000	0·69 0·17	75·96 25·32	0·31 0·21	2 9 0 12	6 4 2 1	0 2 0 1	8 15 2 14	M. F.
	—	—	—	14,500,000	940,000,000	13,250,000	—	—	—	—	—	—	—	—
Group A ...	Hypothesis I (b).			Results of Hypothesis I (b).										
	8	2	10	1,697,000	9,738,000	3,201,000	2·56 0·64	14·70 3·67	4·13 2·06	9 1 2 5	1 4 0 6	1 0 0 10	11 5 3 1	M. F.
	2	5	4	3,394,000	74,805,000	4,213,000	1·71 0·43	36·74 10·50	1·65 1·10	6·1 1 10	3 0 0 17	0 8 0 5	9 9 2 12	M. F.
	1	10	1	9,409,000	855,457,000	5,836,000	0·85 0·21	73·49 24·50	0·41 0·27	3 0 0 15	6 0 2 0	0 2 0 1	9 2 2 16	M. F.
				14,500,000	940,000,000	13,250,000	—	—	—	—	—	—	—	—

\* Proof gallons.

—	Hypothesis I (c).			Results of Hypothesis I (c).										
	Ratio of Consumption for Male of each Group.			Total Consumption (in gallons).			Per head Consumption (in gallons).			Per head Duty (male and female consumer).				
	Spirits.	Beer.	Wine.	Spirits.*	Beer.	Wine.	Spirits.*	Beer.	Wine.	Spirits.	Beer.	Wine.	Total.	
Group A ...	12	2	9	4,282,500	18,406,000	3,214,000	6·46 1·61	27·78 6·94	4·15 2·07	£ s. 22 16 5 14	£ s. 2 5 0 11	£ s. 1 0 0 10	£ s. 26 1 6 15	M. F.
Group B ...	4	4	3	4,282,500	113,115,000	3,525,000	2·15 0·54	55·56 15·87	1·38 0·92	7 12 1 18	4 11 1 6	0 7 0 4	12 10 3 8	M. F.
Group C ...	1	5	1	5,935,000	808,479,000	6,511,000	0·54 0·13	69·46 23·15	0·46 0·31	1 18 0 9	5 13 1 18	0 2 0 2	7 13 2 9	M. F.
—	—	—	—	14,500,000	940,000,000	13,250,000	—	—	—	—	—	—	—	—
Group A ...	Hypothesis I (d).			Results of Hypothesis I (d).										
	Ratio of Consumption for Male of each Group.			Total Consumption (in gallons).			Per head Consumption (in gallons).			Per head Duty (male and female consumer).				
	Spirits.	Beer.	Wine.	Spirits.*	Beer.	Wine.	Spirits.*	Beer.	Wine.	Spirits.	Beer.	Wine.	Total.	
Group A ...	9	1	60	3,167,000	9,896,000	8,114,000	4·78 1·19	14·94 3·73	10·47 5·24	16 17 4 4	1 4 0 6	2 11 1 6	20 12 5 16	M. F.
Group B ...	4	2	6	4,750,000	60,811,000	2,670,000	2·39 0·60	29·87 8·53	1·05 0·70	8 9 2 2	2 9 0 14	0 5 0 3	11 3 2 19	M. F.
Group C ...	1	5	1	6,583,000	869,293,000	2,466,000	0·60 0·15	74·68 24·89	0·17 0·11	2 2 0 11	6 2 2 1	0 1 0 1	8 5 2 13	M. F.
—	—	—	—	14,500,000	940,000,000	13,250,000	—	—	—	—	—	—	—	—

\* Proof gallons.

HYPOTHESIS II.

*Factors common to Hypotheses II (a)—II (d).*

	Proportion of Abstainers.	Number of Consumers.	Proportion of Male to Female Consumption.			Notional Number of Male Consumers.			
			Spirits.	Beer.	Wine.	Spirits.	Beer.	Wine.	
Group A (incomes upwards of £500)	M.	15	550,000	4	4	2	681,000	681,000	812,000
	F.	30	525,000	1	1	1			
Group B (incomes between £200 and £500).	M.	20	1,550,000	4	7	3	1,859,000	1,903,000	2,374,000
	F.	45	1,237,000	1	2	2			
Group C (incomes up to £200) ...	M.	10	9,700,000	4	3	3	12,190,000	13,020,000	16,340,000
	F.	20	9,960,000	1	1	2			

—	Hypothesis II (a).			Results of Hypothesis II (a).										
	Ratio of Consumption for Male of each group.			Total Consumption (in gallons).			Per head Consumption (in gallons).			Per head Duty (Male and Female Consumer).				
	Spirits.	Beer.	Wine.	Spirits.*	Beer.	Wine.	Spirits.*	Beer.	Wine.	Spirits.	Beer.	Wine.	Total.	
Group A...	6	1	20	2,711,000	3,891,000	4,841,000	3·98 1·00	5·71 1·43	5·96 2·98	£ s. 14 1 3 11	£ s. 9 2	£ s. 1 9 15	£ s. 15 19 4 8	M. F.
Group B...	3	4	5	3,700,000	43,488,000	3,538,000	1·99 0·59	22·85 6·53	1·49 1·00	7 0 1 15	1 17 11	7 5	9 4 2 11	M. F.
Group C...	1	12	1	8,089,000	892,621,000	4,871,000	0·66 0·16	68·56 22·85	0·30 0·20	2 7 12	5 12 1 17	1 1	8 0 2 10	M. F.
	—	—	—	14,500,000	940,000,000	13,250,000	—	—	—	—	—	—	—	—
—	Hypothesis II (b).			Results of Hypothesis II (b).										
	Ratio of Consumption for Male of each group.			Total Consumption (in gallons).			Per head Consumption (in gallons).			Per head Duty (Male and Female Consumer).				
	Spirits.	Beer.	Wine.	Spirits.*	Beer.	Wine.	Spirits.*	Beer.	Wine.	Spirits.	Beer.	Wine.	Total.	
Group A...	3	2	10	1,650,000	9,075,000	3,168,000	2·42 0·60	13·33 3·33	3·90 1·95	8 11 2 3	1 2 5	19 10	10 12 2 18	M. F.
Group B...	2	5	4	3,003,000	63,399,000	3,706,000	1·62 0·40	33·31 9·52	1·56 1·04	5 14 1 8	2 14 16	8 5	8 16 2 9	M. F.
Group C...	1	10	1	9,847,000	867,526,000	6,376,000	0·81 0·20	66·63 22·21	0·39 0·26	2 17 14	5 9 1 16	2 1	8 8 2 11	M. F.
	—	—	—	14,500,000	940,000,000	13,250,000	—	—	—	—	—	—	—	—

\* Proof gallons.

—	Hypothesis II (c).			Results of Hypothesis II (c).										
	Ratio of Consumption for Male of each group.			Total Consumption (in gallons).			Per head Consumption (in gallons).			Per head Duty (male and female consumer).				
	Spirita.	Beer.	Wine.	Spirita.*	Beer.	Wine.	Spirita.*	Beer.	Wine.	Spirita.	Beer.	Wine.	Total.	
Group A ...	12	2	9	4,262,000	17,284,000	3,147,000	6·26 1·56	25·38 6·34	3·88 1·94	£ s. 22 2 5 10	£ s. 2 1 0 10	£ s. 0 19 0 9	£ s. 25 2 6 9	M. F.
Group B ...	4	4	3	3,879,000	96,596,000	3,067,000	2·09 0·52	50·76 14·50	1·29 0·86	7 8 1 17	4 3 1 4	0 6 0 4	11 17 3 5	M. F.
Group C ...	1	5	1	6,359,000	826,120,000	7,036,000	0·52 0·13	63·44 21·15	0·43 0·29	1 17 0 9	5 4 1 15	0 2 0 1	7 3 2 5	M. F.
—	—	—	—	14,500,000	940,000,000	13,250,000	—	—	—	—	—	—	—	—
—	Hypothesis II (d).			Results of Hypothesis II (d).										
	Ratio of Consumption for Male of each group.			Total Consumption (in gallons).			Per head Consumption (in gallons).			Per head Duty (male and female consumer).				
	Spirita.	Beer.	Wine.	Spirita.*	Beer.	Wine.	Spirita.*	Beer.	Wine.	Spirita.	Beer.	Wine.	Total.	
Group A ...	8	1	60	3,150,000	9,199,000	8,140,000	4·63 1·16	13·51 3·38	10·02 5·01	16 7 4 2	1 2 0 6	2 9 1 4	19 18 5 12	M. F.
Group B ...	4	2	6	4,300,000	51,413,000	2,380,000	2·31 0·58	27·01 7·72	1·00 0·67	8 3 2 1	2 4 0 13	0 5 0 3	10 12 2 17	M. F.
Group C ...	1	5	1	7,050,000	879,388,000	2,730,000	0·58 0·14	67·54 22·51	0·17 0·11	2 1 0 10	5 10 1 17	0 1 0 1	7 12 2 8	M. F.
—	—	—	—	14,500,000	940,000,000	13,250,000	—	—	—	—	—	—	—	—

\* Proof gallons.

ESTIMATES OF AVERAGE DUTY BORNE IN RESPECT OF INDIVIDUAL MALE AND FEMALE CONSUMPTION.

*Hypotheses I (a) to I (d) and II (a) to II (d).*

		I (a)	I (b)	I (c)	I (d)	II (a)	II (b)	II (c)	II (d)
		£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.
Group A ... (Incomes upwards of £500.)	Spirits ... Male ...	14 13	9 1	22 16	16 17	14 1	8 11	22 2	16 7
		3 13	2 5	5 14	4 4	3 11	2 3	5 10	4 2
	Beer ... Male ...	10	1 4	2 5	1 4	9	1 2	2 1	1 2
		3	6	11	6	2	5	10	6
	Wine ... Male ...	1 11	1 0	1 0	2 11	1 9	19	19	2 9
		15	10	10	1 6	15	10	9	1 4
		21 5	14 6	32 16	26 8	20 7	13 10	31 11	25 10
Group B ... (Incomes between £200 and £500.)	Spirits ... Male ...	7 7	6 1	7 12	8 9	7 0	5 14	7 8	8 3
		1 17	1 10	1 18	2 2	1 15	1 8	1 17	2 1
	Beer ... Male ...	2 1	3 0	4 11	2 9	1 17	2 14	4 3	2 4
		12	17	1 6	14	11	16	1 4	13
	Wine ... Male ...	8	8	7	5	7	8	6	5
		5	5	4	3	5	5	4	3
		12 10	12 1	15 18	14 2	11 15	11 5	15 2	13 9
Group C ... (Incomes up to £200.)	Spirits ... Male ...	2 9	3 0	1 18	2 2	2 7	2 17	1 17	2 1
		12	15	9	11	12	14	9	10
	Beer ... Male ...	6 4	6 0	5 13	6 2	5 12	5 9	5 4	5 10
		2 1	2 0	1 18	2 1	1 17	1 16	1 15	1 17
	Wine ... Male ...	2	2	2	1	1	2	2	1
		1	1	2	1	1	1	1	1
		11 9	11 18	10 2	10 18	10 10	10 19	9 8	10 0



## APPENDIX XI.

MEMORANDUM BY MR. W. H. COATES, LL.B.,  
B.Sc. (ECON.), ON THE INCIDENCE OF INCOME TAX.

## PART I.—INTRODUCTION.

1. The fundamental cause of the great development of direct taxation has undoubtedly been the general acceptance of the principle of "ability to pay." But this principle depends, for its validity, upon the truth of the further theory that the incidence of the tax falls upon those upon whom the tax is imposed. And while the doctrine that taxation should "be fairly distributed, and the individual share fitted with sympathy and discrimination to the back that will for many years have to bear it"\* is accepted by nearly all classes, the underlying and correlated theory that the tax cannot be passed on commands no such measure of unanimity. Few subjects indeed, arouse such a division of opinion as the incidence of the Income Tax. There are two distinct schools of thought, one founded on arguments largely based upon practical business considerations and the other on theoretical reasoning. Which view is correct? It is the purpose of this memorandum to examine the subject in greater detail than has hitherto been presented to the Committee, giving attention to the practical or statistical considerations, as well as to those drawn from pure theory. The discussion is confined entirely to the incidence of direct taxation in the form of a tax on profit margins, that is, to the direct effects of such a tax, and does not extend into the sphere of its incidental or indirect effects.

2. No attempt will therefore be made to examine or analyse those more difficult aspects of the effects of a tax which may be grouped under the head of psychological reactions. Human nature is a very complex thing, and economists have long since abandoned the conception of the simple "economic man." There is to-day a much wider conception of the numerous forces which act and re-act upon men, taken either individually or in the mass, when they are determining their course of action in business life. Decisions, which once might have been taken in the light of a few simple considerations only, are in these days the subject of much broader views as to their immediate and consequential effects. With the growth of this larger vision the opportunity for variation between man and man has similarly extended so that generalisations applied wholesale to all entrepreneurs of business have become much more liable to error. On the other hand, it is also more widely recognised that practical men of business, steeped in the technique and insistent demands of their own particular cares, are apt to take views regarding the effect of actions arising in other spheres but impinging on their own, which look primarily to the more direct and superficial results, and not to the deeper or more distant results which are in truth the object of those actions. For this reason, in theoretical or even practical investigations of what things are, sight must never be lost of what things seem. Deep-seated psychological reactions may have to be traced to the latter, rather than to the former, for when men act on erroneous impressions, it is the consequences of those acts which have to be reckoned with, and not the entirely different consequences which might have arisen from acts founded on correct impressions. Psychological reactions to taxation are not therefore necessarily dependent upon a true determination of the incidence of the tax. They may arise from fallacious reasoning, but are not less important on that account. But fortunately or unfortunately, as the view may be, these deep-seated reactions do not

\* Royal Commission on the Income Tax: Report: Cmd. 615, 1920, § 10.

lend themselves to statistical tests of a satisfactory character. For that reason they find little place in this memorandum. This is not to say that their existence is denied. On the contrary it is admitted. Warning is merely given that they are deliberately excluded, except in so far as the statistics which will be adduced may in themselves bear silent witness to the degree of their reality. For the rest, it may be noted that psychological reactions to a tax are not the monopoly of one class. For his success in life, the business man or concern depends upon environment. There can be no seller without a buyer, and the latter, as well as the former, has his psychological reaction to that function of price through which all profit, and therefore all tax, emerges.

## PART II.—PRICE DETERMINATION—THE DOCTRINAL AND THE PRACTICAL VIEW.

3. The doctrinal view is briefly that, subject to certain consequential effects of high direct taxation, an income tax of the nature of the British Income Tax imposed upon net profits cannot enter into the cost of production, and cannot be passed on, by those upon whose incomes it is laid, to the general community, i.e., to the ultimate consumer of all goods and services. This position rests mainly upon four economic laws, viz.:—the law of demand, the law of marginal utility, the principle of substitution, and the law of value or price.

4. The general law of demand, as stated by Marshall, is that:—

“The greater the amount to be sold, the smaller must be the price at which it is offered in order that it may find purchasers; or, in other words, the amount demanded increases with a fall in price, and diminishes with a rise in price” (a).

Within any given small unit of time, purchasers taken as a whole possess a definite amount of purchasing power. The distribution of that power in the acquisition of goods and services will be determined by the aggregate of their separate efforts to satisfy their several wants, within the limitations imposed by the respective individual amounts of purchasing power. Every movement of supply accordingly sets in motion a force affecting price. Marginal utilities will govern these movements.

“There is an endless variety of wants, but there is a limit to each separate want. This familiar and fundamental tendency of human nature may be stated in the law of satiable wants or of diminishing utility, thus:—The total utility of a thing to anyone (that is, the total pleasure or other benefit it yields him) increases with every increase in his stock of it, but not so fast as his stock increases. . . . That part of the thing which he is only just induced to purchase may be called his marginal purchase, because he is on the margin of doubt whether it is worth his while to incur the outlay required to obtain it. . . . And thus the law just given may be worded:—The marginal utility of a thing to anyone diminishes with every increase in the amount of it he already has” (b).

As the ultimate regulator of all demand is the demand of the ultimate private consumer, these laws express the fundamental principles which govern the conditions of price when regarded from the demand side. The law of demand and the law of marginal utility are, in fact, the main determinants of demand price, that is, the price which people are just willing to pay for a unit of any utility.

(a) Principles of Economics, Marshall, 8th edition, 1920, p. 99.

(b) *ibid.*, p. 98.

5. Just as the individuals making up the entity of the nation formulate, as consumers, demand prices for those commodities which they need for the satisfaction of their wants, so do they formulate, as producers, prices at which those commodities will be supplied. The combination of factors which may be used in the production of any commodity is not fixed and rigid, but very elastic and variable. Those who are responsible for production have always open to them a choice of the ingredients of production, and the manner in which different individuals will combine those factors will be dependent again upon many forces, varying not only with the circumstances of time and place, but also with the ability, temperament, imagination and other qualities of the individual. But one general tendency or law will be apparent, known to economists as the law of substitution.

"As far as the knowledge and business enterprise of the producers reach, they in each case choose those factors of production which are best for their purpose; the sum of the supply prices of those factors which are used is, as a rule, less than the sum of the supply prices of any other set of factors which could be substituted for them; and whenever it appears to the producers that this is not the case, they will, as a rule, set to work to substitute the less expensive method" (c).

6. Economic analysis of the process of production for consumption thus deals separately with the demand side and the supply side. The consumer constantly re-distributes his purchasing power among different commodities or different kinds and grades of the same commodity in order that the satisfaction derived from his marginal purchases may be as great as possible. On the supply side, commodities will tend to be available at the price which has been considered sufficient to call forth all the efforts which are required for their production. And every producer will always be seeking so to employ the various agents of production that the cost of those efforts is reduced to a minimum. These two sides have to be brought into relation, and economic analysis proceeds to do so through the common element of value or price. Demand price is a creature of the moment. Supply price, on the other hand, is the present effect of numerous forces set in motion in the past. As a consequence of this fundamental difference between supply and demand, economic analysis distinguishes between their long period and short period relations.

7. Over a long period, the doctrinal view is that price tends to move towards the cost of production, that cost including the normal supply prices of all the factors involved. It would thus include the averaged cost of building up a business and also the normal profits of carrying on business, those normal profits being the profits which persons engaged in the business would reasonably expect as a reward for their efforts, risk and capital, regard being had to the level of reward in businesses in general. It is further postulated that there will be a tendency for this cost of production to fall to the lowest cost of production as determined by the maximum degree of efficiency attained, under the stimulus of the competition of the best-managed businesses. The theory suggests that the cost of production—so interpreted—indicates a theoretical equilibrium between supply and demand, resulting in a theoretical price, which all the restless forces governing the business world constantly tend to produce. Real life is, however, concerned, not with the long-run trend, but with the facts of the moment. Most attention must therefore be given to the short-period relation of demand price and supply price. Demand is largely dependent upon the conditions of the moment at which it is effective. Supply has but slight mobility. It is much more inert, and in coping with the quick movements of demand must use, as best it can, the facilities which happen to be available, some being the outcome of past decisions. In these short

(c) *ibid.*, p. 241.

period circumstances, then, the law of demand is paramount. It is the relation between the conditions of demand in any small unit of time and the actual position of supply at that time which determines price. If demand is greater than supply, then in accordance with the law of demand the price will rise until demand is checked, and the two forces are in equilibrium; in the reverse case, price will fall. The quantity of supply is thus a vital factor. Its variations in relation to the demand of the moment will immediately make themselves felt.

8. The central point of modern economic theory of the determination of price turns on this movement of supply at the margin. Economic analysis suggests that the area of change of price is governed by the factor of profit—that increasing profit, or its anticipation, tends to enlarge the volume of production, and decreasing profit, or its anticipation, to diminish it—and, in either case, that there is always a quantum of supply, of varying volume, which is on the point of being produced or withheld from production. This quantum is governed by the personal judgment which has to decide whether or not to produce it. The test applied by that judgment is whether the production under consideration will be profitable or not. Every increment or decrement of supply in relation to the existing effective demand will affect price. But the price must either cover the cost of production of the marginal units produced, or it will yield to the producer a loss which will influence his subsequent volume of production. There is thus at work a continual movement of supply at a margin, which is determined by results, i.e., by profit or loss. The producer is always endeavouring to keep the final unit within the profit sphere, but in his search for additional business and additional profit he is constantly approaching the marginal line at which no profit will result, and often he will find himself carried over the line into the region of loss on his marginal units. Price is always hovering in the neighbourhood of that line, on which neither profit nor loss is made. The conclusion of economic analysis is thus that, while the broad trend of price is governed by the lowest or most efficient cost of production, that cost including normal profit and therefore such portion of normal profit as is taken by taxation of income, this stage is rarely reached in the actual conditions of life. In these conditions, the temporary positions of demand and supply are the governing factors and price is determined by the cost of the marginal products, the sale of which yields no profit, and may indeed yield a loss.

9. When this analysis of the position is connected with the incidence of a tax levied upon the margin of profit which emerges from business transactions, the conclusion, based on that analysis, is of a simple nature. In competitive conditions, the prices at which commodities are sold settle, under the influence of the fluctuations of supply and demand, on the point at which a minimum of profit, or a loss, is yielded by the marginal increments of supply, that is, the quantities which producers just think it worth while to put on the market. But it is axiomatic, with a tax on profit margins, that if there is no profit there is no tax. Hence the price realised for the marginal increments of supply bears no tax. Yet those marginal increments of supply settle the general price. So the general price also contains no element of tax, and the producer does not recover from the consumer any part of the tax that he, the producer, will bear on the result of his productive activities.

10. The practical view of price determination is much more difficult to expound. There is little logically developed or closely reasoned argument which can be set out for comparison with the preceding exposition of the economic school. With one exception, the view held by this school must be gathered from the dicta expressed by leading business representatives, well-known public men, and responsible journals (*d*). The first

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(*d*) Annex I contains typical dicta and references.

tenet of the practical view is that Income Tax enters into and forms part of the cost of production of goods and services. As a corollary of this contention, it is said that Income Tax (including Super-tax) is passed on to the ultimate consumer in the form of higher prices for goods and services. The nexus between these two views is rarely stated, but, at bottom, it appears to rest upon the general economic theory, which is discussed above, that price is determined in the long run by the normal cost of production. Given these postulates, the next step, in the view of the practical business man, is that the high cost of living must be attributed largely to the burden of the Income Tax and Super-tax. The general conclusion is then drawn that the present depression of industry, and, in particular, the diminution of British export trade compared with the pre-war position, is mainly due to heavy direct taxes, especially the Income Tax and Super-tax.

11. None of the quotations in Annexe I offers a detailed argument by which these conclusions may be subjected to a reasoned analysis. Only one writer, Mr. P. D. Leake, can be found to expound the practical view in any detail. Mr. Leake's analysis of the problem was set out in a paper read before the London Members of the Institute of Chartered Accountants on the 24th April, 1923; the paper was reproduced in *The Accountant* of the 28th April, 1923. The substance of the argument is to be found in the following passage:—

“ The level of selling prices is thus of the greatest importance to the well-being of the wage-earners, who must exchange their wages for food, clothes, shelter and amusement. But it is the employers who are the producers of all these things, and who fix prices at a level which will yield them not less than a fair average profit—otherwise it is obvious that they will gradually cease to produce. Thus, apart from current price fluctuations due to changes in supply and demand, the general level of selling prices must inevitably be based upon the cost borne by employers incidental to production, and this cost includes the employers' disproportionate burden of progressive taxation. Therefore the effect of this extra tax burden must be to foster the maintenance of high prices, and so to lay upon the wage-earners an extra burden of altogether unknown extent, but which may probably amount to not less than 85 per cent. of that part of the employers' Income Tax burden which is inevitably reflected in the retail prices of the commodities purchased by the wage-earners.”

12. The central point is that the employers, who are the producers of the food, clothes, shelter and amusement which represent the bulk of consumption, fix prices at a level which will yield them not less than a fair average profit—otherwise they will gradually cease to produce. In a letter to the *Times* of the 16th August, 1924, repeating the substance of his argument, Mr. Leake introduced an important modification. He said:—

“ All production—except that from State and municipal undertakings—arises in the hands of employers and independent workers. Employers are the price fixers, and, in the long run, they will surely either gradually cease to produce or else they will maintain selling prices at a level which will leave them a reasonable net profit after paying all outgoings, including taxes. For the most part they can, and, naturally they do, adopt the latter alternative.”

The qualification lies in the words “ in the long run ” which changes the whole basic position. These words convert the assertion of a definite fact into the statement of a tendency. The only firm point left in Mr.

Leake's argument appears to be one which approaches general economic theory; he says:—

“ Thus, apart from current price fluctuations due to changes in supply and demand, the general level of selling prices must inevitably be based upon the cost borne by employers incidental to production, and this cost includes the employers' disproportionate burden of progressive taxation.”

Here is an implied recognition of the fact that current price fluctuations are due to changes in supply and demand, but it is parenthetical only, and at once made subsidiary again to the cost of production theory. A legitimate doubt therefore remains whether Mr. Leake holds that any *de facto* price is determined by these current fluctuations of supply and demand, or by the general long-run trend of the cost of production. Mr. Leake leaves that doubt unresolved.

### PART III.—THE BASIC DIFFERENCE BETWEEN THE TWO SCHOOLS OF THOUGHT.

13. The broad difference between the process of price fixing in relation to taxation of income, as elaborated by economic argument, and as stated by Mr. Leake in explaining the views of the business school, thus lies in this. The economist conceives the broad trend of price determination to be the cost of production, that cost including all normal profits, and therefore such portion of those normal profits as is taken by taxation of income. But in the conditions of real life, economic reasoning denies that this stage is ever realised. The cross currents, fluctuations and opposing forces are too varied, too strong and too conflicting. The actual course of events progresses along an irregular line, each point on which marks the resultant of the conditions of the moment. Those conditions are determined by the current position of supply and demand, which constitute the upper and nether millstones grinding out the results of industry, in the form of profit or loss. Mr. Leake, on the other hand, gives great prominence to the long-run tendency, and appears to hold, though with some doubts, that this long-run tendency governs price at any moment. The interpolation of these doubts is evidenced by his reference to the current price fluctuations due to changes in supply and demand. The general business view, therefore, appears to be that if producers cannot maintain prices at “ a level which will leave them a reasonable net profit, after paying all outgoings, including taxes ” they will surely “ gradually cease to produce.” Therefore, it is argued, they do add the tax. On the contrary, if the economic argument is correct, they cease to produce.

14. The general economic theory of the marginal product, that is, of the quantity of supply which producers are doubtful whether to put on the market or not, appears to assume that some portion of the production of every producer is a marginal product. This assumption depends on the theory that each producer will push production up to the point at which the price yielded by the last increment of supply is just equalled by the cost of its production, so that, on that increment, neither profit nor loss is made. The price equals the cost at the margin, and therefore, so goes the theory, the price of all of that commodity on the market will be governed by a cost which yields no profit, and therefore bears no tax. It is a ready answer to this presentation of the theory that the producer will only push production to the point at which he secures a normal profit on cost, and that that normal profit will thus include all the taxes he has to bear. No doubt each producer has a marginal amount of production, that is, a variable quantity the production of which he may hesitate to undertake. And if all producers were equal in ability, the marginal production of any commodity might well be spread over the whole area of production, with a constant tendency on the part of each producer to determine his marginal production by the test of net profit after payment of income taxation.

15. But the variety of human ability has to be reckoned with. The qualities which contribute to the success of the business man are not few in number. The manner in which they can be distributed in the composition of one human mind is almost infinitely great. On the one side, therefore,—supply—there is an infinite gradation of ability, and on the other side—demand—there is a huge multitude of consumers, varying from day to day in their needs, their estimate of values, their fancies and their purchasing power. On *a priori* grounds, the normal expectation would be that these infinite variations would, when interpreted in the resultant terms of the profit or loss of the producer, show a continuously graded result, ranging from a net loss to a considerable profit, judged in relation to some fixed standard, such as the unit of capital employed or the unit of business done.

16. In such conditions, economic theory holds that the adjustments of supply to demand are constantly fluctuating, and that the point of equilibrium with capricious demand cannot be stable for any period. The effort to draw profit from the intricate movements of market conditions must always be hazardous, and, in face of the probabilities of varying human ability, it would be exceptional to find any industry in which, except perhaps in conditions of extraordinary boom, there were not producers whose calculations and hopes proved the reverse of anticipation. While, therefore, there may be for every producer a marginal area of supply, the most sensitive point of expansion or contraction would naturally lie among those producers whose ability or good fortune was least. Among any large number of producers, there will always be a certain number whose financial position is unstable. Losses may be met for a time out of reserves, accommodation from banks, or further capital put up by interested persons, but the public record of bankruptcies, reconstructions and liquidations, bears eloquent testimony to the conditions at the margin of profitable enterprise. Concerns which are on the point of withdrawal from the market have been contributing their supplies to the total offered, and their influence on the supply side has been a factor in the conditions which determine price, for, on the economic argument, this tends to be settled in any given unit of time by the demand which is effective in relation to the total quantity on offer. The addition to supply, which their activities have produced, will, by its enlargement of supply, have tended to depress the price to meet the effective demand. Yet the price influenced by this marginal production of the weak producers will have been insufficient to yield those producers a residuum of profit. Into that price can enter no element of any tax which is levied on profit, for, in the conditions which exist, no tax will be levied on those weak producers whose incremental supply on the market is a factor in the determination of price.

#### PART IV.—A STATISTICAL EXAMINATION OF THE PROBLEM.

17. The issue between the two schools of thought is thus seen to be largely a question of fact. Are the industries of the country mainly in the hands of representative concerns, whose normal cost of production determines price, as the business school contends, or, on the contrary, are they in the hands of concerns whose varying circumstances and abilities show, in competitive conditions, results varying from losses, or small profits, up to large profits, per unit of business?

18. In the course of the administration of the Income Tax, the Inland Revenue Department receives annually a large number of trading accounts, profit and loss accounts and balance sheets, showing the results of the year's business of the principal industrial, manufacturing, distributive, &c., concerns of the country. The number of accounts furnished voluntarily now approaches a quarter of a million. Part of

this unique mass of information supplemented by certain additional particulars has been used for the purpose of making a statistical contribution to the consideration of this question.

19. The scope and validity of any statistical investigation clearly depend upon the uniformity and consistency of the things to be measured, counted or compared, and consideration of the particular elements of the problem under review showed that the subject-matter was not free from difficulties. It is not proposed at this point to discuss the particular problems which arose. They are set out in some detail in Annexe II. Here it will be sufficient to summarise them very shortly. The main question was to what independent variable the dependent variable of profit could most suitably be related. After consideration, the basis which first suggested itself, viz., the unit of capital employed in the business, was rejected. There remained the unit of turnover. Although this base had its own disadvantages, on balance it was felt that its advantages far outweighed them, and on that ground it was decided that, broadly speaking, the unit of turnover constituted a generally reliable base to which the unit of profit could suitably be related. There remained the difficulty that profit, although measured, according to the rules of the Income Tax Acts, by one uniform yardstick, yet contained within itself different elements according to the status of the "person" by whom the profits were earned. In other words, the constituent elements of profit for purposes of the Income Tax are not the same for joint stock companies as for individuals, whether those individuals are sole or partnership traders. In the former case, profit excludes, and in the latter case includes, that element of profit which the economist calls "earnings of management." It was therefore decided, in order to preserve uniformity, to limit the statistical investigation to the data available in the case of companies. All these points, together with others which called for consideration, are more fully discussed, as already observed, in Annexe II.

20. Accordingly the method followed in the preparation of the statistics in Tables 1 to 7 has been to take all the companies for which information was available as to the amount of turnover, as well as of profit, within the seven groups chosen. The percentage of the amount of profit on the amount of turnover was calculated, and the cases classified according to that percentage. Eight classes have been adopted. The first contains concerns showing a loss on turnover of not less than 10 per cent.; the following six classes represent ranges of 5 per cent. of the turnover; and the eighth class covers cases making 20 per cent. or more on turnover. The tables presented show the dispersion, among these classes, of the total turnover and the total number of concerns included in the sample. Particulars are given for trading accounts ended in the two Income Tax years 1920-21 and 1922-23. (Statistics for the year 1921-22, during which the great fall in the price level took place, have been purposely omitted, because the losses sustained on stocks totally obscured the true results of trading in that year.) Each year is sub-divided into the four quarters of the year. At the foot of each quarterly column are shown the number of cases and the total turnover included therein. The seven trade groups cover the following industries:—

- (i) Cotton.
- (ii) Wool.
- (iii) Iron and steel.
- (iv) Metals.
- (v) Food.
- (vi) Wholesale distribution.
- (vii) Retail distribution.

More detailed descriptions of the industries covered are given at the foot of each table.



TABLE 1.—RELATION OF PROFIT TO TURNOVER.

(The expressions Profit and Turnover are defined in Annexe II.)

Description of Trade, &c. \*Cotton Manufacture.

Profit to Turnover percentage.	1920-1921.								1922-1923.							
	Accounts for 12 months made up to a date between :—															
	6th April and 30th June.		1st July and 30th September.		1st October and 31st December.		1st January and 5th April.		6th April and 30th June		1st July and 30th September.		1st October and 31st December.		1st January and 5th April.	
	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.
Up to -10	—	—	2.56	0.10	1.15	1.10	4.61	3.44	9.09	1.48	7.90	3.21	13.10	8.33	8.51	7.69
-9.9 to -5	1.06	0.21	—	—	1.61	0.58	8.50	7.69	12.12	3.90	2.63	7.77	7.75	6.69	10.34	8.40
-4.9 to -0	3.19	2.67	7.69	3.87	5.99	4.34	14.56	12.23	7.58	5.64	26.31	32.97	22.46	19.42	17.93	13.92
0 to 4.9...	15.96	14.08	35.90	20.53	37.10	33.01	37.14	34.81	24.24	10.65	34.21	33.24	28.61	32.62	38.60	41.75
5 to 9.9...	27.66	15.34	25.64	39.94	26.50	31.76	21.60	25.46	18.18	32.22	13.16	12.74	17.65	19.51	16.41	20.02
10 to 14.9...	28.41	33.63	12.82	20.41	16.82	18.46	8.74	11.76	13.64	10.59	7.90	4.90	6.95	8.51	4.56	3.75
15 to 19.9...	14.89	14.91	10.26	14.90	6.68	7.43	2.91	2.87	9.09	9.18	2.63	3.79	2.14	3.85	2.13	4.11
20 and over	13.83	19.16	5.13	0.25	4.15	3.32	1.94	1.74	6.06	26.34	5.26	1.38	1.34	1.07	1.52	0.36
TOTAL ...	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.
	94	(£000) 44,025	89	(£000) 15,310	434	(£000) 181,612	412	(£000) 133,310	66	(£000) 15,936	38	(£000) 5,957	374	(£000) 57,452	329	(£000) 54,515

\* The group includes Spinning, Weaving, &c.

TABLE 2.—RELATION OF PROFIT TO TURNOVER.

Description of Trade, &amp;c. \*Wool.

Profit to Turnover percentage.	1920-1921.								1922-1923.							
	Accounts for 12 months made up to a date between:—															
	6th April and 30th June.		1st July and 30th September.		1st October and 31st December.		1st January and 5th April.		6th April and 30th June.		1st July and 30th September.		1st October and 31st December.		1st January and 5th April.	
	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.
Up to -10	0·71	0·07	—	—	5·62	2·51	18·10	13·60	17·02	4·31	8·16	2·92	7·91	1·91	2·41	0·29
-9·9 to -5	—	—	3·51	2·69	5·62	3·83	5·17	4·86	2·13	0·43	2·04	0·81	2·88	1·66	2·41	0·48
-4·9 to -0	—	—	5·26	3·44	10·63	4·32	16·38	16·28	6·38	8·92	12·24	9·82	5·76	3·62	9·64	5·13
0 to 4·9 ...	10·64	9·40	14·28	7·61	21·25	42·32	15·52	13·27	6·38	12·39	14·29	10·72	19·42	22·00	27·71	30·86
5 to 9·9 ...	19·15	13·97	22·81	19·13	23·75	20·83	25·86	36·67	18·09	18·58	18·37	20·35	16·55	14·57	27·71	35·21
10 to 14·9...	26·24	29·36	22·81	25·41	13·13	9·25	11·21	8·00	21·28	27·07	18·37	19·70	23·74	34·28	19·28	18·36
15 to 19·9...	14·89	17·07	15·72	16·75	9·37	6·56	5·17	6·30	11·70	12·06	20·41	26·84	8·63	7·84	4·82	6·26
20 and over	28·37	30·13	17·54	24·97	10·63	10·38	2·59	1·02	17·02	16·24	6·12	8·84	15·11	14·12	6·02	3·41
TOTAL ...	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00
	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.
	141	(£000) 41,079	57	(£000) 18,680	160	(£000) 61,164	116	(£000) 31,413	94	(£000) 11,672	49	(£000) 5,306	139	(£000) 16,968	83	(£000) 11,347

\* The group includes Spinning, Weaving, Alpaca, Mohair, Carpets, &amp;c.

TABLE 3.—RELATION OF PROFIT TO TURNOVER.

Description of Trade, &c. \*Iron, Steel and Engineering.

Profit to Turnover percentage,	1920-1921.								1922-1923.							
	Accounts for 12 months made up to a date between :—								Accounts for 12 months made up to a date between :—							
	6th April and 30th June.		1st July and 30th September.		1st October and 31st December.		1st January and 6th April.		6th April and 30th June.		1st July and 30th September.		1st October and 31st December.		1st January and 6th April.	
	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.
Up to -10	2.15	0.88	2.48	0.33	1.80	0.53	1.42	0.25	17.38	4.49	20.78	7.77	13.37	5.48	16.67	7.46
-9.9 to -5	1.48	0.52	0.41	0.06	1.62	1.54	2.13	0.61	8.49	10.68	6.50	5.56	5.01	2.14	5.71	2.17
-4.9 to -0	3.35	0.77	2.89	1.90	4.68	4.29	7.45	3.54	8.49	5.25	9.74	11.08	9.75	5.77	7.14	11.63
0 to 4.9...	13.88	12.18	17.77	14.56	21.08	27.11	23.40	32.16	13.90	19.39	19.48	22.85	17.55	12.05	16.19	9.86
5 to 9.9...	27.27	38.29	28.93	40.25	25.95	25.57	28.37	26.99	16.99	22.42	17.53	23.04	21.45	40.25	19.05	26.17
10 to 14.9...	25.86	29.00	19.01	19.38	18.56	23.14	13.83	12.98	16.99	12.28	11.04	10.64	12.81	8.98	16.67	18.22
15 to 19.9...	13.88	7.63	15.70	10.16	10.09	10.13	9.93	16.61	6.56	6.36	9.09	9.88	7.52	12.37	6.67	5.98
20 and over	12.68	11.23	12.81	13.36	16.22	7.69	13.47	6.86	11.20	19.13	5.84	9.18	12.54	12.96	11.90	18.51
TOTAL ...	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.
	418	(£000) 85,848	242	(£000) 54,659	555	(£000) 118,739	282	(£000) 54,018	259	(£000) 25,579	154	(£000) 13,753	359	(£000) 40,097	210	(£000) 15,035

\* The group includes Ironworks, Iron and Steel (Founding, Rolling and Casting), Machinery and Mechanical Engineering (including Electrical Engineering but excluding Civil Engineering and Contracting), Shipbuilding and Marine Engineering, and combinations of the foregoing.

TABLE 4.—RELATION OF PROFIT TO TURNOVER.

Description of Trade, &amp;c. \*Miscellaneous Metal Industries.

Profit to Turnover percentage.	1920-1921.								1922-1923.							
	Accounts for 12 months made up to a date between :—															
	6th April and 30th June.		1st July and 30th September.		1st October and 31st December.		1st January and 5th April.		6th April and 30th June		1st July and 30th September.		1st October and 31st December.		1st January and 5th April.	
	Per centage of Number of Cases	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.
Up to -10	2.42	1.23	2.20	3.59	3.58	1.31	6.04	2.51	13.45	6.62	12.42	5.68	8.80	4.11	6.54	2.11
-9.9 to -5	0.81	1.96	0.88	0.11	1.12	0.79	3.30	2.58	3.51	0.88	7.45	1.99	7.04	4.04	2.80	0.87
-4.9 to -0	3.23	2.44	3.08	9.96	6.71	6.83	13.19	14.56	13.45	13.87	9.94	9.41	12.68	15.81	9.35	9.08
0 to 4.9...	18.14	16.24	21.15	16.32	25.73	29.02	28.57	38.57	21.64	32.46	21.74	34.27	26.76	35.25	22.43	36.72
5 to 9.9...	26.61	30.87	29.52	32.36	27.52	31.38	19.23	21.91	17.54	21.20	20.50	21.43	18.66	18.03	26.17	16.63
10 to 14.9...	21.37	21.25	18.06	19.29	17.00	17.65	13.19	9.21	13.45	10.28	13.05	12.97	10.21	9.40	12.15	14.45
15 to 19.9...	11.29	11.24	14.98	10.94	8.05	7.11	8.24	5.95	7.02	8.53	7.45	9.23	5.99	4.47	14.95	16.90
20 and over.	16.13	14.77	10.13	7.43	10.29	5.91	8.24	4.71	9.94	6.16	7.45	5.02	9.86	8.89	5.61	3.24
<b>TOTAL ...</b>	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.
	248	(£000) 29,791	2.27	(£000) 52,785	447	(£000) 86,904	182	(£000) 31,756	171	(£000) 9,545	161	(£000) 20,915	284	(£000) 29,233	107	(£000) 10,622

\* The group includes Railway Carriage, Wagon and Tramcar Building; Cycle and Motor Trades; Anchor Chain, Nail, Bolt, Rivet and Screw Trade; Shell Arms, Cutlery, Tools, Implements, Needles, Pins, Fish-hook and Button Trade, Locks, Safes, Wrought Iron and Steel Tubes, Wire Trade, Galvanised Sheet,

TABLE 5.—RELATION OF PROFIT TO TURNOVER.

Description of Trade. \* Miscellaneous Food Trades.

Profit to Turnover percentage.	1920-1921.								1922-1923.							
	Accounts for 12 months made up to a date between :—															
	6th April and 30th June.		1st July and 30th September.		1st October and 31st December.		1st January and 5th April.		6th April and 30th June		1st July and 30th September.		1st October and 31st December.		1st January and 5th April.	
	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.
Up to -10	—	—	2.56	0.31	2.78	0.90	7.56	2.49	—	—	2.04	0.46	2.92	0.55	2.44	0.53
-9.9 to -5	—	—	1.28	0.11	2.31	0.70	1.68	0.52	—	—	2.04	0.76	2.92	0.86	4.88	1.76
-4.9 to -0	1.84	1.93	5.13	5.12	6.95	12.22	8.40	16.26	9.72	2.19	10.20	11.73	11.68	9.87	9.76	7.44
0 to 4.9...	85.78	89.93	37.18	47.83	39.81	59.35	37.82	45.32	26.39	32.78	26.53	44.79	25.54	37.00	21.95	31.08
5 to 9.9...	26.61	16.45	14.10	19.01	18.52	14.95	19.33	10.17	25.00	14.35	16.33	12.89	20.44	19.18	35.36	38.84
10 to 14.9...	16.51	19.19	12.82	5.06	13.43	4.95	8.40	7.99	13.89	23.95	16.33	16.62	8.76	6.07	12.19	12.28
15 to 19.9...	6.42	5.44	8.98	4.56	8.33	3.85	5.88	10.19	8.33	17.85	8.16	5.36	8.76	15.32	4.88	5.60
20 and over	12.84	17.06	17.95	18.00	7.87	3.08	10.93	7.06	16.67	8.88	18.37	7.39	18.98	11.15	8.54	2.57
TOTAL ...	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.
	109	(£000) 26,416	78	(£000) 11,120	216	(£000) 88,779	119	(£000) 30,139	72	(£000) 9,777	49	(£000) 4,314	137	(£000) 22,172	82	(£000) 10,160

\* The group includes Grain Milling ; Biscuit and Bread making (Wholesale) ; Cocon, Confectionery and Fruit Preserving ; and other Miscellaneous Food Trades.

TABLE 6.—RELATION OF PROFIT TO TURNOVER.

Description of Trade. \* Wholesale Distribution.

Profit to Turnover percentage.	1920-1921.								1922-1923.							
	Accounts for 12 months made up to a date between :—								Accounts for 12 months made up to a date between :—							
	6th April and 30th June.		1st July and 30th September.		1st October and 31st December.		1st January and 5th April.		6th April and 30th June.		1st July and 30th September.		1st October and 31st December.		1st January and 5th April.	
	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.
Up to —10	—	—	0·87	0·52	3·41	1·72	4·77	1·03	4·67	1·22	5·17	1·26	2·28	0·23	2·30	1·47
—9·9 to —5	0·23	0·01	0·48	1·04	2·24	3·85	5·84	5·84	2·47	0·78	1·72	0·68	2·72	0·57	1·29	0·36
—4·9 to —0	1·13	1·11	2·18	2·56	11·52	14·51	14·93	13·54	6·87	3·47	12·08	8·81	9·28	13·02	8·69	5·29
0 to 4·9 ...	42·47	57·53	41·92	51·32	43·65	60·43	43·29	63·70	39·01	60·50	40·80	62·58	43·71	58·92	48·85	67·49
5 to 9·9 ...	20·90	22·23	20·51	17·49	16·12	12·56	17·75	12·68	20·60	20·92	20·12	18·02	19·86	18·06	18·92	16·59
10 to 14·9...	13·93	10·63	16·58	13·32	7·88	4·00	6·92	2·47	10·16	5·04	5·17	2·24	8·57	4·66	8·95	5·49
15 to 19·9...	6·51	4·18	4·36	9·37	3·42	1·10	1·73	0·47	3·03	3·44	4·60	4·36	2·72	0·99	4·09	1·51
20 and over	14·83	4·31	13·40	4·38	11·76	1·83	4·77	0·87	13·19	4·63	10·34	2·05	10·86	3·55	6·91	1·80
TOTAL ...	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00
	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.	Number of Cases.	Total Turn-over.
	445	(£000) 107,619	229	(£000) 63,421	850	(£000) 302,424	462	(£000) 138,743	364	(£000) 58,903	174	(£000) 28,051	700	(£000) 148,837	391	(£000) 69,238

\* The group includes Merchants, Warehousemen, Agents, &c., connected with the distribution of goods, produce and merchandise which is not worked upon other than by sorting or blending.

*Description of Trade. • Retail Distribution.*

Profit to Turnover percentage.	1920-1921.								1922-1923.							
	Accounts for 12 months made up to a date between :—															
	6th April and 30th June.		1st July and 30th September.		1st October and 31st December.		1st January and 5th April.		6th April and 30th June.		1st July and 30th September.		1st October and 31st December.		1st January and 5th April.	
	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.	Per centage of Number of Cases.	Per centage of Total Turn-over.
Up to —10	0·36	0·07	—	—	0·84	0·55	1·69	0·78	2·22	0·59	1·91	1·13	1·99	0·44	0·89	0·08
—9·9 to —5	—	—	1·57	1·10	1·05	1·47	1·69	1·36	1·78	1·46	1·27	0·54	1·99	0·65	1·95	1·58
—4·9 to —0	0·72	2·10	2·09	1·96	5·44	9·00	8·57	5·59	11·11	9·85	8·93	9·13	5·95	2·66	3·92	2·16
0 to 4·9...	39·93	59·06	81·94	46·10	36·82	51·01	41·43	53·75	40·01	64·26	28·66	41·94	31·51	64·77	36·23	35·96
5 to 9·9...	21·95	23·94	29·84	36·58	28·66	19·36	32·16	32·37	22·66	16·98	27·39	30·15	28·04	16·22	36·94	50·95
10 to 14·9...	23·02	9·93	16·24	8·75	12·13	14·05	7·58	3·86	8·00	3·64	16·56	9·60	15·63	10·19	12·08	6·64
15 to 19·9...	6·47	2·98	10·47	3·63	6·90	2·81	3·37	1·61	7·11	2·09	9·55	5·16	8·19	3·21	4·97	2·21
20 and over	7·55	1·92	7·85	1·88	8·16	1·75	3·51	0·68	7·11	1·13	5·73	2·35	6·70	1·86	3·02	0·42
<b>TOTAL ...</b>	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00
	Num-ber of Cases.	Total Turn-over.	Num-ber of Cases.	Total Turn-over.	Num-ber of Cases.	Total Turn-over.	Num-ber of Cases.	Total Turn-over.	Num-ber of Cases.	Total Turn-over.	Num-ber of Cases.	Total Turn-over.	Num-ber of Cases.	Total Turn-over.	Num-ber of Cases.	Total Turn-over.
	278	(£000) 37,420	191	(£000) 20,549	478	(£000) 52,427	712	(£000) 132,414	225	(£000) 23,717	157	(£000) 10,444	403	(£000) 41,473	563	(£000) 79,271

\* The group includes Purely Distributive Retailers (where the vendor renders no personal services other than in distribution, e.g., Grocer, Tobacconist, Newsagent, Green Grocer, Draper); and Semi-Industrial Retailers (having manufacturing and productive elements, e.g., Carpenter, Gasfitter, Blacksmith, Laundry, Baker, Nurseryman, Monumental Mason, Tailor). It does not include Hotels, Inns, Beerhouses, Refreshment Houses, Retailers of Beers, Wines, Spirits, and Liquors.

21. The analysis of the information gathered has been carried a little further by the preparation of two more tables, showing, for each group and for each period, the observations at the median and the lower and upper quartile points, the mean deviation about the median and the skewness of the dispersion.\*

\* Definitions of the median, quartiles, mean deviation and of the measure of skewness used are given in Annexe III.

TABLE 8.—PERCENTAGE OF PROFIT ON TURNOVER  
(COMPANIES ONLY), 1920-21.

A = Median.  
B = Quartiles.  
C = Mean Deviation about Median.  
D = Skewness.

Industrial Group.		June.	September.	December.	March.
Cotton	A	14.16	8.88	6.49	3.94
	B	7.375 18.04	6.08 12.26	2.85 10.90	0.24 8.24
	C	6.38	4.10	4.79	5.70
	D	— .27	+ .09	+ .10	+ .075
Wool ...	A	14.58	12.68	3.98	5.28
	B	10.30 21.875	8.19 19.96	3.19 10.625	-2.94 8.69
	C	6.78 H	6.44	6.42 H	7.64 H
	D	+ .26	+ .24	+ .79	— .41
Iron and steel ...	A	9.84	8.93	7.97	7.53
	B	7.22 13.89	8.03 14.70	3.34 12.52	3.22 13.79
	C	5.37	5.27	6.13	5.83
	D	+ .21	+ .73	— .01	+ .18
Metals...	A	9.06	7.82	6.76	3.97
	B	5.27 15.59	3.78 12.30	2.62 11.61	1.11 7.48
	C	6.77	6.45	5.59	5.57
	D	+ .27	+ .05	+ .08	+ .10
Food ...	A	7.17	4.80	1.67	2.60
	B	2.65 14.52	2.17 11.75	0.71 5.48	0.625 10.125
	C	6.69	6.96 H	3.92 L	6.76
	D	+ .24	+ .45	+ .60	+ .58
Wholesale ...	A	3.67	4.31	1.66	1.83
	B	1.60 9.23	2.17 10.52	0.22 4.03	0.27 3.80
	C	4.70	5.94	4.10	3.44
	D	+ .46	+ .49	+ .24	+ .12
Retail ...	A	3.43	5.33	4.17	3.79
	B	2.01 9.03	2.31 8.97	1.64 7.90	2.21 6.84
	C	3.51 L	3.90 L	3.99	3.21 L
	D	+ .60	+ .09	+ .19	+ .32

H = highest value of mean deviation.  
L = lowest value of mean deviation.



TABLE 9.—PERCENTAGE OF PROFIT ON TURNOVER  
(COMPANIES ONLY), 1922-23.

A = Median.  
B = Quartiles.  
C = Mean Deviation about Median.  
D = Skewness.

Industrial Group.		June.	September.	December.	March.
Cotton	A	8.33	1.14	2.17	1.97
	B	5.15 20.24	— 2.875 4.25	— 2.38 6.41	— 1.79 5.91
	C	8.57	5.30	6.24	5.97
	D	+ .58	— .13	— .04	+ .02
Wool ...	A	12.10	10.50	10.75	6.50
	B	4.25 16.52	3.375 17.23	3.89 14.44	3.34 10.45
	C	8.84	7.60	7.38	4.35
	D	— .28	— .03	— .30	+ .11
Iron and steel ...	A	5.91	6.50	8.31	9.125
	B	3.64 15.78	0.17 12.17	4.84 15.325	2.50 15.00
	C	9.87 H	8.33 H	7.72 H	10.88 H
	D	+ .63	— .055	+ .34	— .06
Metals ...	A	4.625	4.95	3.66	5.06
	B	0.71 10.375	1.73 11.02	0.44 8.56	1.50 12.50
	C	7.79	7.28	6.94	6.66
	D	+ .19	+ .31	+ .21	+ .35
Food ...	A	10.10	3.80	5.21	5.75
	B	3.20 15.59	2.45 11.58	2.38 15.59	1.30 8.80
	C	6.25	5.41	6.81	5.33
	D	— .11	+ .70	+ .57	— .19
Wholesale ...	A	3.22	3.58	2.30	2.36
	B	1.30 6.44	1.50 5.425	0.80 5.44	0.86 5.08
	C	4.62	3.98 L	3.83	3.51
	D	+ .25	— .06	+ .35	+ .29
Retail ...	A	2.65	4.72	2.93	5.45
	B	1.64 4.80	1.72 8.70	2.12 5.96	3.22 7.29
	C	3.00 L	4.40	3.40 L	2.72 L
	D	+ .36	+ .14	+ .58	— .10

H = highest value of mean deviation. L = lowest value of mean deviation.

22. In considering these tables, the effect of the price level movements is of considerable importance. If regard is had solely to the amount of monetary profit, 1920-21 was one of the most profitable years ever experienced by British industry. The earliest accounts included in the statistics for that year begin at a date after the 6th April, 1919, and the latest ones at the 6th April, 1920. But in any one quarter most accounts terminate on the final day of the quarter. The wholesale price index of the Statist moved as follows during the potential period reflected in the 1920-21 statistics, viz. :—

TABLE 10.—Statist, Wholesale Price Index, 1912, 1913 and 1914 = 85.			
End of month.	Index.	End of month.	Index.
1919.		1920.	
July ... ..	206.4	June ... ..	255.7
August ... ..	212.7	July ... ..	254.6
September ... ..	214.9	August ... ..	253.5
October ... ..	224.3	September ... ..	248.7
November ... ..	231.0	October ... ..	239.9
December ... ..	235.2	November ... ..	207.2
1920.		December ... ..	223.8
January ... ..	245.3		
February ... ..	260.4	1921.	
March ... ..	261.8	January ... ..	197.2
April ... ..	266.1	February ... ..	183.0
May ... ..	260.0	March ... ..	177.2

During the first 10 months of this 21 month period, prices were rising, until the peak was reached in April, 1920. Thereafter prices gradually fell. The effect of a rising or falling price level upon profit varies with the rate of turnover; accordingly, it may vary in different industries. The quicker the rate of turnover, the smaller is the effect of a movement in the price level, since, the shorter the duration of the productive or selling process, the narrower is the margin between the bought price and the sold. For the period under review, this 21 months (July, 1919 to March, 1921), the mean wholesale price index was 231.4, and the mean deviation of the monthly indices from that mean was 22.5. There can be little doubt that the normal relation between turnover and profit for any concern was subject, on account of the price level movement, to considerable displacement. Another source of disturbance may arise from the treatment of the value of stock in hand at the end of the trading year. The usual commercial practice—accepted for purposes of Income Tax—is to bring stock in hand at the end of the trading period into the accounts at its cost or market price, whichever is the lower. In times of rising prices, the increase in the market value of stock at the date of stock-taking, compared with the price at which the stock was bought, does not, under this practice, have any effect in increasing profit. For the quantity of stock in hand, the bought price debited and the stock value credited are equal, and cancel out one another. But in times of falling prices, stock is brought in at the market value, which, *ex hypothesi*, is lower than the bought price. It follows that the profit (or loss) actually realised on the transactions of the year is diminished (or increased) by the difference between the market value of stock and its bought price. In effect there is brought into the reckoning of profit (or loss) for the year concerned an anticipation of the loss which will be realised in subsequent years, i.e., those in which the stock in question will actually be sold. In consequence, the relation between profit and turnover for periods of steadily falling prices is artificially disturbed.

23. The price level during the second year under examination, 1922-23, was far more stable. The *Statist* index moved as follows during the relevant 21 months, viz.:—

TABLE 11.—*Statist, Wholesale Price Index, 1912, 1913 and 1914 = 85.*

<i>End of month.</i>	<i>Index.</i>	<i>End of month.</i>	<i>Index.</i>
1921.		1922.	
July ... ..	158.2	June ... ..	135.6
August ... ..	154.3	July ... ..	134.0
September ... ..	149.4	August ... ..	129.6
October ... ..	138.4	September ... ..	127.9
November ... ..	136.7	October ... ..	130.1
December ... ..	133.6	November ... ..	130.6
1922.		December ... ..	129.1
January ... ..	132.5		
February ... ..	132.2	1923.	
March ... ..	133.3	January ... ..	130.2
April ... ..	134.8	February ... ..	131.9
May ... ..	135.5	March ... ..	132.7

The mean level was 135.7, and the mean deviation from that mean was only 5.5, compared with 22.5 for the 1920-21 period. During the first five months, prices were still on the downward grade, so that the disturbing factors mentioned in the preceding paragraph were in operation, but to a much smaller extent.

24. What do the statistics in Tables 1-7 show? In the first place, they indicate, throughout all the changing conditions of the period covered, a considerable degree of dispersion of the variable (profit per cent. of turnover). Even in the most prosperous period, the year to June, 1920, this feature is present. It persists during the low profit period to March, 1921. The dispersion varies considerably. This appears to arise partly

from the nature of the industrial group; for instance, in five out of the eight periods, the lowest dispersion is shown by the Retail Distribution group. This accords with a *priori* expectation. Part of the variation may arise from irregularities of sampling, and from the different proportions in which any group for different periods is made up of the several industries included therein.

25. The second feature shown by this analysis is the gradual decrease of the median figure during the four periods of 1920-21, concurrently with the fall in the price level. The effect on profits of the two disturbing factors already discussed appears to have been a gradual general movement downwards.

26. The third point to be noticed is that the standard rate of Income Tax for 1920-21 was 6s., whereas for 1922-23 it was 5s. If it be true that Income Tax enters into price, and that a reduction of the rate of tax may be expected to be reflected in a decrease in prices, that decrease should apparently emerge as a reduction of trading profit, since it is upon profit that the tax is levied. On each unit of turnover, the profit should be smaller, as part of the tax originally contained therein would have been eliminated. If the reduction of the tax increased the total business done, the fall in the rate of profit on turnover might have been slightly diminished on account of the general economies resulting from an increase of business. But ignoring this factor, the reduction of the tax by one-sixth should have effected a general reduction of the variable by one-fifteenth, as follows. With tax at 6s. or 30 per cent. for any value of the variable, say 10 (10 per cent. on turnover), the variable consisted of three for tax and seven for net profit after payment of tax. Content with the seven net profit, and only having to pay tax at 5s. or 25 per cent., the trader will be in the same net position if he adds 2·3 for the tax, making a total of 9·3 compared with the previous 10, i.e., a reduction of 0·7 or one-fifteenth of the original value. The movement of the median values, from 1920-21 to 1922-23, which is shown in Table 12, makes it clear that, whatever may have been the effect of the reduction in the standard rate of tax, there are other forces which are overwhelmingly more potent. In the June and September quarters, there is a distinct downward movement of the median, but its magnitude in each case far surpasses the hypothetical one-fifteenth computed above. In the December and March quarters, the movement is upwards but the powerful effect of the decline in the value of trading stocks in 1920-21 robs the figures of any comparative value. The movements of skewness have also been brought together in Table 13. Their irregularity is very striking, even in the June and September quarters, which are comparatively free from the influence of an abrupt fall in trading stock values. It seems clear from these comparisons that the current fluctuations in supply and demand are of supreme importance in the determination of profit or loss, and, therefore, of price.

TABLE 12.—MEDIANS. Movement, 1920-21 to 1922-23.

	June.				September.			
	1920-21.	1922-23.	Plus.	Minus.	1920-21.	1922-23.	Plus.	Minus.
Cotton ...	14·16	8·33	—	5·83	8·88	1·14	—	7·74
Wool ...	14·58	12·10	—	2·48	12·68	10·50	—	2·18
Iron and Steel	9·84	5·91	—	3·93	8·93	6·50	—	2·43
Metals ...	9·06	4·62	—	4·44	7·82	4·95	—	2·87
Food ...	7·17	10·10	2·93	—	4·80	3·80	—	1·00
Wholesale ...	3·67	3·22	—	0·45	4·31	3·58	—	0·73
Retail ...	3·43	2·65	—	0·78	5·33	4·72	—	0·61

	December.				March.			
	1920-21.	1922-23.	Plus.	Minus.	1920-21.	1922-23.	Plus.	Minus.
Cotton ...	6.49	2.17	—	4.32	3.94	1.97	—	1.97
Wool ...	3.98	10.75	6.77	—	5.28	6.50	1.22	—
Iron and Steel	7.97	8.31	0.34	—	7.53	9.12	1.59	—
Metals ...	6.76	3.66	—	3.10	3.97	5.06	1.09	—
Food ...	1.67	5.21	3.54	—	2.60	5.75	3.15	—
Wholesale ...	1.66	2.30	0.64	—	1.83	2.36	0.53	—
Retail ...	4.17	2.93	—	1.24	3.79	5.45	1.66	—

TABLE 13.—SKEWNESS. Movement from 1920-21 to 1922-23.

	June.				September.			
	1920-21.	1922-23.	Plus.	Minus.	1920-21.	1922-23.	Plus.	Minus.
Cotton ...	-0.27	+0.58	0.85	—	+0.09	-0.13	—	0.22
Wool ...	+0.26	-0.28	—	0.54	+0.24	-0.03	—	0.27
Iron and Steel	+0.21	+0.63	0.42	—	+0.73	-0.055	—	0.78
Metals ...	+0.27	+0.19	—	0.08	+0.05	+0.31	0.26	—
Food ...	+0.24	-0.11	—	0.35	+0.45	+0.70	0.25	—
Wholesale ...	+0.46	+0.25	—	0.21	+0.49	-0.06	—	0.55
Retail ...	+0.60	+0.36	—	0.24	+0.09	+0.14	0.05	—

	December.				March.			
	1920-21.	1922-23.	Plus.	Minus.	1920-21.	1922-23.	Plus.	Minus.
Cotton ...	+0.10	-0.04	—	0.14	+0.075	+0.02	—	0.05
Wool ...	+0.79	-0.30	—	1.09	-0.41	+0.11	0.52	—
Iron and Steel	-0.01	+0.34	0.35	—	+0.18	-0.06	—	0.24
Metals ...	+0.08	+0.21	0.13	—	+0.10	+0.35	0.25	—
Food ...	+0.60	+0.57	—	0.03	+0.58	-0.19	—	0.77
Wholesale ...	+0.24	+0.35	0.11	—	+0.12	+0.29	0.17	—
Retail ...	+0.19	+0.58	0.39	—	+0.32	-0.10	—	0.42

27. The final and most relevant characteristic of these statistics is the general dispersion of the variable. The table for each group and for each period shows the familiar distribution common to practically all phenomena when treated statistically, namely, the existence of a certain point, or region, about or within which the number of instances or occurrences is great, associated with a progressive decrease in the number of instances on either side of that point or region, as the distance therefrom increases. For the present purpose the point of

importance is that a material portion of the total turnover is being done at a loss or at no profit. In periods of boom, when demand is far in excess of supply, competitive conditions tend to disappear, and to be replaced by monopoly considerations. But even in the most profitable period here analysed, that to June, 1920, there is evidence that in practically all groups some part of the total turnover was sold at a loss. Table 14 shows the proportion of the total turnover for each group and period. The existence of marginal concerns is clearly indicated. The progressive fall in the price level during the 1920-21 period threw more and more concerns down into this marginal position, though the movement was no doubt exaggerated by the heavy amounts written off the value of stocks at the end of the trading period. For this reason, the position can be studied more advantageously for the 1922-23 period, during which prices were relatively stable. In this period, there is a large proportion of the total turnover on the margin, so large that it is difficult to avoid the conclusion that many sellers were admittedly doing business, during the depression, at prices which were not expected to cover the whole cost of production. That course is undoubtedly common in such conditions. Orders will tend to be taken at a price which is sufficient to cover all prime costs, together with such portion of supplementary costs as the particular producer in the particular circumstances is able to obtain.

TABLE 14.  
**TURNOVER ON WHICH NO PROFIT WAS MADE.**  
*Expressed as a percentage of Total Turnover.*

	Cotton.	Wool.	Metals.		Food.	Distribution.	
			Iron and Steel.	Miscellaneous.		Wholesale.	Retail.
<b>1920-21.</b>							
Accounts for 12 months made up to a date between:—							
6th April and 30th June, 1920.	2.88	0.07	1.67	5.63	1.93	1.12	2.17
1st July and 30th September, 1920.	3.97	6.13	2.29	13.66	5.54	4.12	3.06
1st October and 31st December, 1920.	6.02	10.66	6.36	8.93	13.82	20.08	11.02
1st January and 5th April, 1921.	23.36	34.74	4.40	19.65	19.27	20.41	7.73
<b>1922-23.</b>							
Accounts for 12 months made up to a date between:—							
6th April and 30th June, 1922.	11.02	13.66	20.42	21.37	2.19	5.47	11.90
1st July and 30th September, 1922.	45.95	13.55	24.41	17.08	12.95	10.75	10.80
1st October and 31st December, 1922.	34.44	7.19	13.39	23.96	11.28	13.82	3.75
1st January and 5th April, 1923.	30.01	5.90	21.26	12.06	9.73	7.12	3.82

## PART V.—THEORETICAL ANALYSIS SUGGESTED BY THE STATISTICAL INVESTIGATION.

28. The statistics collected for each of the seven industrial groups covered are not, of course, absolutely homogeneous, inasmuch as each group includes several sub-groups. Any objection on this ground might, indeed, be carried further by the contention that even in any particular trade, the aggregate supply and demand is scattered over numerous markets, each distinguished by some particular peculiarity of price, value or otherwise. There are two answers to this objection. First, if these statistical groups presented are classified in smaller groups, the same characteristic of a wide dispersion is found to exist, although the narrower scope of the sample makes the dispersion much more irregular. Secondly, although separate markets for different species of one genus may be distinguished from one another by particular characteristics, the principle of substitution maintains competition between them. Thus, while no one another in general utility may present many divergences in detail, but consumers in seeking the maximum satisfaction of their wants will not refrain from comparing their respective prices, having due regard at the same time to their comparative advantages and disadvantages. The selection of a motor car affords an excellent illustration of the working of the principle of substitution on competitive supplies.

29. The general characteristic of dispersion of the relation between profit and turnover disclosed by the statistics may be illustrated by diagram 1, in which the contribution of the different components of supply at gradually increasing cost per unit of turnover is shown for the year 1922-23.\* The lowest cost per unit, i. e., those of the most profitable concerns, are placed on the left, and higher costs are arranged in ascending order with the least profitable concerns on the extreme right. Cost as a percentage of turnover, i. e., of sale price, is shown as the ordinate,\* and the proportion of the total sales or turnover as the abscissa.\* The loss resulting when cost exceeds price is shown by shading. The diagram represents the aggregate of the seven industrial groups dealt with in Part IV.

30. Diagram 1 is shown in two dimensions, length horizontally and height vertically, but, as a preliminary to a further examination of the internal building up of the element of profits, it will be convenient to show it also in three dimensions, as in diagram 2. In this form, each business is represented by a solid block, of which the thickness along OX multiplied by the width along OZ represents the amount of the business or turnover of the several concerns taken singly, and the height measured along OY again signifies the average percentage of cost to price for each concern. As before, the lowest cost or highest profit concerns are on the left, the highest cost or greatest loss concerns are on the right, and those in between are again arrayed in order of magnitude of the relation of cost to price. In this diagram, designed to relate to separate concerns, the drawing is illustrative only and does not purport to adhere to the precise actualities of the statistics, simply because the complexity of reality would destroy the lucidity of the diagram and obscure the tendency it is designed to illustrate. Diagram 2 thus shows in perspective a series of vertical strata, rising one behind the other, each representing a typical business. The right-hand side of the solid series of steps shown in diagram 2 represents the same phenomenon of the relation of cost to price as is presented in two dimensions in diagram 1.

31. In this diagram each block pictures the results of a year's trading for a concern. But these business results for a year as a whole are the

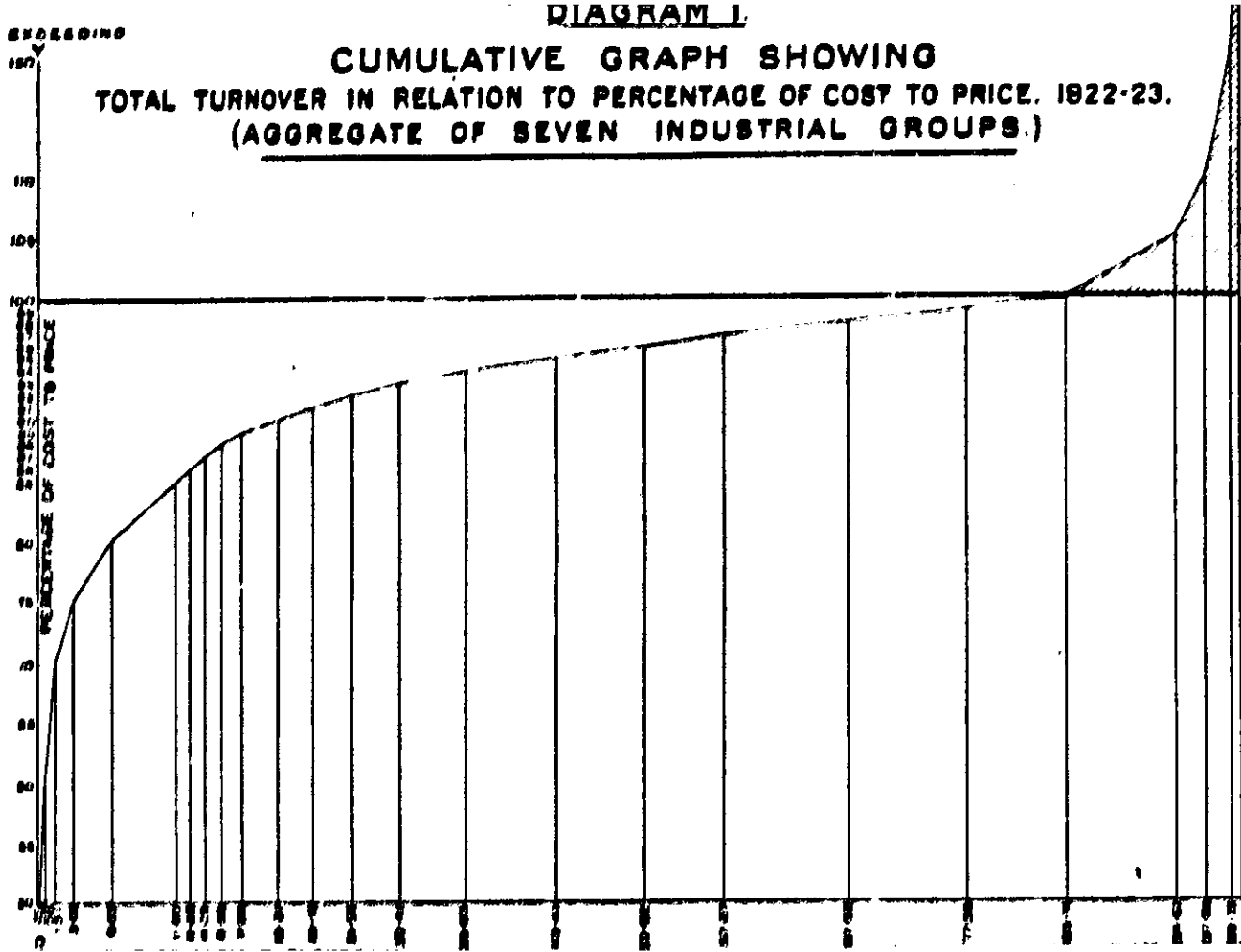
\* The figures for this graph are taken from Table 15 in Part VI showing the dispersion of the percentage of profit to turnover.

\* The ordinate is the vertical measurement on the line or axis OY drawn from the origin O, and the abscissa is the horizontal measurement on the line or axis OX.

NOT EXCEEDING

DIAGRAM I.

**CUMULATIVE GRAPH SHOWING  
TOTAL TURNOVER IN RELATION TO PERCENTAGE OF COST TO PRICE, 1922-23.  
(AGGREGATE OF SEVEN INDUSTRIAL GROUPS.)**



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# DIAGRAM I.

CUMULATIVE GRAPH SHOWING  
TOTAL TURNOVER IN RELATION TO PERCENTAGE OF COST TO PRICE. 1922-23.  
(AGGREGATE OF SEVEN INDUSTRIAL GROUPS.)

NOT EXCEEDING

120

105

90

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60

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15

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PERCENTAGE OF COST TO PRICE

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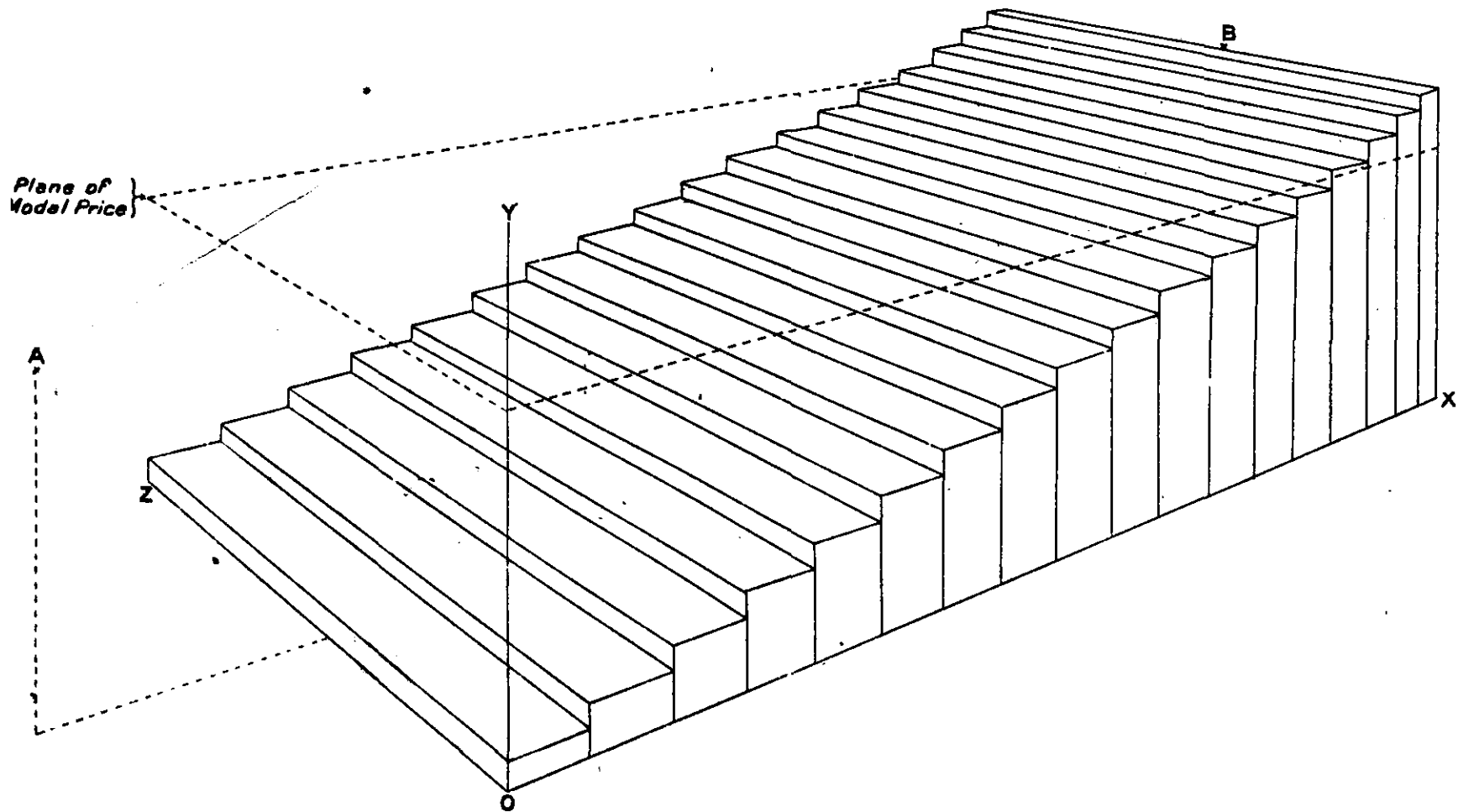
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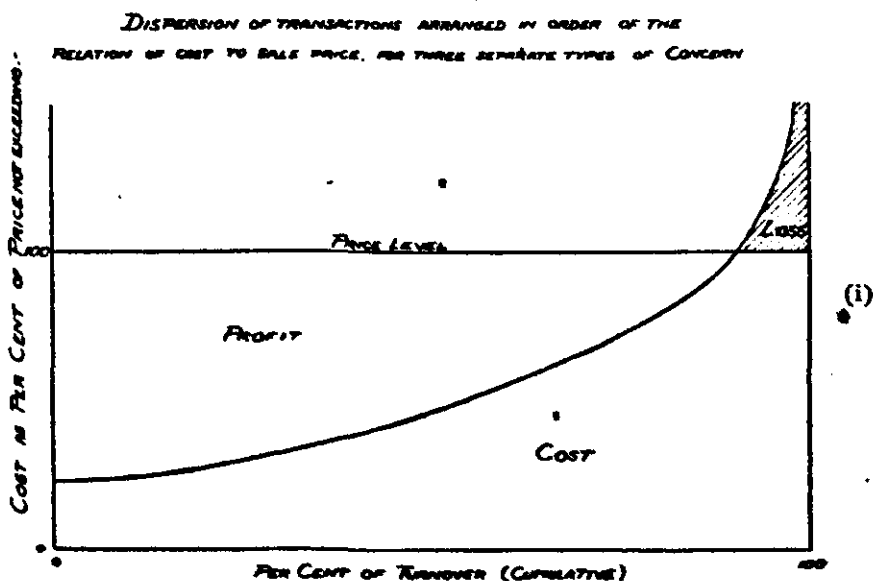


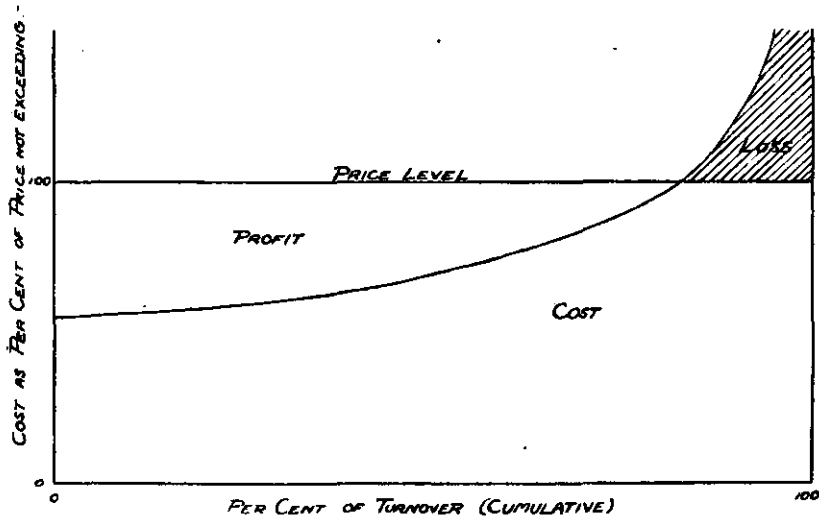
outcome of numerous separate transactions carried out over a period of time. The block form of diagram 2 reduces these transactions to an average form and ignores the fact that the result of a year's trading is a composite of the results of all the sales during that period. In actual fact these sales may, and probably do, yield different percentages of profit on the prices at which they are made. An average result does not then disclose the actualities. If by the technique of cost accountancy accurate particulars of the separate sales and their relative costs could be collected and classified for each concern, it would probably be found that the separate sales when arranged in order of magnitude according to the percentage of profit on price for each transaction would reveal a dispersion similar to that obtained for each industrial group, as illustrated by the general tables, and by diagram 1 for all groups taken together. Each trading transaction will have been carried out at distinct points of the cost schedule, in relation to equally distinct, and perhaps independent, demand schedules, effective at the different dates of the transactions concerned.

32. On this view diagram 2 is an artificial and inaccurate representation of the true facts. The blocks representing the separate businesses should not be monotonously rectangular, as shown, but should present upper surfaces of considerable variety, each one picturing the particular cost schedule of the particular concern represented.

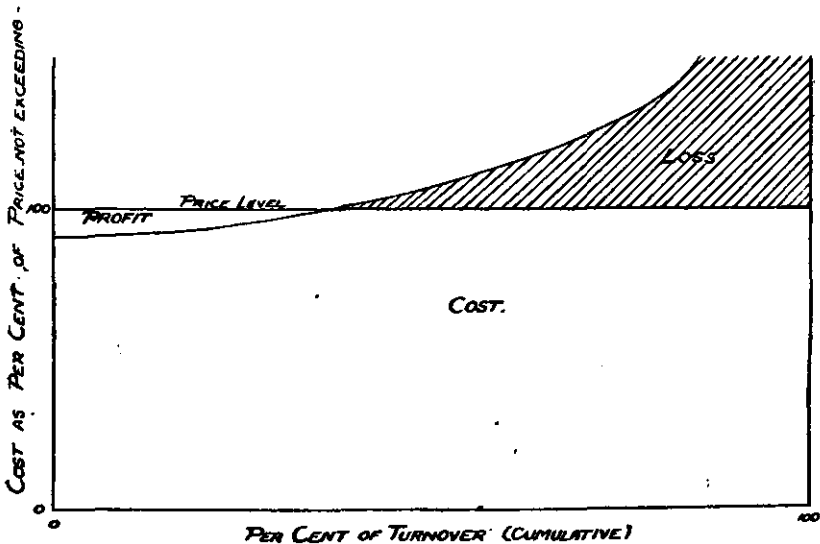
33. It is not practicable to present with any clearness a new view of diagram 2 showing these separate cost curves. All that is feasible is to select typical individual business cost curves, representing three types, as they appear when viewed from point A looking towards point B in diagram 2. These are presented in diagram 3. The units of turnover in each of the typical cases selected are arrayed by reference to the variable of profit on turnover, or, in other words, to the percentage relation of cost to price, without reference to the order of production of the units of product sold. Case (i) in diagram 3 represents a highly profitable concern, one that would lie on the extreme left of diagram 1 or 2; case (ii) represents a moderately profitable business, lying towards the centre of those diagrams, and case (iii) one that is suffering a loss, and lying on the extreme right of diagram 1 or 2. The object of diagram 3

DIAGRAM 3.





(ii)



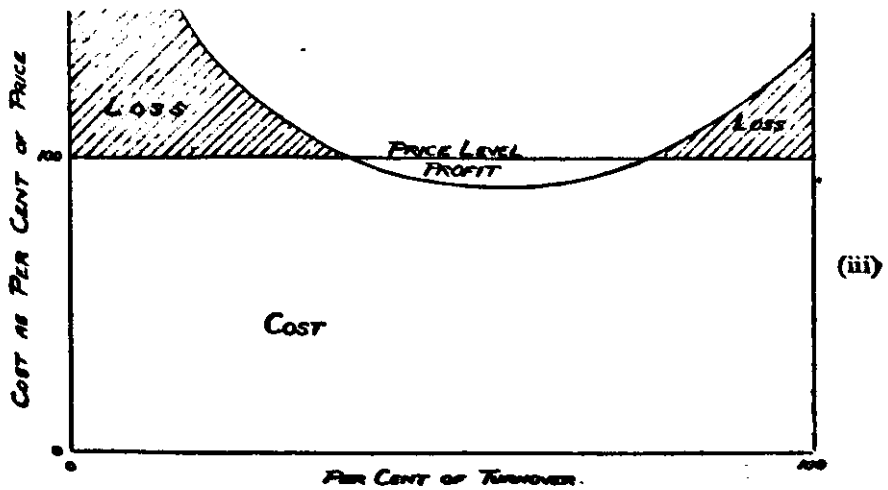
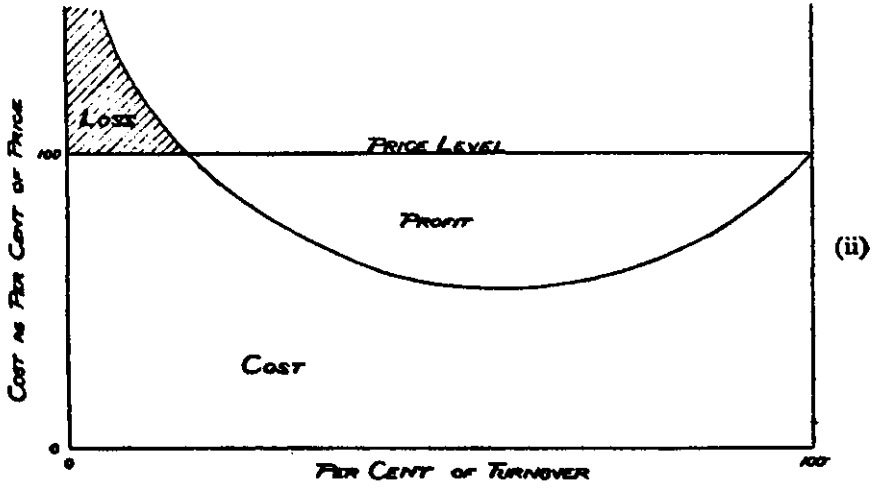
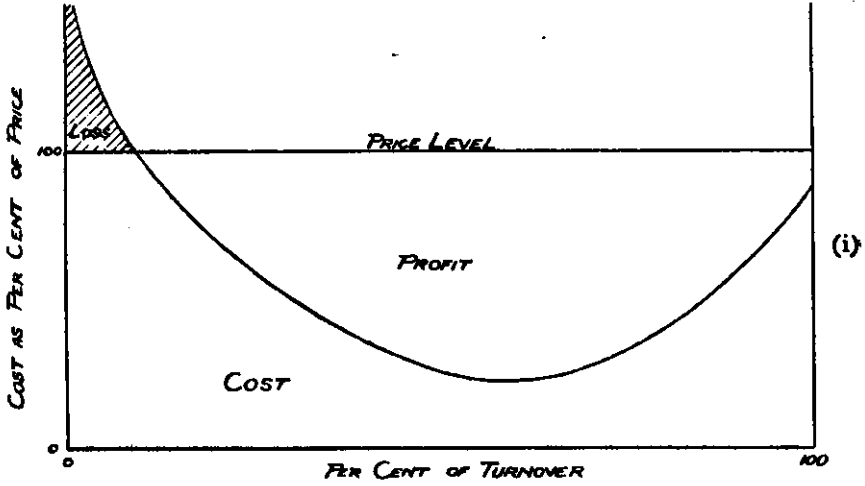
(iii)

is to illustrate graphically the position suggested above, viz., that on analysis the total results of trading by any business are not constituted of like rates of profit on every transaction carried out or every unit of product sold, but, on the contrary, are built up of units of business yielding various rates of profit, according to the momentary conditions of supply and demand and other factors affecting the elusive element of profit. Price is not, of course, in these circumstances a constant, but a variable. All that is here measured is the percentage relation of cost to price.

34. Economic theory, as described in Part II of this memorandum, depicts the producer endeavouring in every case to push his production just to the point at which the cost of his final units of product is exactly equalled by the cost of their production.

One further diagram may serve to illustrate types of cases in which the trader achieves, with more or less success, his aim of attaining the maximum of profit from the agents of production that he employs. In diagram 4, the units of production are arranged in their order of

DIAGRAM 4.



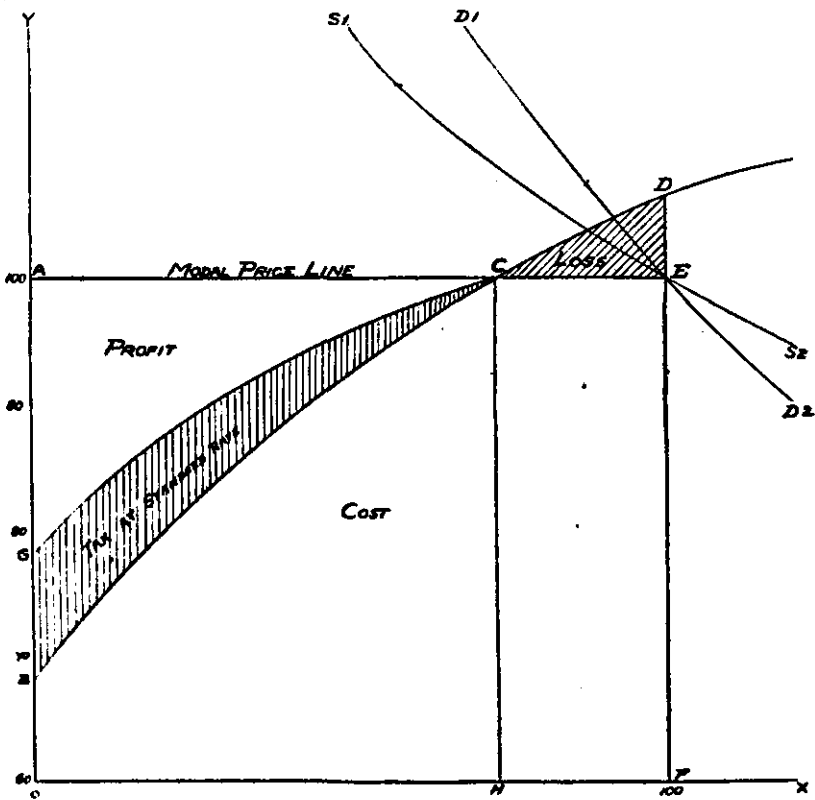
production; on the first units, it is assumed that the cost of production would exceed the price. As production expands the cost falls in relation to price, on the assumption that most industrial enterprises to-day are governed by the law of diminishing costs. Profits thus increase on subsequent units, tending towards a maximum point. After that point, increased supplies begin to affect demand price, and accordingly the margin of profit falls. Three cases are shown, representing as before typical grades of profitableness. Case (i), showing a high percentage of profit on turnover, represents one in which production has not been pushed to the margin where the sale price is just equalled by the cost of production. In case (ii), the producer is assumed to have attained exactly this economic balance; the last unit of production is shown as sold exactly at its cost price. Case (iii) illustrates a concern of which the greater part of the turnover is done at a loss. It would be found, in diagram 1 or 2, at the extreme right. In between the cases illustrated by cases (i) and (iii) of diagram 4 there will be distributed the producers in any trade group, each with his own particular curve of profitable and unprofitable turnover.

35. If this hypothesis of the dispersion of profit per unit of turnover in the case of each producer is correct, there will be in the cases of numerous producers a marginal amount of production which is marketed at a loss. The proportion of this marginal unprofitable production per concern depends upon its relative efficiency, particular advantages of situation, circumstances, and so on. But the most sensitive part of the marginal production—that part which is most easily suppressed under the pressure of loss—undoubtedly will be found among the producers who are in the weakest financial position, i.e., those illustrated by diagram 3 (iii). For this reason, the increment of supply put on the market by the producers working at a loss is of special importance, not only in its effect on price but also for the insuperable obstacle its competitive presence offers to any attempt elsewhere to pass on a tax levied only on a profit margin.

36. From these general considerations, it may be deduced with some confidence that at any given moment of time, there is, in any market, a distribution of concerns offering supply along a relative cost schedule, that is, a schedule of cost in relation to price, which is similar to the distribution emerging from a year's trading, i.e., similar to diagram 1. The particular position of separate concerns on any day in relation to the supplies offered for sale on that day may be very different from their consolidated position in the particular trade group when the total transactions for a trading year are aggregated. In fact, that position may vary from day to day. But it is suggested that for any day there will be a given distribution similar to that of diagram 1. This diagram is repeated, in a smoothed form in diagram 5, together with illustrative curves of the demand and supply schedule. Both the demand and supply curves purport to represent the conditions of the moment. Price is fixed by the equilibrium which is set up by their momentary relation. It is shown by the intersection of the two curves at E, through which passes the modal price line.\* This diagram is timeless, that is, it represents the conditions at a particular moment. The demand curve  $D^1 D^2$ , and the supply curve  $S^1 S^2$ , intersect at E. The modal price line is drawn through this point. The whole turnover or aggregate sale price is represented by the rectangle AF; cost is represented by the area OBDF. Profit is represented by the triangle ABC, and the loss suffered by marginal concerns by the triangle CDE. Tax being levied at the standard rate on the profits is represented by the vertically

\* Although in the diagrams price is shown as a straight line, in real life, no matter what the market, there is probably not one uniform price, but a dispersion closely grouped round a modal figure. It is this modal figure which the price line purports to represent.

DIAGRAM 5.



shaded area BGC. With this pictorial guide, the effect of an increase in the rate of taxation on trade profit considered in the aggregate may be more closely examined.

37. The absorption by the State of a portion of the profit area in the form of a percentage rate of tax on profits exerts practically no pressure on any of the forces producing the resultant position drawn in the diagram.

The smallest absolute amount of tax is taken off the smallest absolute amount of profits, that is, as point C is approached, the tax gradually diminishes, until it reaches zero, when profits also touch that point. The amount of supply offered is not diminished by the fact of taxation. As for demand, it is often hastily supposed that the purchasing power taken by taxation simply disappears into the void. The national balance sheet makes it clear, however, that all the revenue collected is disbursed again. As the tax is levied only on profit, it does not affect the diagonally shaded loss area CDE. Therefore, if the tax area BGC is increased, still tapering to zero at point C, no additional force is exerted tending to change the relative positions illustrated, as the additional tax area is fixed only after the other lines of the diagram have been settled by economic forces. Certainly no change in the various forces resulting in the equilibrium of price indicated by the diagram would be anticipated from an increase in the number of shareholders in the companies concerned, and it is difficult to draw any distinction between such an increase in the number of private individuals participating in the profits indicated by the area ABC, and an increase in the participants arising from the fact that the State withdraws a share in the form of Income Tax.

## PART VI.—COMPARISON OF PRE-WAR AND POST-WAR PROFITS.

38. An effort has been made to probe the matter further by making comparisons with a pre-war year. Table 15, based on such information as is available, in effect compares the estimated dispersion of the variable as it existed in the seven groups treated as a whole in 1912-13 with the dispersion that would have existed for 1922-23, had there been no alteration in the relative contribution of each industrial group to the total turnover.

**TABLE 15.—PROFIT AS A PERCENTAGE OF TURNOVER.**  
*Dispersion, 1912-13 and 1922-23. Aggregate of Seven Industrial Groups.*

Value of the Variable.	1912-13. Percentage of the total Turnover.	1922-23. Percentage of the total Turnover.
-20 and below ... ..	0.03	0.87
-19.9 to -10 ... ..	0.03	2.07
- 9.9 ,, - 5 ... ..	0.04	2.39
- 4.9 ,, - 0 ... ..	1.92	8.96
0 ,, -9 ... ..	9.44	8.33
1 ,, 1.9 ... ..	7.69	9.86
2 ,, 2.9 ... ..	11.02	10.25
3 ,, 3.9 ... ..	14.57	6.45
4 ,, 4.9 ... ..	8.69	7.41
5 ,, 5.9 ... ..	11.45	7.48
6 ,, 6.9 ... ..	6.22	5.52
7 ,, 7.9 ... ..	5.86	3.85
8 ,, 8.9 ... ..	3.96	3.40
9 ,, 9.9 ... ..	4.01	2.85
10 ,, 10.9 ... ..	2.23	2.98
11 ,, 11.9 ... ..	2.59	1.76
12 ,, 12.9 ... ..	2.95	1.29
13 ,, 13.9 ... ..	1.48	1.41
14 ,, 14.9 ... ..	0.54	1.03
15 ,, 19.9 ... ..	3.24	5.47
20 ,, 24.9 ... ..	1.10	3.31
25 ,, 29.9 ... ..	0.18	1.61
30 ,, 39.9 ... ..	0.59	0.93
40 ,, 49.9 ... ..	0.05	0.33
50 and over ... ..	0.12	0.25
<b>Total</b> ... ..	<b>100.00</b>	<b>100.00</b>

39. The similarity of these dispersions is very remarkable, though it is not obvious at first sight. It will be better appreciated by the following statistical co-efficients for the two years, viz:—

	1912-13.	1922-23.
Median ... ..	4.61	4.11
Lower quartile ... ..	2.53	1.24
Upper quartile ... ..	7.67	8.46
Skewness ... ..	plus 0.19	plus 0.20
Average or mean ... ..	5.80	5.43
Mean deviation from the median ... ..	3.59	6.01

The medians and the means (or averages) are very close to one another for these two years, separated by a decade and the cataclysm of that period. If the 1912-13 median and average are each expressed by 100,



then in 1922-23 the median was 89 and the average 94. That the general distribution of the curve given by the dispersions is similar is shown by the close approximation of the measurements of skewness, plus 0.19 in 1912-3 and plus 0.20 in 1922-23. But the quartile measurements indicate as clearly that the shape of the curve has altered. The lower quartile has fallen from 2.53 to 1.24 while the upper quartile has risen from 7.67 to 8.46. The range over which the middle half of the business was done has therefore widened from 5.14 to 7.22. Apparently there was a greater uncertainty in the results of business in 1922-23 than in 1912-13; it is measured by the increase of the mean deviation about the median from 3.59 to 6.01, i.e., in the ratio 100 : 167.

40. A further aid to comparison between the two years is afforded by Graph 1, which follows. The general coincidence of the two lines, when allowance is made for the greater spread in 1922-23 is plain. This is made clearer by Graph 2, in which the factor of the increased mean deviation for 1922-23 is eliminated. Here the abscissa scales for 1912-13 and 1922-23 respectively are in the ratio 167 : 100 (see above), whilst the ordinate scales are in the inverse ratio. The curves have been plotted so that the medians are coincident. On this basis the similarity of the curves is indeed striking.

41. This general comparison, however, needs to be implemented by separate comparisons for each of the seven groups. The dispersions for the seven separate groups are shown in Table 16, and the corresponding statistical co-efficients in Table 17.



TABLE 17.

Industrial Group.	Year.	Median.	Lower Quartile.	Upper Quartile.	Skewness.	Average or Mean.	Mean Deviation from Median.
Cotton ...	1912-13	6.56	5.01	8.91	+ .21	7.00	2.54
	1922-23	2.55	-1.65	7.18	+ .05	2.47	6.63
Wool ...	1912-13	8.60	5.43	10.56	- .24	8.19	2.94
	1922-23	9.73	3.77	14.57	- .10	9.78	7.37
Iron and Steel ...	1912-13	6.25	3.69	9.75	+ .16	7.49	4.19
	1922-23	7.48	4.02	13.22	+ .25	7.74	8.30
Miscellaneous Metal Industries	1912-13	4.17	1.22	8.25	+ .16	6.10	4.50
	1922-23	4.21	0.92	10.36	+ .30	5.22	7.38
Food ...	1912-13	4.73	3.02	6.86	+ .11	5.07	2.43
	1922-23	4.73	1.81	10.95	+ .36	7.11	6.12
Wholesale distribution ...	1912-13	2.95	1.50	4.68	+ .09	3.90	2.54
	1922-23	2.56	0.99	5.58	+ .32	4.14	3.92
Retail distribution ...	1912-13	6.60	5.06	11.72	+ .54	8.48	4.01
	1922-23	4.74	2.40	6.84	- .05	5.14	3.35

42. A cursory inspection shows that there have been considerable cross movements in detail, which tend to cancel out in gross. The misfortunes of the cotton industry are all too apparent. The median and the average have both fallen heavily, although in 1922-23 a quarter of the business was still done above 7.18 per cent. on turnover, as against a corresponding figure of 8.91 per cent. in 1912-13. But whereas the middle half of the business was done in 1912-13 at a rate of profit between 5 and 9 per cent. on turnover, in 1922-23 the limits were a loss of roughly  $1\frac{1}{2}$  per cent. and a profit of 7 per cent. No less than 30 per cent. of the trade sampled resulted in a loss. In the other manufacturing industries, there is a general tendency towards (a) a slightly higher median, normally accompanied also by a somewhat higher average, and (b) a marked widening of the dispersion. Both quartiles show a tendency to move outward from the median. Thus the mean deviations about the mean are greater in 1922-23 in every group, with the sole exception of the retail distributive trade. In the wool group, the average rate of profit has risen, but the general distribution about the median is less favourable, for the skewness has fallen from minus 0.24 to minus 0.10. The lower quartile has fallen from 5.43 to 3.77. The iron and steel group shows the same kind of movement, though in a smaller degree. Although the median point for the miscellaneous metal industries has risen, the average rate has fallen slightly, but there is the same characteristic of a wider dispersion, and an adverse movement of the skewness from plus 0.16 to plus 0.30. It would seem plain that the manufacturing food trades have improved their broad position, for the average has risen from 5.07 to 7.11, but the composition of the group in the respective years is not entirely on all fours: less complete information was available for 1922-23 in some branches of this class of trade, which tend to show a low rate of profit on turnover. Wholesale distribution makes a poorer show in 1922-23 than 1912-13, for although the average rate is slightly higher, the dispersion is much greater, the median is slightly lower, and the positive skewness has increased considerably. It is doubtful whether the particulars for the retail distributive trade are of great value, for it has been ascertained, on inquiring into the discrepancy between the results for the two years, that it is due in part to the omission (through the accidents of sampling) of any food concerns in 1912-13. As their business is normally conducted at a low rate on turnover, this omission invalidates the comparability of the figures. Apart from this group, however, the broad

tendency towards a widening of the dispersion seems plain. Just as the mean deviation about the median is greater, so there is a broad tendency towards an increase in the positive degree of skewness, indicating a tendency towards the distribution of a greater part of the trade about rates of turnover lower in relation to the median in 1922-23 than in 1912-13. But, as already noted, the median in 1922-23 is on a somewhat higher level than that in 1912-13.

43. From the field of complexity offered by these figures, it is perhaps difficult to draw any conclusion beyond the conviction that they must be the result of numerous forces, acting in various directions. What part has been played by the movements of taxation of income? Nothing is more difficult than to isolate the effect of one single factor, but the problem may be approached from the other side by inquiring what would have been the effect of the increase in the rate of Income Tax, had that increased tax been shifted in its entirety from the profits of industry on which it is initially laid to those who consume the products, all other factors being ignored.

44. For the year 1912-13, the general rate of Income Tax was 1s. 2d.; for the year 1922-23, the standard rate of tax paid by all companies was 5s., or 4.28 times as much. If the turnover in 1912-13 yielded a profit of Y per cent., and that percentage included the tax which had to be paid thereon, then the trader's net rate of profit was  $Y \times \frac{226}{240}$  or .9416 Y per cent., and the balance represented tax. Assuming, on the theory that those in control of business will not carry on unless they receive the same net reward for their efforts, that the company was in a position to insist on the same net percentage profit for 1922-23, then the gross rate of profit on turnover for that year would rise to

$$.9416 Y \times \frac{240}{180} \text{ per cent.}$$

i.e., to 1.25 Y per cent., or an increase on the original gross Y per cent. of  $\frac{23}{90}$ ths of its value. This increase to be effective in its object would

require to be realised throughout the whole range of the dispersion, or at least in all its profit-bearing ranges. The preceding tables and graphs offer no evidence in support of any such change. On the contrary, the earnings of industry, as a whole, before payment or deduction of Income Tax, when related to the unit of the pound of turnover are practically the same in 1912-13 and 1922-23, notwithstanding (a) the increase in the rate of Income Tax by 328 per cent., (b) the change in the relative importance *inter se* of the individual concerns engaged in any one industry which has undoubtedly taken place during the intervening 10 years, (c) all the disturbances associated with the war and the subsequent boom and depression, and (d) any diminution in the aggregate of real production which may have followed.

## PART VII.—THE INCOME TAX FIELD AS A WHOLE.

45. The foregoing detailed statistical investigation has been restricted to seven industrial groups. It covers the chief manufacturing and distributive activities of the country. This course has been followed because the controversy as to the incidence of the Income Tax is confined almost entirely to the effect of the tax on business. But it would be a mistake—though one which is often made—to assume that the aggregate income within the Income Tax area consists wholly of income from business sources. Table 18 has accordingly been prepared to show the component parts of the aggregate income liable to tax for the years 1912-13 and 1922-23. "Income" here means income as estimated upon the statutory basis for purposes of Income Tax, that is, upon the average or other base laid down in the Acts.

TABLE 18.

## INCOME TAX, 1912-13 and 1922-23.

Distribution by Sources of the Aggregate Income, United Kingdom.

Source.	1912-13.		1922-23.	
	Amount.	Percent of total.	Amount.	Percent of total.
<b>I. Real Property :—</b>	£000		£000	
(a) Real property owned and occupied for business purposes by companies.	20,000	2·21	22,500	0·96
(b) Other real property ...	154,4·2	17·02	169,776	7·21
Total ...	174,422	19·23	192,276	8·17
<b>II. Farming profits and other profits from land.</b>	5,368	0·59	25,465	1·08
<b>III. Securities :—</b>				
(a) British Govt. (Schedule C.)	13,450	1·48	86,650	3·68
(b) Dominion " ( " D.)	—	—	75,000	3·19
(c) Foreign " ( " C.)	23,350	2·57	31,250	1·33
(d) Foreign " ( " C.)	10,205	1·12	10,250	0·43
(e) Dominion " and " Foreign Govt., Corporate, Municipal, &c.	£0,500	5·57	48,000	2·04
(e) Miscellaneous ...	10,500	1·16	15,100	0·64
Total ...	108,005	11·90	266,250	11·31
<b>IV. Business :—</b>				
(a) Mining, Manufacturing and Productive.	193,300	21·31	339,300	14·42
(b) Distribution, Transport and Communication :—				
(i) Railways in the United Kingdom.	42,900	4·73	46,000	1·95
(ii) Other ...	152,900	16·85	325,600	13·84
(c) Finance, Professions and other business.	75,800	8·36	124,400	5·29
Total ...	464,900	51·25	835,300	35·50
<b>V. Employments :—</b>				
(a) Crown employees ...	22,000	2·43	90,000	3·83
(b) Weekly Manual wage-earners.	—	—	359,575	15·28
(c) Employees of Private and Corporate concerns.	132,459	14·60	584,318	24·83
Total ...	154,459	17·03	1,033,893	43·94
<b>Grand Totals ...</b>	<b>907,152</b>	<b>100·00</b>	<b>2,353,184</b>	<b>100·00</b>

46. The details shown in Table 18 are not put forward as exact figures; they are estimates, and there are some disturbing factors. These consist mainly of changes in Income Tax law, movements of the price level and paucity of data.

47. Income from business formed 51 per cent. of the total in 1912-13 and 35 per cent. in 1922-23. The seven industrial groups investigated in Part V fall within Classes IV (a) and IV (b) ii, which account for 38 per cent. of the total in 1912-13 and 28 per cent. in 1922-23. The major part of these classes is covered by the investigation, the chief industries omitted being:

Mines, quarries, gas and water-works, docks, &c.; silk, flax, jute and hemp, lace, hosiery, bleaching and dyeing, and miscellaneous textiles; brewing, distilling, sugar and tobacco; patent medicines; soap and candles; chemicals and allied trades; leather and clothing; paper-making, printing, publishing, and miscellaneous stationery trades; timber and building; pottery, china, glass and miscellaneous manufacturing industries; retail liquor trade; shipping, tramways, omnibuses, electric power and light. All concerns the main assets of which are abroad.

These omissions cover approximately 59 per cent. of Classes IV (a) and IV (b) ii, so that the statistical investigation covers approximately 41 per cent. of the total income allocated in the table to these Classes in 1912-13. The 1922-23 percentage is rather higher, viz., 50 per cent.

48. The distribution of the actual produce of the tax among the several sources set out in Table 18 is by no means the same as the distribution of the total income there shown. It is only possible to make a very approximate estimate of the distribution of the net produce of the tax among the various sources of income. The result for the year 1922-23 is shown in Table 19.

TABLE 19.  
NET PRODUCE OF THE INCOME TAX, 1922-23.  
*Distribution by Sources, United Kingdom.*

Source.	Amount.	Per cent. of total.
<b>I. Real Property :—</b>	£000	
(a) Real property owned and occupied for business purposes by companies, &c.	5,400	1·83
(b) Other real property ... ..	32,700	11·08
Total ...	38,100	12·91
<b>II. Farming Profits and other profits from land...</b>	1,500	0·51
<b>III. Securities :—</b>		
(a) British Government ... .. Schedule C. and Schedule D.	29,800	10·10
(b) Dominion Government, Schedule C. ...	6,300	2·14
(c) Foreign Government, Schedule C. ...	2,200	0·74
(d) Dominion and Foreign Government, Corporate, Municipal, &c.	10,700	3·63
(e) Miscellaneous ... ..	3,400	1·15
Total ...	52,400	17·76
<b>IV. Business :—</b>		
(a) Mining, Manufacturing and Productive	66,300	22·47
(b) Distribution, Transport and Commu- nication :—		
(i) Railways in the United Kingdom ...	8,400	2·85
(ii) Other ... ..	42,600	14·44
(c) Finance, Professions and other business	19,100	6·48
Total ...	136,400	46·24

Source.	Amount.	Per cent. of total.
V. <i>Employments</i> :—	£000	
(a) Crown employees ... ..	7,100	2·41
(b) Weekly Manual wage-earners ... ..	2,200	0·75
(c) Employees of Private and Corporate concerns	57,300	19·42
Total ... ..	66,600	22·58
Grand Totals ...	295,000	100·00

49. The approximations furnished by Table 19 give a fair indication of the relative importance of the sources of yield of the Income Tax. The incidence of the tax from business sources has formed the main subject of discussion up to this point, and a brief review of the tax from other sources will serve to complete this inquiry.

50. (I. (a).) Tax arising from real property owned and occupied by companies for business purposes may by some be regarded as indistinguishable, in fact, from tax arising from their profits, on the ground that the division of the aggregate profits between the two Schedules (A and D) of the tax is largely of an administrative character. But it would probably be better to regard it as in the same category as the tax on other real property. The annual value placed on such premises is determined in no manner different from that applied to property generally, and the division between Schedule A and Schedule D of the aggregate profits of a concern which owns its premises is thus not administrative but economic.

51. (I. (b).) Tax arising from other real property mainly consists of that paid on the rental value of private houses, and of business premises occupied by private and corporate traders (excluding cases covered by the preceding class I. (a) and on the rental value of land). The tenant of a private house has been protected by the Rent Restriction Acts against the normal economic effects of supply and demand, and, *a fortiori*, against any increase in rent designed to reimburse the owner for the increase in direct taxation. The tenant of business premises has been exposed to the play of economic forces, but there is no apparent reason why their effect should have been amplified by the rise in the Income Tax, a rise which to the individual owner letting the premises is conditioned by facts, e.g., his total income, marital state, &c., which are totally unrelated to the demand for the premises. (II.) As for the tax on the occupation of lands, the farmer, faced by the competition of overseas supplies, has had little opportunity in recent years to load his prices in consonance with higher income taxation. The index of prices of agricultural produce published by the Ministry of Agriculture seems to offer conclusive evidence on this point.

52. (III.) The yield of securities of the highest gilt-edged type offers the best measure of the general rate of pure interest on capital. The inter-relation of that rate with movements of Income Tax is an extremely difficult theme, which, because it trenches on psychological ground, hardly falls within the scope of this memorandum. It is hard to deny that there is some connection between the net rate of interest, i.e., after deduction of Income Tax, and the stream of new capital, but it is even harder to trace that connection or to find any measure of it. In the long run, the general rate of interest is no doubt governed by the

elementary forces of supply and demand, interpreted by the marginal principle. In other words, capital will be employed up to the limit at which its employment is profitable, and the marginal rate of interest will be that at which the least profitable employment is found. As the supply of capital increases in relation to the demand, so it must press its way into less favourable employment, and the general rate of interest will tend to fall. The real point in issue concerns the effect of the rate of interest on the supply of capital, and in this way one is led to ask—what is the ultimate determinant of the will to save? Here one reaches the realm of psychology, in which judgments are governed by impressions and not by identifiable facts. There is a general consensus of economic opinion that an increase in the rate of interest will stimulate saving, and that a fall will depress it. But the elasticity of savings will naturally be highly variable as it depends on many considerations quite unconnected with the rate of interest, and therefore with the rate of Income Tax. It is common ground that in the lowest regions of income from which savings emerge the rate of Income Tax is of no account, for the simple reason that none is payable. The effect of the rate of interest itself is also probably very small, inasmuch as the power to save is very limited, and the will to save is likely to be due more to the influence of the capital put by than to that of the income to be derived therefrom. At the other extreme of income, savings arise from the automatic excess of income over expenditure rather than from the desire to accumulate more. Only in the middle regions of income is there likely to be a considered balancing of the respective attractions of a present sacrifice and a future income. The impersonal savings of companies are of great importance in the aggregate of national savings, but their effect in the present connection flows out through the influence of the undistributed or reserved profits on the distributed dividends. If there be a conflict between the claims of reserves and dividends arising from a shrinkage in the spendable undistributed profits—because the tax thereon is higher—there is ground for saying generally that the claims of reserves will tend to be preferred. On the whole, therefore, there is much to be said for the view that the volume of savings is largely unaffected by the rate of interest.

53. What, then, is the influence of a movement in the rate of Income Tax? As the Income Tax is drawn mainly from the small but richer section of the community, the effects of any cause leading to an alteration in its rate are concentrated immediately on that section and thus on those by whom the larger part of personal savings is made. An increase in the rate of tax may tend to reduce the amount immediately available in the hands of the wealthier classes; the impersonal savings of the companies may be maintained, but the net cash dividends distributed will tend to fall. The automatic savings of the wealthy will be smaller. So also will the savings of other classes, as far as they are fed from the stream of investment income. As a result, the stream of capital seeking investment may shrink, the less remunerative sources of employment for it may be cut out, and the general rate of interest may tend to rise, in sympathy with the movement in the rate of earnings of capital at the margin of its employment. When the rate of tax is reduced the converse movement may take place.

54. But this line of reasoning cannot be entirely divorced from the purposes to which the additional yield of the tax (arising from the higher rate) may be devoted. Income taxation for social expenditure may well be distinguished from taxation for the service of a debt, the holdings of which are concentrated among the taxpaying class. On the other hand, the change introduced by this factor may be one, not so much of substance as of degree, dependent mainly upon the different effects in point of time introduced by the various causes leading to an increase in the rate of tax. In sum, then, it is probable that the rate



of Income Tax has a consequential effect upon the rate of interest, though that effect springs largely from the realm of psychology where it is beyond practical measurement. The yield on securities, while not intimately and directly connected with movements in the rate of tax, will feel the effect of movements set up by such an increase, though in what degree cannot be predicated. As the number of steps in the causative chain between rate of tax and rate of interest increases, so do the possibilities of disentangling the effect of the tax from that of numerous other intervening forces become more remote.

55. Mr. A. H. Gibson, in an article contributed to the Financial Supplement of *The Spectator* of 7th March, 1925, on "The Future Course of Investment Values" contends that "economic reasoning and past experience prove that the basic factor determining market values of Government and other first-class stocks is the cost of living." He says:—

"The law of relationship between the cost of living and investment values may be stated as follows:—

"The course of the market prices of high-class fixed-interest-bearing stocks is mainly indirectly determined by the cost of living, a fall in the latter being usually accompanied or followed by a rise in the former, and conversely."

Among other factors, he includes:—

"Taxation, its degree, incidence and application of proceeds." And under this head he remarks:—

"The effect of taxation on the market values of investments is one of the most elusive factors to estimate. Since the Great War terminated, Income Tax has been reduced from 6s. to 4s. 6d. in the £, and yet, on each occasion of announcement of a reduction, practically no effect was produced on the market values of investments."

Mr. Gibson illustrates the sympathetic movement of commodity prices and the yield of Consols from 1820 to 1924 by a chart, based on the mean price of Consols and the "Statist" Index of Wholesale Prices, of which the data were published mainly in the *Bankers' Magazine* for January, 1923. Using the Pearsonian co-efficient of correlation,\* the two sets of data, for the 100 years from 1825 to 1924 give the following results:—

Relative.	—	Co-efficient of correlation.	Probable error.
Statist Index number 1825—1924.	Gross yield of Consols in same year.	plus 0·893 ...	·014
Statist Index number 1824—1923.	Gross yield of Consols in succeeding year.	plus 0·903 ...	·012
Statist Index number 1825—1924.	Gross yield of Consols in preceding year.	plus 0·808 ...	·023

And for the 17 years from 1908 to 1924, the co-efficients are:—for the same year plus 0·90; for the succeeding year† plus 0·91, and for the preceding year plus 0·75. There is thus a high degree of positive correlation, though it is doubtful whether this arises because one relative is the cause of the other. It seems much more likely that the correlation

\* A note on the Pearsonian co-efficient of correlation and the probable error appears in Annex III.

† For this computation the Statist Index Nos. 1907-1923 have been taken.

arises because these two sets of phenomena proceed from one common source, which, for so long a period, is probably to be found in general economic and monetary conditions.

56. The close correspondence of the phenomena does, however, it is suggested, throw some doubt on the emphasis usually laid on the rate of interest as a factor in saving, and consequentially on the influence of the rate of Income Tax on prices through the medium of the rate of interest. To test the matter a little further, the co-efficient of correlation has also been taken out, for the past 17 years, between the net (after deduction of Income Tax) yield on Consols and the "Statist" Index. For identical years, the co-efficient is plus 0.74; taking the yield on Consols for the succeeding year, it is plus 0.72. It will be seen, therefore, that there is a smaller degree of relationship for the net yield of Consols than for the gross, the figures (for the succeeding year) being plus 0.91 for the gross yield and plus 0.72 for the net. The implication is that the Income Tax is an effective burden on the income, not thrown off through a movement in the yield. Table 20 which follows shows for these 16 years the average price of Consols, the gross and net yields, together with an index figure for the net yield, based on 1908 as 100. During the years immediately preceding the War, when the rate of Income Tax was small and varying very little, there is a distinct movement of the gross and net yield of interest. Again, in the past three years, during which the rate of tax has been moving downwards, the net yield was moving downwards in the two earlier years and upwards in the last year. On this evidence as a whole, it seems very difficult to establish any distinct relation in the nature of cause and effect between the rate of Income Tax and the rate of interest.

TABLE 20.

*Consols and Wholesale Prices (Statist Index Number) 1908 to 1924.*

Year.	Average Price for Year.	Gross Yield at Average Price.	Income Tax.		Net Yield at Average Price.		Statist Index of Wholesale Prices.	
			Rate.	Amount.	Amount.	Index No. (1908=100).	As published.	With 1908 = 100.
1908	86 $\frac{1}{8}$	£ s. d. 2 18 1	s. d. 1 0	£ s. d. 2 11	£ s. d. 2 15 2	100.0	73	100
1909	83 $\frac{1}{2}$	2 19 5	1 1	3 3	2 16 2	101.8	74	101
1910	81 $\frac{1}{8}$	3 1 8	1 2	3 7	2 18 1	105.3	78	107
1911	79 $\frac{1}{8}$	3 3 0	1 2	3 8	2 19 4	107.6	80	111
1912	76 $\frac{1}{2}$	3 5 8	1 2	3 10	3 1 10	112.1	85	116
1913	73 $\frac{1}{2}$	3 7 11	1 2	4 0	3 3 11	115.9	85	116
1914	74 $\frac{1}{4}$	3 6 9	1 5	4 9	3 2 0	112.4	83	114
1915	65 $\frac{1}{2}$	3 16 4	2 4	8 11	3 7 5	122.2	108	148
1916	58	4 6 2	4 0	17 3	3 8 11	124.9	136	186
1917	54 $\frac{1}{2}$	4 11 5	5 0	1 2 10	3 8 7	124.3	175	240
1918	56 $\frac{1}{4}$	4 7 11	5 6	1 4 2	3 3 9	115.6	192	263
1919	54 $\frac{1}{8}$	4 12 6	6 0	1 7 9	3 4 9	117.4	206	282
1920	47	5 6 5	6 0	1 11 11	3 14 6	135.0	251	344
1921	47 $\frac{1}{2}$	5 4 10	6 0	1 11 5	3 13 5	133.1	155	212
1922	56 $\frac{1}{2}$	4 8 6	5 6	1 4 4	3 4 2	116.3	131	179
1923	58	4 6 2	4 9	1 0 6	3 5 8	119.0	129	177
1924	57 $\frac{1}{8}$	4 7 7	4 6	19 8	3 7 11	123.1	139	191

Relatives.		Co-efficient of correlation.	Probable error.
Statist Index Number 1908-1924.	Gross yield of Consols in same year.	plus 0·90	0·03
Statist Index Number 1907-1923.	Gross yield of Consols in succeeding year.	plus 0·91	0·03
Statist Index Number 1908-1924.	Net yield of Consols in same year.	plus 0·74	0·07
Statist Index Number 1907-1923.	Net yield of Consols in succeeding year.	plus 0·72	0·08

57. (IV.) The business group has been mainly covered by the statistical investigation made in Part V, but some comments may be made on industrial groups in sub-heads (a) and (b) not there included. It is not likely to be suggested that the coal-mining industry has passed on the Income Tax borne on its profits to the consumer. As regards the manufacturing industries not covered by the investigation, there is reason to suppose that the position does not differ materially from that shown in the five large groups selected. In the case of all public utilities, gas and waterworks, railways, &c., the restrictions imposed by statute, either on the charges which can be made or on the profits distributed, have been considered a sufficient reason for their elimination. Concerns which carry on the physical part of their business mainly abroad, and are thus necessarily either competitors in the world market or catering for foreign consumers, seem also to be outside the ambit of the general question. The conditions under which transport concerns operate abroad, e.g., shipping, railways, tramways, appear to admit of little influence of British taxation on the prices at which their services are rendered. The products of such concerns as mining and oil companies, tea, coffee, sugar, rubber and other plantations are sold on the world market under competitive conditions in which the normal forces of supply and demand are paramount.

58. There remains only sub-head (c), viz., Finance, Professions and other business. In this group the main feature of the business carried on is not the sale of goods, but the performance of services. As a natural consequence, the method of investigation pursued in Part V, namely, the examination of the relation of the amount of profit to turnover, is not suitable to the characteristics of such businesses. These considerations apply specially to banking, insurance and other financial business. For the rest, the professions are practically all in private hands, corporate enterprise playing but a little part. Some evidence to rebut any suggestion that the professional classes have recovered, in their charges, from the general public, the additional income taxation imposed since 1913-14, is to be found in Table 21. This shows the estimated percentage increase in the earnings of professional men, in typical professions, holding representative positions fixed by their order when the total earnings are arranged in descending order of magnitude.

TABLE 21.

*Professional Earnings. Estimated Ratio of Increase per cent. of Earnings in 1922-23 over those in 1913-14.*

Accountants.		Solicitors.	
Representative point in 1913-14.	Percentage increase; 1922-23 on 1913-14.	Representative point in 1913-14.	Percentage increase; 1922-23 on 1913-14.
Average of 200 highest	98	Average of 300 highest	57
£1,560	95	£1,617	58
£796	131	£885	69
£414	158	£492	75
£248	169	£277	76
Doctors.		Dentists.	
Representative point in 1913-14.	Percentage increase; 1922-23 on 1913-14.	Representative point in 1913-14.	Percentage increase; 1922-23 on 1913-14.
Average of 200 highest	36	Average of 50 highest	45
£1,218	45	£1,294	50
£800	64	£611	73
£484	78	£322	78
£314	94	£215	101

59. This Table shows that accountants have improved their position considerably in relation to the movement of the Ministry of Labour cost of living index, which during 1922-23 was, on the average, 79 per cent. above the base figure for July, 1914. It is not an unexpected result, when regard is paid, *inter alia*, to the heavy and increasing demands which have been made upon their profession in connection with the great development in taxation and finance since 1914. For the rest, only in the lower ranges of earnings of Doctors and Dentists, do the percentage increases outrun that of the movement of the cost of living index.

## ANNEXE I.

## BUSINESS VIEWS ON DIRECT TAXATION.

(i) The F.B.I. believe that a reduction in direct taxation has probably the most immediate and general effect upon industry—

1. by directly reducing the costs of production;
2. by leaving over a larger surplus of national income over national expenditure from which savings can be made to provide the capital for fresh developments.

*Extract from Memorandum sent by the Federation of British Industries to the Chancellor of the Exchequer, on Wednesday, the 27th February, 1924. Quoted in the Daily Telegraph, 29th February, 1924.*

(ii.) Another burden from which we suffered was the burden of taxation, which added to the cost of production and reduced buying power.

*Mr. George Douglas, Managing Director, Bradford Dyers' Association Limited. Annual meeting. Yorkshire Post, 29th February, 1924.*

(iii.) In our own trade the average increased cost of labour is just over 150 per cent.; in other words, labour that used to cost a shilling before the war now costs half a crown. Taxation has grown still more rapidly. The increase of national taxation, direct and indirect, is calculated to be well over 300 per cent.; that is to say, where we used to pay a pound we now pay four. The increase of local taxation may be put at 125 per cent., which means that this burden, which even before the war was injuriously heavy, has been more than doubled. On our own works and warehouses the rates payable have increased from £25,000 in 1914 to nearly £54,000 in the present year.

When these important elements in the cost of production—the price of labour and the burden of taxation—have risen at the rates indicated by the figures I have given you, the Chancellor's vague suggestions for better utilisation of our national resources are not of much practical use to a business firm that has to find the money with which to carry on industry. Mr. Snowden would render a greater service to the country if he would bring down the cost of government.

*Mr. L. B. Lee, Chairman, Calico Printers' Association. Times, 19th September, 1924, p. 18d.*

(iv.) The dependence of this country on export trade is obvious, but cannot be over-emphasised. In round figures we import annually food to the value of nearly £500,000,000 and the bulk of the raw materials of our staple industries from overseas. To pay for these imports we need exports. When this preliminary necessity has been satisfied, the prosperity of our country requires a large export trade. In the course of a century we have built up a specialised organisation for the production of fine manufactures, metal goods, and coal, and for their sale abroad, which we can employ to the best advantage only if we can find markets for our disposable surplus. These are elementary, if unpleasant, truths that it is folly to ignore. At the present time, while our production costs are relatively high, we are unable to extend our foreign trade to its pre-war magnitude; we have an increased population to employ and maintain; no policy, therefore, can provide permanent relief for the unemployed, or restore the prosperity of industry that does not help immediately to reduce costs of production. In these costs taxation is the element that has increased most since 1914, and the chief assistance that Government can give to industry is to reduce taxation.

*The Times. Leader on Export Trade and Unemployment, 30th October, 1924.*

(v.) There is a widespread impression that the Income Tax, the Super-tax and the almost confiscatory estate duties are paid by the rich and the very rich. That is a complete delusion. The people who pay the Income Tax have not a sufficient surplus to pay it out of their pockets. The principal Income Tax payers do so either by treating Income Tax payments as a business expense adding it to the price of the goods sold, or they find the necessary amount by cutting down their purchases.

Whether they adopt the former policy or the latter is perfectly immaterial. In either case the bulk of the Income Tax is shifted on to the consumers, and even the poorest man and woman has to pay Income Tax, Super-tax and estate duties, in every loaf, in every herring, and in every box of matches bought.

*Extracts from article entitled "Coal Prices and the Income Tax," by an Economist, Daily Mail, 13th March, 1924.*

(vi.) That high taxes levied on the few who control production and distribution are recovered from the masses is, as a general economic fact, incontestable; and is the best illustration of another economic truth, namely, that unjust and oppressive taxation doesn't pay in the long run.

*Direct Taxation Again. Article by A. A. B. in the Evening Standard, 8th September, 1924.*

(vii.) Income Tax does not merely fall upon the rich, it falls upon a great many people who are not rich. It falls upon the working classes also.

*Sir A. Mond. Second Reading, Finance Bill, 1923, 14th May, 1923. Official Report; Vol. 164, Col. 94.*

(viii.) Lastly, so far as the encouragement of trade is concerned, there is another point. The Income Tax may be looked at now, having got to this enormous size, as a tax that is capable of being passed on to the consumer. It is an undoubted fact, with Income Tax standing at this huge figure, that the higher class man in business takes it into account in fixing salaries. Salaries have to be increased very largely, not only on account of the cost of living, but also on account of the increased Income Tax. He may be able to hand it on in the price of goods, and if he does, the general consumer suffers. I think it is a view which is not sufficiently realised, that one of the items of cost in the price of a retail article is so much of the Income Tax paid by the manufacturer and the retailer.

*Mr. (now Sir Henry) Cautley, on the Budget Resolutions, Finance Bill, 1921, 2nd May, 1921. Official Report; Vol. 141, Col. 779.*

(ix.) Direct taxation on a small minority of the population is the very worst form of indirect taxation. It is not in the least true that the people who are not taxed do not pay. They do pay, but without in the least knowing that they pay, and without any direct knowledge of the consequences involved in excessive taxation.

*Lord R. Cecil, Second Reading, Finance Bill, 1921, 25th May, 1921. Official Report; Vol. 142, Col. 169.*

(x.) As to prices, Mr. Leake computes that 85 per cent. of these taxation charges is, in one way or another, reflected in the final cost to consumers, and there is no doubt at all that one-third at least of the cost of everything above pre-war is taxation cost. Out of every £1 of wages, then, from that cause, not less than 6s. 8d. is milked, and it is milked out of the poorest of the poor.

*The Financial News. Leader on Taxation Reform. 28th April, 1923.*

(xi.) Miners' wages and wages in general are far higher than before the war because prices in general are considerably higher. The increase in the cost of living is due to various factors, and among these the Income Tax occupies a very prominent position.

*Extracts from article entitled "Coal Prices and the Income Tax," by an Economist, Daily Mail, 13th March, 1924.*

(xii.) The reduction of 1s. in the Income Tax, amounting to about £50,000,000, made in last year's Budget was a relief to the nation. We hope that the Government will have effected such economies in national expenditure as will enable further reductions to be made in taxes this year, both Imperial and local. As a result of the burden of rates and taxes the nation has had to carry during the years since the war, trade has suffered severe depression, so that any relief of this burden will give an added stimulus to trade revival, and strengthen the national effort to secure, in competition with other nations, our share of the trade of the world.

*Sir Woodman Burbidge, Chairman, Harrods, Ltd. 23rd Annual Meeting. Times, 8th March, 1923.*

(xiii.) We find an increasing difficulty in meeting the competition of other countries producing similar articles to those your company manu-

factures, owing to the heavy charges of taxation, and if these are made a still heavier burden in the future, further curtailment of trade must ensue with a consequent reduction in employment.

*Mr. Charles D. Morton, Chairman. At 12th Annual Meeting of C. & E. Morton, Ltd. Times, 12th March, 1924.*

(xiv.) With reference to taxation, I should like to say this: That any relief that can be given to the heavy burden of taxation borne by the citizens of the United Kingdom would have an immediate direct effect in improving business, increasing demand and reducing unemployment.

*The late Viscount Leverhulme, Chairman, Lever Bros., Ltd. 29th Annual Meeting. Manchester Guardian, 14th April, 1923.*

## ANNEXE II.

### NOTE ON STATISTICS OF PROFIT AND TURNOVER.

1. Hitherto, no attempt has been made to apply statistical methods to the problem of the incidence of income tax, and in the preliminary consideration of the material which might be used for the purpose certain difficulties were met with. The first question which arose was to what independent variable the dependent variable of profits should be related. At first sight, capital appeared the most suitable base. New units of the stream of capital, as they become available, tend always to seek the highest remuneration available to them. Strong forces are thus always in motion to direct the flowing stream of capital to those industries in which it will secure the highest return. At the same time, the gradual decay of industrial capital permits of withdrawal from an industry which is becoming less profitable. Under the action of these two forces there is a broad tendency for new capital to be offered approximately equal earnings in various industries. Accordingly, the best examination of the dependent variable of profit appeared to be offered by its relation to the independent variable of capital.

2. The measurement of capital itself, however, presented almost insoluble difficulties. Liquid capital once invested in the appliances of production derives its value solely from the produce, measured by varying considerations, expected to arise from those appliances.

" . . . the market value of a business being simply the present value of its anticipated earnings, these earnings must yield the ordinary rate of interest on it, allowing for the particular risks involved, whatever sum they amount to."<sup>\*</sup>

In other words, the value of such appliances rests upon a capitalisation of their profit-producing capacity. Clearly this will vary with that capacity, and the relation between them will be constant. The market valuation of capital assets would thus be an unsuitable base for the independent variable sought. A uniform base for determining the capital employed in each business, for the purpose in question, could therefore only take the form of the amount of capital, stated in money or money's worth, actually invested in the concern. Even in normal conditions of a stable price level, such an ascertainment of capital presents many difficulties, owing to the internal accounting treatment of the various assets and liabilities, losses, reserves, etc. The transformation of private businesses into joint stock companies and reconstructions of companies add to the tangle. The ascertainment and arrangement of the exact facts call for almost endless enquiry. But in the conditions which have characterised the past 10 years, such an undertaking becomes

<sup>\*</sup> Pigeon. *Economics of War-time*, 1920, p. 227.

hopeless. The change in the price level has destroyed the validity of all pre-war capital figures.

" . . . since price levels are different in different times, the practice of estimating capital investments merely by reference to their money value at the time they were made is incorrect. A real investment of 1,000 days' labour will be called £1,000 if it is made in one year, while an exactly identical real investment will be called £2,000 if it is made in another year."\*

The comparability of pre-war pounds of business capital and pounds invested since the outbreak of war has disappeared. The use of capital, expressed in the monetary units current in relation to real values at the date of investment, as the independent variable to which can be related the variable of profit would therefore yield results which would defy interpretation.

3. The other unit of business available as a basis for measuring the rate of profit was the unit of turnover. The pound of turnover varies automatically with every change in the price level, and in this respect it has not the disadvantages of the unit of capital. It functions always in the present unhandicapped by events in the past. It has, however, difficulties of its own. At times of rapidly changing prices, the rate of change in the unit of turnover differs from that of the unit of correlated profit, owing to the time lag between the date of purchase and that of sale. Any given increment or decrement of price may equally affect both turnover and profit, and so it may very greatly disturb their relation to one another. This difficulty is, however, minimised as soon as prices become more stable, and for the year 1922-23 the disadvantage is not great enough to rule out the unit of turnover as a basis of measurement. Another difficulty arises from the varying rate of turnover in different businesses. As between distinct trades, this source of disturbance can be eliminated by classification according to trade, but it remains effective as between different businesses in the same trade. It reaches its most acute form in a trade combination of a vertical kind which carries out every stage of production of a commodity, from the extraction or growth of the raw material to the sale of the finished goods ready for final consumption. Such a business will clearly require to make a greater profit per unit of turnover than one which only carries out one or two of the various processes in the whole chain. This factor is, however, probably small when a fairly broad classification of industry is adopted. But it may still have some effect if a business—treated as a separate entity for purposes of Income Tax—is in reality linked up intimately with other concerns, separately treated for taxation purposes. Internal arrangements between businesses so connected may possibly have the effect of artificially distributing the total profits arising from the operation of all the businesses, in such wise that a greater rate of profit than the actual is shown by one kind of business and a smaller rate by another. Another source of disturbance as between different years is to be found in changes which take place in the nature and scope of various business concerns. Extensions of business may be either in the direction of a greater quantum of business of the same kind, or in the direction of fresh activities. In the former event, a movement of the rate of profit on turnover may be due either to the greater internal economies possible in the business, or to the general forces of demand and supply; in the latter event, the movement may arise entirely because the new activities introduce a new relation between profit and turnover. A further difficulty arises from the varying proportions in which different businesses in the same trade derive their total earnings from remuneration for services and the sale of goods respectively. A commission or agency business, when combined with a distributive business buying and selling goods on its own account, will tend to raise the rate of profit

\* *ibid.*, p. 828.



on turnover for the whole business, because the more vocational the service the closer does the amount of profit approach the amount of turnover. The Department is, in general, little concerned with factors of this nature in the administration of the Income Tax, and no information can be offered as to the extent to which the relation between profit and turnover is affected by such forces. These or similar causes may offer, in some cases, broad explanations of the presence of high rates of profit on turnover where they occur. But it is not with that extreme of the distribution of profits on turnover that the present investigation is primarily concerned. The relation of the unit of profit (or loss) to the independent variable of the unit of business turnover thus appears to provide, when the price level is not fluctuating abnormally, a basis for testing whether typical trade groups consist largely of representative concerns equipped with appliances and ability, more or less on the same level, or, on the other hand, of concerns varying so largely, either as respects appliances or ability, that their relative trading results show very wide divergencies.

4. The second consideration which arose was the changes in the value of the dependent variable likely to result from differences in the constitution of the ownership of businesses. The broad distinction here is between corporate and private enterprise. The former, carried on mainly by joint stock companies, receives a profit which may be analysed into the two elements of remuneration of capital and remuneration for risk, because profit for Income Tax purposes in the case of companies is arrived at after debiting the salaries, fees, commissions and other emoluments, not only of the ordinary wage and salary earning staff, but also of the directors, managers and other individuals controlling the conduct of the business. The latter, carried on by sole and partnership traders, receives a profit, which in addition to these two elements, includes a further sum in respect of the personal remuneration of the work of the individual proprietors of the business, usually termed, technically, the earnings of management. As the proportions in which the three elements constituting profit in the case of private enterprise may be combined may vary indefinitely, it is clear that there is no satisfactory statistical basis of comparison between the profits of these two classes of enterprise. For these reasons, the investigation has been confined to the relation of profit to turnover in the case of corporate enterprise.

5. A third difficulty in compiling statistics for the investigation arose from the fact that out of the whole body of information available only a certain number of cases yielded the necessary data. Sample information only is therefore available. Generally speaking, for sample statistical investigations it is essential that every care should be taken to secure a sample free from bias, and to further this purpose, the sample taken should be random and independent. Very often randomness can be secured by the accidents which make cases available, as in the present instance. An exhaustive investigation is impossible, for obvious reasons, and the reliability of the sample cannot therefore be dogmatically asserted. On the other hand, the greater the proportion of the sample taken to the universe sampled, the greater is likely to be the precision of the result. The samples offered by the present investigation are fairly large, and derive some added reliability from this fact.

6. The statistical measurement of a group of facts is commonly based on the number of observations or instances of the various values of the variable, and it might have been expected that an analysis of the relation between profit and turnover would have been based upon the number of businesses showing different magnitudes of that relation. This basis would have been misleading, inasmuch as the magnitude of the business done at various values of the variable does not depend upon the number of businesses engaged, but rather upon the aggregate amount of turn-

over proper to each value of the variable. For this reason, the unit of reckoning has been taken as £1 of turnover.

7. Assessments to Income Tax in respect of the profits of trades, &c., are computed upon an average of the profits of the three years preceding the year of assessment which begins on the 6th April. For this purpose the trader normally adopts the year for which he makes up his trading accounts. For instance, if his trading year ends on the 31st January, the three years entering into the average for the year of assessment, 1924-25, would be those ending the 31st January, 1922, 1923 and 1924; should it end on the 30th April, then the three years would be those ending 30th April, 1921, 1922 and 1923. It follows that the extreme range of time that could possibly be covered by the last year's accounts used for the computation of liability for any one year of assessment is practically two years. For example, one concern might base its return for the year of assessment, 1924-25, on its three years' trading to the 6th April, 1923, and another on its three years' trading to the 5th April, 1924. The period covered by the most recent trading years of these two traders taken altogether would stretch from the 7th April, 1922, to the 5th April, 1924. In Tables 1 to 11 the particulars for any one year relate to accounts made up to a date ended within that year, i.e., within the Income Tax year beginning on the 6th April and ending on the following 5th April. No average profits have been used in the compilation of the statistics. Each result included represents, subject to the modifications described in paragraph 11, the trader's profit for one year as computed for purposes of Income Tax.

8. Trade profit for any year, measured on this basis, means, broadly speaking, the difference between the gross receipts of the business from all trade sources and the expenses incurred wholly and exclusively in carrying on the business. In addition to the ordinary expenses of purchase of goods, rent, wages, salaries, rates and miscellaneous expenses, there may be deducted in computing profit any debts which are proved to be bad, and doubtful debts to the extent that they are estimated to be bad. The Income Tax Acts prohibit deductions in respect of capital charges, lost capital, losses unconnected with the business and all private and domestic expenses. The amount of Income Tax paid by the trader is not a business expense. Should the trader own the premises which he occupies for the purposes of his business, the net annual value thereof upon which Income Tax, Schedule A, has been paid may be deducted in arriving at the profit assessable under Schedule D, in order to avoid a double charge of tax on that part of the total profit of the business. This course, it may be added, places on a comparable basis the Schedule D profits of two traders, one of whom hires, and the other owns, his trade premises. If the trade premises occupied consist partly of a dwelling house, the deduction in respect of the trade part is restricted to a portion of the rent or net annual value, Schedule A, normally not exceeding two-thirds of the whole. The Income Tax Acts also prohibit, as part of the system of collection of the tax at the source, the deduction of certain charges which would normally be regarded by the trader as business expenses. Such charges include any interest on borrowed money, annuity or other annual payment payable out of the profit, and any royalty in respect of a patent. Interest on short loan, e.g., on overdraft from a bank is, however, a deductible expense. Any Excess Profits Duty or Corporation Profits Tax payable in respect of the profits of any year is allowable as a deduction in computing the amount of profits for purposes of Income Tax. Repayments of the former duty are, on the other hand, chargeable to Income Tax as a receipt in the year in which the repayment was made.

9. The Income Tax Acts also provide for an allowance in respect of the diminished value, by reason of wear and tear, during the year of

assessment, of any plant and machinery used in the business and owned by the trader. That allowance is not deductible as an expense in computing the profit of the year's account, which is ultimately brought into the three-year average computation, but is deducted as a separate item from the average profits assessable.

10. Profit, as determined for Income Tax, on the lines broadly described above, is thus calculated upon uniform principles for each trader. It represents the whole profit of the business, irrespective of its distribution among the different persons entitled to share it, e.g., in the shape of interest on a loan invested in the business by some person other than the trader himself. In cases such as have been used for the statistics, the Income Tax profit is normally arrived at after investigation of the accounts by the Inspector of Taxes and after discussion between the trader (or his expert advisers) and the Inspector of any points arising from that investigation.

11. In order to secure, for the present purpose, a true comparison between the amount of profit and that of turnover, the Income Tax profit has been subjected to three modifications. The first two consist in the exclusion of any effect of payments or repayments of Excess Profits Duty and Corporation Profits Tax. The profit is presented as it would have been had these two taxes not existed. Had this course not been followed, the profit included in the statistics would not have been the whole profit arising, but only a part thereof. Excess Profits Duty, it will be recalled, extended to all businesses, whether carried on by private traders or companies. Corporation Profits Tax, on the other hand, was levied only on limited liability companies. The third modification relates to the allowance for wear and tear, or depreciation, of plant and machinery. For the present purpose, the amount of the allowance for the year of assessment in which the final date of the account fell has been deducted from the amount of profit shown by that account.

12. The turnover tabulated represents the total receipts of the business from the sale of goods or from remuneration paid in respect of services. It excludes any receipts from rents or property let, interest on loans, dividends on investments, &c.

13. Concerns have been classified according to the description of their trade usually furnished by taxpayers in making their returns for Income Tax purposes. When a taxpayer carries on two or more kinds of business which fall into different trade classifications, each class is dealt with separately when separate accounts are rendered for each class, and liability to Income Tax is separately computed. In other cases, the concern is usually assigned to the class from which the greater part of the profits is normally derived. It is not uncommon, of course, to meet with concerns which combine wholesale or manufacturing business with retail trade; if in such cases there is a preponderance of retail trade not distinguishable, the entire profits are classified as from retail distribution. Concerns which, in addition to their manufacturing business, carry on also the business of wholesale distribution, are normally classified by reference to the manufacturing business, unless that element is negligible.

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### ANNEXE III.

#### DEFINITIONS OF MEDIAN, QUANTILES, MEAN DEVIATION FROM MEDIAN, SKEWNESS, CORRELATION CO-EFFICIENT AND PROBABLE ERROR.

1. The median observation is the actual or calculated observation at the  $(\frac{N}{2} + \frac{1}{2})$ th point, when all the observations are arranged in order of magnitude, and their total number is  $N$ . It is the point above and

below which there are equal numbers of observations. In table 1 (cotton), June, 1920 quarter, the total turnover was £44,025,000. Taking £100,000 of turnover as the unit (in order to facilitate calculation), there were 440 cases or observations; the median point was the 220½th case. This was taken to be the point half-way between the average percentages of profit for the 220th and 221st £00,000's of turnover. In the same table for the September, 1920 quarter there were 153 units of turnover, and the percentage of profit on the 77th unit represented the median point.

2. Similarly, the lower quartile is the unit below which there is one-quarter of the total number of cases and above which there are the remaining three-quarters; for the upper quartile these proportions are reversed.

3. The mean deviation of a series of values of a variable is the arithmetic mean of the deviations of the respective values from some origin, taken without regard to the sign of the deviation. The origin chosen may be either the median or the arithmetic average of all the observations, obtained by multiplying each value of the variable by the frequency of that value and dividing by the total number of frequencies. The median is the natural origin to use, as the mean deviation is least when so measured.

4. If the numbers of instances at the various points of observation in tables 1 to 11 were plotted on squared paper, with the values of the variable as abscissæ and the percentages of total turnover as ordinates, graphic frequency curves would be obtained. The forms taken by a frequency curve vary infinitely, and its simplest form, that of absolute symmetry, with the frequencies decreasing symmetrically on either side of the maximum is very rare. The normal form in economic statistics is the moderately asymmetrical or skew form, with the frequencies decreasing more rapidly on one side of the maximum than on the other. There are various measures of asymmetry or skewness, and for the present purpose one of the simplest, based on the quartile points, has been adopted. The difference between the deviations of the two quartiles on either side of the median indicate skewness, and to measure its degree it is necessary to relate the difference to some quantity of the same dimensions. "The simplest to compute is as follows:—

Let  $q_2$  be the excess of the upper quartile over the median, and  $q_1$  the excess of the median over the lower quartile; then

$$s = \frac{q_2 - q_1}{q_2 + q_1}$$

is a measure of skewness. If the curve is symmetrical,  $q_2 = q_1$ , and  $s=0$ ; if  $q_2$  is greater than  $q_1$ ,  $s$  is positive, and if  $q_2$  is less than  $q_1$ ,  $s$  is negative.  $s$  becomes plus 1, if  $q_1 = 0$ , that is, if the median and lower quartile coincide, and  $s$  becomes minus 1, if  $q_2 = 0$ .  $s$  is therefore a measurement which never exceeds 1 numerically, and has a definite significance at zero and its extreme values. . . . The significance of various values can only be obtained by experience, but it may be suggested that 0.1 is a moderate degree of skewness, and 0.3 a considerable degree." (*Bowley, Elements of Statistics.*)

5. Where it is found that in a number of instances two variables tend always to fluctuate in the same direction or in opposite directions it is assumed that a relationship exists between them. This relationship is known as "correlation." If the linked observations constantly deviate in the same direction the correlation is said to be direct or positive, while, if the movements are in opposite directions, the correlation is inverse or negative. Correlation between two variables may be roughly illustrated by frequency graphs. Graphic methods are, however,

deficient in that they cannot give a numerical measurement of the degree of correlation existing. For this purpose it is usual to adopt the Pearsonian formula, the working of which is illustrated in the following table:—

- (1) "Statist" Index No.  
 (2) Gross yield of Consols in same year.

*Correlation for period 1908-1924.*

Year.	"Statist" Index No.			Gross yield of Consols (in pence).			
	Figure for year.	Deviation from Average. X.	X <sup>2</sup> .	Figure for year.	Deviation from Average. Y.	Y <sup>2</sup> .	XY.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1908 ...	73	— 55	3,025	697	—256	65,536	+14,080
1909 ...	74	— 54	2,916	713	—240	57,600	+12,960
1910 ...	78	— 50	2,500	740	—213	45,369	+10,650
1911 ...	80	— 48	2,304	756	—197	38,909	+ 9,456
1912 ...	85	— 43	1,849	788	—165	27,225	+ 7,095
1913 ...	85	— 43	1,849	815	—138	19,044	+ 5,934
1914 ...	83	— 45	2,023	801	—152	23,104	+ 6,840
1915 ...	108	— 20	400	916	— 37	1,369	+ 740
1916 ...	136	+ 8	64	1,034	+ 81	6,561	+ 648
1917 ...	175	+ 47	2,209	1,097	+144	20,736	+ 6,768
1918 ...	192	+ 64	4,096	1,055	+102	10,404	+ 6,528
1919 ...	206	+ 78	6,084	1,110	+157	24,649	+12,246
1920 ...	251	+123	15,129	1,277	+324	104,976	+39,852
1921 ...	155	+ 27	729	1,258	+305	93,025	+ 8,235
1922 ...	131	+ 3	9	1,062	+109	11,881	+ 327
1923 ...	129	+ 1	1	1,034	+ 81	6,561	+ 81
1924 ...	140	+ 12	144	1,051	+ 98	9,604	+ 1,176
Averages.	128	—	2,667	953	—	33,321	+ 8,448

$$\text{Standard Deviation} = \sqrt{2,667} = 51.6.$$

$$\text{Standard Deviation} = \sqrt{33,321} = 182.5.$$

$$\begin{aligned} \text{Co-efficient of Correlation} &= \frac{\text{Average of products of Deviations}}{\text{Product of Standard Deviations}} = \\ &+ \frac{8,448}{51.6 \times 182.5} = +.90. \end{aligned}$$

$$\text{Probable Error} = \frac{.67(1-r^2)}{\sqrt{n}}$$

$$\begin{aligned} (\text{where } r &= \text{the co-efficient of correlation, } n = \text{the number of observations.}) \\ &= \frac{.67(1-.90^2)}{\sqrt{17}} = .03. \end{aligned}$$

Here the year appears in column 1 and the relative "Statist" Index No. in column 2. The deviations of this variable from the average for the 17 years are given in column 3, due regard being paid to sign (+ or -). In column 4 the deviations are squared, and the square root of the average of the squares, known as the "standard deviation," is calculated. Columns 5, 6, and 7 contain similar particulars relating to the gross yield of Consols in the year. The deviations from the

respective averages for each pair of linked observations are multiplied together, having regard to sign (+ or -), and the products shown in column 8. The average of these products divided by the product of the standard deviations gives the co-efficient of correlation. A co-efficient of + 1 indicates perfect direct correlation; - 1 perfect inverse correlation. In the present instance the co-efficient of + .90 shows a high degree of direct correlation.

6. The present example of correlation is based on a comparatively small number of observations, and it is quite possible that if an investigation were made for another period a different co-efficient would result. It is often desirable to be in a position to estimate the probable variation in the results which would be arrived at. In the present instance the "probable error," calculated as shown in the table, amounts to .03. In other words, if the correlation of the "Statist" Index No. and the gross yield of Consols were investigated over a large number of 17-year periods, half the resulting co-efficients might be expected to lie between + .87 and + .93 ( $.90 \pm .03$ ). It is generally considered that marked evidence of correlation exists if the co-efficient of correlation is more than six times the probable error. The derivation of the formula for the probable error is too complex for discussion in this Memorandum.

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## APPENDIX XII.

### INCOME TAXES AND THE PRICE LEVEL.\*

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The connection between taxes and prices has long engaged the attention of scholars and the solicitude of statesmen. Whereas in former times the practical controversy turned about the tariff, of recent years it has come to the forefront of discussion in connection with the sales tax and now with the income tax. The problem is a subtle and difficult one, and there are perhaps few questions on which there exists a greater divergence of opinion, if not among scientists, at least among business men. It is the endeavor of the following paper to probe this question to its foundation, so far as the income tax is concerned.

#### I. Are All Taxes Shifted?

The most obvious way in which the influence of a tax on prices manifests itself is through the process of shifting. For if a tax is shifted or rolled off from the producer to the consumer, the price to the consumer will naturally be increased by the amount of the tax. By the shifting of the tax we mean its transfer from the original taxpayer to some other person; and as the latter ultimately bears the burden of the tax we may call him the tax-bearer. In order that the tax may be shifted there must, of course, be some economic transaction as between the two parties. In the great mass of cases these transactions take the form of an exchange or a transfer of economic rights—generally through purchase or sale, or through rent or lease; and the question resolves itself into one of a change of price as between the two parties to the exchange.

There is, however, another way in which prices may be affected, apart from the immediate shifting from the original taxpayer to the tax-bearer. The payment of a tax may so modify the position of the

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\* This paper is reproduced, by Professor Seligman's permission, from "Wealth and Taxation," Proceedings of the Academy of Political Science in the City of New York (Columbia University), May, 1924, Vol. XI, No. 1.

taxpayer as to influence his future actions. It may, for instance, cause him not only to change the price, but to alter the output of the commodities or services in question, and it may affect his desire to save or to spend or to invest or to do other things of economic importance. Any such change in his economic attitude may have a reaction upon other classes and may ultimately modify the prices of goods or services which are only indirectly connected with the original taxpayer. In other words, a tax which affects the situation of the original taxpayer may alter the equilibrium of economic forces subsisting between him and his neighbors and may have widespread consequences upon the community, comparable to the ultimate effects that may be produced by any other change in the relative prices of goods or services.

It is obvious, however, that such a consequence depends upon the existence of further relations between the original taxpayer and other individuals. It is necessary here again to hold in mind the distinction between the direct relations which make possible a shifting of the tax and the indirect relations which depend on the ultimate effects of the tax. This distinction is neglected by those who believe that all taxes are shifted to the consumer in the shape of higher prices—the so-called doctrine of the diffusion of taxation. Over a century ago a Frenchman by the name of Canard contended that the imposition of a tax was like the injection of a drop of liquid into the veins of a human being: although introduced at a single point, it will at once be carried throughout the body by the circulation of the blood. Economic transactions in the community are like the circulation of blood in the individual.

In this widely held opinion there are two fallacies. In the first place there are some taxes which do not involve any further direct relations. A poll tax or an inheritance tax, for instance, is not necessarily concerned with anything that the individual produces or sells; it is difficult to see how such a tax can be shifted when the tax involves no further direct economic relation between the taxpayer and other individuals. It is only in a very indirect way that a poll tax, by affecting the general purchasing power of the individual, may modify his demand for economic goods or services in general, or that a high inheritance tax, affecting the readiness of the testator to accumulate wealth, may exert a subtle influence upon the entire economic process. But such indirect effects are very different from the rise of prices traceable to the imposition of the tax. There can, in other words, in such cases be no shifting of the tax, because there is no further immediate economic transaction between the taxpayer and other individuals.

The second fallacy in the general-diffusion theory consists in the fact that, even where there are such further relations between the taxpayer and other individuals, economic forces may prevent any shifting of the tax. Take, for example, a tax imposed upon the net profits of a monopolist or upon the rent of a piece of unimproved land. In the case of a monopolist, like the owner of a patented process, the price of the article produced will always be fixed at the highest point consistent with the greatest sales; this is the point of maximum monopoly revenue. If the monopolist were to try to raise the price beyond that point, his sales would fall off to such an extent as to reduce his net profits. If a tax is imposed upon the output or the gross profits of the monopolist, it may indeed lead him to revise his price schedule, because the point of maximum monopoly revenue will now have been altered as a consequence of the tax upon his output or cost. That is, although he may now sell less units than before, his net profits may be greater because of the new margin between cost and price. But if the tax is imposed upon his net profits, it will not lead him to increase the price; for, if he could do this without cutting down his sales, he would have done it before the tax was imposed. What the consumer is willing to give is unaffected by what the producer is compelled to take. In the case of a tax on output he may find it to his interest to sell a little less at a higher price; because the less he

sells, the smaller his tax: but in a tax on net profits his tax is reduced not by the falling off in output but by the falling off in profits; and if he increased the price he would suffer a double loss, namely in his lower profits as well as in the payment of the tax. He will therefore prefer to maintain his profits and to pay the tax, that is, he will not shift the tax to the consumer.\*

The same thing is true, although in an entirely different way, with a piece of unimproved land. Its price depends upon the amount of similar available land and the demand of those who desire to use the land. A tax upon the landowner does not of itself affect either the one or the other. The amount of land is not influenced by a tax on the land, differing in this respect from a tax on the house which stands upon the land. A house is a piece of capital; and unless house-builders secure the usual return from the investment of their capital, they will not build houses; and the consequent shortage of houses will raise rents. In a tax on land on the contrary, the supply is unaffected by the tax; and there is nothing to compel the user of the land to pay more than he did before the imposition of the tax. The result of a new tax upon the land, therefore, will be to bring about a lowering of the value of the land in the hands of its present owner; for a new purchaser of the land, who will have to pay the annual tax, will make allowance for this in the purchase price. But a tax on land cannot, as in the case of a tax on a house, lead to an increase of price to the person who uses the land.

We have thus seen that the doctrine of the general diffusion or shifting of taxes is a fallacy, first, because some taxes, like the poll tax and the inheritance tax, do not give rise to any further direct transactions; and second, because even where there are such direct transactions, conditions may cause the taxpayer to assume the tax either voluntarily, as in the case of a monopoly, or necessarily, as in the case of land. In other words, some, but not all, taxes are incapable of being shifted.

We have mentioned some taxes that cannot be shifted. About some taxes that are generally shifted, there is also no dispute. In a tax on commodities such as the ordinary excise or customs duty everyone agrees that the tax tends to be shifted from producer to consumer in the

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\* Let it be assumed that a monopolist can sell, at the price of 5 dol. each, 1000 units of a particular article. Let it be further assumed that the cost of each unit is 2 dol. His gross receipts will then be 5,000 dol., and his net profits  $(5-2 \text{ dol.}) \times 1,000$  or 3,000 dol. If he charged more, the sales would fall off; if he charged less, the receipts would be smaller. In either case his net profits would diminish. Let it be assumed that, if he charged 6 dol. a unit, the sale would fall off to 700 units. His gross receipts would then be 6 dol.  $\times$  700 or 4,200 dol., and his net profits  $(6-2 \text{ dol.}) \times 700$  or 2,800 dol., or less than before. If, on the contrary, he charged only 4 dol. a unit, his sales would increase, let us say, to 1,200 units, his gross receipts would be 4,800 dol., and his net profits  $(4-2 \text{ dol.}) \times 1,200 = 2,400$  dol. He will therefore under the conditions always prefer the price 5 dol. which marks the point of maximum monopoly revenue.

If the government now imposes a tax of 1 dol. a unit, what will be the result? The net return on each unit is reduced to 2 dol., the total net profits to 2,000 dol. If the monopolist attempts to add the whole tax to the price, he will sell only 700 units; and since the cost per unit has been increased by the tax to 3 dol., his net profits will be  $700 \times (6-3 \text{ dol.}) = 2,100$  dol. Granting that this is the highest net return that the new conditions admit, the monopolist will increase the price from 5 dol. (which gives him 2,000 dol. profits) to 6 dol. (which gives him 2,100 dol. profits). The entire tax will be shifted to the consumer.

But suppose on the other hand that instead of a tax which, as in the above example, amounts to 50% of the cost per unit, or 20% of the original selling price per unit, a tax of 40% is imposed on net profits. Taking the same figures, with no change in price or output, the monopolist must pay 40% of 3,000 dol. or 1,200 dol., and his remaining surplus will be 1,800 dol. If he attempts to add the tax to the price and raises the price to 6 dol., his taxable net profits will be, as above, 2,800 dol., his tax 1,120 dol. and his surplus 1,680 dol., instead of 1,800 dol. He will therefore refrain from adding the tax to the price. His final profits are indeed less than before in both cases—but it will be clear why he prefers the tax per unit of product or sales to a tax on income. It is also clear why, with the particular figures here selected, an income tax is for the community as a whole preferable to a tax on product or on sales. For while the producer suffers more under the income tax than under the tax on sales, the difference is more than compensated by the extra loss imposed on the consumer by the tax on product or the sales tax.



shape of higher prices. The only question at issue is first as to the exact proportion of the tax which is shifted and secondly as to the possible ulterior consequences. Into the niceties of this argument it is impossible to go here. Those who are interested in this particular problem may be referred to a volume that has been written on the subject.\* It may suffice to say that the proportion of the tax which is shifted, depends partly upon the elasticity of the demand and partly upon the elasticity of the supply. In everyday language, the degree to which the producer will find it profitable to raise his price depends partly upon the probable falling off in sales and partly upon the change in cost per unit which may attend the diminution of his output. As regards ulterior consequences, it will suffice to say that even where it is possible for the producer to shift only part of the tax to the consumer it may affect the various producers in different ways and, by changing the conditions of the market, may confer an advantage on the larger producers which in some cases will even tend to produce a monopoly. Again, even though it is true that the tariff is a tax, the indirect effects of the tax may—not to say, as claimed by the protectionists, must—confer such advantages on the domestic producer, especially in young industries, as ultimately to compensate for the increased burden on the consumer. But in all these cases there is no dissent from the opinion that the original taxpayer shifts the tax, in whole or in greater part.

In a sales tax the same is true; the only point at issue here is as to whether the consumer suffers by more than the amount of the tax, or, in other words, whether there is a so-called pyramiding of the tax, whereby not only the tax but a sum over and above the tax is taken from the ultimate consumer. The problem to which we shall now address ourselves is whether the income tax is like the poll tax, the inheritance tax, and the land tax, in not being susceptible of transfer in the shape of higher prices: or whether it resembles a tax on commodities or a sales tax or the tariff, in being usually shifted to the consumer.

The ordinary business man finds but little difficulty in answering this question. He is accustomed to include all taxes in his outlays or cost of operation; and when he considers the price at which he shall offer his goods, he is apt, in the case of a tax, to add it to the cost of his raw materials and his overhead and then, after figuring a reasonable profit on this cost, to fix his price accordingly. But when we come to study the actual results of the operation, the situation is by no means so simple. It needs, in fact, a rather careful analysis of the various complicated elements in the problem.

## II. *The Shifting of Special Taxes on Income.*

In the first place we must distinguish between a uniform or general tax on all incomes and a partial or special or exclusive tax on certain forms of income. Where the income is derived from property, the latter kind of income tax would be tantamount to a special tax on particular kinds of property. Examples of this are very common. In the case of property, we may have a special tax on land or a special tax on moneyed capital or a special tax on mortgages and the like. In the case of an income tax an interesting illustration is afforded by France. The French income tax is composed of two parts. One consists of a general tax upon the entire income, as is the case with our federal tax. Another part, however, consists of taxes on the separate constituents of income, such as income from land, from professions, from moneyed capital, from business and the like. Each of these taxes of the constituent kinds of income is or has been levied at a different rate. Where such taxes apply to the income from property, there is but little difference between them and the customary property taxes, provided the latter permit, as is not always the case, a deduction of debts.

\* Seligman, *The Shifting and Incidence of Taxation*, 4th ed., 1911.

Where, as in some of the American States, indebtedness is not deductible from property, as for instance in the case of real estate in New York, the tax is tantamount to the impersonal taxes or taxes on the yield or product of property, as they are still found in Europe. But where debts are deducted and the tax is imposed on net assets or net property, it makes little difference whether we call it a tax on property or a tax on the income from property; for the selling value of property tends to be equal to the capitalised value of the income to be derived therefrom.

Where we have a series of special taxes on income, it is necessary to consider each class by itself. If we are dealing with ordinary competitive conditions, many such special income taxes will be shifted. If a tax, for instance, is imposed on the profits of a particular class of business, the tax will usually be shifted. The argument is analogous to that in the case of a special tax on the income of houses or on the income of moneyed capital loaned at interest. Why should the individual continue to keep his capital in a particular kind of business, subject to a special tax if, by transferring his capital to some other field not subject to taxation, he can increase his net returns? Such special taxes, therefore, tend to be shifted; for otherwise the individual will withdraw his capital from that class of enterprises and the consequent diminution of supply will inevitably lead to an increase of price.

The same argument applies, with certain reservations, to income from personal exertions like wages and professional salaries. In the case of ordinary unskilled labor, if wages are near the minimum of subsistence a special tax on wages (which in modern times is not found because the individual and family exemptions in the general income tax) be apt to be shifted in first instance to the employer in the shape of higher wages; and he in turn may be able to pass the tax on to the consumer in the shape of higher prices. Where wages are above the minimum of subsistence and enable the laborer to enjoy a higher stage of life, the question as to whether he will be able to shift the tax on the employer in the shape of higher wages, or whether he will have to pay the tax himself and thus suffer a reduction in his standard of life, depends upon many conditions which can be summed up under the head of relative resisting powers of both parties. Under actual conditions the standard of life is tenaciously maintained, as in the United States, a tax even on the higher class of laborers will tend to be shifted. The same would be likely to be true of the earnings of the professional classes, like physicians, lawyers, architects, engineers and the like. In the long run, if such classes were subject to an exclusive tax, under conditions of free competition, lead to a gradual exodus of those occupations not subject to tax; and this decrease in the supply would naturally lead to an increase of the remuneration of those that remain. There are, indeed, exceptional cases where high professional incomes represent either monopoly returns or incomes that are fixed by law rather than competition; and in such instances, like railway engineers and great surgeons, it is not at all impossible that, having already charged all that the traffic will bear, they would refrain from adding the tax to their charges or salaries. In the great run of cases, however, a special tax on professional incomes, like a tax on wages where the workmen are well organized, is apt to be passed on.

While special income taxes are thus ordinarily shifted, this result does not apply in all cases. For, as was pointed out above, a tax on the income of a monopolist, whether he be a business man or a professional man, cannot be shifted. Monopoly price is always at the point of maximum monopoly revenue: the monopolist will always charge what the traffic will bear and a tax will not enable him to charge more. In the same way, as we have seen above, a tax on land, exclusive of improvements, cannot be shifted, because there cannot be, as in the case of houses or other forms of capital, a change in the supply. An exclusive tax on land, however, like an exclusive tax on the dividends or stock of some particular class of corporations, even if it cannot be shifted,

It will be capitalised into a lower selling value of the property, so that the new owner or purchaser will not bear the tax. There will be a change of price, and the new taxpayer will thus suffer no burden.

### III. *The Shifting of a General Income Tax.*

In the main, then, a special tax on the income of particular classes, with the exceptions just noted, will lead to changed prices, either higher prices as in the ordinary case of shifting, or lower prices as in the case of land or of securities where the tax is capitalised rather than shifted. Inasmuch as the individual business man ordinarily thinks of himself in the light of one who is subject to special taxation, it is natural that he should generalise the above conclusion and hold that income taxes, like so many other taxes, are shifted to the purchaser in the form of higher prices.

As a matter of fact, however, the situation is different when we deal with a general income tax such as our federal income tax.\* If everyone is taxable upon his income, from whatever source derived, there is no taxless field to which he can repair. If he pays the tax in the first instance, he cannot improve his position by transferring his capital and his energies to some other business or occupation; for he would meet in the new enterprise precisely the same conditions, so far as the tax is concerned, as in the old one. How then can such a change in the relations of demand and supply be brought about as to render possible a shifting of the tax or an increase of price? If the tax is on professional earnings there will be no exodus from the profession because there will be no resulting improvement to the taxpayer. The recipient of income from houses or from interest on capital will not be led to diminish his investments, because in whatever new fields he might be tempted to invest, he would suffer the same burden. The business man subject to a general income tax would also be in precisely the same predicament. So that in case of a general income tax there is no difference, as before, between conditions of monopoly and conditions of competition.

But how shall we meet the objection of the ordinary business man who tells us that he adds the income tax, like the tax on product or on sales, to his cost and thus to his price? It is obvious, however, that there is a fallacy in this contention, at all events when we deal with a graduated income tax. For the larger sum paid as a surtax is measured by profits, not by sales. Let us grant, for the moment, that the smaller taxpayer, subject only to the normal tax, will add the tax to the price of the commodities. Then, if the high profits of his fortunate competitor, subject to large surtaxes, are due not to greater sales but to lower cost or more efficient management, it is clear that the addition per unit made to the price by this fortunate individual must be considerably greater than the addition to price made by the competitor who pays only normal taxes. If the surtax-payer attempts such an excessive rise of price per unit, his sales will fall off, his market will be captured by the competitor subject only to normal tax, and his profits will disappear. He will accordingly refrain from adding the high tax to the price. It is clear therefore that in the above case only the normal tax, and not the surtaxes can be added to the price.

Suppose, however, that the higher profits are due to greater sales, so that the surtax-payer will distribute his tax among a larger number of units than his competitor. Even then, however, the addition which he would make to the price would turn out to be the same as that made by his smaller competitor only in the very exceptional case where the amount of his sales before and after the change of price would bear the same proportion to the amount of his competitor's sales as would

\* The only point which militates against the acceptance of the federal tax as a general income tax is the 12½% rate on corporations with individual credit for dividends. But as this credit for dividends applies only to the normal tax of 4-8% it is really of minor importance.

the relative ratio of their taxes. For only in that way would the graduation in the amount of sales keep exact pace with the graduation in the amount of taxes.

Barring this highly exceptional case, it therefore remains true that the surtaxes will not be shifted to the consumer in the shape of higher prices. Even if the normal tax or an amount equal to the tax paid by the least heavily assessed individual is shifted, the excess above that amount in the shape of a surtax or supertax cannot be shifted. The belief so widely prevalent among business men that income taxes are added to the price thus turns out to be fallacious, at least so far as the surtaxes are concerned.

But it can now be shown that the same is true of the normal tax. Despite the widely held belief to the contrary, even a proportional income tax cannot be shifted. In order to prove this, however, it is necessary to discuss somewhat more fully the conditions which fix prices.

How are prices fixed? It is obvious that while prices are affected by the conditions of demand and supply, the normal point around which the market prices oscillate is in close relation to the cost of production. Some commodities oscillate around a hundred dollars a unit; others around one dollar a unit. But when we say cost of production, we have at once to inquire: whose cost of production? Producers obviously differ in ability and in opportunity. It is true that at any given time all similar units in the supply of a given commodity must sell in the market at the same price. If prices differ, it is because of differences in the brand or in the quality or in the speed with which the order can be filled or some analogous reason. But while there is only one price for exactly similar units of the same commodity in the market at any given time, there are under conditions of competition always differences in cost. Some producers have more ability; some factories are more favorably situated; some employers get better results from their labor force; some individuals are able to reduce their overhead or to organize more successfully their advertising or selling campaigns. In short, some have relatively high costs and some relatively low costs of production. At any given time the normal price will tend to equal the highest cost of production. As long as the demand at any particular time is sufficient to take off the total supply of commodities produced at different costs, the price at which the whole supply will be sold tends to be fixed at the point of greatest cost. Inasmuch as the price is fixed at the cost of producing the most expensive portion of the supply that is actually sold, the difference between the lowest cost and the actual price—that is, the difference between the cost of producing the article and bringing it to market under the most disadvantageous circumstances and that of producing it under the more favorable conditions, constitutes the producers' surplus or profits. Profits are the result of the industrial process; they represent not cost, but surplus over cost.

The next obvious point is that in actual life, under competitive conditions, the situation is continually changing. The more efficient producer or perhaps some newcomer in the field with more capital, or with improved machinery, or with better facilities for marketing the product, or with more ability to cut down his overhead, will endeavor to capture a part of the market by putting out an increased supply at a lower cost of production. The fact of this increased supply will tend to lower the price; and, although his percentage of profits may be smaller than it would have been at the old price, the more fortunate producer expects larger total profits because of his ability to sell more. This increase of supply, at a lower price, must manifestly injure the less efficient producer at the margin of profitable production. In every business there are always some producers who are able only just to make both ends meet; their machinery is antiquated, their capital is depleted, their private expenses are too great, their business activity and knowledge are no longer what they should be, and as a consequence their former profits tend to vanish. They may decide for a time to

continue the struggle, hoping against hope; they may live on their capital; or they may deceive themselves by a fallacious system of book-keeping, and figure out a nominal profit. But sooner or later such producers will find that they are getting no return or no adequate return on their industrial capital. They will abandon the business and their place will be taken by a more efficient individual.

All industrial progress consists of such a change at the top and the bottom of the line of producers. Fresh capital is continually coming in; the discouraged are continually stepping out. Under such conditions of change, normal price tends in the direction of the cost of production under the most favorable, not under the least favorable, conditions; it tends toward lowest cost, not toward highest cost. The actual price in the market at any given time is indeed always fixed at the point of highest cost; for at any given moment there is always some unlucky producer who furnishes a part of the supply at cost. But next year he will be crowded out and his place will be taken by someone who can produce at lower cost.

What is the bearing of this analysis upon the problem of taxation? It resolves itself into the question of how the marginal producer, the producer at the margin, is affected. A tax on a commodity per unit affects the cost of the marginal producer as well as of every other producer and therefore tends to be added to the price, because whatever increases marginal cost must ultimately increase price. But a tax on income is a tax on net profits; and net profits are not cost, but the surplus over cost. A tax on profits cannot reach the man who makes no profits. But the man at the margin who makes no profits, or who makes only the minimum profits which correspond to wages of management or recompense for the risk, pays no tax because he makes no profits or pays only a negligible tax upon these minimum profits. If the man at the margin who at any particular time fixes the price for the entire supply of commodities that is sold in the market pays no tax, how can the income tax be added to the price? The tax on profits is paid only by the man who makes profits, that is by the intra-marginal producer, not by the marginal producer. But the tax paid by the intra-marginal producer cannot affect the price which is fixed by the marginal producer who pays no tax.

#### IV. *The Business Man's Theory.*

The ordinary business man who thinks that he is adding the tax to the price is in reality not doing so. Whether he can get the price which he has set depends not upon himself, but upon market conditions. If his competitor who pays a smaller tax because of smaller anticipated profits, or who perhaps pays no tax at all, marks his goods at a lower price because of the smaller tax, all the others will have to follow suit whether their taxes are high or low. Where a man has added the tax to the price, the inability to dispose of his goods at this higher price will lead him quickly to mark down his goods; with the result that his anticipated profits may not materialize. There is many a slip 'twixt cup and lip. The profits of a business man at the end of the year depend upon a multiplicity of perhaps very insignificant factors; he can never tell at the beginning what his profits are going to be at the end. The mere fact that he adds his anticipated taxes to the asking price will not by any means enable him always to get the price that he asks. The profits upon which he pays taxes come at the end, and not at the beginning, of the period. If every man could fix his profits at will by charging increased prices because of anticipated increased taxes, the making of profits would be a very simple proposition. Unfortunately, however, business life does not work that way.

It might indeed be claimed that, if the business man were correct in his opinion, it would be stupid for him to object to high income taxes. For, if the business man really adds the income tax to his

cost and then charges proportionate profits on this increased cost, why, it might be asked, would not high income taxes increase his profits?

This argument, however, is really invalid.\* For the producer does not necessarily remain scatheless even if his taxes are shifted. He may be able, under a tax on product or on sales, to increase the price of his commodities; but the increase in price will almost surely lead to a falling off in consumption and will therefore tend to restrict his profits. This is the reason why the business man does not welcome taxes on his product, even if the tax is passed on. In the same way, even though the producer should be able to add the income tax to the price of his goods and thus increase his profits per unit of output, he would, in all probability, sell so many less units as to diminish his total net profits. The business man, therefore, is quite justified in objecting to high taxes on business profits, even if he thinks that he is able to shift them to the consumer.

As a matter of fact, however, as we have seen, the business man is not able to do this. The chances are that if he did not increase the price by his anticipated income taxes, his actual profits at the end of the year would probably be the same. For in the first place it is not at all sure that he can hold to the higher prices in the face of the lower taxes imposed on some of his competitors; and, secondly, even if he should be able to hold to the higher prices for a time, he would find his sales falling off to such an extent as to lead to a new and lower price schedule. In other words, business profits are a result of business operations: they are a consequence of price, not a cause of price. A tax on business profits is not a part of cost as is a tax on business products. The latter can be shifted; the former cannot be shifted.

It might be claimed by some that the above reasoning is defective. Producers, it might be said, will not permanently remain in business unless they secure the usual returns, which in the ordinary run of cases can be fixed at, say, six per cent. Not only the producer below cost, but the producer at cost or with profits of less than six per cent. will be continually stepping out, and the real marginal class, it might be claimed, is the six per cent. class. Even a normal income tax will then, so the argument runs, be shifted because otherwise it would reduce their profits to say, five per cent., with the result that their falling out of the race will reduce the supply and thus increase the price.

This objection, however, is doubly defective. In the first place, it does not follow that the fall of profits to five per cent. will lead to an exodus of the previous six-per-cent. producers. For there will now be no other field of business to which they can repair. If the tax is a general tax, the entire level of profits will be reduced from six to five per cent., and the producer will have to content himself with the smaller profits. It is only when the normal tax is so excessively high as to reduce the general rate of profits to a figure where all business enterprise will be checked, that prices can be affected. But, as we shall see below, even this means not a shifting of the tax in the shape of higher prices, but a prevention of what would otherwise be a tendency to lower prices.

In the second place, if the price of the commodity is raised as a result of the addition of the tax made by the six-per-cent. producers, all of the lower-profit or no-profit producers—whether we call them marginal or sub-marginal—who pay small taxes or no taxes at all will now also be able to charge the higher price. They will consequently be in a position to increase their output, with the result that their more effective competition will soon lead to an abandonment of the higher price by the six-per-cent. producers. For even five-per-cent. profits are preferable to the still lower profits which would ensue on a loss of the market.

Thus the analysis stands: a normal income tax cannot be shifted, any more than can a surtax.

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\* It has nevertheless been advanced by some writers.

There is only one possible weakness in the above analysis. In a period of rapidly rising prices, we may have what is commonly called a sellers' market. Everyone is then anxious to buy; every producer is turning out goods at the maximum rate, and stocks are being depleted almost more rapidly than they can be replenished. Even the producer with the highest cost—the old marginal producer—will now find that he is making money, because the price of his goods is considerably higher than his cost. Being in a position to market his entire output, there will be no inducement for him to cut prices in order to secure a still larger proportion of the total sales. Under such circumstances, indeed, the imposition of a tax of any kind, whether on income or anything else, will afford the producer an excuse for asking a still higher price, and the conditions of the market may enable him to hold to that price. But after all, the tax will then be an excuse for, rather than a cause of, the higher prices which he would probably have been led to demand in any event. And at best, such business conditions can be only temporary. For the large profits due to a sellers' market will speedily lead to a fresh investment of capital and an increased output on the part of some competitors; and as soon as this condition shows itself, the heyday of the old producers is gone. As a matter of fact, the sellers' market is before long apt to be succeeded by a buyers' market, when all the advantages will be on the side of the purchasers, and when the producers will slash prices, tax or no tax, in order to dispose of their accumulated stocks. Just as everyone makes money in good times, so everyone loses money in poor times; and what the consumer has suffered in the first case by high prices, he will now gain by low prices.

Under normal conditions, however, when there is neither a business boom nor a business depression, when there is neither a sellers' market nor a buyers' market, but just an ordinary, normal, average market, the producer will not even have an excuse for adding an income tax to the price. For, as we have pointed out above, prices will tend, under normal conditions, to be fixed at the cost of production of the marginal competitor who pays no taxes because he finds at the end of the year that he has made no profits.\*

#### V. *The Indirect Effects of an Income Tax.*

While, then, it is a fact that taxes on business incomes cannot be directly passed on in the shape of higher prices, the question still remains as to what the indirect effects upon prices may be. Here we

\* The above conclusions as to the shifting of the income tax are in harmony with the doctrine of Ricardo. His statement is as follows: "To me, however, it appears convincingly certain that neither the income tax, the assessed taxes, nor many others, do in the least affect the prices of commodities. . . . The income tax, were it fairly imposed, would leave every member of the community in the same relative situation in which it found him. Each man's expenses must be diminished to the amount of his tax; and if the seller would wish to relieve himself from the burthen of the tax by raising the price of his commodity the buyer for the same reason would wish to buy cheaper. These contending interests would so exactly counteract each other, that prices would undergo no alteration. The same observations are applicable to the assessed taxes, and to all other taxes which are not levied on commodities. But, if the tax should in its operation be unequal, if it should fall particularly heavy on one class of trade, the profits of that trade would be diminished below the general level of mercantile profits, and those engaged in it would either desert it for one more profitable, or they would raise the price of the commodities in which they dealt, so as to bring it to produce the same rate of profits as other trades."

"Taxes on commodities would certainly raise the price of the commodity taxed to the full amount of the tax. The price for such commodities may be considered as divided into two portions; one portion, its original and natural price, and the other a tax for the liberty of consuming it. If this tax again were laid on a commodity, the consumption of which, by each individual, was in exact proportion to his income, no other commodity would rise but the one taxed; but if it were not in such proportion, those who paid more than their just portion would demand an increased price for the commodity in which they dealt, and, by obtaining it, the society would be put in the same relative situation in which they were before placed." David Ricardo, *Reply to Mr. Beaumont's Practical Observations on the Report of the Bullion Committee*, 1811, pp. 117-118. In McCulloch's *The Works of David Ricardo*, new ed., 1876, this passage will be found on p. 837.

enter upon the thorny path of the general effects of taxation. It may be said at once that all sorts of ultimate effects are possible. It is conceivable, for instance, that if income taxes are so high as to check the investment of capital, very definite consequences to the entire community may ensue. The continual growth of a country's prosperity depends largely upon the readiness of the able and the venturesome to start new enterprises and to take the risk of the unknown. Where the hazard is great, the profits must be correspondingly great; for in the long run in new and untried fields the profits of some are likely to be counterbalanced by the losses of others. If the government, however, demands too large a percentage of these anticipated profits, the individual may prefer not to subject himself to the risk and may decide to be content with a smaller, but a surer, return. Or, if the income tax is still more excessive, it may decrease the margin above living expenses and thus retard savings and the accumulation of capital. In both cases, whether there is less capital to invest or fewer venturesome individuals to utilise the capital, the result will be the same. The rate of interest will tend to rise, thus to this extent increasing cost and therefore augmenting price. And, on the other hand, the relative slackening of demand for new production will check the increase of employment and the rise of wages that normally go with increased productivity and the growth of capital. This, again, will prevent the gradual fall in the price of the particular commodities subject to the law of increasing productivity. The history of modern capitalism, especially in the United States, shows a steady increase in wages and the laborer's standard of life and a steady decrease in the cost of the manufactured articles which enter into ordinary consumption. To the extent that excessive income taxes actually check accumulation and enterprise, they may therefore have this indirect result. But this result will be not so much an increase of price (except in so far as the rate of interest actually rises) as the prevention of a further reduction in the prices of commodities and a further rise in the rate of wages which is itself compatible, under the theory of the economy of high wages, with lower prices.

Whether taxes on business income will engender such indirect consequences depends, however, on a variety of circumstances. It depends first upon whether the taxes are used for fresh expenditure or to pay the interest on an old debt. If the taxes are used for new expenditure, the problem becomes one as to the relative productivity of private and public outlay. The statement so often heard that it is always better for the government to let capital fructify in the hands of the private individual is by no means correct. Certain forms of government expenditure or investment may be far more productive than certain forms of private expenditure or investment. The money spent for new roads or for new schools may be far more productive, in the real sense of the term, than the money invested by private individuals in the manufacture of opium products or of the munitions of war.

There are of course considerations on the other side. If the government attempts to run the railroads or to manage the coal mines it is entirely probable that the enterprise will be less productive of wealth than if it were conducted by private individuals. It is undoubtedly true in general that there is apt to be less extravagance and waste under private than under public management. But when the community has entrusted to the government the carrying on of what are everywhere conceded to be proper co-operative functions it does not follow that the results will be injurious. The taxes may be so high as to retard accumulation and investment; but if they are spent for governmental purposes that are acknowledged to be necessary or advisable, the smaller evil may be swallowed up in the larger benefit. The problem is really one of the proper limits of government expenditure, and of the choice between low taxes on the one hand and the accomplishment of desirable governmental purposes in an adequate, albeit economical, fashion on the other.



The problem differs when we deal with taxes imposed to pay the interest on an old debt. This is the situation in the greater part of the world to-day. In the United States a large part of our present high taxes is devoted to the debt service. - It is immaterial whether we consider the war expenses productive or unproductive of wealth or of welfare: the money has been spent, the debt has been contracted, and taxes must be imposed to pay the interest and to provide for amortization. The chief consideration now is the rapidity of debt payment. If the taxes are excessive, it may be better to go slow in discharging the debt rather than further to retard capital investment and enterprise. But if a definite policy of taxation for debt service has been decided upon, the next consideration is whether the debt is a foreign or a domestic debt. If the debt is held largely or exclusively abroad there can be no advantages to compensate for the excessive burdens upon the domestic producer. If the debt is a domestic debt, the funds taken from the taxpayer are handed over to the bondholder. The capital still remains in the country and is presumably available for investment by someone.

A further analysis discloses the fact that conditions may here be very different. If the bonds are held largely by the small man who will now increase his personal or family expenditures because of the money received from government, there are no advantages to the community as a whole which will compensate for the burden of taxation. But if the bonds are held by the wealthier classes who now have more money to invest, or by people in more moderate circumstances who put the interest into the bank, rather than spend it upon themselves, there may indeed be compensating advantages. It is true that the business man who pays the high taxes will have less capital to plough back into his business; but to the extent that he is also a bondholder, the deficiency will be made good. That is doubtless the reason why, despite the high income taxes in the United States during the past two years, the volume of accumulated investment suffered no perceptible reduction.

Even with this qualification, however, it still remains true that excessive income taxes may discourage enterprise and thus prevent a reduction of price. For while the old capitalist may find that his bond interest will reimburse him for his taxes, the venturesome individual who would otherwise embark upon a new and untried course may still be prevented from devoting his energies and abilities to the hazardous enterprise if the excessive rate of taxation threatens to reduce his profits below what he considers adequate. To the extent—but only to the extent—that progress depends upon the entrance of the new man into the industrial field does the argument as to this ultimate effect of income taxes upon prices remain true.

We have limited ourselves to a discussion of what is apt to be the effect of income taxes upon prices. We have not discussed the more important problem of government policy. It is conceivable, for instance, that a tax system might be so arranged as to prevent any ulterior effects upon prices and nevertheless be entirely unacceptable. An aristocratic or plutocratic government might conceivably raise its entire revenue from a tax on the poor or the moderately well-to-do consumer and wholly exempt large business. Such a policy would indeed not produce any of the injurious effects on enterprise and investment that have been mentioned above. But it would so obviously contravene the principle of equality and of ability to pay as to be wholly inadmissible. A democracy which is educated both economically and morally will seek in its tax system to preserve the proper balance between the principle of ability to pay on the one hand and the principle of what might be called innocuity, i. e., harmlessness of taxation on the other. Into this field of discussion, however, we are not called upon to enter.

In conclusion then we may sum up as follows: Taxes upon the separate classes of income will or will not be shifted according to the particular category or the particular circumstances. A general or universal tax on all income, if actually enforced, cannot be shifted

directly. But in so far as taxation brings about a new equilibrium of economic forces, even a general income tax may ultimately and indirectly affect prices, either by leading to a readjustment of interest rates, or by preventing an increase of productivity with its usual accompaniments of higher wages and lower prices. For the greater the productivity in any field of enterprise, the lower will be the prices of the products in that field, despite the rise of wages. An excessive income tax may accordingly interfere both with an otherwise to be anticipated fall in prices and rise of wages, thus standing directly athwart the interests of the consumer as well as of the laborer. Even if an income tax cannot be shifted, it may, if excessive, disadvantageously affect the position of other classes besides the immediate taxpayer.

## APPENDIX XIII.

## INCOME TAX AND SUPER-TAX.—AMOUNT AND EFFECTIVE RATE OF TAX ON SPECIMEN INCOMES, WITH GRAPHS SHOWING THE EFFECTIVE RATES FROM 1911-12 TO 1925-26.

TABLE I.—Unmarried Individual: Income all Investment Income.

Income.	1913-14.		1919-20.		1920-21 and 1921-22.		1922-23.		1923-24 and 1924-25.		1925-26.	
	Total Tax.	Effective Rate.	Total Tax.	Effective Rate.	Total Tax.	Effective Rate.	Total Tax.	Effective Rate.	Total Tax.	Effective Rate.	Total Tax.	Effective Rate.
£	£	Pence.	£	Pence.	£	Pence.	£	Pence.	£	Pence.	£	Pence.
130	—	—	—	—	—	—	—	—	—	—	—	—
150	—	—	—	—	—	—	—	—	—	—	—	—
200	2	2·8	12	14·4	10	12·6	2	3·0	2	2·7	2	—
250	5	5·0	20	18·7	17	16·6	8	9·7	7	8·8	7	7
300	8	6·5	27	21·6	25	19·8	14	13·8	13	12·4	12	11
350	11	7·6	35	23·7	32	22·1	21	16·5	19	14·8	17	13
400	14	8·4	42	25·2	46	27·5	27	18·4	24	16·6	22	14
500	20	9·8	60	28·8	76	36·4	38	22·9	34	20·6	31	18
600	28	11·2	94	37·5	106	42·3	63	30·3	57	27·3	51	24
700	37	12·6	118	40·5	136	46·5	88	35·3	79	31·7	71	28
800	47	14·0	150	45·0	166	49·7	113	38·8	102	34·9	91	31
900	53	14·0	169	45·0	196	52·2	138	41·4	124	37·3	111	33·2
1,000	58	14·0	188	45·0	226	54·2	163	43·5	147	39·1	131	34·8
1,250	73	14·0	281	54·0	301	57·7	188	45·2	169	40·6	151	36·1
1,500	88	14·0	338	54·0	376	60·1	251	48·1	226	43·3	201	38·5
1,750	102	14·0	459	63·0	451	61·8	313	50·1	282	45·1	251	40·1
2,000	117	14·0	525	63·0	526	63·1	376	51·5	338	46·4	301	41·2
2,500	146	14·0	750	72·0	713	68·4	438	52·6	394	47·3	351	42·1
3,000	175	14·0	963	77·0	913	73·0	600	57·6	544	52·2	469	45·0
4,000	233	14·0	1,363	81·8	1,338	80·3	775	62·0	707	56·6	594	47·5
5,000	292	14·0	1,788	85·8	1,788	85·8	1,150	69·0	1,057	63·4	869	52·2
6,000	425	17·0	2,238	89·5	2,263	90·5	1,550	74·4	1,432	68·7	1,182	56·7
7,000	508	17·4	2,713	93·0	2,763	94·7	1,975	79·0	1,832	73·3	1,532	61·3
8,000	592	17·8	3,188	95·6	3,288	98·6	2,425	83·1	2,257	77·4	1,907	65·4
9,000	675	18·0	3,688	98·3	3,838	102·4	2,900	87·0	2,707	81·2	2,282	68·5
10,000	758	18·2	4,188	100·5	4,388	105·3	3,400	90·7	3,182	84·9	2,682	71·5
12,000	925	18·5	5,238	104·8	5,488	109·8	3,900	93·6	3,657	87·8	3,082	74·0
15,000	1,175	18·8	6,813	109·0	7,138	114·2	4,900	98·0	4,607	92·1	3,932	78·6
20,000	1,592	19·1	9,438	113·2	9,888	118·7	6,400	102·4	6,032	96·5	5,207	83·3
25,000	2,008	19·3	12,063	115·8	12,763	122·5	8,900	106·8	8,407	100·9	7,457	89·5
30,000	2,425	19·4	14,688	117·5	15,638	125·1	11,525	110·6	10,907	104·7	9,832	94·4
40,000	3,258	19·5	19,938	119·6	21,638	129·8	14,150	113·2	13,407	107·3	12,207	97·7
50,000	4,092	19·6	25,188	120·9	27,638	132·7	19,650	117·9	18,657	111·9	17,207	103·2
100,000	8,258	19·8	51,438	123·4	57,638	138·3	25,150	120·7	23,907	114·8	22,207	106·6
							52,650	126·4	50,157	120·4	47,207	113·3

TABLE II.—*Married Individual and Three Children: Income all Earned Income.*

Income.	1918-14.		1919-20.		1920-21 and 1921-22.		1922-23.		1923-24 and 1924-25.		1925-26.	
	Total Tax.	Effective Rate.	Total Tax.	Effective Rate.	Total Tax.	Effective Rate.	Total Tax.	Effective Rate.	Total Tax.	Effective Rate.	Total Tax.	Effective Rate.
£	£	Pence.	£	Pence.	£	Pence.	£	Pence.	£	Pence.	£	Pence.
130	—	—	—	—	—	—	—	—	—	—	—	—
150	—	—	—	—	—	—	—	—	—	—	—	—
200	—	—	—	—	—	—	—	—	—	—	—	—
250	2	2·2	—	—	—	—	—	—	—	—	—	—
300	4	3·3	5	3·6	—	—	—	—	—	—	—	—
350	6	4·1	10	6·9	—	—	—	—	—	—	—	—
400	8	4·7	16	9·5	7	4·1	6	3·4	5	3·1	2	1·1
500	12	5·8	29	14·0	20	9·7	17	8·1	15	7·3	10	4·9
600	18	7·2	54	21·6	34	13·5	28	11·2	25	10·1	19	7·4
700	24	8·1	74	25·2	61	20·8	51	17·4	46	15·6	31	10·7
800	30	9·0	99	29·7	88	26·3	73	21·9	66	19·7	48	14·4
900	34	9·0	129	34·4	115	30·6	96	25·5	86	22·9	65	17·2
,000	38	9·0	144	34·6	142	34·0	118	28·4	106	25·5	81	19·5
,250	47	9·0	234	45·0	209	40·2	174	33·5	157	30·1	123	23·6
,500	56	9·0	281	45·0	277	44·3	231	36·9	208	33·3	165	26·3
,750	66	9·0	394	54·0	344	47·2	287	39·3	258	35·4	215	29·4
,000	75	9·0	450	54·0	412	49·4	343	41·2	309	37·1	265	31·7
,500	125	12·0	656	63·0	599	57·5	505	48·5	459	44·1	383	36·8
,000	150	12·0	963	77·0	799	63·9	680	54·4	621	49·7	508	40·7
,000	233	14·0	1,363	81·8	1,224	73·4	1,055	63·3	971	58·3	783	47·0
,000	292	14·0	1,788	85·8	1,674	80·4	1,455	69·8	1,346	64·6	1,096	52·6
,000	425	17·0	2,238	89·5	2,149	86·0	1,880	75·2	1,746	69·8	1,446	57·8
,000	508	17·4	2,713	93·0	2,649	90·8	2,330	79·9	2,171	74·4	1,821	62·4
,000	592	17·8	3,188	95·6	3,174	95·2	2,805	84·2	2,621	78·6	2,196	65·9
,000	675	18·0	3,688	98·3	3,724	99·3	3,305	88·1	3,096	82·6	2,596	69·2
,000	758	18·2	4,188	100·5	4,274	102·6	3,805	91·3	3,571	85·7	2,996	71·9
,000	925	18·5	5,238	104·8	5,374	107·5	4,805	96·1	4,521	90·4	3,846	76·9
,000	1,175	18·8	6,813	109·0	7,024	112·4	6,305	100·9	5,946	95·1	5,121	81·9
,000	1,592	19·1	9,438	113·2	9,774	117·3	8,805	105·7	8,321	99·9	7,371	88·4
,000	2,008	19·3	12,063	115·8	12,649	121·4	11,430	109·7	10,821	103·9	9,746	93·5
,000	2,425	19·4	14,688	117·5	15,524	124·2	14,055	112·4	13,321	106·5	12,121	97·0
,000	3,258	19·5	19,938	119·6	21,524	129·1	19,555	117·3	18,571	111·4	17,121	102·7
,000	4,092	19·6	25,188	120·9	27,524	132·1	25,055	120·3	23,821	114·4	22,121	106·2
,000	8,258	19·8	51,438	123·4	57,524	138·1	52,555	126·1	50,071	120·2	47,121	113·1

**APPENDIX XIV.**

**INCOME TAX AND SUPER-TAX STATISTICS (1919-20) RELATING TO VARIOUS INCOME-CLASSES.**

*Tables prepared by the Board of Inland Revenue.*

*INCOME TAX AND SUPER-TAX—Year 1919-20.*

Table showing the approximate distribution of the amounts of income, allowances, &c., among taxpayers, classified according to the amount of their total incomes, together with the approximate number of incomes in each class, and the tax paid by each class.

Class.		Number of Incomes.			Actual Income.	Abatements and personal allowances. (See footnote.*)	Net Income paying tax.	Net Produce of Income Tax. Year 1919-20. (See footnote.†)	Net Produce of Super-tax. Year 1920-21. (See footnote.†)	Total Income Tax and Super-tax.
Exceeding.	Not exceeding.	Entirely relieved from tax by the operation of abatements and allowances. (1a)	Chargeable with tax. (1b)	Total. (1a) and (1b)						
£	£	No.	No.	No.	£	£	£	£	£	£
130	160	2,510,000	980,000	3,490,000	488,887,960	468,698,242	20,189,718	2,325,761	—	2,325,761
160	200	1,095,000	936,400	2,031,400	355,250,000	318,310,000	36,940,000	4,123,000	—	4,123,000
200	250	235,000	516,700	751,700	165,000,000	129,000,000	36,000,000	4,174,000	—	4,174,000
250	300	55,000	356,000	411,000	110,700,000	74,195,000	36,505,000	4,211,000	—	4,211,000
300	400	5,000	367,900	372,900	126,206,191	67,199,288	59,006,903	6,963,000	—	6,963,000
400	500	—	180,000	180,000	78,890,000	28,577,433	50,312,567	6,067,000	—	6,067,000
500	600	—	108,700	108,700	58,696,107	17,397,449	41,298,658	6,626,000	—	6,626,000
600	700	—	74,850	74,850	47,904,000	9,946,286	37,957,714	6,267,000	—	6,267,000
700	800	—	60,400	60,400	44,696,000	4,784,983	39,911,017	6,624,000	—	6,624,000
800	900	—	47,640	47,640	40,022,000	878,000	39,144,000	6,529,000	—	6,529,000
900	1,000	—	38,920	38,920	36,583,000	875,000	35,708,000	6,007,223	—	6,007,223
1,000	1,500	—	98,430	98,430	118,088,285	2,137,886	115,950,399	23,912,233	—	23,912,233
1,500	2,000	—	44,440	44,440	75,554,431	1,327,474	74,226,957	18,163,440	—	18,163,440
<b>Total</b>										
130	2,000	3,900,000	3,810,380	7,710,380	1,746,477,974	1,123,327,041	623,150,933	101,992,657	—	101,992,657

ASSTO	2,000	2,500	—	24,870	24,870	54,701,849	1,399,526	53,302,323	15,127,906	255,000	15,382,906
	2,500	5,000	—	37,760	37,760	130,030,000	2,390,000	127,640,000	37,940,000	5,040,000	42,980,000
	5,000	10,000	—	16,720	16,720	114,870,000	1,500,000	113,370,000	33,700,000	11,475,000	45,175,000
	10,000	15,000	—	4,850	4,850	58,650,000	700,000	57,950,000	17,230,000	9,020,000	26,250,000
	15,000	20,000	—	2,043	2,043	35,005,000	400,000	34,605,000	10,300,000	6,220,000	16,520,000
	20,000	25,000	—	992	992	22,022,000	240,000	21,782,000	6,475,000	4,250,000	10,725,000
	25,000	30,000	—	650	650	17,680,000	180,000	17,500,000	5,205,000	3,615,000	8,820,000
	30,000	40,000	—	685	685	23,471,000	207,000	23,264,000	6,915,000	5,135,000	12,050,000
	40,000	50,000	—	390	390	17,333,000	139,000	17,194,000	5,110,000	4,040,000	9,150,000
	50,000	75,000	—	358	358	21,467,000	166,000	21,301,000	6,330,000	5,270,000	11,600,000
	75,000	100,000	—	137	137	11,782,000	82,000	11,700,000	3,480,000	2,990,000	6,470,000
100,000	—	—	165	165	33,690,000	226,000	33,464,000	9,950,000	9,190,000	19,140,000	
<b>Total</b>	<b>2,000</b>	<b>—</b>	<b>—</b>	<b>89,620</b>	<b>89,620</b>	<b>540,701,849</b>	<b>7,629,526</b>	<b>533,072,323</b>	<b>157,762,906</b>	<b>66,500,000</b>	<b>224,262,906</b>
<b>TOTALS (income distributed amongst individuals).</b>		<b>8,900,000</b>	<b>8,900,000</b>	<b>7,800,000</b>	<b>2,287,179,823</b>	<b>1,130,956,567</b>	<b>1,156,223,256</b>	<b>259,755,563</b>	<b>66,500,000</b>	<b>326,255,563</b>	
<b>Other income (see Note 10).</b>		<b>—</b>	<b>—</b>	<b>—</b>	<b>260,000,000</b>	<b>—</b>	<b>260,000,000</b>	<b>76,800,000</b>	<b>—</b>	<b>76,800,000</b>	
<b>GRAND TOTAL ...</b>		<b>8,900,000</b>	<b>8,900,000</b>	<b>7,800,000</b>	<b>2,547,179,823</b>	<b>1,130,956,567</b>	<b>1,416,223,256</b>	<b>336,555,563</b>	<b>66,500,000</b>	<b>403,055,563</b>	

\* In the case of incomes exceeding £1,000 the only allowance is for Life Insurance premiums. None of these allowances is made for the purposes of Super-tax.

† By "Net Produce" is meant the estimated yield of the tax assessed in the year irrespective of the date of actual collection. It does not, therefore, correspond with the amount of tax paid to the Exchequer in the financial year.

The "Net Produce" of the Super-tax is the estimated amount that will actually be received for the year 1920-21 (see Explanatory Note 9). The net produce for this year is given in conjunction with the net produce of the Income Tax for the preceding year 1919-20 because the Super-tax is charged on the Income Tax income of the preceding year.

## EXPLANATORY NOTES.

1. The figures set out in the Table are partly estimated. In preparing the statement the Board have made use of all relevant information available, but elements which are incapable of accurate measurement have of necessity entered into the calculations.

In particular the available *data* for estimating the amount of non-personal income and of income accruing to residents abroad are inadequate, and the figure of £260,000,000 attributed to these items (*vide* the foot of Column 2 of the Table) must be regarded as subject to a considerable margin of error. The constituents of the figure are stated in Note 10.

2. *Year*.—The Table relates to income assessed to Income Tax in the year 1919-20, whether actually assessable for that year or for an earlier year. It does not include income assessable for the year 1919-20 but remaining unassessed at the end of that year. The amount thus carried forward from one year to another is, however, relatively small and fairly constant.

3. *Income*.—The income dealt with is income as computed for purposes of Income Tax and is therefore in part computed by reference to the income of the year and in part by reference to the income of the preceding year or of an average of preceding years. The income dealt with does not, therefore, correspond with the *real* income of taxpayers received in the year.

## 4. (Columns 1a and 1b.)

*Number of Incomes*.—The total of the two columns (1a and 1b) represents the estimated number of individuals with incomes in each class and is divided in order to show:—

(a) The number of individuals who, although in receipt of incomes above the limit of exemption, were entirely relieved from Income Tax by the operation of the personal allowances—for example, a married man with a wife and three children under 16 years of age would pay no tax if his total income did not exceed £260, the whole being covered by allowances as follows:—

Abatement	...	...	...	...	...	...	£
							120
Wife	...	...	...	...	...	...	50
Three Children	...	...	...	...	...	...	90
							<hr/>
Total Allowances	...	...	...	...	...	...	260
							<hr/>
Balance to be taxed	...	...	...	...	...	...	Nil.

## (b) The number of individuals actually paying tax.

The class with incomes exceeding £130 but not exceeding £160 does not include soldiers, sailors, merchant seamen, etc., having incomes within those limits, as they were entitled to the pre-war limit of exemption, viz., £160, and are consequently excluded from review.

## 5. (Column 2.)

*"Actual" Income*.—Subject to the foregoing explanations this represents, broadly speaking, the total net income of the classes above the exemption limit of £130 after eliminating all expenses incurred in earning it, but before consideration of abatements and personal allowances.

## 6. (Column 3.)

*Abatements and Personal Allowances.*—In 1919-20 these were as follows:—

## (a) Abatements.

Income.		Amount allowed as Abatement.	
Exceeding.	Not Exceeding.	Soldiers, Sailors, &c.	Other Taxpayers.
£	£	£	£
130	300	160	120
300	400	120	120
400	600	100	100
600	700	70	70

(b) Insurance premiums on the life of the taxpayer or of his wife within a limit, generally speaking, of one-sixth of the total income.

(c) An allowance of £50 for a wife, and in certain cases for a housekeeper, and of £25 for certain dependent relatives, where the total income of the taxpayer did not exceed £800.

(d) An allowance of £40 for one child and of £25 for each remaining child (including adopted children) under 16 years of age where the total income did not exceed £800, with similar allowances for every such child beyond the first two if the income, while exceeding £800, did not exceed £1,000. The allowance was also granted for children over 16 years of age when they were receiving full-time instruction at an approved educational establishment.

## 7. (Column 4.)

*Net Income paying Tax.*—This is the income on which tax is finally levied after all the allowances due have been deducted.

## 8. (Column 5.)

*Net Produce of Income Tax.*—This is the amount of tax actually levied on the income in the previous column. It is somewhat smaller than the figure that would be produced by calculating the tax on the income at the appropriate rates in force for the year 1919-20 for the following reasons:—

(a) Some of the assessments made in the year relate to liabilities for earlier years charged at lower rates. (See Note 2 above.)

(b) Income which has suffered Dominion Income Tax is allowed a corresponding relief (up to a maximum of 2s. 6d. in the £) from British Income Tax.

(c) Incomes slightly above any limit at which the rate of tax alters or allowances cease are granted such relief as will obviate the possessor of the income being made poorer by payment of the tax than the man with an income which only just reaches the limit.

## 9. (Column 6.)

*Net Produce of Super-tax, 1920-21.*—Super-tax (payable by individuals whose total incomes exceed £2,000) is computed for any year by reference to the Income Tax income of the preceding year. Consequently, the actual income shown in Column 2, which, subject to the reservation explained in Note 2 above, is assessable to Income Tax for the year 1919-20, will not be assessable to Super-tax until the following year, 1920-21. Broadly

speaking, therefore, the statement indicates that 89,620 individuals resident in the United Kingdom with an aggregate actual income of £540,700,000 should be assessed to Super-tax in the year 1920-21. Even allowing for normal annual growth, these figures are unlikely to be realised. The anticipated deficiency, except so far as accounted for by a margin of error in the estimate, is attributable to the leakage which is inherent in a system of direct assessment as opposed to a system of collection of duty at the source. This deficiency is additional to a loss of Super-tax which occurs through the non-distribution of companies' profits or their distribution in a form other than income. Such profits are included in the £260,000,000 "Other Income" at the foot of Column 2 of the Table.

10. "Other Income," viz., Non-personal Income and income accruing to non-residents.

The income under this head is made up of the following items:—

(i) That part of the actual income of companies which, though charged to Income Tax, is not distributed to the shareholders in dividends, but is retained for the purpose of increasing reserves, etc. (This item accounts for two-thirds of the total.)

(ii) The income from the invested funds of insurance companies retained to meet future liabilities.

(iii) Income distributed to residents out of the United Kingdom, including not only dividends and interest, but also profits arising from trading in the United Kingdom by foreign firms, etc.

(iv) Other items, such as income of clubs, corporations, etc.

## APPENDIX XV.

### THE PROPORTIONS OF EARNED AND INVESTMENT INCOME IN THE INCOMES OF SUPER-TAX PAYERS (INCOMES EXCEEDING £10,000).

*Statistics provided by the Board of Inland Revenue.*

In response to an early request from the Committee a sample\* investigation has been made into the composition of incomes exceeding £10,000 assessed to Super-tax for 1913-14 and 1922-23. As desired, incomes have been so analysed as to throw light on the proportions of earned and investment incomes in each year. A classification was also desired according to age-groups, in connection (it is understood) with the question which had been raised before the Committee whether high taxation causes men to retire early from business. For 1913-14 there are no data for such an analysis: for 1922-23, however, certain figures are given, with particular reference to the age-group 66 and over.

\* The sample includes 48 per cent. of the incomes exceeding £10,000 for 1913-14, and 85 per cent. for 1922-23. Special attention has been given to the ranges of income over £75,000, for which the percentages included are as follows:—

Range of Income.	1913-14.	1922-23.
£75,000-100,000	61	57
Over £100,000	89	96



TABLE 1.—Incomes exceeding £10,000 assessed to Super-tax 1913-1423 and 1922-23 (United Kingdom).

Total Income in each Range and percentage division thereof between Earned Income and Investment Income.

(Percentage figures based on sample.)

Range of Income.	1913-14.			1922-23.		
	Total Income in Range.	Percentage of Total Income in Range.		Total Income in Range.	Percentage of Total Income in Range.	
		Earned Income.	Investment Income.		Earned Income.	Investment Income.
£            £	(£000)	Per cent.	Per cent.	(£000)	Per cent.	Per cent.
10,000- 15,000	28,948	31·4	68·6	51,337	30·7	69·3
15,000- 20,000	17,272	32·1	67·9	29,981	26·5	73·5
20,000- 25,000	11,489	26·6	73·4	20,155	32·4	67·6
25,000- 30,000	7,673	27·2	72·8	13,596	34·1	65·9
30,000- 40,000	10,843	31·4	68·6	19,125	28·6	71·4
40,000- 50,000	7,710	20·6	79·4	12,644	26·5	73·5
50,000- 75,000	10,002	17·0	83·0	16,927	30·0	70·0
75,000-100,000	5,912	32·4	67·6	10,286	31·8	68·2
Exceeding £100,000	14,396	22·6	77·4	26,261	21·0	79·0
Total ...	114,245	27·7	72·3	200,312	28·7	71·3

TABLE 2.—Incomes exceeding £10,000 assessed to Super-tax 1913-14 and 1922-23 (United Kingdom).

Number of Individuals falling within each Range of Income, and percentage division thereof between—

(1) Individuals having Earned Income.

(2) Individuals having Investment Income only.

(Percentage figures based on sample.)

Range of Income.	1913-14.			1922-23.		
	Total Number in Range.	Percentage of Total Number in Range.		Total Number in Range.	Percentage of Total Number in Range.	
		Having Earned Income.	Having Investment Income only.		Having Earned Income.	Having Investment Income only.
£            £		Per cent.	Per cent.		Per cent.	Per cent.
10,000- 15,000	2,393	73·8	27·2	4,244	69·3	30·7
15,000- 20,000	1,002	74·7	25·3	1,748	68·3	31·7
20,000- 25,000	514	75·2	24·8	904	73·2	26·8
25,000- 30,000	281	67·2	32·8	498	74·8	25·2
30,000- 40,000	313	73·3	26·7	563	75·0	25·0
40,000- 50,000	171	73·6	27·4	284	70·0	30·0
50,000- 75,000	167	63·3	36·7	276	73·5	26·5
75,000-100,000	67	82·9	17·1	119	82·4	17·6
Exceeding £100,000	80	73·2	26·8	134	75·2	24·8
Total ...	4,988	73·0	27·0	6,770	70·6	29·4

TABLE 3.—Incomes exceeding £10,000 assessed to Super-tax 1913-14 and 1922-23 (United Kingdom).

Income from various sources shown as percentage of Total Income in each Range.

(Percentage figures based on sample.)

Range of Income.	1913-14.								1922-23.							
	Total Income in Range.	Percentage of Total Income in Range.							Total Income in Range.	Percentage of Total Income in Range.						
		Investment Income.	Earned Income.					Total.		Investment Income.	Earned Income.					Total.
			Mines and Manufactures.	Distribution and Transport.	Professions, Finance, &c.	Employments, Directors' Fees, &c.	Total.				Mines and Manufactures.	Distribution and Transport.	Professions, Finance, &c.	Employments, Directors' Fees, &c.	Total.	
£	£	£000	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	£000	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	
10,000—15,000		28,948	68·6	5·9	12·0	6·5	7·0	31·4	51,337	69·3	5·9	7·5	5·8	11·5	30·7	
15,000—20,000		17,272	67·9	6·4	10·5	8·7	6·5	32·1	29,981	73·5	4·5	6·9	6·4	8·7	26·5	
20,000—25,000		11,489	73·4	7·5	8·1	7·1	3·9	26·6	20,155	67·6	8·4	9·0	5·4	9·6	32·4	
25,000—30,000		7,673	72·8	8·8	8·3	5·2	4·9	27·2	13,596	65·9	9·8	11·1	5·0	8·2	34·1	
30,000—40,000		10,843	68·6	4·3	10·9	12·6	3·6	31·4	19,125	71·4	5·2	10·8	4·8	7·8	28·6	
40,000—50,000		7,710	79·4	4·8	6·9	7·5	1·4	20·6	12,644	73·5	4·4	12·1	4·6	5·4	26·5	
50,000—75,000		10,002	83·0	9·8	1·6	4·3	1·3	17·0	16,927	70·0	9·2	11·5	3·6	5·7	30·0	
75,000—100,000		5,912	67·6	12·0	8·1	8·4	3·9	32·4	10,286	68·2	10·0	13·0	5·1	3·7	31·8	
Exceeding 100,000		14,396	77·4	6·7	1·3	13·7	0·9	22·6	26,261	79·0	8·7	6·9	3·5	1·9	21·0	
Total	...	114,245	72·3	6·9	8·2	8·3	4·3	27·7	200,312	71·3	6·9	8·9	5·1	7·8	28·7	

TABLE 4.—Incomes exceeding £10,000 assessed to Super-tax 1913-14 and 1922-23 (United Kingdom).

Number of Individuals having Income from various sources shown as percentage of Total Number in each Range.

(Percentage figures based on sample.)

Range of Income.	1913-14.							1922-23.						
	Total Number in Range.	Percentage of Total Number in Range.						Total Number in Range.	Percentage of Total Number in Range.					
		Having Investment Income only.	Having earned Income.						Having Investment Income only.	Having earned Income.				
			Mines and Manufactures.	Distribution and Transport.	Professions, Finance, &c.	Employments, Directors' Fees, &c.	Total.			Mines and Manufactures.	Distribution and Transport.	Professions, Finance, &c.	Employments, Directors' Fees, &c.	Total.
£	£	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
10,000—15,000	2,898	27·2	9·1	17·2	11·6	34·9	72·8	4,244	30·7	7·5	10·8	11·4	39·6	69·3
15,000—20,000	1,002	25·8	10·1	14·5	13·6	36·5	74·7	1,748	31·7	6·0	11·2	11·2	39·9	68·3
20,000—25,000	514	24·8	11·0	13·3	9·8	41·6	75·2	904	26·8	9·8	12·9	11·5	39·0	73·2
25,000—30,000	281	32·8	13·4	12·7	8·2	32·9	67·2	498	25·2	14·3	17·0	7·4	36·1	74·8
30,000—40,000	318	26·7	8·6	17·2	17·2	30·3	73·3	563	25·0	8·3	15·7	11·6	39·4	75·0
40,000—50,000	171	27·4	9·6	13·7	10·9	38·4	72·6	284	30·0	6·0	15·0	8·0	41·0	70·0
50,000—75,000	167	36·7	16·7	3·3	10·0	33·3	63·3	276	26·5	11·3	16·8	9·2	36·2	73·5
75,000—100,000	67	17·1	17·1	21·9	17·1	26·8	82·9	119	17·6	13·2	20·6	13·2	35·4	82·4
Exceeding 100,000	80	26·8	8·5	7·0	22·5	35·2	73·2	134	24·8	14·7	14·0	10·9	35·6	75·2
Total ...	4,988	27·0	10·1	15·3	12·1	35·5	73·0	8,770	29·4	8·1	12·3	11·0	39·2	70·6

NOTE.—Individuals having earned income from employments as well as from trade or profession are classified under the latter.

TABLE 5.—Incomes exceeding £10,000 assessed to Super-tax, 1913-14 and 1922-23 (United Kingdom).

Increase (+) or decrease (-) in 1922-23 as compared with 1913-14 of—

(i) Earned Income expressed as a percentage of Total Income in Range.

(ii) Nos. of Earned Incomes expressed as a percentage of Total Nos. in Range.

(Results based on sample.)

(N.B.—“ O ” represents no change.)

Range of Total Income.	Mines and Manufactures.		Distribution and Transport.		Professions, Finance, &c.		Employments, Directors' Fees, &c.		Total.	
	Income.	Nos.	Income.	Nos.	Income.	Nos.	Income.	Nos.	Income.	Nos.
£										
10,000-15,000 ...	O	—	—	—	—	—	+	+	—	—
15,000-20,000 ...	—	—	—	—	—	—	+	+	—	—
20,000-25,000 ...	+	—	+	—	—	+	+	—	+	—
25,000-30,000 ...	+	+	+	+	—	—	+	+	+	+
30,000-40,000 ...	+	—	—	—	—	—	+	+	—	+
40,000-50,000 ...	—	—	+	+	—	—	+	+	+	—
50,000-75,000 ...	—	—	+	+	—	—	+	+	+	+
75,000-100,000 ...	—	—	+	—	—	—	—	+	—	—
Over 100,000 ...	+	+	+	+	—	—	+	+	—	+
Total ...	O	—	+	—	—	—	+	+	+	—

TABLE 6.—Incomes exceeding £10,000 assessed to Super-tax, 1922-23 (United Kingdom).

Classification by Age-Groups and Source of Income of Individuals in each Range in receipt of Earned Income.

(Figures based on sample.)

Range of Income.	Total Number of Super-tax payers in Range.	Number of Cases with Earned Income in Range.		Numbers at Age Groups.			
				Up to 45.	46-55.	56-65.	66 and over.
£ 10,000-15,000	4,244	A	576	82	144	206	144
		B	1,316	206	452	391	267
		C	1,049	103	288	453	205
		Total ...	2,941	391	884	1,050	616
15,000-20,000	1,748	A	192	21	64	86	21
		B	704	171	171	213	149
		C	298	64	64	106	64
		Total ...	1,194	256	299	405	234

TABLE 6—continued.

Range of Income.	Total Number of Super-tax payers in Range.	Number of Cases with Earned Income in Range.		Numbers at Age Groups.			
				Up to 45.	46-55.	56-65.	66 and over.
£ 20,000-25,000	904	A	131	51	36	22	22
		B	356	22	116	109	109
		C	175	22	44	37	72
		Total ...	662	95	196	168	203
25,000-30,000	498	A	85	—	27	48	10
		B	159	10	53	48	48
		C	128	21	37	43	27
		Total ...	372	31	117	139	85
30,000-40,000	563	A	59	14	15	22	8
		B	267	37	52	89	89
		C	96	22	7	52	15
		Total ...	422	73	74	163	112
40,000-50,000	284	A	31	—	8	15	8
		B	130	15	61	31	23
		C	38	—	8	8	22
		Total ...	199	15	77	54	53
50,000-75,000	276	A	55	8	12	16	19
		B	89	12	19	38	20
		C	53	8	12	35	4
		Total ...	203	28	43	89	43
75,000-100,000	119	A	28	10	—	3	15
		B	42	—	18	18	6
		C	28	3	4	14	7
		Total ...	98	13	22	35	28
Over 100,000	134	A	30	2	4	13	11
		B	47	4	13	19	11
		C	24	4	—	9	11
		Total ...	101	10	17	41	33
TOTALS ...	8,770	A	1,187	188	310	431	258
		B	3,110	477	955	956	722
		C	1,895	247	464	757	427
		Total ...	6,192	912	1,729	2,144	1,407

Note.—A indicates Income from Mines and Manufactures.

B " " " Distribution, Transport, Professions, Finance, &c.

C " " " Employments, Directors' Fees, &c.

TABLE 7.—*Number of Individuals aged 66 or over and in receipt of Earned Income expressed as a percentage of the Total Number of Taxpayers in the Range, 1922-23.*

(Figures based on sample.)

Range of Income.		Where the earned income is derived from			
		Mines and Manu- factures.	Distribution, Transport, Professions, Finance, &c.	Employ- ments, Directors' Fees, &c.	Total.
£	£	Per cent.	Per cent.	Per cent.	Per cent.
10,000—	15,000	3·4	6·3	4·8	14·5
15,000—	20,000	1·2	8·5	3·7	13·4
20,000—	25,000	2·4	12·1	8·0	22·5
25,000—	30,000	2·0	9·6	5·4	17·0
30,000—	40,000	1·4	15·8	2·7	19·9
40,000—	50,000	2·8	8·1	7·7	18·6
50,000—	75,000	6·9	7·2	1·4	15·5
75,000—	100,000	12·6	5·0	5·9	23·5
Over	£100,000	8·2	8·2	8·2	24·6
Total		2·9	8·2	4·9	16·0

## APPENDIX XVII.

## THE TRANSFER OF RESIDENCE ABROAD BY BRITISH BUSINESS CONCERNS AND BY INDIVIDUALS.

*Note by the Board of Inland Revenue.*

## I.—Business concerns.

1. The Board of Inland Revenue have since 1916 noted 128 cases in which the head office and control of a concern assessable to Income Tax under Schedule D was transferred abroad, so that the profits formerly liable to Income Tax in the United Kingdom, or a part of those profits, ceased to be liable. The number includes 13 cases of private traders, the balance being companies.

2. The following statement shows, year by year, the number of concerns where the control was transferred abroad, and the total amount of the Schedule D assessment made on the profits of such concerns for the last year for which they were liable to Income Tax. (The eight cases not included were concerns where a part only of the business was transferred, but no figures were available of the profits earned by the transferred branches.)

Year.	No. of cases.	Net Assessment Schedule D.
		£
1915-16	5	167,000
1916-17	16	808,000
1917-18	11	285,000
1918-19	6	488,000
1919-20	15	175,000
1920-21	18	736,000
1921-22	18	1,671,000
1922-23	14	126,000
1923-24	17	197,000
Totals	120	£4,653,000

3. The following statement analyses the 128 cases by trades (showing the profits for the 120 cases) and distinguishes those whose main assets and activities are abroad.

	No. of cases.	Net Assessment Schedule D.
		£
I.—Concerns having their main activities or branches in the United Kingdom:—		
Various manufactures	6	70,000
Wholesale Agents, Shippers, Distributors, etc.	20	628,000
	26	698,000

	No. of cases.	Net Assessment Schedule D. £
II.—Concerns having their main assets abroad:—		
Tramways, etc., Gas and Electric Supply Companies ... ..	10	900,000
Mines, various ... ..	10	250,000
Tea, etc., Plantations, Land and Farming Companies ... ..	23	435,000
Textile Mills, Factories, etc. ...	10	943,000
Metal and Engineering Works ...	8	58,000
Tobacco Factories, Chemical, Rubber, etc., Works ... ..	28	1,122,000
Wholesale Warehouses, Agents, etc., and Retail Stores ... ..	13	247,000
	<hr/>	
	102	3,955,000
	<hr/>	
Totals ... ..	128	£4,653,000

4. It will be observed that cases with their activities mainly in the United Kingdom fall almost wholly into the class of agents, shippers, &c., and that only six cases carried on manufacturing activities in the United Kingdom.

5. Of the 128 cases reported, it is seen that 102 are concerns whose main assets and activities are abroad. In most of these cases pressure of taxation is alleged as the cause of the transfer of control abroad, and this reason is particularly relevant in the four cases where the great bulk of the shares (not merely, as in many cases, the predominant part) belonged to residents out of Britain. But there are indications that other factors were also at work in many cases. No increasing tendency towards transfer abroad is discernible.

6. If it be assumed that the assessable profits of these 128 concerns might now reach £5,000,000 per annum, it would seem at first glance that the tax lost annually might be as much as £1,000,000. It must be remembered, however, that a large proportion of the dividends of these companies, or the profits of firms, is paid to shareholders or partners resident in Britain and that British Income Tax is payable on the amounts so received. The net annual loss to the British Exchequer is therefore only a fraction of the sum named above.

#### II.—*Transfer of Residence by Private Individuals.*

7. Among British subjects who seek to avoid Income Tax by going abroad, two general types may be distinguished, those who give up their residence in this country for at least a definite period of considerable length, and those who go abroad for indefinite periods or from time to time.

8. An individual who effectively transfers his residence ceases to be liable to British Income Tax in respect of any income arising abroad, any interest, etc., payable in the United Kingdom on foreign and Colonial stocks, etc., and any interest on certain British Government securities. In regard to general sources of income in this country he remains liable.

9. The Board have no evidence of any appreciable tendency on the part of British subjects definitely to abandon their residence in this country in order to escape Income Tax. It appears to exist in some slight degree among retired persons. There is also a minor tendency



among persons whose sphere of work has been wholly or mainly abroad to refrain from taking up residence here on retirement. There is no reason to think that the tendency is materially increasing.

(It is of course not overlooked that residence abroad in such cases may be due to various considerations quite apart from those of taxation, such as health, comparative cost of living, etc.)

10. The Board's attention was directed during the years immediately following the end of the War to a tendency among certain classes of well-to-do and moderately well-to-do people, short of completely transferring their residence, to adopt a nomadic type of life and to spend the greater part of their time out of this country. This was largely due to a widespread impression that liability to British Income Tax could be avoided simply by not retaining a house in this country and residing here for less than six months of the Income Tax year. Steps have been taken to correct this impression and to resist ill-founded claims. It is thought that the movement abroad, although at one time it appeared to be reaching appreciable dimensions, has received a considerable check and that the loss of tax has not at any time been serious.

## APPENDIX XVII.

TABLE showing (1) the TOTAL GROSS CAPITAL OF ESTATES LIABLE TO ESTATE DUTY (excluding fixed duty estates), (2) the amount included therein for GOVERNMENT AND MUNICIPAL SECURITIES, STOCKS AND SHARES OF JOINT STOCK COMPANIES, etc., and (3) the amount included for LIFE POLICIES.

Great Britain, 1923-24.

Ranges of Estates.		Married Men.			Widowers.			Bachelors.		
		Total gross capital.	Securities, stocks and shares, &c.	Life Insurance policies.	Total gross capital.	Securities, stocks and shares, &c.	Life Insurance policies.	Total gross capital.	Securities, stocks and shares, &c.	Life Insurance policies.
Exceeding £ net.	Not exceeding £ net.	£000	£000	£000	£000	£000	£000	£000	£000	£000
100	1,000	8,902	1,266	1,125	2,525	396	197	1,997	543	136
1,000	5,000	26,331	6,922	2,229	9,297	2,579	481	6,420	2,458	219
5,000	10,000	18,456	6,861	1,228	6,373	2,247	331	4,057	2,158	63
10,000	25,000	28,877	13,256	1,559	11,062	5,412	469	7,837	4,717	108
25,000	50,000	23,342	12,778	935	9,045	4,819	329	6,674	4,270	56
50,000	100,000	26,560	15,490	886	10,455	6,293	274	6,701	4,813	67
100,000	250,000	25,906	17,663	692	11,142	6,887	214	5,460	2,925	4
250,000	—	45,006	26,747	1,068	21,514	11,458	200	11,375	8,293	15
Total	...	203,380	100,983	9,722	81,413	40,091	2,495	50,521	30,177	668

## APPENDIX XIX.

## PRIVATE TRADERS AND THEIR CAPITAL RESOURCES.

*Note by the Board of Inland Revenue.*

1. Among the several statistical investigations conducted by the Board during the progress of the inquiry by the Select Committee of the House of Commons on the War Levy in 1920, was one relating to the capital resources of private traders.

An examination was made of the trading accounts, profit and loss accounts and balance sheets of 310 private business concerns engaged in manufacturing industries and wholesale distribution. Typical industrial and urban areas were selected. Only large concerns were included in the investigation. On that occasion, the accounts examined ran to various dates in the year 1919.

2. The results of the investigation are fully set out in Section O of "Further Note by the Board of Inland Revenue on the Possible Effects of a War Levy upon Businesses," printed on page 289 *et seq* of the Appendix to the Report of the Select Committee (H.C. 102 of 1920). Since those particulars were collected and analysed at the time of an unparalleled industrial boom, industry has experienced a great depression and conditions are still largely influenced in many trades by war and post-war causes of disturbance. In order to examine the effects of these changes the Board have again collected particulars of the resources of the private traders (individuals and firms), who constituted the subject of the 1920 investigation, and the result of this later examination is set out below. During the interval between these two investigations, changes in the constitution of some of the concerns originally included have taken place. Some have been converted into joint stock companies; others have been amalgamated with existing limited companies and so on. In consequence, particulars are available for a recent year for 216 concerns only. In drawing comparisons between 1919 and 1923 (the latter being the most recent year for which details are available), attention has therefore been confined to this smaller sample.

3. The broad facts which the investigation was designed to elicit were the concerns' credit or debit balance at the bank at the close of their trading year; the aggregate net capital of the business at the end of the trading year as computed on the lines laid down for purposes of the Excess Profits Duty, that is, broadly speaking, on the basis of the actual cash invested in the business, irrespective of the date of investment; and also the magnitude of the capital resources of the individual proprietors of the business, other than the resources invested in the business.

4. Of the 216 concerns, 136 or 63 per cent. had a credit balance at the bank at the end of the 1919 trading year, and 80 or 37 per cent. had a debit balance or overdraft. At the end of the 1923 trading year, 131 or 61 per cent. had a credit balance, and the remaining 85 or 39 per cent. had a debit balance. 34 businesses which had a credit balance in 1919, had a debit balance in 1923, and 29 businesses which had a debit balance in 1919 had a credit balance in 1923. The original investigation, covering the 310 concerns in 1919 showed remarkably similar results, 63 per cent. of the businesses then having a credit balance and 37 per cent. a debit balance.

5. The cases under examination thus fall into four groups, which may be conveniently shown in tabular form:—

Description by reference to cash position at the bank.	Year.	No. of Concerns.	No. of Individual Proprietors.
In credit both years ... ..	1919	102	225
	1923	102	208
In credit in 1919; in debit in 1923	1919	34	69
	1923	34	65
In debit in 1919; in credit in 1923.	1919	29	66
	1923	29	62
In debit both years ... ..	1919	51	116
	1923	51	119

6. The summarised balance sheets for each group show the following positions:

I. 102 Concerns in credit in both 1919 and 1923.

	1919.	1923.
	£000.	£000.
Net cash in hand or at the bank ... ..	1,594	1,486
Investments:—		
(a) reckoned as capital for E.P.D. purposes ... ..	292	682
(b) not so reckoned ... ..	842	1,121
Buildings and land ... ..	711	651
Other business assets, less business liabilities ... ..	2,839	3,471
<b>Total business capital shown by the balance sheets ...</b>	<b>6,278</b>	<b>7,411</b>

34 Concerns in credit in 1919, but in debit in 1923.

	1919.	1923.
	£000.	£000.
Net cash in hand or at bank in 1919 and net overdraft in 1923 ... ..	379	-404
Investments:—		
(a) reckoned as capital for E.P.D. purposes ... ..	77	29
(b) not so reckoned ... ..	543	216
Buildings and land ... ..	214	216
Other business assets less business liabilities, other than overdraft in 1923 ... ..	813	1,484
<b>Total business capital shown by the balance sheets ...</b>	<b>2,019</b>	<b>1,541</b>

29 Concerns in debit in 1919, but in credit in 1923.

	1919.	1923.
	£000.	£000.
Net overdraft in 1919 and net cash in hand or at bank in 1923 ... ..	-441	264
Investments:—		
(a) reckoned as capital for E.P.D. purposes ... ..	238	3
(b) not so reckoned ... ..	150	128
Buildings and land ... ..	150	141
Other business assets less business liabilities, other than overdraft in 1919 ... ..	1,338	973
<b>Total business capital shown by the balance sheets ...</b>	<b>1,485</b>	<b>1,508</b>

51 *Concerns in debit both in 1919 and in 1923.*

	1919.	1923.
	£000.	£000.
Net overdraft at bank ... ..	-2,026	-2,058
Investments:—		
(a) reckoned as capital for E.P.D. purposes ... ..	1,522	122
(b) not so reckoned ... ..	958	1,339
Buildings and land .....	383	380
Other business assets less other business liabilities ... ..	3,233	3,030
Total business capital shown by the balance sheets ... ..	4,050	2,818

7. As already stated, capital for purposes of the Excess Profits Duty represented, broadly speaking, the cash actually invested in the acquisition of assets of the business still in use at the date of the computation, reduced, in the case of assets suffering in profit-earning capacity, according to the proportion of the life expired. Although the Excess Profits Duty was no longer in force in 1923, the computations for that year were made on the same lines. The figures for that year are, however, on that account, subject to some slight margin of error, because the inquiries made in dealing with the 1923 accounts were not so close as respects fluctuation of capital. In 1919, no particulars were gathered of the capital value shown in balance sheets of property owned and occupied, and the capital value was accordingly taken at 25 years' purchase of the net annual value assessed to Income Tax, Schedule A. In making the 1923 inquiry, these capital values were ascertained and have been used in the statements above. It should, however, be stated that such values did not support a multiplier of 25 years' purchase, but indicated one of 16.25. The variation between the capital values placed on land and buildings in the two years is partly due to this factor, which does not, however, disturb the accuracy of the aggregate value of all business assets.

8. The method adopted in reckoning capital for purposes of the Excess Profits Duty does not purport to give the value of the assets at the date of computation, and no such meaning should be read into the figures stated. Inasmuch as the purchasing power of the pound sterling has not been constant throughout the period during which the assets may have been acquired, there may be important inconsistencies between book values and true values at the dates of these computations, but this fact should not materially affect the validity of comparisons of the position at different times, as it is to be assumed that the balance sheet values placed on fixed assets will tend to remain stable. Accordingly, the comparative figures presented are of value as showing the broad changes in capital resources, expressed in terms of cost, between the two years in question.

9. In addition to making these summaries of the accounts, a computation has been made of the private or non-business resources of the individual proprietors of the businesses, as shown by their returns for Income Tax purposes. The private income from investments of all kinds has been capitalised at a flat rate of 14 years purchase. This multiplier has been adopted as a rough average applicable to all classes of investments, ranging from a gilt-edged security, through every class or industrial, &c., to a short-life interest in trust funds.

10. On this basis, the movement of the estimated capital value of private resources in the four groups has been as follows:—

Group.	No. of individual proprietors (a) in 1919. (b) in 1923.	Estimated capital value of private resources in :		Increase per cent.
		1919.	1923.	
		(£000)	(£000)	
I.—Concerns in credit at bank in both years.	(a) 225 (b) 208	7,804 —	— 9,139	— 17
II.—Concerns in credit in 1919 and in debit in 1923.	(a) 69 (b) 65	720 —	— 928	— 29
III.—Concerns in debit in 1919 and in credit in 1923.	(a) 66 (b) 62	464 —	— 883	— 90
IV.—Concerns in debit in both years.	(a) 116 (b) 119	2,893 —	— 3,463	— 20

11. The two parts of the inquiry, the business part and the private part, may now be brought together, in the following statement.

*Aggregate Resources, Trade and Private, of 216 Private Concerns.*

Group.	Year.	Number of Concerns.	Number of Individuals.	Description of Resources.					
				Business Assets.				Private Assets.	Aggregate Assets.
				Cash + or Overdraft —	Investments.	Land and Buildings.	Total.		
				(£000)	(£000)	(£000)	(£000)	(£000)	(£000)
I.—Concerns in credit at bank in both years	1919	102	225	+ 1,594	1,134	711	6,278	7,804	14,082
	1923	102	208	+ 1,486	1,808	651	7,411	9,139	16,550
Movement	...	—	— 17	— 108	+ 669	— 60	+ 1,133	+ 1,335	+ 2,468
II.—Concerns in credit at bank in 1919 and in debit in 1923.	1919	84	69	+ 872	620	214	2,019	720	2,739
	1923	84	66	— 404	945	216	1,541	928	2,469
Movement	...	—	— 4	— 776	— 375	+ 2	— 478	+ 208	— 270
III.—Concerns in debit at bank in 1919 and in credit in 1923	1919	29	66	— 441	888	150	1,485	464	1,949
	1923	29	62	+ 264	181	141	1,508	883	2,391
Movement	...	—	— 4	+ 705	— 267	— 9	+ 28	+ 419	+ 442
V.—Concerns in debit at bank in both years	1919	51	116	— 2,026	2,480	263	4,050	2,298	6,348
	1923	51	119	— 2,053	1,461	280	2,810	2,463	6,281
Movement	...	—	+ 3	— 27	— 1,019	+ 17	— 1,242	+ 570	— 667
TOTALS...	1919	216	476	— 501	4,622	1,433	12,852	11,881	25,733
	1923	216	454	— 707	3,640	1,368	12,278	14,415	27,691
Movement	...	—	— 22	— 206	— 982	— 50	— 574	+ 2,582	+ 1,978

12. These aggregated results show that for the 216 concerns taken as a whole, covering 476 individuals in 1919 and 454 in 1923, the aggregate capital resources (business and private) amounted to over £25½ millions in 1919 and to over £27½ millions in 1923. Of these totals, the business assets comprised 54 per cent. in 1919 and 48 per cent. in 1923. Concerns numbering 136 which were in credit at the bank in 1919 (Groups I and II), improved their capital position by £2,198,000, of which £655,000 was shown as business assets and £1,543,000 is estimated as private assets.

13. In 1919, the remaining 80 concerns were in debit at the bank (Groups III and IV), the total overdraft amounting to £2,467,000. The net business assets after deducting this liability amounted to £5,535,000, of which £2,868,000 represented investments and £513,000 land and buildings. In addition, the proprietors of these businesses possessed private assets totalling £3,357,000. By 1923, four years later, the position had changed considerably, not so much in respect of the total liability to the bank, as in respect of the magnitude of the business assets. The net liability to the bank had fallen from £2,467,000 to £1,789,000, that is, by £678,000; 29 concerns which formerly had a debit balance and latterly had a credit balance had improved their position by £705,000, while the other 51 concerns, which were in debit in both years, had lost ground to the extent of £27,000.

The net business assets of these 80 concerns in 1923 had fallen to £4,326,000 compared with £5,535,000, but on the other hand, the private assets of the partners had increased from £3,357,000 to £4,346,000. A decrease of £1,209,000 in the business assets was thus largely off-set by an increase in the private assets of £989,000. But this summary gives a misleading impression as regards those 51 concerns which were in debit at the bank in both years (Group IV). In this group, the debt to the bank remained practically unchanged at about £2 millions, but the business assets fell by nearly £1½ millions, against which the set-off for an increase in private assets amount to about £½ million.

14. In the foregoing calculations the business capital is calculated by reference to cost or money put in. This, of course, is not the same as the current market value of the business. No material is available on which reliably to estimate this latter figure. All that can be said is that, on consideration of such general evidence as is available, the Board are inclined to think that the figures lie in the following region:—

		<i>Trade Capital.</i>			
		On basis of cost.		On basis of market value.	
		(£000)		(£000)	
1919	... ..	13,832	...	26,000	...
1923	... ..	13,278	...	17,800	...

## APPENDIX XX.

### ESTATE DUTY AND PRIVATE BUSINESSES.

*Note by the Board of Inland Revenue.*

1. It was understood at an early stage of the Committee's enquiry that the burden of the death duties had been represented as falling with particular severity upon the estates of persons who had been engaged in private business: in large estates of this kind the duties could only be met by raising bank loans of such a magnitude as to be highly injurious

2. The validity of this criticism of the death duties appears to rest implicitly upon the assumption that men with large private businesses ordinarily invest in them the whole, or by far the greater part, of their fortunes. In other words, it appears to depend on the actual constitution of estates, and, this being so, the Board undertook, at the desire of the Committee, to attempt a sample analysis of estates which might throw light upon the question.

3. The Estate Duty offers no exception to the rule that, in the daily application of the rigid provisions of any statute, there will be found cases involving some measure of hardship and some degree of adverse consequences, which, from the standpoint of the individual, cannot be lightly regarded. As always, the crucial point is the degree of prevalence of the evil complained of.

4. The Estate Duty records have been investigated on the following lines. Affidavits and other returns rendered for purposes of the Estate Duty contain particulars which enable trade assets, and shares in private companies to be segregated. Statistics have been extracted, for a period defined below, of all estates of a total net capital value exceeding £10,000 which included trade assets, except where these were confined to an interest in a private firm, or holdings in a private joint stock company, of a value not exceeding £1,000. This course was followed on the assumption that, if a deceased person's interest in a private business (including in that term a business conducted by a private company) was restricted to so small a proportion of the total estate as £1,000 (out of a minimum of £10,000), then either the private business was not the main occupation of the deceased, or the burden of the Estate Duty on his business interests was negligible. The estates included in the sample were the entire estates of the individuals concerned; the investigation extended to all estates in England and Wales complying with the conditions above which came before the Department in the three months from 1st January to the 31st March, 1922, the most recent period for which reliable information was available.

5. In the statistics which follow, the figures expressing values of assets of various descriptions, amount of duty payable, &c., have been strictly confined to the appropriate actual figures relating to the free estate only. Thus no credit has been taken in reckoning the burden of the duty for the existence of settled assets, which practically never include trade assets. Nor has credit been taken for the fact that on the death of a person interested in trade as a partner in a business there is commonly a liability resting upon the surviving partners in the firm to pay out in readily realisable form the capital value of the interest of the deceased partner. This liability was a matter of established usage long before the first imposition of the Estate Duty.

6. During the period taken 1,342 estates of a value exceeding £10,000 came under the notice of the Department, and in 373 cases (27½ per cent.) the estate included trade assets of the description stated. The approximate aggregate net capital value of all estates in the sample amounted to £54,000,000; that of the estates which included trade assets amounted to £22,000,000, or 41 per cent. of the total. The distribution of the total number of estates included in the sample, and of the number including trade assets, according to the total value of the estate was as follows:—

TABLE 1.—*Number of Estates exceeding £10,000 Net Capital Value in England in the three months ended 31st March, 1922, and number of such Estates of which Trade Assets formed a part.*

Range of Net Capital Value of Estate.	Total Number of Estates.	Estates containing Trade Assets. (as defined in para. 4).	
		Number.	Per cent. of Total Number in Range.
£            £			Per cent.
10,000—25,000 ...	828	209	25·2
25,000—50,000 ...	308	89	28·9
50,000—100,000 ...	128	37	28·9
100,000—250,000 ...	56	25	44·6
250,000—500,000 ...	12	7	58·3
Over £500,000 ...	10	6	60·0
Total . . . . .	1,342	373	27·8

7. The proportion of the number of estates including trade assets to the total number of estates increases steadily with the increase in the range of total value. Between £10,000 and £25,000 it is as low as 25 per cent.; between £100,000 and £250,000 it stands at 45 per cent.; and in the highest range, of estates exceeding a value of £500,000, it has risen to 60 per cent. On the face of these figures, it seems as if the effect of the Estate Duty on the preservation of a private business may be of very considerable importance, but it can only be determined by a comparison between the magnitude of the trade interest and that of the total capital resources, that is, of the value of the whole estate left by the deceased.

8. Unfortunately, no simple analysis by reference to the amount of the private business interest is possible. Estate Duty is payable, broadly speaking, in the normal case of an individual who was domiciled in this country, upon the net principal value of all the property which passes upon death, subject to the exception that immovable property situate out of Great Britain, devolving as such, is not liable to duty in any circumstances. The net principal value of the property is represented by the aggregation of the principal values of all the items of property, less the total deductions allowed in respect of debts, incumbrances, &c. Debts are not, commonly speaking, earmarked to specific assets, and in the present statistical investigation some difficulty arises from this fact. Values placed upon trade assets represent gross values, except as respects shares in partnerships, which are net. Trade debts are not distinguished in compiling statistics of capital values. The only available figures, therefore, for trade assets are those shown on the credit side of the estate, consisting of a composite total of the net value of any interest in a partnership, the gross value of ordinary trade assets and the market value of any shares, &c., in private joint stock companies, within the limits stated above. This composite total is, for the sake of convenience, referred to subsequently as the "gross trade assets."

9. The problem to be investigated is whether the Estate Duty payable in those cases in which part of the estate consists of a private business is of such weight, when viewed in the light of all the relevant circumstances, as to endanger the continuance of the business or to render its conduct much more difficult through the depletion of liquid capital. The tables appended, numbered 2 to 23, have been drawn up in order to throw as much light as possible on this question.



10. It has already been shown by Table 1 above that the proportion of trade cases rises concurrently with the increase in the weight of the Estate Duty. Table 2 sets out the relation of the gross trade assets to the total net estate. Vertically, the 373 estates including trade assets are classified by reference to the net value of the whole estate. Horizontally, the number of these estates in each range is classified according to the percentage of the net estate represented by the gross trade assets. It will be borne in mind that some portion of any debts encumbering the gross estate must be allocated to the trade assets, so that by basing the percentages in question on the gross trade assets, the relative importance of the trade assets in these cases is somewhat exaggerated. Out of the 373 estates, no less than 335 (or 90 per cent.) are of a value not exceeding £100,000. In these 335 estates, the gross trade assets constituted not more than half the net estate in 261 cases, or 78 per cent. of them all. In 24 cases (or 7 per cent. of the total) the gross trade assets exceeded 80 per cent. of the net estate. When attention is turned to estates of a net value between £100,000 and £250,000, it is found that there are 25 estates including trade assets out of 56 estates sampled, and that, of these 25 cases, only four include gross trade assets amounting to more than half of the total estate. In the higher ranges, over £250,000 in value, no cases were found in which the gross trade assets exceeded half of the total estate.

11. One of the unavoidable disadvantages of taxation is that the demand of the State is for cash. In the case of the Estate Duty, when the deceased is the sole or part proprietor of a private business, this demand comes at a time when active earning power has ceased. The extent of the command of the estate over readily realisable resources is therefore of no slight importance when the burden of the duty is under consideration. For this reason, an attempt has been made to carry the present investigation a step further, in Tables 3 to 9 appended, by classifying the estates in the sample taken (a) by the total value of the net estate, (b) by the percentage relation of the gross trade assets to the net estate, and (c) by the relation of the cash and liquid assets to the amount of Estate Duty payable. A separate table has been prepared for each range of estates (Tables 3 to 8), and also for all estates taken together (Table 9). In each table the percentage relation of the gross trade assets to the net estate is shown horizontally, and the relation of the cash and liquid assets to the duty payable vertically. The number of estates falling within the various sub-divisions forms the basis of this analysis. The description "cash and liquid assets" covers the following free and settled assets:—

Money in the house or at the bank, whether on current or deposit account;

Life insurance policies, free or settled;

Government and municipal stocks;

Debentures, shares, etc., in companies, excluding holdings in private joint stock companies classified as trade assets;

Mortgages on real estate;

Money out on bonds, bills, notes and other securities.

Realty and leasehold property have not been regarded as liquid assets, although this view prejudices the burden of the Estate Duty *vis-à-vis* the trade assets in estates including considerable investments in land and buildings.

12. Looking at the sample as a whole, Table 9 shows that out of the 373 cases in the sample, in only 24 were the cash and liquid assets insufficient to meet the Estate Duty payable. In 13 of these cases the gross trade assets were more than half the net estate. Four of these 13 cases were in the range of estates between £10,000 and £25,000; eight were in the range from £25,000 to £50,000, and the remaining one was in the range from £50,000 to £100,000. There were 25 estates in the sample of a value between £100,000 and £250,000, which corresponds

roughly with the range to which considerable importance has been attached from the business point of view. In four of these cases (Table 6) the gross trade assets were more than half the net estate. In three of them, the cash and liquid assets were between two and three times the amount of the Estate Duty, and in the remaining case, such assets were between one and two times the amount of the duty.

13. In the foregoing observations, no account has been taken of debts due by the estate. As already stated, this factor complicates the problem, for it is not possible to allocate the debts, except upon very broad lines, to the different categories of assets. An attempt has, however, been made to deal with the debts, in two ways.

14. In the first instance, the debts have been regarded as strictly apportionable among all the assets, each description of asset bearing its rateable share of the total debts of the estate. This method ignores whatever degree of affinity may have existed between particular assets and debts, e.g., the fact that, on the one hand, the bulk of the debts may be business debts strictly to be regarded as diminishing the trade assets, or, on the other hand, that they may be mainly incumbrances on the real estate assets. The number of estates in the sample including trade assets has been tabulated (a) by range of total value of net estate, (b) by the percentage relation of the net trade assets, so computed, to the total net estate, and (c) by the relation between the net assets—excluding the net trade assets—and the Estate Duty payable. The results are shown in Tables 10 to 16; Tables 10 to 15 deal with the various ranges of values of estates, and Table 16 deals with all the estates as a whole.

15. From Table 16 it will be seen that out of the 373 cases in the sample, in 65 cases (or 17 per cent.) the net trade assets comprised more than half of the total net estate. In the remaining 83 per cent. of the total number of estates in the sample, the net trade assets were less than half the net estate. Out of these 65 estates, consisting mainly of trade assets, in the case of three only were the net non-trade assets less than the Estate Duty payable. Difficulty would doubtless have arisen here in preserving the private business untouched by the burden of the Estate Duty. The measure of the difficulty, viewing the whole field, is indicated by the relation of these three cases to the total of 373 estates including business assets, that is 0·8 per cent., and by their relation to the total number of estates covered by the investigation, viz.: 1,342, that is 0·22 per cent.

Even if it is assumed that difficulty may arise in cases where the net non-trade assets are less than three times the Estate Duty payable, irrespective of the proportion of the total estate formed by the net trade assets, only 30 estates out of the 373 (or 8 per cent.) can be brought within consideration.

16. Turning to the separate ranges of estates, it will be found that of the three definite cases of hardship, two are in the range from £25,000 to £50,000, and one in the range from £50,000 to £100,000. There is no such case in the higher ranges. Extending consideration again to the wider field in which the net non-trade assets are less than three times the duty payable, the 30 cases concerned out of the 373 estates tabulated are distributed in the following ranges of total value of estate, viz. :—

Range.				No.
£	£	...	...	
10,000 to	25,000	...	...	5
25,000	50,000	...	...	12
50,000	100,000	...	...	5
100,000	250,000	...	...	4
250,000	500,000	...	...	1
500,000	—	...	...	3

17. The final tabulation applies the most exacting test of all. In this instance, the whole of the debts of the estate have been treated as a

charge on the non-trade assets, and the gross trade assets, being thus freed from all debt, have been preserved intact. As is to be expected, the burden of Estate Duty appears more formidable on these hypotheses. The estates including trade assets have again been tabulated, by number, on a triple classification, viz.: (a) by the total value of the estate, (b) by the percentage relation of the gross trade assets to the net estate, and (c) by the relation of the excess of the net estate over the gross trade assets to the amount of Estate Duty payable. Tables 17 to 22 show the results for the various ranges of estates, and Table 23 brings the whole of the ranges together.

18. Even on this severe, and in fact unjustifiable, basis, out of the 373 cases including trade assets, Table 23 shows that in only 12 estates were the non-trade assets (after deduction of the whole of the debts) insufficient to meet the Estate Duty payable on the whole estate. In each of these cases, the gross value of the trade assets either closely approached or exceeded the net value of the entire net estate. Of these 12 estates, eight were in the range from £10,000 to £25,000, two in the range from £25,000 to £50,000, one in the range from £50,000 to £100,000, and one in the £100,000 to £250,000 range. In other words, 3.2 per cent. of the 373 estates including trade assets, or 0.89 per cent. out of the total number of 1,342 estates examined, were cases in which the burden of the Estate Duty may have been a cause of serious difficulty when viewed from the special standpoint of preserving intact the whole of the gross trade assets, any trade debts being regarded as a charge on the private assets.

19. The Board are very sensible of the fact that the most laborious statistical examination of a problem of this description cannot pretend to give a full picture of the real measure of hardship in cases where hardship occurs. Nor in the infinite variety of human circumstances can such an investigation take account of the close interrelations which must often exist between the employment of the various assets comprising one man's resources. It has been necessary in this investigation to draw distinctions between trade and private assets, and in individual cases this hard and fast line may obscure and distort the true facts when viewed as a whole. Such defects are unavoidable. But making every consideration for abnormalities of this kind, it is suggested that, viewed broadly, the burden of the Estate Duty does not appear to be a major factor tending towards the disintegration of private businesses, whether carried on by sole or partnership traders, or through the medium of a private joint stock company.

TABLE 2.—Trade Assets. Relation to Total Net Estate.

Range of Net Capital Value of Estate.	Numbers of Estates.											Total.
	Percentage of the Total Net Estate represented by Trade Assets (Gross).											
	N.E. 10	10.1 -20	20.1 -30	30.1 -40	40.1 -50	50.1 -60	60.1 -70	70.1 -80	80.1 -90	90.1 -100	Over 100	
£ 10,000-25,000	56	42	28	52	14	7	10	8	3	2	7	209
25,000-50,000	27	13	13	5	5	6	6	3	9	1	1	89
50,000-100,000	9	5	2	4	6	4	4	2	—	—	1	37
100,000-250,000	11	2	1	3	4	—	2	1	—	—	1	25
250,000-500,000	4	1	1	—	1	—	—	—	—	—	—	7
Over 500,000	6	—	—	—	—	—	—	—	—	—	—	6
TOTAL ...	113	63	45	44	30	17	23	14	12	3	10	373
PER CENT. ...	30	17	12	12	8	4	6	4	3	1	3	100

TABLE 3.—*Relation of Gross Cash and Liquid Assets to amount of Estate Duty.*  
Range £10,000 to £25,000.

Number of cases in which the Cash and Liquid Assets (Gross) are a multiple of the E.D. payable of:—	Number of cases in which the Trade Assets (Gross) bear a percentage relation to the total Net Estate of:—											Total
	N.E. 10	10·1 -20	20·1 -30	30·1 -40	40·1 -50	50·1 -60	60·1 -70	70·1 -80	80·1 -90	90·1 -100	Over 100	
Up to 1	2	2	—	4	—	1	—	1	1	—	1	12
1·1-2	1	—	2	3	1	—	1	1	2	1	1	13
2·1-3	—	1	—	1	4	1	2	1	1	—	1	11
3·1-4	—	1	—	1	1	—	—	3	—	—	1	7
4·1-5	1	—	—	1	—	—	1	1	—	—	—	4
5·1-6	3	2	2	1	2	—	1	—	—	—	—	13
6·1-7	—	1	2	6	—	1	5	—	—	—	—	15
7·1-8	—	4	3	2	1	3	—	—	—	—	—	13
8·1-9	6	1	3	2	1	—	—	—	—	—	—	13
9·1-10	5	4	6	3	3	—	—	1	—	1	2	25
Over 10	38	26	10	8	1	—	—	—	—	—	1	85
TOTAL ...	56	42	28	32	14	7	10	8	3	2	7	209

TABLE 4.—*Relation of Gross Cash and Liquid Assets to amount of Estate Duty.*  
Range £25,000 to £50,000.

Up to 1	.1	—	1	—	—	—	2	—	4	1	1	10
1·1-2	—	1	—	—	—	—	—	—	3	—	—	4
2·1-3	1	1	—	1	1	—	1	2	2	—	—	9
3·1-4	—	1	1	—	—	1	1	1	—	—	—	5
4·1-5	2	—	1	1	2	2	2	—	—	—	—	10
5·1-6	2	1	1	1	2	1	—	—	—	—	—	8
6·1-7	3	3	1	2	—	2	—	—	—	—	—	11
7·1-8	2	1	4	—	—	—	—	—	—	—	—	7
8·1-9	4	3	3	—	—	—	—	—	—	—	—	10
9·1-10	7	2	1	—	—	—	—	—	—	—	—	10
Over 10	5	—	—	—	—	—	—	—	—	—	—	5
TOTAL ...	27	13	13	5	5	6	6	3	9	1	1	89

TABLE 5.—*Relation of Gross Cash and Liquid Assets to amount of Estate Duty.*  
Range £50,000 to £100,000.

Up to 1	—	—	—	—	—	—	—	—	—	—	1	1
1·1-2	—	1	—	1	—	—	—	1	—	—	—	3
2·1-3	1	—	—	1	1	2	3	1	—	—	—	9
3·1-4	2	1	1	—	2	2	1	—	—	—	—	9
4·1-5	—	1	—	2	2	—	—	—	—	—	—	5
5·1-6	1	—	—	—	—	—	—	—	—	—	—	1
6·1-7	2	1	—	—	—	—	—	—	—	—	—	3
7·1-8	2	1	—	—	1	—	—	—	—	—	—	4
8·1-9	1	—	1	—	—	—	—	—	—	—	—	2
9·1-10	—	—	—	—	—	—	—	—	—	—	—	—
Over 10	—	—	—	—	—	—	—	—	—	—	—	—
TOTAL ...	9	5	2	4	6	4	4	2	—	—	1	37

TABLE 6.—*Relation of Gross Cash and Liquid Assets to amount of Estate Duty.*  
*Range £100,000 to £250,000.*

Number of cases in which the Cash and Liquid Assets (Gross) are a multiple of the E.D. payable of:—	Number of cases in which the Trade Assets (Gross) bear a percentage relation to the total Net Estate of:—											Total.
	N.E. 10	10·1 -20	20·1 -30	30·1 -40	40·1 -50	50·1 -60	60·1 -70	70·1 -80	80·1 -90	90·1 -100	Over 100	
Up to 1	—	—	—	—	—	—	—	—	—	—	—	—
1·1- 2	—	—	—	1	—	—	—	1	—	—	—	2
2·1- 3	—	—	1	1	2	—	2	—	—	—	1	7
3·1- 4	2	—	—	—	2	—	—	—	—	—	—	4
4·1- 5	—	2	—	1	—	—	—	—	—	—	—	3
5·1- 6	3	—	—	—	—	—	—	—	—	—	—	3
6·1- 7	5	—	—	—	—	—	—	—	—	—	—	5
7·1- 8	1	—	—	—	—	—	—	—	—	—	—	1
8·1- 9	—	—	—	—	—	—	—	—	—	—	—	—
9·1-10	—	—	—	—	—	—	—	—	—	—	—	—
Over 10	—	—	—	—	—	—	—	—	—	—	—	—
TOTAL ...	11	2	1	3	4	—	2	1	—	—	1	25

TABLE 7.—*Relation of Gross Cash and Liquid Assets to amount of Estate Duty.*

*Range £250,000 to £500,000.*

Number of cases in which the Cash and Liquid Assets (Gross) are a multiple of the E.D. payable of:—	Number of cases in which the Trade Assets (Gross) bear a percentage relation to the total Net Estate of:—					
	N.E. 10	10·1 -20	20·1 -30	30·1 -40	40·1 -50*	Total.
Up to 1	—	—	—	—	—	—
1·1- 2	—	—	—	—	—	—
2·1- 3	2	—	1	—	1	4
3·1- 4	1	1	—	—	—	2
4·1- 5	1	—	—	—	—	1
5·1- 6	—	—	—	—	—	—
6·1- 7	—	—	—	—	—	—
7·1- 8	—	—	—	—	—	—
8·1- 9	—	—	—	—	—	—
9·1-10	—	—	—	—	—	—
Over 10	—	—	—	—	—	—
TOTAL ...	4	1	1	—	1	7

\* In no case was the percentage relation higher than 50.

TABLE 8.—*Relation of Gross Cash and Liquid Assets to Amount of Estate Duty.*

Range £500,000 and over.

In none of the six estates in this range do the Trade Assets (Gross) bear a percentage relation to the total net estate exceeding 10.

The Cash and Liquid Assets (Gross) are multiples of the Estate Duty payable, as follows:—

Up to 1	...	...	...	...	...	...	1
1·1 „ 2	...	...	...	...	...	...	—
2·1 „ 3	...	...	...	...	...	...	3
3·1 „ 4	...	...	...	...	...	...	2
Total	...	...	...	...	...	...	6

TABLE 9.—*Relation of Gross Cash and Liquid Assets to amount of Estate Duty.*

All Ranges.

Number of cases in which the Cash and Liquid Assets (Gross) are a multiple of the E.D. payable of:—	Number of cases in which the Trade Assets (Gross) bear a percentage relation to the total Net Estate of:—											Total
	N.E. 10	10·1 -20	20·1 -30	30·1 -40	40·1 -50	50·1 -60	60·1 -70	70·1 -80	80·1 -90	90·1 -100	Over 100	
Up to 1	4	2	1	4	—	1	2	1	5	1	3	24
1·1- 2	1	2	2	5	1	—	1	3	5	1	1	22
2·1- 3	7	2	2	4	9	3	8	4	2	—	2	43
3·1- 4	7	4	2	1	5	3	2	4	—	—	1	29
4·1- 5	4	3	1	5	4	2	3	1	—	—	—	23
5·1- 6	9	3	3	2	4	1	1	—	—	—	—	23
6·1- 7	10	5	3	8	—	3	5	—	—	—	—	34
7·1- 8	5	6	7	2	2	3	—	—	—	—	—	25
8·1- 9	11	4	7	2	1	—	—	—	—	—	—	25
9·1-10	12	6	7	3	3	—	—	1	—	1	2	35
Over 10	43	26	10	8	1	1	—	—	—	—	1	90
TOTAL ...	113	63	45	44	30	17	22	14	12	3	10	373

TABLE 10.—*Relation of Net Assets (Excluding Trade Assets) to Amount of Estate Duty.*  
Range £10,000 to £25,000.

Number of cases in which the Net Assets, other than Trade Assets, are a multiple of E.D. payable of:—	Number of cases in which the Trade Assets (Net) bear a percentage relation to the total Net Estate of:—										
	N.E. 10	10·1 -20	20·1 -30	30·1 -40	40·1 -50	50·1 -60	60·1 -70	70·1 -80	80·1 -90	90·1 -100	Total.
Up to 1	—	—	—	—	—	—	—	—	—	—	—
1·1- 2	—	—	—	—	—	—	—	—	1	1	2
2·1- 3	—	—	—	—	—	—	—	1	2	—	3
3·1- 4	—	—	—	—	—	—	—	—	—	—	—
4·1- 5	—	—	—	—	—	—	2	1	—	—	3
5·1- 6	—	—	—	—	—	—	3	1	—	—	4
6·1- 7	—	—	—	—	—	1	10	—	—	—	11
7·1- 8	—	—	1	—	3	1	1	—	—	—	6
8·1- 9	—	—	—	1	2	4	—	—	—	—	7
9·1-10	—	—	—	6	6	—	—	—	—	—	12
Over 10	57	48	27	23	6	—	—	—	—	—	161
<b>TOTAL ...</b>	<b>57</b>	<b>48</b>	<b>28</b>	<b>30</b>	<b>17</b>	<b>6</b>	<b>16</b>	<b>3</b>	<b>3</b>	<b>1</b>	<b>209</b>

TABLE 11.—*Relation of Net Assets (Excluding Trade Assets) to Amount of Estate Duty.*  
Range £25,000 to £50,000.

Up to 1	—	—	—	—	—	—	—	—	—	2	2
1·1- 2	—	—	—	—	—	—	—	—	5	—	5
2·1- 3	—	—	—	—	1	—	—	4	—	—	5
3·1- 4	—	—	—	—	—	—	3	2	—	—	5
4·1- 5	—	—	—	—	—	3	3	—	—	—	6
5·1- 6	—	—	—	—	4	1	—	—	—	—	5
6·1- 7	—	—	—	3	2	—	—	—	—	—	5
7·1- 8	—	—	1	—	—	—	—	—	—	—	1
8·1- 9	—	3	4	2	—	—	—	—	—	—	9
9·1-10	10	3	5	—	—	—	—	—	—	—	18
Over 10	19	9	—	—	—	—	—	—	—	—	28
<b>TOTAL ...</b>	<b>29</b>	<b>15</b>	<b>10</b>	<b>5</b>	<b>7</b>	<b>4</b>	<b>6</b>	<b>6</b>	<b>5</b>	<b>2</b>	<b>89</b>

TABLE 12.—*Relation of Net Assets (Excluding Trade Assets) to Amount of Estate Duty.*  
Range £50,000 to £100,000.

Up to 1	—	—	—	—	—	—	—	—	—	1	1
1·1- 2	—	—	—	—	—	—	—	—	—	—	—
2·1- 3	—	—	—	—	—	1	3	—	—	—	4
3·1- 4	—	—	—	—	—	3	1	—	—	—	4
4·1- 5	—	—	—	—	5	—	—	—	—	—	5
5·1- 6	—	—	—	5	1	—	—	—	—	—	6
6·1- 7	—	1	1	—	—	—	—	—	—	—	2
7·1- 8	5	2	1	—	—	—	—	—	—	—	8
8·1- 9	6	—	—	—	—	—	—	—	—	—	6
9·1-10	—	—	—	—	1	—	—	—	—	—	1
Over 10	—	—	—	—	—	—	—	—	—	—	—
<b>TOTAL ...</b>	<b>11</b>	<b>3</b>	<b>2</b>	<b>5</b>	<b>7</b>	<b>4</b>	<b>4</b>	<b>—</b>	<b>—</b>	<b>1</b>	<b>37</b>

TABLE 13.—*Relation of Net Assets (Excluding Trade Assets) to Amount of Estate D*  
*Range £100,000 to £250,000.*

Number of cases in which the Net Assets, other than Trade Assets, are a multiple of E.D. payable of :—	Number of cases in which the Trade Assets (Net) bear a percentage relation to the total Net Estate of :—										T
	N.E. 10	10·1 -20	20·1 -30	30·1 -40	40·1 -50	50·1 -60	60·1 -70	70·1 -80	80·1 -90	90·1 -100	
Up to 1	—	—	—	—	—	—	—	—	—	—	
1·1- 2	—	—	—	—	—	—	—	1	—	—	
2·1- 3	—	—	—	—	—	1	2	—	—	—	
3·1- 4	—	—	—	—	4	—	—	—	—	—	
4·1- 5	—	1	—	3	—	—	—	—	—	—	
5·1- 6	3	2	—	—	—	—	—	—	—	—	
6·1- 7	6	—	—	—	—	—	—	—	—	—	
7·1- 8	2	—	—	—	—	—	—	—	—	—	
8·1- 9	—	—	—	—	—	—	—	—	—	—	
9·1-10	—	—	—	—	—	—	—	—	—	—	
Over 10	—	—	—	—	—	—	—	—	—	—	
TOTAL ...	11	3	—	3	4	1	2	1	—	—	

TABLE 14.—*Relation of Net Assets (excluding Trade Assets) to amount of Estate Duty.*

*Range £250,000 to £500,000.*

Number of cases in which the Net Assets, other than Trade Assets, are a multiple of E.D. payable of :—	Number of cases in which the Trade Assets (Net) bear a percentage relation to the total Net Estate of :—							
	N.E. 10	10·1 -20	20·1 -30	30·1 -40	40·1 -50	50·1 -60	Total.	
Up to 1	—	—	—	—	—	—	—	—
1·1- 2	—	—	—	—	—	—	—	—
2·1- 3	—	—	—	—	—	1	—	1
3·1- 4	—	—	2	1	1	—	—	4
4·1- 5	—	2	—	—	—	—	—	2
5·1- 6	—	—	—	—	—	—	—	—
6·1- 7	—	—	—	—	—	—	—	—
7·1- 8	—	—	—	—	—	—	—	—
8·1- 9	—	—	—	—	—	—	—	—
9·1-10	—	—	—	—	—	—	—	—
Over 10	—	—	—	—	—	—	—	—
TOTAL ...	4	1	1	—	1	—	—	7



TABLE 15.—*Relation of Net Assets (excluding Trade Assets) to amount of Estate Duty.*

*Range £500,000 and over.*

In none of the six estates in this range do the Trade Assets (Net) bear a percentage relation to the total Net Estate exceeding 10.

The Net Assets (excluding Trade Assets) are multiples of the Estate Duty payable, as follows:—

Up to 2	...	...	...	...	...	...	—				
2·1 „ 3	...	...	...	...	...	...	3				
3·1 „ 4	...	...	...	...	...	...	3				
Total							...	...	...	...	6

TABLE 16. *Relation of Net Assets (excluding Trade Assets) to amount of Estate Duty.*

*All Ranges.*

Number of cases in which the Net Assets, other than Trade Assets, are a multiple of E.D. payable of:—	Number of cases in which the Trade Assets (Net) bear a percentage relation to the total Net Estate of:—										Total.
	N.E. 10	10·1 -20	20·1 -30	30·1 -40	40·1 -50	50·1 -60	60·1 -70	70·1 -80	80·1 -90	90·1 -100	
Up to 1	—	—	—	—	—	—	—	—	—	3	3
1·1- 2	—	—	—	—	—	—	—	—	1	6	8
2·1- 3	3	—	—	—	2	2	5	5	2	—	19
3·1- 4	5	1	1	—	4	3	4	2	—	—	20
4·1- 5	2	1	—	3	5	3	5	1	—	—	20
5·1- 6	3	2	—	5	5	1	3	1	—	—	20
6·1- 7	6	1	1	3	2	1	10	—	—	—	24
7·1- 8	7	2	3	—	3	1	1	—	—	—	17
8·1- 9	6	3	4	3	2	4	—	—	—	—	22
9·1-10	10	3	5	6	7	—	—	—	—	—	31
Over 10	76	57	27	23	6	—	—	—	—	—	189
TOTAL ...	118	70	41	43	36	15	28	10	8	4	373

TABLE 17.—*Relation of Net Assets (excluding Trade Assets) to Estate Duty, all debts being charged against Assets other than Trade Assets.*

Range £10,000 to £25,000.

Number of cases in which Net Estate minus Gross Trade Assets is a multiple of E.D. payable of:—	Number of cases in which the Trade Assets (Gross) bear a percentage relation to the total Net Estate of:—												Total
	N.E. 10	10·1 -20	20·1 -30	30·1 -40	40·1 -50	50·1 -60	60·1 -70	70·1 -80	80·1 -90	90·1 -100	Over 100		
Up to 1	—	—	—	—	—	—	—	—	—	1	7	8	
1·1- 2	—	—	—	—	—	—	—	—	1	1	—	2	
2·1- 3	—	—	—	—	—	—	—	1	1	—	—	2	
3·1- 4	—	—	—	—	—	—	—	3	1	—	—	4	
4·1- 5	—	—	—	—	—	—	—	3	—	—	—	3	
5·1- 6	—	—	—	—	—	—	4	1	—	—	—	5	
6·1- 7	—	—	—	—	—	2	3	—	—	—	—	5	
7·1- 8	—	—	—	—	1	2	3	—	—	—	—	6	
8·1- 9	—	—	—	3	1	3	—	—	—	—	—	7	
9·1-10	—	—	—	5	3	—	—	—	—	—	—	8	
Over 10	56	42	28	24	9	—	—	—	—	—	—	159	
TOTAL ...	56	42	28	32	14	7	10	8	3	2	7	209	

TABLE 18.—*Relation of Net Assets (excluding Trade Assets) to Estate Duty, all debts being charged against Assets other than Trade Assets.*

Range £25,000 to £50,000.

Up to 1	—	—	—	—	—	—	—	—	—	1	1	2
1·1- 2	—	—	—	—	—	—	—	—	7	—	—	7
2·1- 3	—	—	—	—	—	—	—	1	2	—	—	3
3·1- 4	—	—	—	—	—	—	4	2	—	—	—	6
4·1- 5	—	—	—	—	—	4	2	—	—	—	—	6
5·1- 6	—	—	—	—	4	2	—	—	—	—	—	6
6·1- 7	—	—	—	3	1	—	—	—	—	—	—	4
7·1- 8	—	—	2	—	—	—	—	—	—	—	—	2
8·1- 9	—	4	4	2	—	—	—	—	—	—	—	10
9·1-10	8	3	7	—	—	—	—	—	—	—	—	18
Over 10	19	6	—	—	—	—	—	—	—	—	—	25
TOTAL ...	27	13	13	5	5	6	6	3	9	1	1	89

TABLE 19.—*Relation of Net Assets (excluding Trade Assets) to Estate Duty, all debts being charged against Assets other than Trade Assets.*

Range £50,000 to £100,000.

Up to 1	—	—	—	—	—	—	—	—	—	—	1	1
1·1- 2	—	—	—	—	—	—	—	—	—	—	—	—
2·1- 3	—	—	—	—	—	—	2	2	—	—	—	4
3·1- 4	—	—	—	—	1	4	2	—	—	—	—	7
4·1- 5	—	—	—	—	3	—	—	—	—	—	—	3
5·1- 6	—	—	1	4	1	—	—	—	—	—	—	6
6·1- 7	—	3	1	—	—	—	—	—	—	—	—	4
7·1- 8	4	2	—	—	—	—	—	—	—	—	—	6
8·1- 9	5	—	—	—	—	—	—	—	—	—	—	5
9·1-10	—	—	—	—	1	—	—	—	—	—	—	1
Over 10	—	—	—	—	—	—	—	—	—	—	—	—
TOTAL ...	9	5	2	4	6	4	4	2	—	—	1	37

TABLE 20.—*Relation of Net Assets (excluding Trade Assets) to Estate Duty, all debts being charged against Assets other than Trade Assets.*

Range £100,000 to £250,000.

Number of cases in which Net Estate minus Gross Trade Assets is a multiple of E.D. payable of :—	Number of cases in which the Trade Assets (Gross) bear a percentage relation to the total Net Estate of :—											Total.
	N.E. 10	10·1 -20	20·1 -30	30·1 -40	40·1 -50	50·1 -60	60·1 -70	70·1 -80	80·1 -90	90·1 -100	Over 100	
Up to 1	—	—	—	—	—	—	—	—	—	—	1	1
1·1-2	—	—	—	—	—	—	1	1	—	—	—	2
2·1-3	—	—	—	—	1	—	1	—	—	—	—	2
3·1-4	—	—	—	—	3	—	—	—	—	—	—	3
4·1-5	—	—	1	3	—	—	—	—	—	—	—	4
5·1-6	3	2	—	—	—	—	—	—	—	—	—	5
6·1-7	6	—	—	—	—	—	—	—	—	—	—	6
7·1-8	2	—	—	—	—	—	2	—	—	—	—	2
8·1-9	—	—	—	—	—	—	—	—	—	—	—	—
9·1-10	—	—	—	—	—	—	—	—	—	—	—	—
Over 10	—	—	—	—	—	—	—	—	—	—	—	—
<b>TOTAL ...</b>	<b>11</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>4</b>	<b>—</b>	<b>2</b>	<b>1</b>	<b>—</b>	<b>—</b>	<b>1</b>	<b>25</b>

TABLE 21.—*Relation of Net Assets (excluding Trade Assets) to Estate Duty, all debts being charged against Assets other than Trade Assets.*

Range £250,000 to £500,000.

Number of cases in which Net Estate minus Gross Trade Assets is a multiple of E.D. payable of :—	Number of cases in which the Trade Assets (Gross) bear a percentage relation to the total Net Estate of :—							Total.
	N.E. 10	10·1 -20	20·1 -30	30·1 -40	40·1 -50	50·1 -60		
Up to 1	—	—	—	—	—	—	—	
1·1-2	—	—	—	—	—	—	—	
2·1-3	—	—	—	—	—	1	1	
3·1-4	2	1	1	—	—	—	4	
4·1-5	2	—	—	—	—	—	2	
5·1-6	—	—	—	—	—	—	—	
6·1-7	—	—	—	—	—	—	—	
7·1-8	—	—	—	—	—	—	—	
8·1-9	—	—	—	—	—	—	—	
9·1-10	—	—	—	—	—	—	—	
Over 10	—	—	—	—	—	—	—	
<b>TOTAL ...</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>—</b>	<b>1</b>	<b>—</b>	<b>7</b>	

TABLE 22.—*Relation of Net Assets (excluding Trade Assets) to Estate Duty, all debts being charged against Assets other than Trade Assets.*

*Range £500,000 and over.*

In none of the six estates in this range do the Trade Assets (Gross) bear a percentage relation to the total Net Estate exceeding 10.

The net estate, minus gross trade assets, is a multiple of the Estate Duty payable as follows:—

Up to 2	...	...	...	...	...	...	...	...	...	...	—
2·1 „ 3	...	...	...	...	...	...	...	...	...	...	3
3·1 „ 4	...	...	...	...	...	...	...	...	...	...	3
Total	...	...	...	...	...	...	...	...	...	...	6

TABLE 23.—*Relation of Net Assets (excluding Trade Assets) to Estate Duty, all debts being charged against Assets other than Trade Assets.*

*All Ranges.*

Number of cases in which Net Estate minus Gross Trade Assets is a multiple of E.D. payable of:—	Number of cases in which the Trade Assets (Gross) bear a percentage relation to the total Net Estate of:—											Total
	N.E. 10.	10·1 -20	20·1 -30	30·1 -40	40·1 -50	50·1 -60	60·1 -70	70·1 -80	80·1 -90	90·1 -100	Over 100	
Up to 1	—	—	—	—	—	—	—	—	—	2	10	12
1·1- 2	—	—	—	—	—	—	1	1	8	1	—	11
2·1- 3	3	—	—	—	2	—	3	4	3	—	—	15
3·1- 4	5	1	1	—	4	4	6	5	1	—	—	27
4·1- 5	2	—	1	3	3	4	2	3	—	—	—	18
5·1- 6	3	2	1	4	5	2	4	1	—	—	—	22
6·1- 7	6	3	1	3	1	2	3	—	—	—	—	19
7·1- 8	6	2	2	—	1	2	3	—	—	—	—	16
8·1- 9	5	4	4	5	1	3	—	—	—	—	—	22
9·1-10	8	3	7	5	4	—	—	—	—	—	—	27
Over 10	75	48	28	24	9	—	—	—	—	—	—	184
TOTAL ...	113	63	45	44	30	17	22	14	12	3	10	373

## APPENDIX XXI.

### PROSPECTIVE INCREASE OF POPULATION IN GREAT BRITAIN, 1926-41.

*Note by the Committee.*

1. Giving evidence before us on the 1st October, 1924, Professor Bowley provided two alternative estimates relating to prospective changes, up to 1931 and 1941, in the population of Great Britain over the age of 15. The first estimate was on the basis of death-rates as in 1910-12, no allowance being made for emigration. (For the purposes of the age-group 15-20 in 1941, the annual average of births 1921-23 was assumed to equal the average 1921-26.) (*E. in C.*, 4). The second estimate was on a basis averaging this hypothesis with the hypothesis of death-rates and emigration as in 1901-11 (*E. in C.*, 5).

2. We did not regard the hypothesis at the basis of either estimate as conclusive. As regard death-rates, the average mortality for 1901-11 was very much higher, and that for 1910-12 substantially higher, than it has been in recent years. As regards emigration, it appeared that for the years 1921-24 the average was higher, not lower, than in 1901-11. We therefore took steps to prepare an independent estimate on the following basis:—

(1) *Death-rates* as in 1923: these are the lowest recorded, but in the Registrar-General's opinion the rates can hardly fail to go still lower:

(2) *Emigration* at a figure paying regard to the record of recent years, and also taking some account of the history of the whole period from 1871 to 1921.

3. We do not propose to discuss the estimates given before us by Professor Bowley, as he himself has since published figures—in the *Manchester Guardian* of the 9th November, 1925—based on the average death-rate of 1921-23. These later figures, so far as they cover the same ground, do not differ widely from our own results, but we have taken five-yearly periods instead of 10-yearly, between 1921 and 1941, and we think these are much more illuminating, since the rate of increase in the population is diminishing very notably; thus the average increase for the whole decennium 1921-31 is considerably higher than that for 1926-31, and the average for 1931-41 than that for 1936-41. Throughout we are indebted to the Registrar-General for the calculations leading to the figures which we show.

4. From the passenger figures and such other records as are available, it is estimated that there was an average net emigration from Great Britain alone for 1921-25 of 93,000 persons per annum; in view, however, of the data being incomplete, the estimate must be regarded as liable to a very considerable margin of error.

The composition of the 93,000 is as follows:—

	<i>Males.</i>	<i>Females.</i>
Under 15 ... ..	10,000	7,000
Over 15 ... ..	43,000	33,000

5. If the hypotheses be taken (i) that the present death-rates will continue unaltered till 1941 (*cf. para. 3*) and (ii) that emigration will throughout be at the rate of 93,000 per annum, they lead to the following figures of average annual increase for successive quinquennia in the population of Great Britain of ages 15-65:—

(1) *Gross average annual increase (before allowance for emigration).*

	<i>Persons.</i>	<i>Males.</i>	<i>Females.</i>
Between 1921 and 1926 ... ..	352,000	180,000	172,000
"  1926  "  1931 ... ..	260,000	134,000	126,000
"  1931  "  1936 ... ..	133,000	74,000	59,000
"  1936  "  1941 ... ..	93,000	61,000	37,000

(2) *Net average annual increase (after allowance for emigration at 93,000 per annum).*

	<i>Persons.</i>	<i>Males.</i>	<i>Females.</i>
Between 1926 and 1931 ... ..	184,000	91,000	93,000
"  1931  "  1936 ... ..	49,000	26,000	23,000
"  1936  "  1941 ... ..	5,000	8,000	-3,000

If it be assumed\* that the future proportions of occupied to total population will correspond with those of the 1911 or 1921 Censuses—about 96 per cent. of males and 37 per cent. of females, the following figures are obtained for occupied population:—

(3) *Net average annual increase of occupied population (after allowance for total emigration of 93,000 per annum).*

	Persons.	Males.	Females.
Between 1926 and 1931 ... ..	121,000	87,000	34,000
„ 1931 „ 1936 ... ..	34,000	25,000	9,000
„ 1936 „ 1941 ... ..	7,000	8,000	-1,000

6. The years 1921-25 are of course a short period on which to base any emigration forecast, the more so as the figures for the last five intercensal periods show a striking lack of continuity:—

1871-1881 ... ..	25,700	per annum.
1881-1891 ... ..	81,800	„ „
1891-1901 ... ..	12,200	„ „
1901-1911 ... ..	75,600	„ „
1911-1921 ... ..	85,900	„ „

The average emigration over the whole 50 years 1871-1921 was approximately 56,000 per annum. If this rate were substituted for the recent rate of 93,000 per annum, the figures of net increase of population would become:—

(a) *Net average annual increase (after allowance for total emigration of 56,000 per annum).*

	Persons.	Males.	Females.
Between 1926 and 1931 ... ..	214,000	108,000	106,000
„ 1931 „ 1936 ... ..	82,000	45,000	37,000
„ 1936 „ 1941 ... ..	42,000	29,000	13,000

(b) *Net average annual increase of occupied population (after allowance for emigration at 56,000 per annum).*

	Persons.	Males.	Females.
Between 1926 and 1931 ... ..	144,000	104,000	40,000
„ 1931 „ 1936 ... ..	58,000	43,000	15,000
„ 1936 „ 1941 ... ..	34,000	28,000	6,000

7. In speculating as to the near future, we cannot ignore the question how emigration is affected by trade prosperity or depression. Professor Bowley said that he presumed “that emigration is rapid now owing to the difficulty of getting work and of getting houses, and is definitely associated with the growth of population.” (Q. 3830.) Mr. A. W. Flux takes a different view. “I should like to emphasise,” he writes, “the general conclusion derivable from the study of passenger records over a

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\*The various factors appear to be too little known to justify refinement on this assumption. Of the 63 per cent. women assumed to be unemployed, the bulk would be married women with household duties who would not be available in any but extreme circumstances. There are, of course, many minor influences which may tend at any time to raise or lower the proportion of unemployed, e.g.—

(1) Earlier retirement owing to availability of pensions may tend to reduce man power and so lead to the absorption of a higher percentage at the earlier ages.

(2) On the other hand if, as seems reasonable, lower mortality at later ages may mean increased vitality at those ages, men may not be so willing to throw up employment for the sake of a pension much smaller than their pay.

(3) Again the extension of educational facilities leading to the continuation of studies and technical training into the 15-65 age period must mean some reduction in the proportion of full-time workers in that period.

Over all personal factors such as these there is the much more important one of trade itself and the availability of employment for such as can take advantage of it.

long series of years, that emigration, broadly speaking, has been active at periods of active and prosperous trade, and has fallen away in periods of depressed trade."

"The agreement in time is not of a high order of precision, but it is far nearer the truth to say that prosperous trade stimulates emigration than to say the opposite. The fact appears to be that it is the attraction presented by the prospects of life in the new country rather than disgust with conditions in the old that is reflected in the mass figures of emigration. As economic prosperity is in its larger manifestations a world phenomenon, it is when we are prosperous here that there is also prosperity in the United States, Canada, etc., and those countries present their maximum attraction, and when business is dull here the prospect of quickly securing remunerative employment in overseas countries is not very bright."

8. This latter view is corroborated by the Report of the Special Committee appointed by the Imperial Economic Conference on the 9th October, 1923, to consider problems connected with overseas settlement within the Empire (Cmd. 2009, page 137), and also by the Report of the Oversea Settlement Committee for the year 1924 (Cmd. 2383). The Oversea Settlement Committee point out that, 40 years ago, Sir Robert Giffen regarded the statistics then available as indicating a connection between emigration and trade prosperity in the country of destination: time has borne out his principles in a remarkable degree. Passing to present conditions, they state that—

"While, as Sir Robert Giffen says, prosperity or the reverse in the country of destination is a far more important factor in determining the volume of migration than conditions at home, still the psychological effect upon workers in this country of the present depression in trade is probably, owing to its prolongation and severity, more acute than during similar periods in the past. Unemployment has not only left those out of work without resources, but has impaired their confidence and made many of them disinclined to try new ventures, even with the considerable measure of assistance which is now offered by the British and Dominion Governments. The Committee would not wish to suggest that this attitude is universal, but there can be little room for doubt that it is widespread. Due weight must also be given to the fact that the Unemployment Insurance Benefit which is available in this country is not available in the Dominions."

"It seems, therefore, safe to assume that the outflow of migration is unlikely to approach its former levels\* until further progress is made towards the restoration of trade. It is not for the Committee to forecast when this will occur, but they note with satisfaction that confidence seems to be reviving. Australia and New Zealand are benefiting from the strength of the world's demand for wool, and it would seem reasonable to anticipate that agricultural interests in the Dominions will derive advantage from the recent rise in prices of wheat and other produce."

9. It is difficult to resist the conclusion that better trade will be an influence in favour of increased emigration. In considering recent years, it has to be borne in mind that, apart from the trade position, there have been various special difficulties in the way of emigration, and on the other hand that State aid has been given since the Empire Settlement Act, 1922, while the fact that the War took large numbers out of the United Kingdom for the first time may have been a certain stimulus. An adverse condition of importance is the United States policy of limiting immigration. There are many factors the development of which cannot be foreseen. On the whole there seems to be a fair chance that the

\* This presumably refers to the high level of 1910 to 1912.

estimated rate of emigration for recent years of bad trade, viz. 93,000, will not prove to exceed that for the next fifteen years. We think it prudent, however, especially in view of the margin of error to which this figure of 93,000 is itself liable:—

(a) for 1926-31, to round off the net increase figures in paragraph 5 in an upward direction;

(b) for 1931-41, to take the average of the net increase figures in paragraphs 5 and 6.

10. The following forecasts, then, are suggested, although we only put them forward as speculative.

*Net average annual increase in total population of Great Britain between ages 15 and 65, after allowance for emigration.*

		<i>Persons.</i>	<i>Males.</i>	<i>Females.</i>
Between 1926 and 1931	... ..	190,000	94,000	96,000
„ 1931 „ 1936	... ..	65,000	35,000	30,000
„ 1936 „ 1941	... ..	24,000	19,000	5,000

*Net average annual increase in occupied population of Great Britain between ages of 15 and 65, after allowance for emigration.*

		<i>Persons.</i>	<i>Males.</i>	<i>Females.</i>
Between 1926 and 1931	... ..	125,000	90,000	35,000
„ 1931 „ 1936	... ..	46,000	34,000	12,000
„ 1936 „ 1941	... ..	20,000	18,000	2,000

## APPENDIX XXII.

### THE PRACTICABILITY OF A CAPITAL LEVY.

*Note by the Board of Inland Revenue.*

1. The following note deals only with aspects of the question of the practicability of a Capital Levy. It should not be taken as reflecting any opinion in regard to the expediency of such an impost. As desired by the Committee,\* the note takes its starting point in the official memoranda presented to the Select Committee on the War Levy and published with the proceedings of that Committee (H.C. 102 of 1920).

2. These official memoranda were directed to the practicability of imposing a War Levy in the 1920 Session of Parliament. That tax would have been applied in principle to war-time wealth, and its nature and the occasion of it would have coincided with the general sentiment of the country at a time when the war was only just over. The present note, on the other hand, is written without any definite assumptions having been postulated as to the date at which a Capital Levy might be imposed, the conditions which might rule at that date or the feelings—of assent or otherwise—which it might attract among the persons chargeable. For this reason, it is necessary at the outset to state in general terms the extremely important reactions of the manner of its reception on the practicability of a scheme of taxation.

3. In the first place, successful administration of any large tax requires that the great majority of persons called upon to pay it should be able to feel that it is a fiscal, as distinguished from a political, measure and

\* See letter annexed.



therefore that their assent can be reasonably expected and given. If that assent is complete or nearly complete, and taxpayers readily seek out the information—sometimes voluminous and difficult to ascertain—which is necessary to enable them to compute their liability, even a very complicated measure can be administered by a competent trained staff—not indeed with ease, for in any conditions the task is an onerous one—but with appreciable success and a relative absence of friction. The point may be illustrated by the success of the Excess Profits Duty and the failure of the Land Values Duties. “If, on the other hand,” to repeat words used by the Board in evidence before the War Levy Committee, “taxpayers as a whole resented the charge and were anxious to raise not merely all legitimate questions of substance, but also all the points of technical legal detail by which the execution of a complicated duty could be clogged and delayed, the successful administration of the duty would be gravely endangered.” This observation was not made out of caution. It is based on experience and is fundamental. In the consideration of any project so great as a Capital Levy, this circumstance must be borne constantly in mind.

4. In the second place, if a Capital Levy were to arouse among the taxpayers widespread anxiety as to its economic consequences, that anxiety—whether it would be well-founded or ill-founded is immaterial to the issue—could hardly fail to affect capital values in such a manner or to such an extent as to render the tax profoundly uncertain in its result, and profoundly difficult to collect owing to the distortion of its incidence and the resultant inequalities.

5. For the purposes of the remainder of this memorandum, the assumption is taken that the levy, if imposed, would receive a normal measure of assent from the taxpayers and would be assessed and collected under normal economic conditions. Whether in the event this assumption would prove to be a correct assumption cannot be predicated, and the statements which follow must be regarded as qualified throughout by what has been stated above.

6. The extent of the practical task of raising a Capital Levy would turn, in considerable degree, upon the exemption limit selected. The first memorandum on the War Levy contemplated that persons owning less than £5,000 would be exempt from the levy (*para. 57, page 229*). With the same exemption limit, the number of charges for a Capital Levy would be very materially larger; with a substantially lower limit, it would multiply very greatly. The number of individuals (exclusive of their dependants) who actually own £5,000 of capital and upwards is estimated to be approximately half a million; those owning between £2,500 and £5,000 are estimated to number about 400,000.

7. The number of charges has an important bearing on the practicability of the levy, although the difficulty of administration does not necessarily increase in the same ratio as the number of charges. The Board pointed out in their first memorandum on the War Levy (*para. 106, page 293*) that they had assumed throughout that it would be found possible to supplement their staff with suitably equipped and experienced persons from outside the Service; and this assumption has of course also to be made in the present connection.

8. From the technical point of view—subject always to the considerations in paragraphs 2 and 3—the assessment of a liability to Capital Levy in a given case would normally be less difficult than a corresponding assessment to War Levy. The Capital Levy involves the valuation of an individual's assets at a given moment in the immediate past, a task essentially similar to that regularly undertaken for purposes of Estate Duty as deaths of persons of substance takes place. Such an impost as the War Levy would involve, on the other hand, the ascertainment of the excess of such a valuation over the valuation of the individual's assets

at a date long anterior. The levying of a tax on a margin of this character—a margin which might often be very narrow—intrinsically requires a greater degree of precision in valuation than the levying of a tax on the whole value of a block of capital. For purposes of a Capital Levy also some of the special adjustments and reliefs which were contemplated for the War Levy, and which added greatly to its intricacy in some spheres, would become unnecessary. If, however, the difficulties mentioned in paragraphs 2 and 3 came into play, they would altogether outweigh the considerations mentioned in this paragraph.

9. The Official Memorandum on the War Levy contemplated (*paras. 88 et seq., page 231*), that a War Levy would be paid in part in cash in a lump sum, in part by surrender of Government securities and other private securities, in part by cash in instalments over an extended period. In the case of the Capital Levy, an important factor would be the extent to which payment by surrender of Government securities was encouraged by the allowance of a premium or otherwise, the range of other securities which might be allowed to be surrendered in payment and the encouragement or discouragement offered to payment in cash. These questions of method of payment involve other serious questions as to the effect of the levy on currency, credit, trade, etc., which lie outside the scope of this note, and unless those questions were first settled the difficulty of the practical task could only be gauged in the very roughest way. Another important factor would be the rate of duty, and the scale marked II would present far less difficulty from this point of view than the other scales.

10. One of the official memoranda (on Limited Interests arising under Settlements, etc., *page 244 et seq*) dealt with the means of charging the War Levy in respect of settled property. The methods there suggested pre-supposed that the interests of life tenants and remaindermen in settled property would be separately valued and dealt with as an integral part of the total property of the persons interested, and a variety of complicated provisions and adjustments were suggested for overcoming the main difficulties which the subject presented. The matter, though very complicated, was not of the first practical importance in connection with the War Levy, as property comprised in settlements was, on the whole, property which had not greatly increased in money value during the War.

11. The same problem, viewed in relation to the Capital Levy, takes on a different aspect. The subject is of much greater practical importance, as probably about one-sixth of the property subject to the levy would be settled property. The scheme of treatment suggested in the memorandum would not necessarily be appropriate for the purpose of a Capital Levy.

12. If it were decided for purposes of such a levy to deal separately with the interests of life tenants and remaindermen, treating them as part of the property of the individuals concerned, the charging of the levy would present difficulties of a very baffling character, and the best means to circumvent them would need much consideration. An alternative course would be for the levy to be imposed, not on the separate interests of individuals and payable out of their estates, but on the whole value of settled property and payable out of the settled fund, the rate of duty both for the settled fund and for the free wealth of the life tenant being found by aggregating the value of the settled property with the life tenant's other property. If this course were taken, the problem would be assimilated roughly to the same level as that arising in the case of free assets. The question which of these various possible methods of approaching the matter is the most appropriate raises questions of principle which are outside the scope of this note.

13. At the outset of this note it was indicated how great an influence upon the practicability of a Capital Levy might be exercised by the attitude of the taxpayers themselves. But even assuming the most favourable conditions, it must not be imagined that the raising of a levy would be other than a task of the first magnitude. In the first official memorandum on the War Levy it was written that the effort of raising the duty would transcend in difficulty any previous effort of taxation in this country. That observation applies certainly no less to the present case.

COPY OF LETTER FROM THE CHAIRMAN OF THE COMMITTEE TO  
SIR R. V. N. HOPKINS, K.C.B.

Treasury Chambers, Whitehall.  
20th July, 1925.

Dear SIR RICHARD,

*Committee on National Debt and Taxation.*

While hearing witnesses on the question of a Capital Levy, my Committee have had before them the evidence relating to a "Duty on War-time Wealth" which was supplied by the Board of Inland Revenue to the Select Committee on Increase of Wealth (War) in 1919 and 1920. This evidence has, moreover, been referred to several times by witnesses.

The Committee apprehend that to some extent the practical difficulties of valuation and collection involved in a Capital Levy are similar, in kind if not in degree, to those which would have attended the Duty on War-time Wealth, had it been brought into operation: they are sensible, therefore, of the value to them of the Board's evidence for the purpose of their present enquiry.

At the same time they are aware that as between the difficulties of a Capital Levy under present conditions and a Duty on War-time Wealth under the conditions existing at the time when it was considered, there can be no exact or complete parallel. In these circumstances the Committee would much appreciate the assistance of the Board, if they would be prepared to give evidence as to the practical difficulties of a Capital Levy, particularly as regards valuation and collection, showing how far and with what modifications their conclusions in regard to the War-time Wealth proposal apply to a Capital Levy. They would be glad if the Board would consider this in relation to the three scales annexed and with particular reference to the following questions:—

(1) *As regards valuation.*

(a) How far would the evidence given to the War Wealth Committee require modification owing to the lapse of time, and the change of conditions since that evidence?

(b) How far are the difficulties of valuation which were discussed in connection with the War Wealth proposal a measure of the difficulties of valuation for a Capital Levy?

(2) *As regards collection.*

How far would the Board's views as to practicability be affected

(a) by the numbers of those who would be liable to a Capital Levy, as compared with the numbers who would have been liable to the War Wealth Duty;

(b) by the comparative amount to be collected; and

(c) by the comparative weight of the burden upon the individual under the various scales.

The Committee would also very much like to have any help which the Department can give in regard (a) to the probable yield of a levy, and (b) to the net annual saving, under each of the three scales. By "net annual saving" is meant the excess of the saving in interest expenditure over the average annual loss in the long run in the yield of existing taxes at existing rates which would automatically result. The Committee

would be glad to know whether, in the time available, it would be possible for the Board to provide an approximate estimate, within 5 per cent. to 10 per cent. of the yield and net annual saving under each of the three scales; or, if that should not be possible, whether the Department could give them such assistance as may be within their power.

Yours sincerely,

(Sgd.) COLWYN.

SIR R. V. N. HOPKINS, K.C.B.,  
Inland Revenue.

Annexe.

POSSIBLE SCALES FOR A CAPITAL LEVY.

						Scale I.	Scale II.	Scale III.	
						Levy per cent.	Levy per cent.	Levy per cent.	
First	£5,000	...	£0	—	£5,000	...	0	0	0
Next	£1,000	...	£5,000	—	£6,000	...	5	1	5
"	£2,000	...	£6,000	—	£8,000	...	10	2	5
"	£2,000	...	£8,000	—	£10,000	...	15	3	5
"	£5,000	...	£10,000	—	£15,000	...	20	4	10
"	£5,000	...	£15,000	—	£20,000	...	25	5	15
"	£10,000	...	£20,000	—	£30,000	...	30	7	20
"	£20,000	...	£30,000	—	£50,000	...	35	10	25
"	£50,000	...	£50,000	—	£100,000	...	40	15	30
"	£100,000	...	£100,000	—	£200,000	...	45	20	40
"	£300,000	...	£200,000	—	£500,000	...	50	25	50
"	£500,000	...	£500,000	—	£1,000,000	...	55	30	60
Remainder	...	...	Above	£1,000,000	...	60	35	70	

These scales would work out as follows:—						Per cent. of his total fortune.	Per cent. of his total fortune.	Per cent. of his total fortune.
A man worth not exceeding £5,000 would pay nothing.						0·8	·17	·83
"	£6,000	would pay	...	...	...	3·2	·62	1·87
"	£8,000	"	"	"	...	5·5	1·1	2·0
"	£10,000	"	"	"	...	10·3	2·07	4·67
"	£15,000	"	"	"	...	14·0	2·8	7·25
"	£20,000	"	"	"	...	19·3	4·2	11·5
"	£30,000	"	"	"	...	25·6	6·52	16·9
"	£50,000	"	"	"	...	32·8	10·76	23·45
"	£100,000	"	"	"	...	38·9	15·38	31·72
"	£200,000	"	"	"	...	45·6	21·15	42·69
"	£500,000	"	"	"	...	50·3	25·58	51·34
"	£1,000,000	"	"	"	...	55·1	30·29	60·67
"	£2,000,000	"	"	"	...	56·7	31·86	63·78
"	£3,000,000	"	"	"	...	59·0	34·06	68·13

*Notes.*—Scale I is that proposed in "Labour and the War Debt. A Statement of Policy for the Redemption of War Debt by a Levy on Accumulated Wealth."

## APPENDIX XXIII.

## CAPITAL LEVY.—YIELD OF CERTAIN SCALES OF LEVY AND THE CONSEQUENT EFFECT ON THE FUTURE YIELD OF INCOME TAX, SUPER-TAX AND DEATH DUTIES.

*Note by the Board of Inland Revenue.*

## I. YIELD OF THE LEVY.

1. The Committee submitted three scales of levy on capital to be charged on the value of the property (movable and immovable) owned by individuals living at the present time. The levy was not to apply to Companies, Corporations, etc.

The suggested scales of levy were as follows:—

"Slice" of Estate.	Scale I. Rate per cent. on slice.	Scale II. Rate per cent. on slice.	Scale III. Rate per cent. on slice.
First £5,000 ... ..	Nil	Nil.	Nil.
Next £1,000 (up to £6,000)	5	1	5
" £2,000 ( " " £8,000)	10	2	5
" £2,000 ( " " £10,000)	15	3	5
" £5,000 ( " " £15,000)	20	4	10
" £5,000 ( " " £20,000)	25	5	15
" £10,000 ( " " £30,000)	30	7	20
" £20,000 ( " " £50,000)	35	10	25
" £50,000 ( " " £100,000)	40	15	30
" £100,000 ( " " £200,000)	45	20	40
" £300,000 ( " " £500,000)	50	25	50
" £500,000 ( " " £1,000,000)	55	30	60
Remainder... ..	60	35	70

2. The information in the Board's possession relating to the capital owned by individuals does not extend to those living but is confined to the fraction of the population dying annually. In the cases of deceased persons owning more than £100 of property at death, this Department receives full details of all the property in the deceased's ownership and of his limited interests, if any, under will or settlement. These particulars are contained in the affidavits and accounts which are rendered to us for the purpose of the death duties, and are classified in various tables, etc., the most important of which are published annually in our Reports. This information enables an estimate of the capital value of property in the hands of living individuals to be made by treating the property declared annually for deceased persons as a sample of the property in the hands of the living. This estimate mainly rests upon the distribution of the capital values charged to Estate Duty according to the age of the deceased, as shown in Table 22 of our 67th Report. The capital value in each age-group is multiplied by the ratio between the estimated number of individuals living and the number dying in a year in that age-group—a ratio based on statistics furnished by the Registrar-General.

3. By this method the aggregate value of estates exceeding £5,000 in the hands of living individuals is estimated to be \$11,000,000,000. This

aggregate is estimated to be distributed among living owners according to age-group and according to range of wealth as follows:—

*Estimated Classification of Capital by reference to Value of Estate and Age of Owner.*

(Estates exceeding £5,000 only.)

£ millions.

Range of Estate.		Age-Groups.								Total.
		20-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and Over.	
£	£									
5,000	to 10,000	21	110	257	450	418	242	96	17	1,611
10,000	" 25,000	22	95	440	614	690	414	174	32	2,481
25,000	" 50,000	60	83	240	396	461	363	132	26	1,761
50,000	" 100,000	—	48	256	349	377	285	117	25	1,457
100,000	" 250,000	—	—	315	355	384	302	154	28	1,538
250,000	" 500,000	72	26	2	237	209	165	59	9	779
500,000	" 1,000,000	5	1	105	162	154	113	38	15	593
Exceeding	£1,000,000	—	—	8	236	341	117	57	21	780
TOTAL ... ..		180	363	1,623	2,799	3,034	2,001	827	173	11,000

4. Before passing to estimates of the yield of the various scales of levy, it may be observed that the values in the above Table are based on the values ruling in estates declared in 1923-24. There have, however, been but slight fluctuations in the aggregate value of stocks, shares, etc. (the bulk of the property declared), since that year, the index of security values published by the *Bankers' Magazine* showing an average of 115·6 for 1923 and of 115·4 for 1924, and standing at 116·5 for December, 1925. It may therefore be assumed that the current aggregate value of all property in the hands of living individuals who would be subject to the levy would not differ materially from that given above.

5. Applying the suggested scales of levy to the total capital of £11,000,000,000 classified as in the Table in paragraph 3, the following figures represent the yield:—

	Aggregate Yield of	Scale	£
	I	...	2,500,000,000
	II	...	1,000,000,000
	III	...	2,000,000,000

These figures are practically arithmetical results arrived at without making any allowance for evasion, defaults, or other difficulties inherent in such taxation, and are therefore maximum figures which might not be attained in actual fact if a Capital Levy were imposed.

6. The following Table shows the amount of the levy and the effective rate per cent. chargeable in respect of certain selected capital values under each of the scales, viz.:—

*Levy Payable on Specimen Estates.*

Capital Value of Estate.	Scale I. Levy payable.		Scale II. Levy payable.		Scale III. Levy payable.	
	Amount.	Per cent. of Estate.	Amount.	Per cent. of Estate.	Amount.	Per cent. of Estate.
5,000	£ Nil	—	£ Nil	—	£ Nil	—
10,000	550	5·50	110	1·10	250	2·50
15,000	1,550	10·33	310	2·07	750	5·00
20,000	2,800	14·00	560	2·80	1,500	7·50
25,000	4,300	17·20	910	3·64	2,500	10·00
30,000	5,800	19·33	1,260	4·20	3,500	11·67
40,000	9,300	23·25	2,260	5·65	6,000	15·00
50,000	12,800	25·60	3,260	6·52	8,500	17·00
60,000	16,800	28·00	4,760	7·93	11,500	19·17
80,000	24,800	31·00	7,760	9·70	17,500	21·88
100,000	32,800	32·80	10,760	10·76	23,500	23·50
150,000	55,300	36·87	20,760	13·84	43,500	29·00
200,000	77,800	38·90	30,760	15·38	63,500	31·75
250,000	102,800	41·12	43,260	17·30	88,500	35·40
300,000	127,800	42·60	55,760	18·59	113,500	37·83
400,000	177,800	44·45	80,760	20·19	163,500	40·88
500,000	227,800	45·56	105,760	21·15	213,500	42·70
600,000	282,800	47·13	135,760	22·63	273,500	45·58
800,000	392,800	49·10	195,760	24·47	393,500	49·19
1,000,000	502,800	50·28	255,760	25·58	513,500	51·35
1,500,000	802,800	53·52	430,760	28·72	863,500	57·57
2,000,000	1,102,800	55·14	605,760	30·29	1,213,500	60·68
2,500,000	1,402,800	56·11	780,760	31·23	1,563,500	62·54
3,000,000	1,702,800	56·76	955,760	31·86	1,913,500	63·78
4,000,000	2,302,800	57·57	1,805,760	32·64	2,613,500	65·34
5,000,000	2,902,800	58·06	1,655,760	33·12	3,313,500	66·27

## II. EFFECT OF LEVY ON FIELD OF REVENUE.

7. In accordance with the Committee's request, the Board have caused an estimate to be made of the annual loss of revenue to be expected if a levy under the suggested scales were carried out. This estimate proceeds on the assumption that the full arithmetical measure of yield given above in paragraph 5 is attained, that the proceeds are used wholly for the redemption of Government securities and that the only change in conditions is the reduction of National Debt and interest, the subtraction of the amount of the levy from the wealth of those subjected to its charge and the payment to the redeemed security holders of the amount of their bond. The dynamic effects of a levy in its reactions on credit, prices, saving and the national economy—effects that might prove of outstanding importance and might seriously prejudice revenue estimates based on static conditions—are not taken into account, as the Board feel that the appraisal of revenue gains or losses resulting therefrom lies in the field of speculation rather than of estimate.

8. *Income Tax.*—For the purposes of the estimate of the loss of Income Tax, it has been assumed that the securities redeemed are on a 5 per cent. basis, and the loss of Income Tax has been measured by the tax on the saving of National Debt interest, with an allowance in respect of such interest as does not yield the full rate of tax by reason of the small

income of the security holder. The saving of interest and estimated loss of Income Tax are as follows:—

			<i>Saving of interest.</i>	<i>Loss of Income Tax.</i>
			£	£
Scale	I	...	125,000,000	23,000,000
"	II	...	50,000,000	9,000,000
"	III	...	100,000,000	18,000,000

9. *Super-tax.*—The loss of Super-tax has been estimated by reference to the results of a sample analysis of the distribution of investment income and earned income in the Super-tax paying classes without reference to variations in the rate of yield of investment income, a factor which it was not found possible to provide for. The loss is estimated as follows:—

						<i>Loss of Super-tax</i>
Scale	I	...	...	...	...	£24,000,000
Scale	II	...	...	...	...	£11,000,000
Scale	III	...	...	...	...	£22,000,000

10. *Death Duties*—The loss in Death Duties has been estimated by taking the capital in each range of value and in each age group, deducting the levy and determining the loss of revenue attributable to the fall in the capital value and in the rate of death duty payable. Looking solely at the deaths of individuals who were subjected to the levy, and assuming normal death rates in all ranges of wealth, the loss in death duties should be at its maximum in the first full year after the levy had taken place, and should show a diminution as years pass by. But, in addition to the loss of death duty revenue on the death of a holder of property who had been subjected to the levy, there will be, even in the years immediately following the levy, a further loss of revenue by reason of the deaths of individuals who inherited property that originally had paid a levy, and taking all this loss into consideration, it is estimated that the annual loss of death duty revenue will not be a declining amount, but will remain at a more or less constant level, represented by the loss in the first full year, for at least the first 10 and probably for as many as 20 years after the imposition of the levy. This annual loss is estimated as follows:—

						<i>Annual loss of death duties.</i>
Scale	I	...	...	...	...	£30,000,000
Scale	II	...	...	...	...	£13,000,000
Scale	III	...	...	...	...	£26,000,000

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## APPENDIX XXIV.

### THE CAPITAL LEVY AND OTHER COUNTRIES.

#### *Note by the Committee.*

1. Little or no help can be derived from studying the experience of other countries. In certain cases a levy has been put into force, but either the provisions of the levy itself, or the conditions of its application, have been such as to invalidate comparison with the proposal in this country. A capital tax, as well as a tax on increases of capital, was imposed in Czecho-Slovakia in 1919, but the circumstances relating to it were peculiar, as explained in Colonel Rigby's evidence on the 5th May, 1925. The imposition of the taxes was intimately bound up



with the punitive laws of 1918 and 1919 for the confiscation of land, aimed particularly at Austrian landlords. A levy was enacted in Italy in 1920, but the scheme allowed the payment to be spread in such a way that it resembles an annual tax on a capital basis and the distinctive features of a levy as understood in this country are absent. Again, the levy imposed in Greece in 1923 has rates which are comparatively very low.

2. In Germany and Austria, levies were enacted in 1919 and 1920 at high rates, but as events turned out, they were rendered ineffective by depreciation of the currency. The same thing happened in the case of Hungary.

3. A levy was proposed in Switzerland in 1922, being submitted to a vote of the people upon an "initiative." The proposal was defeated by a heavy majority. The depression which followed upon the threat of a levy, even though there was apparently little prospect of its being carried through, is very striking; it is, however, difficult to judge how far the results might have differed if the proposal had been viewed with some measure of good-will. In any event, the Swiss proposal differed in important respects from that which has been suggested here by the Labour Party: in particular, its direct object was to provide for social benefits, not for debt redemption, and its scope was to include companies as well as individuals. For these and other reasons it is not possible to press too far any comparison between the two countries.

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## APPENDIX XXV.

### THE PRICE LEVELS AT WHICH DEBT HAS BEEN CREATED.

#### *Notes by the Treasury.*

1. The Treasury understand that the Committee wish to have a statement "showing the price levels at which the various War Loans were raised."

Owing to the numerous conversions, the question so put is extremely difficult to answer in any form which is relevant to the actual dead-weight debt as now constituted. The following figures may, however, sufficiently indicate the general position.

2. The nominal dead-weight debt is compared in the following table with the Statist Index Number (which assumes 1913 = 100).

	Floating Debt.	Foreign Debt.	Pre-war Debt (Funded Debt and Terminable Annuities).	Debt other than Floating, Foreign and Pre-war.	Total Debt.	Index Number at 31st March
31st July, 1914 (approx.)	£ 15,000,000	£ —	£ 612,500,000 } * 17,500,000 }	£ —	£ 645,000,000	96·4 (31st July)
31st March, 1915	77,150,000	—	611,330,818 } * 17,395,500 }	399,090,758	1,104,967,076	122·0
1916	586,722,500	60,616,438	344,619,148	1,141,189,558	2,133,147,644	153·4
1917	671,644,500	400,311,220	341,832,277	2,597,657,911	4,011,445,908	198·8
1918	1,134,332,153	1,048,673,961	339,633,620	3,349,210,903	5,871,850,637	221·2
1919	1,338,944,000	1,364,852,657	338,273,972	4,392,878,800	7,434,949,429	217·3
1920	1,263,583,000	1,278,713,405	334,265,924	4,955,181,971	7,831,744,300	308·0
1921	1,243,181,000	1,161,563,174	332,535,060	4,848,130,456	7,585,409,690	208·5
1922	1,020,915,500	1,088,669,915	330,714,478	5,235,995,216	7,676,295,109	156·8
1923	809,907,500	1,155,653,503	327,901,806	5,478,933,699	7,772,396,508	156·1
1924	774,475,500	1,125,813,339	327,478,952	5,452,855,562	7,680,623,353	161·2
1925	742,195,000	1,121,599,874	326,812,004	5,455,764,910	7,646,371,788	164·8

\* Pre-war Exchequer Bonds.

3. Omitting (1) Floating Debt, (2) Foreign Debt, (3) Pre-war Debt as not affected by past British price levels, there remains a figure of £5,455,764,910, out of a total nominal Debt of £7,646,371,788 as on 31st March, 1925.

This figure of £5,455,764,910 may be estimated to correspond with a figure of actual cash raised of £4,741,551,000.

This cash figure may be roughly distributed as follows:—

	£
1914-15	342,843,000
1915-16	612,299,000
1916-17	1,198,714,000
1917-18	883,452,000
1918-19	1,068,026,000
1919-20	437,609,000
1920-21	-107,030,000
1921-22	250,220,000
1922-23	109,324,000
1923-24	- 31,677,000
1924-25	- 17,229,000

£4,741,551,000

4. It will be seen that out of a cash total of £4,741,551,000 about £1,266,000,000 (net) may be regarded as having been raised when the level of prices was less than the present figure of 164, and about £3,475,000,000 (net) when the level of prices was more than 164 (and consequently the value in commodities of pounds sterling was less).

27th October, 1925.

## APPENDIX XXVI.

## THE RIGNANO SCHEME OF DEATH DUTY TAXATION.

*Note by the Board of Inland Revenue.*

1. The Board of Inland Revenue understand that the Committee on National Debt and Taxation are desirous of having their views upon the question whether the Rignano scheme of Death Duty Taxation could, from the practical point of view, be effectively put into operation in this country.

2. In the following remarks the Board have limited themselves to the practical aspect of the question, and have not attempted to express any views upon the policy involved in a proposal of this character or the several effects which might be anticipated from its introduction.

3. The Rignano scheme of death duties contemplates differential taxation of different parts of the estate left by any deceased person. The total estate would be divided into three portions, the first representing property which the deceased had received at any time during his life by way of inheritance or gift from a donor who had acquired it in a like manner; the second, property acquired by inheritance or gift from a donor who had acquired it by his own labour or saving; and the third, property which the deceased had accumulated by his own labours or saving. Exemption from the duty would be granted, or alternatively, a light rate of tax would be applied, to the third category of property, i.e., that which the deceased had acquired by his own efforts; a much heavier rate of duty would be imposed on the second category, and total appropriation would take place of property acquired by inheritance or gift from a donor who had also acquired it by inheritance or gift. The inherited property thus falls into two parts, (i) inherited from gifts (by will, deed or otherwise) and (ii) inherited from savings. The saved property is determined by deducting from the value of the total estate the value of the inherited property. The scheme is apparently upon a value or money basis and not upon a real basis, i.e., it does not trace particular properties through their various changes of ownership, or give any weight to the question whether they have increased or decreased in value, or even ceased to exist, since being inherited.

4. Before they would be in a position to express an authoritative opinion as to whether a scheme of this character could be put into effective operation in this country, the Board would require to make a prolonged and detailed enquiry, for unsuspected difficulties, even of a serious character, may only become apparent after much investigation. But from an examination of the proposal within the limited time available, the Board think that it would not be impracticable to introduce in the country an effective scheme of death duty taxation on the lines of the Rignano proposal, subject to the following considerations:—

(i) Any such scheme would necessitate the keeping of very elaborate and costly records.

(ii) A tax of this character could not in its initial stages be fully and effectively administered so as to secure a correct assessment and equality as between one taxpayer and another. Probably it would only be after the tax had been in operation for a considerable period, say, two generations, and full and elaborate records had been accumulated that it could be anticipated that the administration of the tax would approximate to the standard prevailing in the case of the other main direct taxes.

(iii) Special provisions would be required as to the disclosure of gifts, and drastic penalties for non-disclosure would have to be imposed. Even with such provisions, the incentive to, and the

opportunities for, evasion would be considerable. Joint investments and joint banking accounts would also afford means of evasion which it would probably be very difficult to control.

(iv) The introduction of such a tax would involve not only the abolition of the existing death duties, but also, if the high rate of tax contemplated by Rignano was applied, a large modification of the existing system of settlements and trusts.

(v) Many questions would require to be dealt with specially, the solution of which would require careful detailed examination, e.g., the division of properties, the treatment of business assets, and of foreign property, etc.

5. In elaboration of the considerations which have been set out in the preceding paragraph, it may be observed that the whole scheme rests upon the practicability of determining the amount of property which has been acquired by inheritance or gift and of allocating that property between assets acquired by the donor (a) by inheritance or gift and (b) by savings or labour. The task of doing so must rest very largely upon the State, as the knowledge of executors on this subject will often be extremely limited, and it will always be to the interest of the executors (on behalf of the beneficiaries) to put the amount of inherited property, whether previously inherited or saved, at the lowest possible sum in order to avoid the heavier rate of tax. Leaving aside for the moment the difficulties as respects gifts, the ascertainment of the amount of property acquired by the deceased by way of inheritance during his life, and its origin, depends entirely upon an adequate system of records. At the present time the State acquires in respect of every death full particulars of the manner in which the estate is intended to be distributed, but it has little or no knowledge of the actual final distribution. If the Rignano plan is to be put into operation, it is essential that on the occasion of the death of every person a declaration should be made by the executors and trustees showing how the net capital value of the estate, after payment of Death Duty, has been distributed among the different beneficiaries either on the death or on the happening of subsequent contingencies. In this way, a series of records would ultimately be in existence showing the amounts which living persons had received and the proportion in which inherited property was attributable at the time of gift to (i) previous inheritance, and (ii) savings, respectively.

6. The successful initiation of the scheme must therefore depend largely upon—

(a) particulars furnished by the executors, and

(b) such information as can be obtained from a wide investigation of all past Estate Duty records.

The latter investigation would be laborious and costly. In the initial years therefore the Rignano plan cannot be expected to yield very large results, as there will be many opportunities for evasion on a large scale. As time passes on, this avenue of evasion should diminish in proportion to the accuracy and completeness of the records described and, broadly speaking, there seems to be no insuperable difficulty from a practical point of view in distinguishing between property inherited and property saved.

7. Different considerations, however, arise as respects gifts. Unless these can be traced and recorded, there would be a loophole of escape from a differential rate of duty upon donated property. A considerable stimulus would be given towards gifts during the lifetime of persons owning considerable wealth. The Rignano plan calls upon beneficiaries to whom gifts have been made to bring the gifts into the total estate. The difficulties of tracing them would be considerable. The incentive to conceal them would be very strong. It is difficult to formulate any plan to collect information as to gifts *inter vivos* which would not be difficult to work and objectionable in practice. Something might be

done by way of information collected from conveyances, by way of voluntary disposition, and also perhaps from regular examination of Income Tax returns, i.e., by comparing them with previous returns and calling for explanations wherever there were large increases in incomes from investment sources which could not be satisfactorily explained by normal savings out of income. These enquiries, however, might drive the trouble underground and lead to further falsification of Income Tax returns, with consequent reaction on the yield of Income Tax and Super-tax. Bearer shares, which are already a possible source of evasion as respects death duty, would have their importance for this purpose considerably enhanced, and it is possible that in course of time legislation might be necessary either to collect information as to ownership from banks, etc., cashing coupons, or to suppress them.

8. Life interests would under the Rignano plan involve much complicated work in tracing their initial sources. With the tripartite division of property left by any person it would not be possible for him to leave more than a single life interest as respects property which he had inherited from previously inherited sources, or more than two life interests in property inherited from savings. Power would apparently be necessary to lay the duty, as respects such life interests, on the trustees holding the capital funds. In reckoning duty on life interests, they would apparently have to be valued at the full capital value of the property producing the life income. The whole scheme would involve a revolution in the practice of settlements. It would be a question whether testators should be allowed to charge interests on different portions of their estate, e.g., on the doubly inherited portion, the inherited portion arising from savings, or on the saved portion, or whether interests in an estate should all be apportioned *pro rata* to the sources of origin of the property on which they were charged or out of which they issued.

9. In general, the Rignano scheme, although it appears simple in its conception, is bound, if applied in this country, to give rise to very difficult and complicated questions. It is, of course, drawn up with the idea of its application to Italy, where conditions are different from those in this country, and where the system of trusts and settlements is practically, if not wholly, non-existent. The Board cannot express an opinion whether such a scheme could be worked practically in Italy. They are, however, of the opinion that in this country it is perhaps doubtful whether it could be worked practically; but it could only be so worked on the understanding that very drastic provisions and penalties would be required, and with very definite reaction on the existing system of settlements and trusts.

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## APPENDIX XXVII.

### THE PRACTICAL ASPECTS OF AN INHERITANCE TAX.

#### *Note by the Board of Inland Revenue.*

1. The Board understand that the Committee on National Debt and Taxation would be glad of their views upon the practical administrative aspects of a proposal to replace the present scheme of death duties by an Inheritance Tax.

2. Under a scheme for an Inheritance Tax, such as the Board understand the Committee to have in mind, tax would be charged upon any benefit received (whether under a will, intestacy or settlement) by any

person consequent upon the death of another person, the rate of duty being graduated by reference to

- (a) the amount of the benefit received or, alternatively, to
- (b) the amount of the total wealth of the recipient at the time when the benefit accrued to him.

3. Upon the merits or economic aspects of such a proposal the Board express no opinion. But from the point of view of practical administration, the Board, so far as they have been able to examine the proposal within the time available, are of the opinion that such a tax, *at a rate graduated by reference to the amount of the benefit received*, could be effectively administered, provided that

- (a) Executors, administrators and trustees were made primarily liable for collection and payment of the tax to the Revenue, as in the case of the Estate Duty. This would involve considerable alteration of the existing law relating to the disposition and devolution of property in this country,
- (b) Statutory obligation was imposed upon executors, administrators and trustees to furnish full information necessary to enable the Board to assess and collect the tax,
- (c) Drastic provisions were introduced to check possible methods of evasion,
- (d) The tax was applied to gifts made within three years of death, as is the case in connection with the present Estate Duty.

Before, however, the Board could definitely state that the administration of such a tax could be put into effective operation in a manner comparable to that applying in the case of the present major direct taxes, close detailed examination of the scheme and the necessary legislation involved would be required.

4. *If the tax were to be imposed at a rate graduated by reference to the total wealth of each beneficiary*, different considerations would arise. Before the duty could be levied it would be necessary to ascertain not merely the amount passing to each beneficiary but the total wealth of each beneficiary. This would be a large problem, the degree of difficulty varying according as the graduation proceeded by a few large stages or by a multiplicity of small stages; in the former event the wealth of each beneficiary would in many cases have to be ascertained only in broad outline and not with meticulous accuracy.

If legislative provision were made under this scheme to require the executors or trustees to pay the proper amount of duty before dealing with the estate, great delay would be likely to be interposed and could not be controlled either by the executors or by the taxing authority. If no obligation were imposed on the executors to do more than furnish information to the taxing authority, the recovery of the duty would present many difficulties especially in cases of property passing to non-residents. Conceivably the obligation could be placed on executors to pay to the Exchequer and subsequently to deduct duty at the maximum rate leaving the beneficiary to claim refund on a declaration of the total amount of his wealth; or at an intermediate rate leaving the beneficiary to pay any balance or claim any refund on such a declaration. It is quite likely that methods could be found by which problems of this nature could be surmounted and the duty rendered reasonably workable, but an exhaustive enquiry would be necessary before a definite scheme could be evolved and a definite statement made as to its degree of practicality.

5. The present Estate Duty is collected very cheaply. Either of the schemes dealt with in this note would be very much more costly in working.

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## APPENDIX XXVIII.

QUESTIONNAIRE ISSUED BY THE COMMITTEE  
REGARDING INCOME TAX AND BUSINESS  
RESERVES.

## I.—RESERVES FOR EXTENSION OF BUSINESS.

*General Questions of Principle.*

(1) Do you agree that the British Income Tax is a tax on income, and that income, as defined by the Acts, excludes any profit arising from capital transactions, *e.g.*, sale of capital assets at a profit, or increasing capital resources arising from appreciation of assets, creation or building up of goodwill, etc.?

(2) Do you agree that reserves of all kinds may be formed out of two kinds of funds (a) funds arising out of capital transactions or variations of the nature just referred to, and (b) reserves arising out of profits falling within the scope of the Income Tax Acts?

(3) It is presumed you would, therefore, not claim any allowance in respect of reserves in the first category, if only on the simple ground that, this kind of profit not being income within the meaning of the Acts, any particular application of it would not thereby give a title for exempting from taxation income which does fall under the taxing Acts?

(4) It is necessary, therefore, to draw a clear distinction between reserves arising out of these two sources?

(5) The second main point to be put to you is whether you agree that the mechanism of accountancy leaves it open to any concern to deal with reserves out of profits in a positive or negative manner. By the positive method is meant the clear appearance on the liability side of the balance sheet of an entry for the reserve, whether shown separately or merged in any other item, *e.g.*, creditors. By the negative method is meant the writing down of an entry on the asset side, either clearly by showing the deduction of the reserved amount, or by showing the item affected at a lower value.

(6) Do you agree that the positive method and the negative method may be, and often are, combined in any single balance sheet?

(7) The third point concerns the difference between real and apparent values in a balance sheet. You will agree that for every item on a balance sheet there is, theoretically at least, a true or real value, *i.e.*, one that on the fullest consideration of the facts would be arrived at by a competent judge as truly representing the value of the asset concerned?

(8) Would you agree that sometimes there may be two or more values for different purposes or from different aspects, *e.g.*, an outside market value of an asset in isolation and a particular value in combination, and that there is no clear and absolute ruling as to which must prevail for a balance sheet in all circumstances?

(9) Would you agree that there is similarly no question but that modern balance sheets very often do not purport to be confined solely to figures representing those true values, that the figures presented are commercial figures, erring in the generality of cases on the prudent side?

(10) If this be so, would it not follow that, between the balance sheets at the beginning and end of a trading year, there may be:

(a) a relation between real values, in three ways, up, down or constant;

(b) a relation of book-keeping values, in the same three ways; and that each of these relations may be given effect to or expressed by the positive method, or the negative method, or a combination of the two?

(11) Is it not, therefore, clear that, in order to ascertain the facts, there must be a clear and accurate disentangling of the actual movements and changed relationships that have taken place?

(12) Inasmuch as the possible permutations of the factors mentioned are very numerous will not a considerable amount of detailed investigation be necessary in every case? Do you think such an investigation could always give a determinate result upon which taxation liability could rest?

(13) In view of the fact that appreciative movements of capital value are not chargeable to Income Tax, would you claim that depreciatory movements should be made a source of claim for diminution of the existing liability to Income Tax?

(14) If not, does not this involve that the suggestion of an allowance in respect of reserves for extensions should be strictly limited to those net extensions which are unbalanced by contractions, and that it should rigidly exclude any allowance in respect of sums reserved out of profits against downward movements of true capital values, even though other assets have been extended?

(15) Can this be guarded against in any manner except by insisting upon a detailed analysis of the actual book-keeping and real movements that have taken place in the balance sheet values?

(16) While the book-keeping movements can be ascertained with substantial safety, on the certificate of the auditors who have arranged the necessary entries, what safeguard would you suggest for the Revenue in ascertaining movements of real values, which may either appear or not appear on the face of the balance sheet?

(17) If the allowance is to be confined to reserves for true net extensions of the business, do you consider that reserves for maintenance of the capital assets must be excluded? (This is developed in concrete detail in Section II.)

(18) Would you agree that before a capital depreciation in an asset is deducted from a gross reserve in order to see how much of the reserve is free and allowable, appreciation in the assets must be determined and set off against the depreciation?

(19) Is the Revenue to rely solely on the certificate of the auditor as to the movements of true values, or is that certificate to be supplemented by certificates of the management as to such values, or is a further safeguard to be sought in certificates of independent valuers? If the latter, would you consider that the Revenue should have the right to verify such valuations by means of enquiries conducted by its own Valuation Department?

(20) Assuming that all these difficulties could be satisfactorily disposed of, is the claim for reserves in respect of extensions confined to extensions actually to be made of each separate business concern dealt with?

(21) For instance, is a reserve intended to be invested in acquiring a controlling interest in an allied concern an extension of the business of the acquiring concern?

(22) If so, at what kind of point is this extension by investment to become too remote for the allowance in question?

(23) For instance, if the reserve is invested in Government securities, pending acquisition of shares in an allied concern, is that a reserve for extension of the business?

(24) Would it be necessary, as a measure of practicability, to confine attention to extensions of each separate business claiming the allowance?

(25) If so, would it not also be necessary to withhold the allowance until, in fact, the extension is actually made, by investment in appliances of production, *e.g.*, stock, plant and machinery, land, buildings, patents, *etc.*?

(26) Would not that course be preferable, for the sake of simplicity, in order to avoid granting an allowance when a reserve is made with an intention, and its subsequent withdrawal when that intention is negated by the necessity of employing the reserved moneys for the maintenance of the capital assets already existing at the date the reserve was made?



(27) Is the underlying basis of your case for an allowance for extensions, the encouragement of investment in industrial enterprise?

(28) Is there any sound basic reason for restricting this encouragement to companies carrying on business? Would you extend it to individuals and firms in such trades?

(29) Would you contemplate the grant of the allowance to all enterprise, *e.g.*, concerns carrying on amusement undertakings, theatres, cinemas, and also to concerns carrying on luxury trades, *e.g.*, hotels, inns, etc.? Would you grant it to property-holding companies, in respect of extensions of their ownerships of property? If so, would you also grant it to investment trust companies, life insurance and other insurance companies, in respect of their additional holdings of securities?

(30) If so, is there any logical reason for refusing it to private individuals, professional men, employees, etc., in respect of their investments, or any other additions that they make to their capital assets, *e.g.*, the purchase of a private motor car?

(31) Might not the ultimate end of the allowance tend to be a revolution in the concept of a tax on income? Might it not convert the tax into one on expenditure?

(32) If so, is not a tax on expenditure one which ultimately tends to transfer much of the burden of taxation from the shoulders which are rich enough to bear it to the shoulders of classes which need all their income to maintain themselves in their existing condition of ability to produce? Is "the ability to pay" of a man who has £10,000 and can save £4,000, spending only £6,000, the same as that of a man who has £6,000 and saves nothing?

II.—SPECIFIC QUESTIONS UPON THE PROPOSAL TO GIVE DIFFERENTIAL TREATMENT IN INCOME TAX TO "RESERVES MADE FOR THE EXTENSION OF BUSINESS," THESE QUESTIONS BEING DESIGNED TO ELICIT MORE EXACTLY THE TRUE NATURE OF THE PRINCIPLE PROPOSED BY SPECIFIC ILLUSTRATIONS. (These duplicate, to some extent, the general questions, but as they are in sequence here this has not been thought an objection.)

### 1. Reserves in relation to Investments.

(1) Suppose that a business has £100,000 "shares in allied businesses." They are unquoted, but it is thought by the management that they may be depreciated, and a reserve of £25,000 is set up against this. It is represented by additional plant and machinery in the business. Is this regarded as a reserve for "extension"?

(2) If answer to (1) is in the negative, does the discrimination depend upon the title of the reserve, or upon proved intent at the time it was set up?

(3) If answer to (1) is negative, suppose the depreciation actually passes away by re-appreciation the following year. does the reserve then pass into the allowable category? If so, at what rate of tax—the old or the new?

(4) Suppose the circumstances to be as in (1), save that the securities are quoted, and the depreciation is, therefore, a known figure, the reserve is set up to cover it. Is this allowable?

(5) Repeat question (2) as in circumstances of (4).

(6) " " (3) " " " "

(7) Suppose the circumstances to be as in (4), but instead of providing a reserve on the liabilities side, the asset itself is written down. Is this a reserve? If so, is it in "extension of the business"?

(If the answers to 1, 4 and 7 are not all positive, can the reason for the distinction be given?)

(8) (a) Would a reserve created by appreciating an investment above its cost be favourably treated? (b) If not, is a reserve which provides a net balance of depreciation (after setting against depreciations those

cases which show an appreciation) to be allowed only on the net sum reserved or on the gross depreciation of the securities showing depreciation?

(9) If the answer to 8 (b) is the *net*, would you, in the case of a business making a reserve for the depreciated cases only, require a set off of the appreciations for which credit might have been taken, in order only to allow a net figure?

(10) If in case (1) the depreciated shares are afterwards sold and a loss is realised which has the effect of reducing the reserve, is the allowance originally given revised or cancelled?

(11) If the answer to (1) was *NO*, and the reserve was not allowed when it was made (year A), suppose the securities are subsequently sold at a loss in year B and the loss is borne out of profits leaving the reserve intact, does the reserve, though not created in year B, rank as if it were created out of profits in year B, for allowance?

(12) If the answer to (11) is in the affirmative would *all* cases of writing off realised losses, after the date of the new enactment, rank as though they were the creation of reserves out of profits for the purpose of allowance (provided that commensurate reserves actually existed at such date)?

(13) If so, would you wish to ascertain whether such reserves were actually made originally out of profits?

If such reserves had been made but had been turned into share capital, would that affect the allowance?

### 2. *Reserves in relation to Machinery and Plant.*

(1) It is presumed that a reserve which merely represents true wear and tear would not rank for allowance. If so, would an amount put to reserve greater than the allowance for Income Tax for the year be regarded as eligible?

(2) If the sum put to reserve for this purpose in a year is *less* than the Income Tax allowance, would the difference be deducted from any other kind of reserve in order to ascertain how much of the latter is allowable?

(3) If over a period of years £60 has been reserved and £70 allowed for Income Tax and then £30 (the remainder of the cost) is allowed for obsolescence, would any amount that is discharged out of profits be allowable as a reserve?

### 3. *Reserves in relation to Wasting Assets.*

(1) If a mining company puts up a sinking fund reserve to meet the exhaustion of its capital subject (and the fund is represented by plant, rolling stock, etc.), is this to be an allowable reserve?

(2) If it makes general reserves, but no specific provision, against the wasting asset, would the case be regarded as the same as (1) above?

(3) Having regard to the recommendations of the Royal Commission on the Income Tax, is any distinction to be drawn between different wasting assets, i.e., coal mines in the United Kingdom, diamond mines abroad? Assets that waste physically against those disappearing by effluxion of time only (leaseholders)?

(4) If such a reserve, having been allowed for, is ultimately realised, and the shareholders get back their original capital, is it intended that it shall have received an allowance as if a business had been "extended"?

### 4. *Reserves in relation to their form or embodiment in Assets.*

(1) A reserve is made, but the assets representing it are outside Securities. It does not "extend" the business any more than if the proprietors had drawn their dividends and personally invested them. But at a later date the investments are sold and plant is bought, the

"Reserve" not altering. Does the sum involved then become allowable? If so, at the rates of tax for the date when originally reserved, or when changed?

(2) A reserve is made in year "A" and is represented by plant. It is allowed for. In year "B" the plant is sold and outside investments bought. Is the allowance cancelled and if so at what rate?

(3) What kind of investments would rank as extension? Would you have the same kind of tests as in the Excess Profits Duty for "Capital Employed in the Business"?

(4) Suppose in a given year £100,000 appears to reserve and there is also £100,000 bank overdraft, or mortgage. Assets are increased: £50,000 plant, £150,000 investments. Is the outside investment regarded as standing primarily against the overdraft, or against the reserve, in the absence of any specific hypothecation?

#### 5. Reserves in relation to the shareholder.

(1) Suppose a reserve has been built up out of profits and allowed for under this principle. It is then capitalised, and bonus shares are issued. Are these shares to be liable to *Income Tax* or not, unconditionally in the hands of the recipients?

(2) If not liable, is it because any reinvestment by a shareholding proprietor of his profits drawn from a business, in that business, as distinct from another, should be encouraged and differentially treated in principle?

(3) If so, is the case distinguishable in essence from an offer of share capital with priority of allotment to existing shareholders? Would you give them any special tax benefit and if so what?

(4) Or would you make the distinction that the introduction of new capital from outside could not be allowed, but if profits had not been technically drawn out of a business they could be invested in extensions and allowed for, and then capitalised?

(5) Would there be any tendency to discourage new businesses as against making existing businesses larger?

#### 6. General.

(1) Suppose it is seen that a business is on its development to require £100,000 capital. The ordinary method is to call for this amount in stages in share capital. A new method may be to say Capital Issue £50,000 with a dividend limited to 5 per cent. while the remainder of the profits are being accumulated (as "reserves") to another £50,000. Is it desired to provide this alternative?

(2) Is there any desire on your part, in substance, to alter the definition of profits by allowing for writing down or losses in capital assets and/or including for taxation gains in capital assets?

(3) If a reserve for unexpired risks turns out ultimately to show a surplus, does this surplus rank as an allowable reserve when it emerges?

(4) If a reserve once allowed for is diminished, is the diminution recharged? If so, do you draw a rigid distinction between reserves denominated as such and "carry forwards"? If so, on what principle?

#### REPLY TO THE FOREGOING QUESTIONNAIRES SUBMITTED BY SIR ARTHUR LOWES DICKINSON, F.C.A.

In my evidence-in-chief I have laid stress on the effect of high taxation in discouraging savings.

It follows that any reduction in taxation should be so designed as to produce the maximum increase in savings. While a general all round reduction in the rate of *Income Tax* would undoubtedly have the effect of increasing savings, it would also probably increase the expenditure on luxuries, which in itself is economically unsound.

It is therefore suggested that reduction in taxation might well take the form of exempting, either wholly or partially, from taxation so much of

the profits of industry as are definitely set aside to provide for future extensions and expansions of business.

Any such general exemption to all Income Tax payers would be unworkable, owing to the difficulty of ensuring that any funds so set aside were in fact used for the purposes intended, and further it would seriously infringe on the principle that taxation must be levied to a considerable extent in proportion to the ability to pay.

Legislation has given to a certain class of taxpayer, viz., incorporated companies, special privileges and imposed on them special liabilities; and has accepted as a principle in the Corporation Profits Tax (now repealed) that special taxation may be imposed on them.

It would seem, therefore, that the contrary principle may be accepted, viz., that relief from taxation in the general interests of the community may be granted to such companies; the more so as it has been generally admitted that the Corporation Profits Tax was a hindrance to the progress of industry while the relief now to be suggested would have the opposite effect.

The plan is as follows:—

(1) That any Incorporated Company, whether public or private, and whether incorporated under the Companies Acts or under special Acts, including undertakings carried on by Municipalities and County Councils, be empowered to set aside, out of profits earned after the passing of the necessary legislation, sums to be placed to the credit of a Development Account.

(2) That any amount so set aside in any year out of profits be wholly or partially exempted from Income Tax; provided that, if in any future year the Development Account is reduced by (1) distribution to shareholders in any form, (2) applying any part thereof to make up losses or depreciation in assets which must legally be made good out of profits, (3) by liquidation of the company, the amount by which the account is so reduced should become liable wholly or in part to Income Tax at the rate in force in the year in which such reduction takes place.

(3) The auditors of the company would be required to certify to the Inland Revenue authorities on the accounts of each accounting period, that the amount standing to the credit of the Development Account is intact, and that no part thereof is required to make good depreciation or losses on assets which should legally be made good out of profits, or alternatively should certify the amount of reduction in the account required for such purposes.

The effect of such provisions would be that a definite increase would be made in the assets of any company setting aside profits to the Development Account over and above the assets previously existing, and this is equally the fact if, to take an extreme case, the whole of the previously existing assets may be subsequently lost.

The Development Account, as long as it remains intact will be represented by either:—

(1) Additional buildings, plant and machinery, or

(2) Additional working capital, i.e., stocks, book debts, etc., enabling a larger business to be done, or

(3) Additional investments in securities, the purchase of which would set free the capital of other persons for increased investment.

The additional questionnaire submitted by the Committee on National Debt and Taxation appears to be directed to showing that any such plan of total or partial exemption from taxation, if applied indiscriminately to all taxpayers, would be impracticable and would conflict with certain accepted principles of taxation.

This conclusion is accepted but the plan here outlined meets these objections, and each question is here answered on the assumption that

the questions are directed against this limited plan, instead of against the wider proposal of exemption to each individual taxpayer.

It should be premised that tax laws never have been, and never can be, entirely consistent or without discrimination, and that the plan suggested is in this respect no different in degree from many other discriminating provisions either now existing or which have existed in the past, e.g. :—

**Corporation Profits Tax.** Rent payable annually allowed as an expense but if payable in advance for a period of years, e.g., purchase of a lease, is disallowed.

Expenses incurred by a trader in earning his income are allowed as a deduction, but expenses incurred by a Recorder are not so allowed.

Mineral royalties are submitted to special taxation.

Allowance is made for depreciation of plant and machinery but not for depreciation of buildings or exhaustion of minerals.

Companies are as a rule exempted from Super-tax.

Other instances could be cited.

It may be urged that if the suggested allowances are made in the case of companies there is no ground for refusing them to private individuals carrying on an identical business. The answer would seem to be that a company is already subjected to restrictions and entitled to privileges which do not apply to the private individual; and if the latter is aggrieved at his exclusion from the proposed concession his remedy, viz., to incorporate as a company, is an easy one.

#### GENERAL QUESTIONS.

1. Yes, except in the case of finance companies which are assessed on capital as well as revenue profits.
2. Yes.
3. No.
4. Generally it is desirable to distinguish clearly between capital and revenue reserves, but in the plan proposed the question does not arise.
5. Yes.
6. Yes.
7. Yes.
8. Yes.
9. Yes.
10. Yes.
11. Such a disentanglement may be desirable, but it is very doubtful if it is generally possible, nor is it necessary for the suggested plan.
12. To the first part, yes, and to the second part, no. But the question is not pertinent to the plan suggested.
13. No, except where depreciation arises from wear and tear or obsolescence.
14. Certainly not under the plan proposed. To take an extreme case, the whole of the capital assets existing before a Development Reserve was set up might be lost, and yet the company would, by reason of the Development Reserve, have more assets than it would have had without it.
15. The suggested course is quite unnecessary under the plan proposed.
16. No safeguard of the kind indicated is required under the plan suggested.
17. Reserves for the maintenance of existing capital assets are quite distinct from the assets created under the plan proposed out of the Development Reserve. It must be remembered that it is not incumbent upon a company to create out of profits reserves for depreciation in the value of capital assets, except to the extent that such depreciation arises out of wear and tear and possibly obsolescence.
18. Yes, but this has no bearing on the plan suggested.

19. Under the plan suggested the Revenue will have no concern with changes of value, except that they should allow adequately as a charge against profits for wear and tear and obsolescence.

20. Under the plan proposed the amount of reserves for extensions upon which total or partial exemption is to be allowed is confined to the amount of Development Reserve that, in accordance with the certificate of the auditors, remains free and unimpaired.

21, 22, 23, 24, 25, 26. Under the plan proposed these questions do not arise.

27. The underlying basis of the case is the desirability of encouraging savings by companies in place of a distribution of profits up to the hilt in dividends.

28. The basic reasons for restricting this encouragement to companies are:—

(1) That companies are already subjected to restrictions, and entitled to privileges which do not apply to individuals or partnerships, e.g., they are not assessed to Super-tax.

(2) That it would be impracticable to allow the suggested concessions to individuals or partnerships because there is in their cases no such statutory division between capital and income as exists in the case of companies.

(3) That to make similar concessions to all Income Tax payers would infringe the principle of taxing according to ability to pay.

29. Yes, provided they were incorporated bodies. The investment of the Development Reserve in securities would either create new industries or set free capital for this purpose.

30. Yes, as set forth in answer to question 28.

31. Not if the plan suggested were adopted.

32. Not necessarily, but in the plan suggested this question does not arise. In the abstract, by a system of allowances for normal expenditure up to some definite figure which would represent a reasonable cost of subsistence, any such result could be avoided.

#### SPECIFIC QUESTIONS.

1 and 2. Reserves in relation to investments and machinery and plant. Any reserve found to be necessary or desirable in respect of existing assets is, according to the plan, definitely excluded from exemption from taxation.

Under the plan suggested the only factor of importance is that additional capital represented by the Development Account has been put into the business.

Appreciation or depreciation of assets other than by wear and tear or obsolescence (which should be covered by allowance for depreciation) is entirely ignored. If any portion of the Development Account is required to meet depreciation in assets which should be, but has not been, made good out of profits, then so much of the Development Account as is required for this purpose becomes immediately subject to tax at the rate then in force. Development Reserve must be created out of profits, and cannot be added to by appreciation in value of assets any more than it can be diminished by depreciation in value.

3. Reserves in relation to wasting assets. Reserves for wasting assets should be allowed as a charge against profits so as to reduce the amount assessable to Income Tax. This is an entirely distinct question from that of a Development Reserve which necessarily provides assets which would not otherwise have existed, which assets must also be properly maintained out of revenue, so far as legally required.

4. Reserves in relation to their form. As already set out the form in which the Development Reserve is represented by assets is immaterial, provided such assets are properly maintained out of revenue to the extent legally required.

5. Reserves in relation to the shareholder. In accordance with the plan any distribution to shareholders which diminishes the Development Reserve, at once subjects that reserve to Income Tax at the ruling rate on the amount of such diminution. Distribution in such case covers capitalisation by issue of bonus shares or distribution in kind as well as in cash.

6. General. No alteration is suggested in the existing practice of creating or dealing with reserves. It is only suggested that an additional reserve, under the title of Development Reserve, be created in effect as capital, and never distributed in any form to the shareholders, and be exempted from Income Tax in whole or in part: If the whole, or any part of this reserve is capitalised or distributed, or if the company goes into liquidation, the part so distributed or capitalised, and in the case of liquidation, the whole, immediately becomes subject to tax at the prevailing rate at that time. General reserves, carry forwards and accumulations of profits in any form, which are not carried to Development Reserve, are not, under the plan, entitled to any exemption from tax.