

BOARD OF GOVERNORS
OF THE
FEDERAL RESERVE SYSTEM

Office Correspondence

Date December 1, 1943

To Chairman Eccles

Subject: The Wartime Tax Effort in the United States, the United Kingdom and Canada.

From Mr. Musgrave R. D. W.

The following is a brief summary of the attached study of the comparative tax effort in the United States, the United Kingdom and Canada:

I. The Over-All Picture

The tax effort of the United States lags substantially behind that of the United Kingdom and Canada.

While central government expenditures as a percentage of gross national output are somewhat larger in the United States than in Canada and smaller than in the United Kingdom, tax receipts in the United States cover only 38 per cent of expenditures compared with 49 per cent in Canada and 51 per cent in the United Kingdom. Total taxes (at all levels of government) as per cent of national income are 31% for the United States, as against 36% for Canada and 42% for the United Kingdom. (See Chart I and Table I.)

Per capita taxes are highest in the United States, but a comparison on this basis is quite misleading. (See page 2.)

In terms of increases over prewar levels of taxation, the United States again lags behind despite the fact that its prewar level was comparatively low. Canada's increase has been by far the largest, but that of the United Kingdom is equally impressive in view of the high level of British prewar taxation.

II. Changes in the tax structure.

Changes in the tax structure in the three countries appear to have been influenced largely by prewar levels of taxation. In the United States and Canada most of the additional war revenue has been obtained from taxation of individual and business net income, while in the United Kingdom the already high levels of excise and income taxes necessitated an equal extension of both these sources. (See Chart II and Table II.)

III. Taxes on individual incomes.

Individual income taxes are much higher in Canada and in the United Kingdom than in the United States for all levels of income except for large families in the very lowest income group, due to the low exemptions under the Victory Tax. (See Chart III and Table III.)

If adjustments are made to allow for the individual's share of the corporation income tax in Canada and in the United States, Canadian income tax liabilities become by far the heaviest for the great majority

of taxpayers. Although the additional burden is considerable in the United States, the effective rates still remain far below those of the other two countries. (See Table IV.)

The increase in income tax liabilities (including Federal as well as State and Provincial taxes) in Canada has been by far the steepest. The increase in the United Kingdom has been greater for all income levels than in the United States, notwithstanding the fact that the level of British income taxes before the war was very much higher. (See Table V.)

IV. Taxes on Business Net Income

Although increases in taxes on corporate income were drastic in all three countries, available data show that profits after taxes doubled from 1939 to 1943 in the United States, remained practically stable in the United Kingdom and seem to have risen by about 40 per cent above the prewar level in Canada.

V. Excise Taxes

While the severity of excise taxes in the three countries is difficult to measure precisely, a comparison of the rates applicable to various types of commodities indicates a substantially higher level in Canada and the United Kingdom than in the United States. In addition to excises, both Canada and the United Kingdom levy a general Federal sales tax. (See Table VI.)

The evidence shows that the over-all tax effort in the United Kingdom and in Canada is substantially greater than in the United States, and that each of the three main tax sources has been drawn on more intensively in the two other countries.

THE WARTIME TAX EFFORT IN THE UNITED STATES, THE UNITED KINGDOM AND CANADA*

by

R. A. Musgrave and H. L. Seligman

The role of finance in a war economy is secondary to the task of obtaining the maximum output of war materials. The limits of production are set by the scarcity of resources and the people's willingness to forego civilian consumption; they are not set by the Government's ability to meet the bill. If the necessary funds cannot be obtained through taxation or borrowing from the people, they can always be obtained through borrowing from the banks. Yet, the methods of war finance are of vital importance; they bear directly upon war production, they largely determine the distribution of the economic burden of the war, and they shape the economic conditions after the war.

While it is not feasible, politically or economically, to cover the entire cost of the war by taxation, it is generally agreed that taxation should cover as large a share as possible without imposing gross inequities and impairing productive incentive. If an all-out tax effort is made, war finance is a powerful means of adjusting incomes to available civilian supplies; if extensive reliance is placed on free market borrowing, particularly on borrowing from the banks, war finance turns into a source of aggravated inflationary pressures. Equally important, an all-out tax effort during the war reduces the financial difficulties of the postwar period. There is thus good reason for appraising the financial performance of a nation at war in terms of its tax effort.

This paper is designed to obtain some perspective on the tax effort of the United States by comparing it with that of the United Kingdom and Canada. The findings are as follows:

1. The present over-all level of taxation is highest in the United Kingdom and lowest in the United States. The increase in the general level of taxation over the prewar level was substantially greater in Canada and the United Kingdom than in the United States.
2. In the United Kingdom, the relative importance of excise and income taxes remained about the same, while in the United States and, to a lesser extent, in Canada the relative importance of income taxes increased while that of excise taxes decreased.
3. Personal income taxes in the United Kingdom and in Canada are much higher than in the United States. This picture remains basically the same, although it is modified somewhat, if the comparison is drawn between taxes net of refunds and if adjustments are made for differences in the treatment of dividend incomes. The dollar increase in tax liabilities, moreover, was by far the steepest in Canada. British rates, although much higher before the war, increased more than did rates in the United States.
4. Corporation profits after tax rose steeply above their prewar level in the United States, less steeply in Canada, and remained unchanged in the United Kingdom.

*Presented in part as an address before the National Tax Conference, Chicago, November 22, 1943.

5. The level of sales and excise taxes is substantially higher in the United Kingdom and Canada than in the United States.

In assessing these conclusions, it must be recalled that taxation is but a part of total war finance. It is the volume of Government expenditures, not the volume of taxes that indicates the share in total output devoted to war purposes. The adjustment of civilian incomes to available civilian supplies comes about as the result of changes in the rate of savings and in prices as well as through additional taxes. A more complete analysis of all financial sources of war production, however, falls outside the limits of this paper which is concerned with taxation only, 1/

I. The Over-All Picture

The tax effort of three countries differing as greatly in economic capacity as the United States, the United Kingdom, and Canada cannot be compared in terms of dollars of tax collection. The fact that receipts in the United States are 15 times as large as those in Canada tells nothing about relative tax efforts.

Equally misleading is a comparison in terms of dollars of per capita tax payments, since per capita payments cannot reveal the degree to which taxpayers have had to lower their standards of living or the amount of income, absolutely or per centagewise, which they retain after payment of taxes. 2/

To obtain a significant comparison, tax collections must be measured relative to other economic dimensions of the respective countries. A first step is to compare the extent to which war expenditures have been met by taxation. Since war expenditures make up 90% or more of wartime budgets and cannot readily be distinguished from other outlays, taxes have been computed as a percentage of total Government expenditures. (Taxes and expenditures of the central governments only are included in this comparison.)

Taking the aggregate of the first three years of the war--the fiscal years 1941 to 1943 for the United Kingdom and Canada, and the fiscal years 1942 to 1944 for the United States--we find Canada covering 57% of its expenditures by taxation, followed by the United Kingdom with 48% and the United States with 35%. Looking at the

1/ A tax comparison of this kind has certain limitations, arising from basic differences in the economies under comparison, such as differences in purchasing power and income distribution, as well as from differences in taxation techniques. Some of these differences, however, do not greatly affect the over-all picture, or can be adjusted for. These remaining should be kept in mind in interpreting our conclusions.

2/ Per capita tax payments in the United States are \$360 for the fiscal year 1944, as against \$256 in the United Kingdom and \$211 in Canada for the fiscal year 1943. But at the same time, per capita incomes in the three countries are \$1,151, \$609 and \$570 respectively. Per capita taxes as a percentage of per capita incomes are (equal to the over-all tax to income ratio discussed below) thus 42% in the United Kingdom, 37% in Canada and 31% in the United States. Surely, this latter comparison is more significant than the former.

CHART I
GOV'T EXPENDITURES, TAXES, AND NATIONAL INCOME
 UNITED STATES, UNITED KINGDOM, AND CANADA

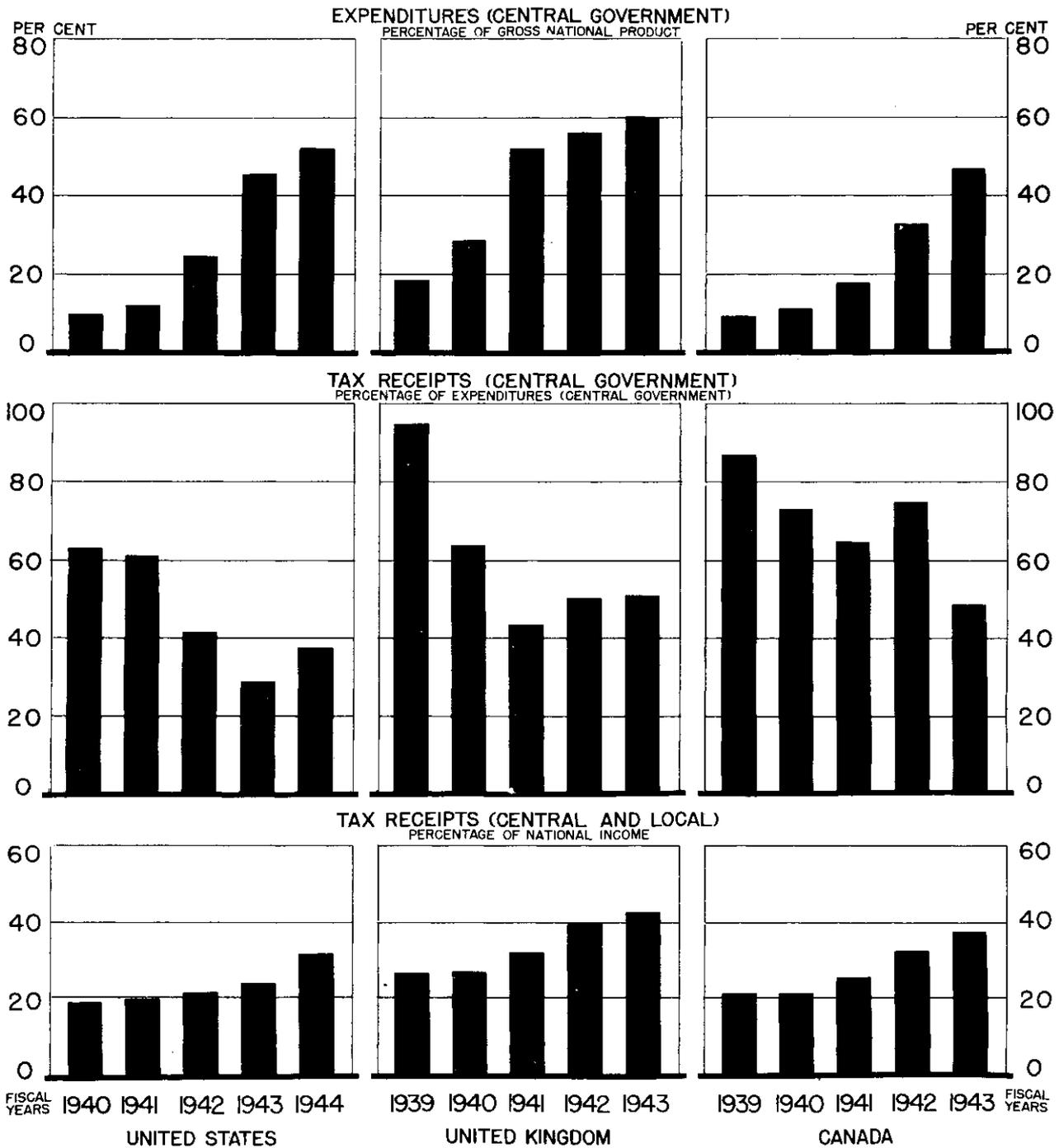


TABLE I

NATIONAL INCOME, TAXES AND GOVERNMENT EXPENDITURES

	(Fiscal Year)					
	1938-39	1939-40	1940-41	1941-42	1942-43	1943-44
<u>United States</u>						
	(Millions of U. S. Dollars)					
1. Gross National Product	---	92,600	106,000	133,000	172,100	198,000
2. National Income	---	74,100	84,500	106,400	135,100	157,000
3. Taxes, Central and Local	---	14,400	16,900	23,000	32,400	49,100
4. Government Expenditures, Central	---	9,000	12,700	32,400	78,200	104,000
<u>United Kingdom</u>						
5. Gross National Product	27,500	27,000	30,300	34,500	37,800	---
6. National Income	22,100	21,700	24,200	27,000	29,500	---
7. Taxes, Central and Local	5,800	5,800	7,700	10,600	12,400	---
8. Government Expenditures, Central	5,100	7,700	15,700	19,300	22,700	---
<u>Canada</u>						
9. Gross National Product	5,300	5,400	6,200	7,500	8,800	---
10. National Income	4,300	4,300	4,800	5,700	6,600	---
11. Taxes, Central and Local	900	900	1,200	1,800	2,400	---
12. Government Expenditures, Central	500	600	1,100	1,700	4,100	---
<u>Taxes as Percent of National Income</u>						
	(Percent)					
13. United States	---	19.4	20.0	21.6	24.0	31.3
14. United Kingdom	26.2	26.7	31.8	39.3	42.0	---
15. Canada	20.9	20.9	25.0	31.6	36.4	---
<u>Government Expenditures as Percent of Gross National Product</u>						
16. United States	---	9.7	12.0	24.4	45.4	52.5
17. United Kingdom	18.5	28.5	51.8	55.9	60.1	---
18. Canada	9.4	11.1	17.7	22.7	46.6	---

For explanation of items see page 11.

most recent year available (1944 for the United States and 1943 for the other two countries) we find the United Kingdom in the lead with 51%, followed by Canada with 49% and the United States with 38%. A more detailed picture is given in Chart I and Table I. Here, as throughout this paper, pound sterling and Canadian dollar figures are converted into U. S. dollars at the official exchange rates. 1/

The ratio of taxes to expenditures, however, has only limited significance, since the effort required to cover a given portion of war expenditures by taxation depends on the size of war expenditures relative to total output. This relationship is also shown in Table I and Chart I. For the latest year available, central Government expenditures as a percentage of total output (the gross national product) amount to 60% in the United Kingdom (fiscal year 1943), 52% in the United States (fiscal year 1944), and 47% in Canada (fiscal year 1943). England, by this standard, is making the greatest effort, since it covers the largest portion of its war expenditures by taxation and also absorbs the largest percentage of total output in Government expenditures. The picture is less clear with respect to the United States and Canada. The United States absorbs the larger share of total output in Government expenditures but covers a smaller portion of its expenditures by taxation. To obtain a more complete picture, a comparison must be drawn between taxes and total output.

The war has exploded traditional economic magnitudes of all kinds, but most dramatic has been the vast expansion in output--particularly in the United States, but also in Canada and the United Kingdom. The gross national product in current prices has more than doubled over its 1939-40 level in the United States; that of Canada has increased by 70%, and that of the United Kingdom by 40%. In part this reflected a rise in prices, but the increase in terms of constant prices was still very great. This factor alone would have resulted in an enormous increase in tax receipts even though no changes in tax rates had been made. But in addition, tax rates in all three countries have been increased sharply and new levies have been imposed. The result, also shown in Chart I and Table I, was that all three countries experienced a substantial increase in the portion of national income absorbed by taxes. 2/ State and local, as well as Federal taxes, are included in this comparison. The United Kingdom, maintaining the lead throughout, took up 42% (fiscal year 1943) of its national income in taxes as compared to 36% for Canada (fiscal year 1943) and an estimated 31% for the United States (fiscal year 1944).

1/ Conversion at the official exchange rate is far from satisfactory. For purposes of a tax comparison, foreign currency should be converted into United States dollars at rates reflecting the relationship between the dollar's purchasing power to the American taxpayer and the purchasing power of the foreign monetary unit to the foreign taxpayer. But in absence of such a "true" conversion rate, which can hardly be estimated under prevailing conditions, the exchange rate has to be used. With respect to the countries here under consideration, the resulting distortion is not likely to be serious.

2/ To avoid confusion, we follow the customary practice of comparing tax collections with national income, although, in some respects, it would seem preferable to draw the comparison with the gross national product. The over-all picture is the same under either approach.

Apart from the level of taxation reached, the question may be raised how sharp the increase has been in the three countries. As may be expected, the percentage increase in tax collections was greatest where the tax base, or the national income increased most, that is in the United States, and it was least where the increase in the tax base was smallest, that is in the United Kingdom. To measure the wartime tax effort, however, we should not compare the percentage increase in taxes but the changes in the ratios of taxes to income. The percentage increase in taxes may be a reflection, wholly or in part, of the buoyancy of an increased level of income, while the effect of an increased base is largely eliminated when tax to income ratios are compared. 1/

Canada and the United States, which prior to the war collected about 20% of their national income in taxes, (central and local) increased this ratio to 36 and 31% respectively, while the United Kingdom, which started the war with the higher ratio of 26% achieved an increase to 42%. While the percentage increase in the tax to income ratio was sharpest in Canada and about equal in the United Kingdom and the United States, it should be noted that the prewar level of taxation in the United Kingdom was by far the highest and that additional increases in the tax to income ratio become the more burdensome the higher the level already reached.

To summarize the over-all picture: With respect to the present over-all level of taxation, it is clearly highest in the United Kingdom and lowest in the United States. With respect to the increase in the level of taxation, Canada and the United Kingdom cannot easily be rated, but they are both substantially ahead of the United States.

II. Changes in the tax structure.

The enormous increase in total tax yields--from 15 to 50 billion dollars in the United States, 5 to 12 billion dollars in the United Kingdom, and 1 to 2.5 billion dollars in Canada--was accompanied by equally drastic changes in the composition of the tax structure of the three countries. To trace the pattern of this change, taxes may be divided into four groups; namely, taxes on individual net income, taxes on business net income, excise taxes (i.e., a variety of taxes on business gross income or cost items), and property taxes.

The distribution of the total tax yield (excluding the yield from property taxes) 2/ remained rather stable in the United Kingdom where receipts from the

1/ With an increasing base, the yield of certain taxes, particularly taxes on net income, increases at a rate faster than the increase in the base, while other taxes, especially property taxes, increase at a slower rate. On the basis of preliminary estimates, it seems likely that had there been no change in tax rates, taxes as percentage of national income would have remained about constant for the United States and Canada and would have shown some slight increase for the United Kingdom.

2/ While receipts from property taxes are included in our over-all figures, they require no special attention in this connection, since they have been a dormant element in wartime taxation. Currently, they supply about 9 per cent of total tax receipts in all three countries. British property tax rates are considerably lower than those in the United States, but the British house owner loses part of what he saves in property taxes since the rental value of an owner occupied home is counted as income under the personal income tax.

CHART II
TAX RECEIPTS BY SOURCES
 CENTRAL AND LOCAL

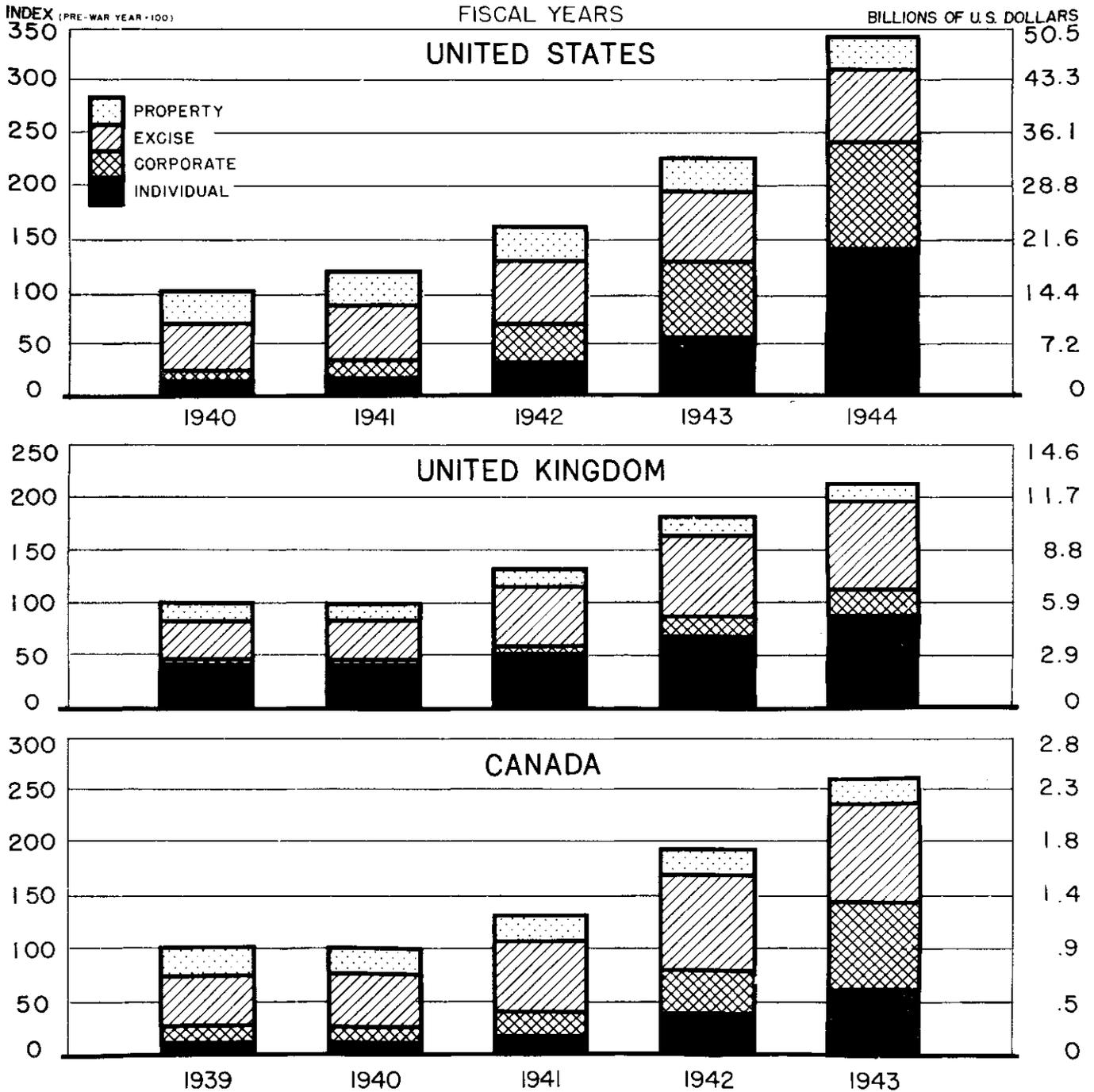


TABLE II
CHANGES IN THE TAX STRUCTURE
(Millions of U. S. Dollars)

	United States		United Kingdom		Canada	
	(Fiscal Years)					
	1940	1944	1939	1943	1939	1943
<u>Central Government</u>						
1. Individual Income Taxes	1,706	19,753	2,552	5,030	56	547
2. Corporate Income Taxes	1,281	14,083	105	1,523	87	743
3. Excise Taxes	2,686	5,498	2,172	4,848	290	689
4. Property Taxes	---	---	---	122	---	---
Total	<u>5,673</u>	<u>39,534</u>	<u>4,829</u>	<u>11,523</u>	<u>433</u>	<u>1,978</u>
<u>State and Local Governments</u>						
1. Individual Income Taxes	319	450	---	---	46	19
2. Corporate Income Taxes	155	400	---	---	41	9
3. Excise Taxes	3,822	4,500	---	---	173	215
4. Property Taxes	<u>4,460</u>	<u>4,450</u>	<u>1,015</u>	<u>863</u>	<u>246</u>	<u>224</u>
Total	<u>8,756</u>	<u>9,800</u>	<u>1,015</u>	<u>863</u>	<u>507</u>	<u>468</u>
<u>All Levels of Government</u>						
1. Individual Income Taxes	2,025	20,203	2,552	5,030	103	566
2. Corporate Income Taxes	1,436	14,483	105	1,523	128	752
3. Excise Taxes	6,508	9,998	2,172	4,848	463	904
4. Property Taxes	<u>4,460</u>	<u>4,450</u>	<u>1,015</u>	<u>985</u>	<u>246</u>	<u>224</u>
Total	<u>14,429</u>	<u>49,134</u>	<u>5,844</u>	<u>12,386</u>	<u>940</u>	<u>2,446</u>

For explanation of items see pp. 11-12.

individual income tax and from excise taxes expanded at about the same rate. As a percentage of the total, they both declined as the result of the introduction of corporate taxation in the form of an excess profits tax. In the United States, the share contributed by the individual income tax rose from one-fifth to nearly one-half, while that of excise taxes declined from two-thirds to one-fifth. As in the United Kingdom, the share contributed by taxes on corporate income increased with the imposition of an excess profits tax. In Canada, the changes in the tax structure were in the same direction as in the United States, but the share of excises decreased less and that of individual income taxes increased less. These developments are shown in more detail on Chart II and Table II.

To some extent the varying emphasis upon different tax sources reflects differences in the budgetary situation before the war and in economic developments during the war, but it also reflects conscious differences in wartime tax policies. The United Kingdom, having entered the war with high income and excise taxes found it necessary to expand its tax frontiers in all directions with the result that the relative shares contributed to the total budget by personal income and excise taxes underwent little change. In the United States, receipts from taxes on individual and business incomes greatly increased relative to excise taxes, reflecting, in part, the large increase in individual incomes and corporate profits and thus the large expansion in the tax base. Also, it reflects a situation in which the over-all level of taxation was still relatively low so that primary reliance on income taxes constituted a sound policy. ^{1/} Despite a much sharper increase in rates, the relative share of income taxes in Canada increased less than in the United States, due to a smaller expansion in the base.

III. Taxes on individual incomes.

Receipts from taxes on individual incomes increased drastically in all three countries; tenfold in the United States, fivefold in Canada, and double in the United Kingdom. They supplied over one-half of the total increase in tax receipts in the United States as against 38 per cent in the United Kingdom and 31 per cent in Canada. The number of income taxpayers in the United States increased from about 4 million to over 40 million, and in Canada from 200,000 to over 2 million--thus revolutionizing the very character of the income tax.

1. Personal income tax liabilities at various levels of incomes may be compared in terms of effective rates, that is, tax liabilities expressed as a percentage of net income before exemptions. The effective rates applicable to a married taxpayer with two dependents are shown in Chart III. Table III shows dollar liabilities at selected income levels, applicable to a single taxpayer and to a married taxpayer with two dependents. For the United States the net Victory Tax and the New York State Income Tax are included together with the Federal Income Tax. ^{2/}

^{1/} The following analysis of the degree to which various tax sources have been drawn upon will throw some light on the question whether income taxation in the United States has now reached a level at which a change in emphasis is called for.

^{2/} The Canadian Provinces relinquished their privilege of imposing income taxes for the duration of the war. Therefore, while Dominion receipts from the individual income tax increased tenfold, the over-all increase was fivefold as stated above.

CHART III
PERSONAL INCOME TAXES
 UNITED STATES, UNITED KINGDOM, AND CANADA

MARRIED TAXPAYER - TWO DEPENDENTS

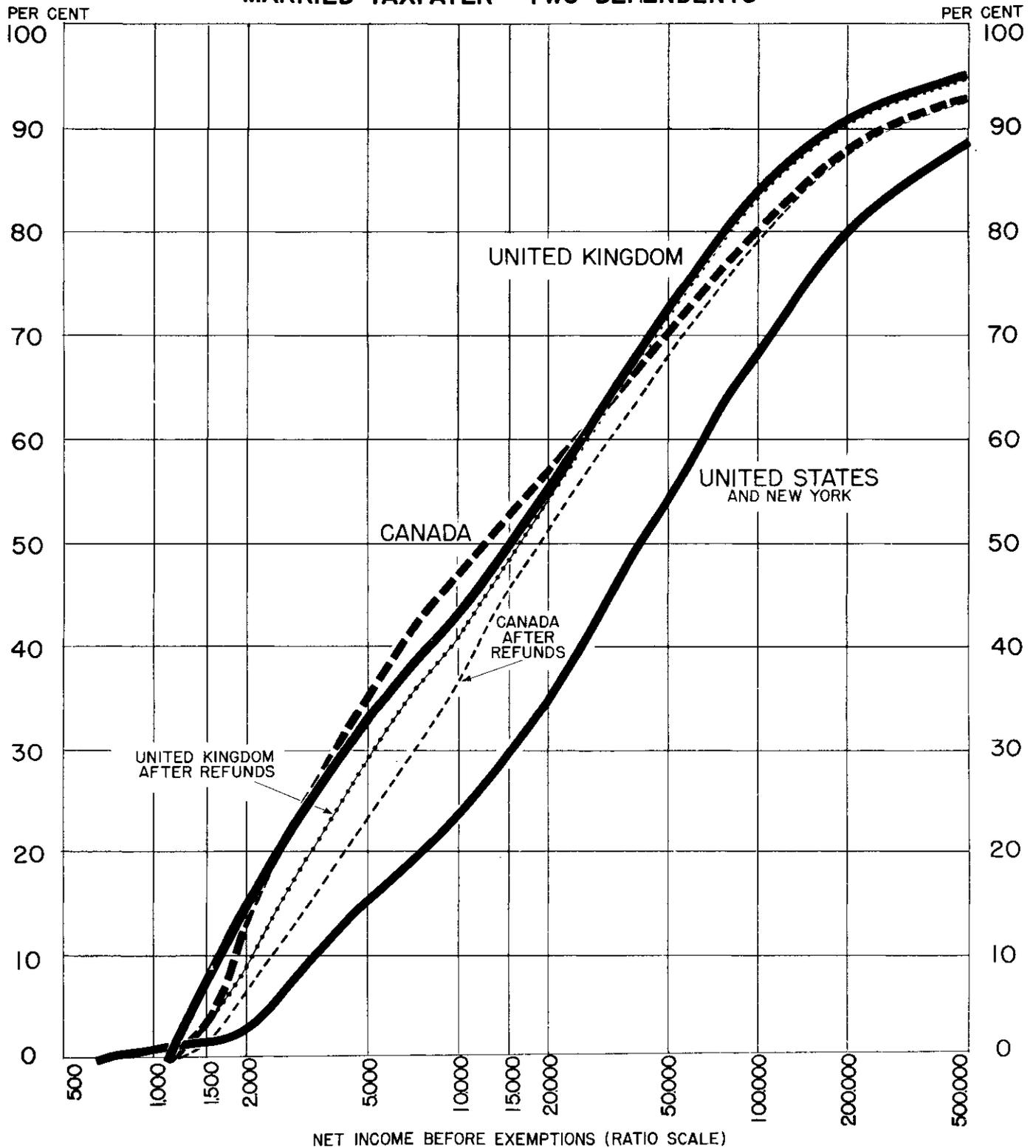


TABLE III
 INCOME TAX LIABILITIES AT SELECTED INCOME LEVELS
 (In U. S. dollars)

Net income before ex- emptions	United States ¹			United Kingdom ²			Canada ³		
	Total	Refund		Total	Refund		Total	Refund	
Single, no dependents									
\$ 1,000	\$ 107	---		\$ 189	\$ 48		\$ 190	\$ 80	
2,000	345	---		624	106		628	160	
5,000	1,172	---		1,975	205		2,180	400	
10,000	2,973	---		4,620	240		5,229	727	
20,000	8,014	---		11,340	240		12,069	727	
50,000	28,797	---		36,550	240		36,318	727	
100,000	70,516	---		84,200	240		82,531	727	
Married, two dependents									
\$ 1,000	\$ 13	---		---	---		---	---	
2,000	58	---		\$ 304	\$ 114		\$ 275	\$ 138	
5,000	754	---		1,655	225		1,747	600	
10,000	2,333	---		4,300	260		4,698	1,091	
20,000	7,042	---		11,020	260		11,336	1,091	
50,000	27,184	---		36,250	260		34,985	1,091	
100,000	68,634	---		83,900	260		80,198	1,091	

For footnotes see p. 12

The comparison shows that British and Canadian rates (inclusive of refunds) are substantially higher except for the very lowest income group. Due to the flat exemption under the Victory Tax, which does not allow for differences in dependency status, large families with incomes of less than about \$1,500 pay a somewhat heavier tax here than in the two other countries. ^{1/} But from thereon, both British and Canadian rates climb rapidly above United States' rates. A family with an income of \$2,000, for instance, pays \$58 in the United States as against \$304 in the United Kingdom and \$275 in Canada. Moving up the income scale, the spread between effective rates here and in the two other countries widens rapidly, and reaches a maximum between \$10,000 and \$20,000. At the \$5,000 level a single American taxpayer contributes \$1,172 as against \$1,975 in the United Kingdom and \$2,180 in Canada. A family with an income of \$20,000, while paying a tax of over \$11,000 in the United Kingdom and Canada, pays but \$7,042 in the United States. Although widest over the middle income ranges, the spread between the rates here and in the United Kingdom or Canada remains substantial to well above the \$25,000 income level. Over the higher income ranges, United States' rates approach, but do not reach, those payable in the United Kingdom and Canada.

The general picture remains the same if we compare tax liabilities net of refunds. (See, again, Chart III and Table III.) In the United States the refundable part of the Victory Tax has been discontinued. In the United Kingdom, refunds are very significant for the lowest income groups, but are small relative to total liabilities for other incomes, the maximum refund being \$260. In Canada refunds form a substantial part of total liabilities for incomes up to \$20,000 or more, the maximum refund being in excess of \$1,000. Comparing tax liabilities net of refunds, British and Canadian rates remain well above those of the United States. Canadian rates, while about level with British rates in a comparison of gross liabilities, fall short of British rates if net liabilities are compared. ^{2/}

2. The comparison of effective rates in the preceding section shows the British and Canadian liabilities to be very much heavier. It must be noted, however, that certain differences in the tax treatment of various types of incomes are neglected in a simple rate comparison. These differences may be particularly important for the higher income levels. Tax exempt securities, for instance, furnish a very significant part of large investment incomes in the United States; in the United Kingdom and Canada they are much more limited. Joint returns are mandatory in the United Kingdom, but not here and in Canada. Rental values of owner occupied homes are counted as part of taxable income in the United Kingdom but not in the two other countries. Capital gains are taxed and losses are allowed in the United States; in the United Kingdom and in Canada both are largely disregarded. The net result of these differences is difficult to determine, but it is unlikely that the "hidden burden" is heavier for the United States than for the United Kingdom or Canada.

^{1/} The lowest income groups in the United Kingdom and Canada, however, are subject to heavier social security taxes than those in the United States.

^{2/} For a more detailed comparison of income tax rates, see the Federal Reserve Bulletin for December 1942.

TABLE IV

TAXATION OF PERSONAL INCOME
Federal Income Tax and Corporation Income Tax Combined 1/
(In U. S. dollars)

Married person, no dependents								
Total Net Income including Dividends Before Tax	:	Corporation Tax Allocated to Dividends	:	Net Income for Personal Income Tax	:	Personal Income Tax	:	Total Tax
United States								
\$ 3,000		\$ 102		\$ 2,898		\$ 384		\$ 486
10,000		788		9,212		2,184		2,972
25,000		2,990		22,010		8,236		11,226
50,000		7,820		42,180		21,380		29,200
100,000		19,000		81,000		51,969		70,969
500,000		122,000		378,000		326,609		448,609
United Kingdom								
\$ 3,000		---		\$ 3,000		\$ 964		\$ 964
10,000		---		10,000		4,491		4,491
25,000		---		25,000		14,976		14,976
50,000		---		50,000		36,374		36,374
100,000		---		100,000		83,962		83,962
500,000		---		500,000		473,962		473,962
Canada								
\$ 3,000		\$ 77		\$ 2,923		\$ 898		\$ 975
10,000		591		9,409		4,527		5,118
25,000		2,243		22,757		13,739		15,982
50,000		5,865		44,135		30,361		36,226
100,000		14,250		85,750		66,430		80,680
500,000		91,500		408,500		374,227		465,727

For footnote see pp. 12-13.

However, one important difference tending to understate income tax liabilities in the United States and Canada, relative to British liabilities, may be corrected for. This relates to the treatment of dividend income. In the United States corporation net income is taxed (at a rate of 40%) under the corporation net income tax and when distributed in dividends, it is taxed again under the personal income tax. In Canada, similarly, a separate tax is imposed on corporations (at a total rate of 30%) which may not be offset against the tax on individual incomes. ^{1/} In the United Kingdom, the corporation income tax is merely a device for collecting personal income taxes on corporate net incomes at the source. Corporate net income is taxed at a rate equal to the standard rate of the personal income tax, but the individual stockholder is not required to pay the standard rate again on income received in the form of dividends.

To obtain a fair comparison between tax liabilities in the three countries, liabilities applicable in the United States and Canada have been adjusted to allow for the double taxation of dividend income. The adjustment is shown in Table IV. ^{2/} The tax liabilities and relative burdens for the United Kingdom remain unchanged, but those of the United States and Canada are increased. The increase is most significant in Canada, raising its rates above those of the United Kingdom for the great majority of taxpayers. Before adjusting for the corporate tax, the rates in Canada fall very close to the rates in the United Kingdom for incomes up to almost \$25,000, but drop behind fairly rapidly thereafter. With the adjustments for the corporation tax, however, the Canadian rates are the highest up to the \$50,000 income level when they start to fall behind the rates for the United Kingdom. For the United States, the additional burden of corporate taxation is largest, yet the correction still leaves the rates in the United States far below those in the two other countries.

3. After comparing the present level of income tax liabilities in the three countries, it is of further interest to compare the increase in income tax liabilities during the war years. An abrupt increase in liabilities would impose a greater hardship on the taxpayer than a gradual increase, so that the country, having a low tax level prior to the war, is handicapped in reaching a high level of wartime taxation.

A comparison between present (unadjusted) income tax liabilities and prewar liabilities at selected income levels is given in Table V. It shows that the increase in tax liabilities in Canada and in the United Kingdom was substantially greater, for all income levels, than the increase in the United States. Income taxes in Canada rose spectacularly from a prewar level generally similar to that in the United States to a wartime level as high as that of the United Kingdom. (The Canadian prewar liabilities include Dominion and Province of Ontario taxes and the New York State tax is included in the United States' liability for both periods.) Income taxes in the United Kingdom rose more moderately than Canadian rates, reflecting the already

^{1/} This 30% rate is composed of an 18% normal rate and an additional 12% collected under the excess profits tax but assessed on the entire net income.

^{2/} For explanation of adjustment see note to Table IV.

TABLE V
INCREASE IN INCOME TAX LIABILITIES
(In U. S. dollars)

Net income before ex- emptions	United States <u>1/</u>			United Kingdom <u>2/</u>			Canada <u>3/</u>		
	1940	1943	Increase	1939	1943	Increase	1939	1943	Increase
Single, no dependents									
\$ 1,000	\$ 4	\$ 107	\$ 103	\$ 27	\$ 189	\$ 162	\$ ---	\$ 190	\$ 190
2,000	63	345	282	183	624	441	45	628	583
5,000	282	1,172	890	843	1,975	1,132	272	2,160	1,908
10,000	1,018	2,973	1,955	2,118	4,620	2,502	983	5,229	4,246
20,000	3,449	8,014	4,565	5,842	11,340	5,498	3,717	12,069	8,352
50,000	16,350	28,797	12,447	21,484	36,550	15,066	16,956	36,318	19,362
100,000	46,540	70,516	23,976	52,684	84,200	31,516	46,245	82,531	36,286
Married, two dependents									
\$ 1,000	\$ ---	\$ 13	\$ 13	\$ ---	\$ ---	\$ ---	\$ ---	\$ ---	\$ ---
2,000	---	58	58	13	304	291	---	275	275
5,000	115	754	639	579	1,655	1,076	122	1,747	1,625
10,000	659	2,333	1,674	1,854	4,300	2,446	688	4,698	4,010
20,000	2,840	7,042	4,202	5,577	11,020	5,443	3,087	11,336	8,249
50,000	15,298	27,184	11,886	21,219	36,250	15,031	16,087	34,985	18,898
100,000	45,164	68,634	23,470	52,419	83,900	31,481	45,061	80,198	35,137

For footnotes see p. 13.

high level of income taxation before the war. Nevertheless, British liabilities increased more sharply than did liabilities in the United States, notwithstanding our much lower level of prewar taxation. In the United States, a married taxpayer with two dependents receiving a \$2,000 income was without income tax liabilities before the war and now pays \$58. In Canada, the same taxpayer paid no tax before the war and now pays \$275, or almost five times as much as the American. In the United Kingdom he paid \$13 before the war and now pays \$304. A \$10,000 taxpayer in the United States had his liability increased from \$659 to \$2,333, or by less than \$1,700. A similarly situated taxpayer in the United Kingdom having paid \$1,854 in the prewar year now pays \$4,300, that is, an increase of \$2,446. In Canada finally, the same taxpayer now pays \$4,698 as compared to \$688 in the prewar year, that is, an increase of \$4,010.

It is thus evident that not only are present Canadian and British income taxes substantially higher than present taxes in the United States; but also the rates have risen much more sharply above their prewar level in both these countries, particularly in Canada.

IV. Taxes on Business Income

Taxes on corporate income, largely on excess profits, increased no less drastically than did taxes on individual income. They supplied about 40 per cent of the increase in Canada and in the United States, but only 20 per cent in the United Kingdom. In the United Kingdom, corporation income is taxed under the excess profits tax only, while here and in Canada an additional tax is imposed on corporation net income at a rate of 40 and 30 per cent respectively. The gross rate of excess profits tax is 100 per cent in the United Kingdom and in Canada, as against 90 per cent here, but net of postwar refunds, all three rates are close to 80 per cent.

More important than the differences in rates are those in the definition of excess profits income. In all three countries the income exempt from the excess profits tax may be determined with reference to the income received in the base period, although there are differences in the way the base period is defined. In the United States the taxpayer has the option of an alternative method, determining the credit as a certain rate of return on invested capital. All three countries make provision for the expansion of capital over the base period level and permit reconstruction of the base period income in cases where incomes in that period were abnormally low. The United Kingdom provides for unlimited carry-forward and carry-back of losses and of unused excess profits credits; in the United States losses and credits may be spread over five years while in Canada this period is limited to two years. Numerous other relief provisions are made in each country.

No detailed comparison of the three taxes can be undertaken here, but given the necessary data, an over-all picture of their impact might be obtained more simply by comparing the course of corporation profits before and after taxes in the three countries. A comparison of this kind does not consider the effects of the tax alone, but the joint impact of taxes, price controls, contracting policies, etc. Clearly, it is this joint impact which is significant. A high excess profits yield by itself may be an indicator of loose pricing policies rather than of severe tax provisions, just as a low excess profits yield may indicate stringent price policies rather than liberal tax provisions.

Adequate data are available for a comparison of the movement of corporation profits after taxes here and in the United Kingdom. The data present a striking contrast. The index of industrial profits after excess profits tax (but before withholding taxes on dividends), compiled by the London Economist, has remained practically stable since 1938. The index is based on 2,300 companies and is sufficiently inclusive, in the words of the London Economist, "to display conclusive evidence of the close control of profits through the mechanism of excess profits taxation", and to show "that there is no sign of the slightest degree of profit inflation." ^{1/} In the United States, profits after tax more than doubled from 1939 to 1943. Profits before tax increased by over 300 per cent. ^{2/} With due allowance for differences in accounting practices, prewar profit levels and changes in capitalization, it remains evident that profits after tax were allowed to benefit greatly from war prosperity in the United States, whereas corporations obtained no such benefits in the United Kingdom. Notwithstanding the huge yield from the excess profits tax in the United States, American corporations are thus enjoying a much more lenient treatment. The data for Canada are less conclusive. According to a sample of 484 companies, compiled by the Bank of Canada, and covering approximately two-thirds of corporate income, net income after taxation in the fiscal year 1942 rose about 40 per cent above the prewar level (1938), or at a rate considerably less than that which prevailed in the United States.

V. Excise Taxes.

The increase in excise taxes is indicated by data on receipts shown in Table VI. These include not only sales and excise taxes proper, but also employers' contributions to payroll taxes and war damage insurance. As a group, these taxes contributed 40 per cent to the increase in total revenue in the United Kingdom ~~against~~ 30 per cent in Canada and 10 per cent in the United States. Here and in the United Kingdom, two-thirds of this contribution was derived from sales and excise taxes proper, whereas in Canada practically the entire increase resulted from these sources.

The yield from sales and excise taxes proper doubled in the United Kingdom and Canada and increased by 50 per cent in the United States. In order to measure the severity of sales and excise taxes in over-all terms, a comparison should be drawn between such taxes paid by the consumer and total consumers' expenditures, but in absence of such information, the ratio between receipts from these taxes and national income may serve as a substitute. Taking the most recent year, this ratio is above 10 per cent for the United Kingdom and Canada and about 5 per cent for the United States. The indication that the level of excises is substantially higher in the other two countries is substantiated by a comparison of the rates applicable to various types of commodities.

^{1/} Economist, London, England, September 19, 1942, p.365.

^{2/} Net income of all corporations, excluding dividends received from domestic corporations. Estimates by U. S. Treasury Department, Division of Research and Statistics, September 10, 1943.

TABLE VI

EXCISE AND PAYROLL TAXES
 All levels of Government
 (Millions of U. S. dollars)

	United States		United Kingdom		Canada	
	1940	1944	1939	1943	1939	1943
1. <u>Employers' Payroll Taxes</u>	1,514	2,396	254	278	---	18
2. <u>War Damage Insurance</u>	---	---	---	819	---	---
3. <u>Sales Taxes</u>						
Alcoholic Beverages	817	1,762	510	1,186	48	115
Tobacco	705	1,125	409	1,349	35	97
Gasoline	1,096	965	279	218	41	67
General Sales Tax	559	775	---	355	132	244
Others, including Customs	2,017	2,975	720	643	207	362
Total	5,194	7,602	1,918	3,751	463	885
4. <u>Total Excise and Payroll Taxes</u>	6,508	9,998	2,172	4,848	463	903

For explanation of items see p.13.

In the United Kingdom, nearly 84 per cent of the additional yield from sales and excise taxes proper was derived from taxes on liquor, tobacco and gasoline, while these same taxes yielded about 50 per cent of the increase in the United States and 37 per cent in Canada. The rates on liquor and tobacco are vastly higher in the United Kingdom than in the other two countries. The tax on a gallon of liquor, for example, is \$23 in the United Kingdom as against \$7.30 in Canada and \$7.50 in the United States. (Both here and in the following examples, the tax for Canada includes that of Quebec and the tax for the United States includes that of the state of New York.) The tax on a barrel of beer in the United Kingdom is \$28 as against \$7.90 in Canada and \$7.93 in the United States. The tax on a package of cigarettes ranges from 27 to 34 cents in the United Kingdom compared to 9 cents in the United States, while the Dominion tax in Canada is 18 cents and the provincial tax in Quebec is 10 per cent of the retail price. Taxes on a gallon of gasoline are 12 cents in the United Kingdom as against 10 cents in Canada and 5½ cents in the United States. The heavy rates on liquor and tobacco in Great Britain are indicative of the high level of excise taxation since these articles absorb nearly 1/5 of total consumers' expenditures or as much as rent and clothing combined.

Both the United Kingdom and Canada have a general sales tax on the Federal level. While the British purchase tax contributes less than 1/10 of the total sales tax yield, the Canadian sales tax contributes over 1/4. The Canadian tax is imposed largely at the manufacturers' level at a rate of 8 per cent; it applies to practically all commodities excluding, however, most foods. The British purchase tax is imposed at rates of 16-2/3 per cent, 33-1/3 per cent and 100 per cent. Absolute necessities and certain commodities already bearing high taxes, such as tobacco and liquor, are excluded, while luxuries, such as furs and baggage, are taxed at the 100 per cent rate. General sales taxes levied by State and local Governments in the United States are at a very much lower rate throughout, rarely exceeding 3 per cent.

In addition, all three countries impose special excise taxes (and custom duties) on numerous other commodities. In the United States and Canada, this group supplies about 40 per cent of the total sales tax yield, but less than 20 per cent in the United Kingdom where many of the items come under the higher rates of the purchase tax. A rate comparison again shows the Canadian rates to be higher in most cases, particularly if allowance is made for the fact that in many cases the Canadian excise rates apply in addition to the 8 per cent sales tax rate. On the whole, it is clear that the level of sales and excise taxation--as that of income taxation--is substantially higher in the United Kingdom and Canada than in the United States.

* * * * *

In evaluating the conclusions reached in this paper, it should be kept in mind that taxation is only one part of war finance and that the adequacy of the tax effort must be measured against the need for curtailing inflationary pressures. Few would hold that inflationary pressures here are less serious than in the two other countries, yet, as we have seen, the tax effort in the United States falls far behind that of the United Kingdom and Canada.

Notes to Tables

Table I.

Item 1. Figures for fiscal years 1939-40 through 1942-43 from the Department of Commerce. Figure for 1943-44 is estimated.

Item 2. See preceding note.

Item 3. Federal tax receipts from Treasury Bulletin and Revised Budget Estimate of Aug., 1943. State tax receipts from Department of Commerce, State Finances; figure for 1943-44 is estimated. Local tax receipts estimated on basis of Department of Commerce, Financing Federal, State and Local Governments, 1941.

Item 4. Figures for fiscal years 1939-40 through 1942-43 from Treasury Bulletin. Figure for 1943-44 from Revised Budget Estimate of August 1, 1943.

Item 5. U. S. Department of Commerce definition. Estimated on basis of data in British White Paper on War Finance for 1943 (Cmd. 6436) and The Economist, April 24, 1943.

Item 6. See preceding note.

Item 7. Central Government tax receipts from annual financial statements of the Chancellor of the Exchequer and British Budget for 1943-44. Local taxes (composed entirely of rates on property) from British White Paper on War Finance for 1943.

Item 8. Figures for fiscal years 1936-39 through 1941-42 from annual financial statements of the Chancellor of the Exchequer. Figure for 1942-43 from British Budget for 1943-44.

Item 9. U. S. Department of Commerce definition. Estimated on basis of data in the Financial Post, April 17, 1943, publications of the Dominion Bureau of Statistics, Annual Report of the Bank of Canada, February 8, 1943, and Monthly Review of the Bank of Nova Scotia, June, 1941.

Item 10. See preceding note.

Item 11. Central Government tax receipts from Appendix to the Budget, 1943-44. Provincial and municipal tax receipts from various issues of the Bank of Canada's Statistical Summary.

Item 12. Figures from Appendix to the Budget, 1943-44.

Table II.

Item 1. Includes taxes on personal income, employees' contributions under social insurance programs, gift taxes, and estate or succession taxes.

Item 2. Includes taxes on corporate income and on excess profits. The capital stock tax is included for the United States and the National Defense Contribution for the United Kingdom.

Item 3. Includes sales taxes, excise taxes, custom duties, employers' contributions to social security programs, and other miscellaneous taxes. For the United Kingdom, compulsory contributions for War Risk Insurance premiums and contributions under the business scheme of the War Damage Act are included.

Item 4. Includes compulsory contributions under the property scheme of the War Damage Act in the United Kingdom.

Table III.

Item 1. Includes Federal income tax under the Revenue Act of 1942, net Victory tax, and New York State income tax. Maximum earned income credit is given. Victory tax liability is computed on the basis of a gross income, assumed to be 110 per cent of the net income shown in the left column.

Item 2. Liabilities under prevailing rates effective for income earned during the fiscal year 1942-43. Maximum earned income credit is given.

Item 3. Liabilities are computed on the basis of the Income War Tax Act of 1942. Income in excess of \$30,000 is assumed to be investment income.

Table IV.

Item 1. In order to make tax liabilities in the United States and Canada comparable with those in the United Kingdom, liabilities for the United States and Canada must be increased to allow for the taxpayer's share in the corporation income tax. The excess profits tax, which is similar in the three countries need not be considered here. The adjustment involves the following steps:

1. For the United States, we begin by increasing net income for income tax purposes by the extent to which dividend income would have been greater if there were no corporation tax. It is assumed that the corporation would have increased dividend distribution by the amount of tax allocable to dividends. For this purpose, the amount of dividends (after corporation tax) received at various income levels was estimated on the basis of Statistics of Income for 1941. Each dollar of dividends was regarded as that percentage (60%) of dividends before the corporation tax which corresponds to the corporate tax rate (40%) and was blown up to 100 per cent. Net income including dividends before the corporation tax (column 1) is obtained by adding the difference between dividends before tax and dividends after tax to net income for income tax purposes (column 3).

The difference between dividends before tax and dividends after tax thus derived equals the amount of corporation tax allocated to the individual's dividends (column 2). This amount must be added to the personal income tax (column 4) levied on personal income tax net income (column 3) to derive the total tax liability (column 5) which can then be charged against the total income.

2. For Canada, we begin with the same total net incomes including dividends before corporation income tax as derived for the United States (column 1). Also, we assume the same ratio of dividends before corporation tax to the total income. The individual's share of the corporation tax is then computed at 30 per cent (the Canadian rate) of dividends before corporation tax (column 2). Subtracting this amount from total net income, we obtain personal income tax net income (column 3). The total tax is then obtained by adding the personal income tax on that income (column 4) and the individual's share of the corporation tax. (In computing the 4 per cent surtax on invested income under the personal income tax, the ratio of earned to unearned income at various levels was estimated on the basis of Statistics of Income for 1941.)

No specific assumptions have been made so far regarding the extent to which corporate income is distributed. If it is assumed that the entire income is distributed, nothing need be added. If we assume that part of the corporate income is retained forever, the corporate income tax in the United States and in Canada, and the withholding tax in the United Kingdom become the only tax paid. The taxpayer in the United Kingdom is somewhat worse off in this instance since the rate of his withholding is higher than the corporate rates in the other two countries. If it is assumed that the retained income will be distributed at a later date, the larger percentage of income received in the form of dividends would be reflected in a greater upward adjustment of the personal income tax.

Table V.

- Item 1. Liabilities under Federal and New York State income taxes.
- Item 2. Liabilities under Finance Act, 1939 and Finance Act, 1942.
- Item 3. Liabilities under Dominion Income War Tax Act as amended through first session of 1939 and Province of Ontario income taxes for 1939. Liabilities for 1943 are for Dominion income taxes under the Income War Tax Act as amended to June 1, 1943 only, since the Provinces have surrendered this tax to the Dominion for the duration of the war.

Table VI.

- Item 1. Employers' contributions under social insurance programs. The United States' program includes old-age insurance and unemployment insurance. The United Kingdom program includes old-age, unemployment, and health insurance. Canada has only an unemployment insurance plan. Figures for the fiscal year 1944 for the United States and for the fiscal year 1943 for the United Kingdom and Canada are estimated.
- Item 2. Includes compulsory contributions for War Risk Insurance and for property and business schemes under the War Damage Act. Estimated on basis of data in British White Paper on War Finance.
- Item 3. Figures for the fiscal year 1944 for the United States are estimated.
- Item 4. Same as item 3 for Table II.