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CHAPTER 2

The Findings for 1950

This chapter presents and analyzes the findings for 1950 in terms of the previously described measures related to the differential income tax on net corporate earnings and the total income of stockholders. With the findings for this one year the broad pattern of the differentials can be laid out, and, in conjunction with this, a detailed explanation of the methods used in the study illustrated by reference to a particular body of data can be developed. Moreover, since the study covers a number of years, estimates of the differential tax burden for one of them will serve as a basis for comparative study of the period as a whole and of selected years, and for an analysis of the effect of changes in the variables that determine the degree of over- or undertaxation. The year chosen, 1950, is the most recent for which complete data were available when this analysis was in work. Chapter 3 deals with variations in the differentials and their characteristics in several other years, and over the period 1940 through 1952 as a whole. Chapter 7 analyzes the effect of the relief provisions introduced in 1954.
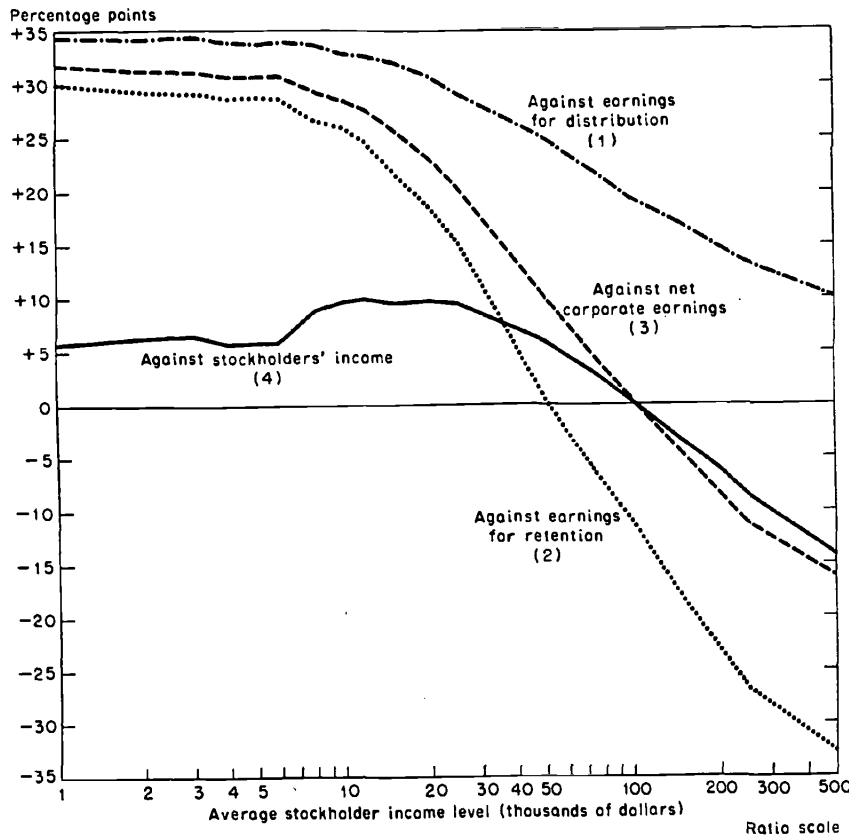
DIFFERENTIALS FOR 1950

How heavy was the differential taxation of net corporate earnings and of stockholder income? What did the picture look like in 1950? Chart 1 summarizes the answer in terms of the four selected measures. The reader is reminded that the results are for "average" stockholders representing the aggregate experience in each stockholder income class, that the values plotted are those obtained from variant 2 of our standard measures, and that the income of stockholders includes their pro rata share of pre-tax corporate earnings. The marginal rate schedules for joint and separate returns showed substantial differences, except at the two extremes of the income range, because of the income splitting permitted married stockholders. Therefore, the differentials for each type of return were computed separately, and weighted averages were struck for plotting the chart.

Examination of line 1—*the differential against earnings for distribution*—reveals that the double taxation of distributed earnings was substantial but became steadily less severe as stockholder income rose. At the bottom of the taxable stockholder income scale, earnings made for distribution to stockholders were subject to a tax more than 34 percentage points higher than would have been due under the personal

income tax alone. At the $25,000 stockholder income level the net extra burden averaged about 29 percentage points, and at the top of the stockholder income range plotted on the chart ($500,000) it was only 10 per cent. The higher the stockholder income level the lower the differential against earnings for distribution.

CHART 1—Differentials, 1950

Percentage points

Average stockholder income level (thousands of dollars)

Ratio scale

Against earnings for distribution (1)

Against net corporate earnings (3)

Against stockholders' income (4)

Against earnings for retention (2)

While *the differential against earnings for retention* (line 2) follows the same general pattern, it is lower at all income levels, the difference becoming very marked over the upper portion of the stockholder income array. Starting at 30 per cent for the lowest income class, it falls rapidly to only 15 per cent at the $25,000 mark, above which the burden changes to a benefit increasing to a differential of –33 per cent at the top of the stockholder income scale. At this level ($500,000) the earnings for retention component of stockholders' income was

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subject to a tax liability 33 percentage points *less* than would have been the case had it been reached promptly and in full by the personal income tax alone. It appears then, that on their share of earnings for retention some stockholders were overtaxed and others were undertaxed to significant degrees. The inversion from over- to undertaxation occurred, on average, at just over the $50,000 stockholder income.

The weighted average of these two measures, *the differential against net corporate earnings,* traces the same general path over the income range as the differentials that comprise it, and falls between them (line 3). Reflecting the greater absolute magnitude of earnings for retention, it lies closer to line 2 than line 1.[1] Over most of the income scale the net corporate earnings component of stockholders' income was overtaxed, but for stockholders higher up the income pyramid undertaxation occurred. The heaviest extra burden lies on the lower stockholder income levels ($1,000 to $10,000)—between 32 and 29 percentage points. Above $10,000 the differential falls rapidly, reaching 0 at about $100,000 and a low point of –16 per cent at $500,000. Thus the substantial over- or undertaxation found on net corporate earnings depends on the stockholder's income level.

So far, by use of the first three measures, our inquiry has disclosed that the net corporate earnings component of stockholder income was subject to a tax differential, which means that total stockholder income was either over- or undertaxed. How much heavier or lighter was the effective tax rate for stockholders than the rate would have been if their income (including their full pro rata share of net corporate earnings) had been reached by the personal income tax alone?[2] (The personal income tax is used as the benchmark in this connection and for determining the other differentials also because it presumably measures the community's consensus as to the rates of income taxation appropriate at different income levels.)

The answer is provided by *the differential against stockholders' income,* line 4 on the chart. It appears that the majority of stockholders, having incomes ranging from $1,000 to $50,000, were liable to an appreciable extra income tax of from 6 to 10 percentage points. Those most severely affected were in the income range between $10,000 and $25,000 with a maximum differential of 10 points. But near the top of the income scale a different picture emerges, with the differential de-

[1] In 1950, earnings for distribution totaled $11 billion, earnings for retention $19 billion. (These figures are the totals for taxable stockholders only.)

[2] Another way of putting the question is this: How much heavier (or less onerous) is the combined corporate-personal income tax rate on stockholders at a given income level than the personal income tax on nonstockholders with a similar amount of income?
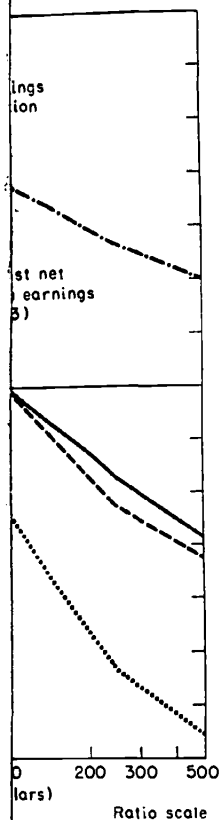
clining very rapidly after the $50,000 point and reaching 0 at a little over $100,000. Stockholders with incomes above this point enjoyed a tax benefit that became relatively more important as income increased. Thus, at the $500,000 imputed gross income level we find the combined corporate-personal income tax liability to be 14 percentage points lower than would have been the case without the corporate tax and with stockholders' full pro rata share of net corporate earnings subject only to the personal income tax.

Instead of falling constantly, as income rises, the differential against stockholders tends first to increase over a portion of the income range and then, after reaching a maximum between the $10,000 to $20,000 level, to fall constantly thereafter. Why this difference in behavior compared with the other three differentials? It occurs because of uneven variations in the proportion of imputed gross income that is derived from corporate earnings. For the value of the differential against stockholders is equal to that fraction of the differential against net corporate earnings that net corporate earnings represent of imputed gross income. In general this fraction tends to rise with income. (This is why we find the solid line on the chart lying closer to the dashed line at the higher income levels.) Over the stockholder income span from $6,000 to $20,000, the rise in the proportion of net corporate earnings to imputed gross income more than compensates for the fall in the differential against net corporate earnings, thereby causing the product—the differential against stockholders—to rise over this range.

The findings apply to average stockholders and figures on how many fell in the over- and undertaxed categories cannot be obtained directly from these data. However, from a closely related set of procedures (discussed in Chapter 6) we can get some idea of the number of stockholders in each of these categories. For 1950 the estimate is about 3.3 million double-taxed stockholders. Slightly under 3.2 million paid a higher combined corporate-personal income tax than would have been due under the personal income tax alone and were, in the sense adopted here, overtaxed. On the other hand, some 4 per cent, about 130,000 were undertaxed.[3] For the latter, a higher tax liability would have occurred if the corporate tax had been eliminated and their share of corporate earnings had been taxed in full as personal income. While small as a proportion of all stockholders, the undertaxed group

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[3] These estimates, while germane, are not strictly comparable with the variant 2 values of the differentials that have been used in discussing the findings for 1950. For in deriving the number of over- and undertaxed stockholders, no account was taken of the future capital gains tax liability on reinvested earnings of 1950. An adjustment on this score would lead to somewhat larger overtaxed and smaller undertaxed totals than those given in the text.

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assumes greater importance when its share of all double-taxed net corporate earnings is measured. Forty four per cent of net corporate earnings was undertaxed.

The findings plotted in Chart 1 are the averages for joint and separate returns taken together. Table 3 shows how the differentials varied with the type of return filed by stockholders at the same income level. The differentials are higher for joint returns than for separate returns, because the marginal rate schedule applying to married persons who file jointly was lower than for separate returns over most of the taxable income scale. For 1950, assuming the proportion of separate to joint returns to be the same for stockholders as for all taxpayers, it is estimated that about 786,000 taxable dividend recipients filed separate returns, and about 2,511,000 filed joint returns.

The findings for 1950 are based on the tax treatment of corporate earnings then in effect. With the Internal Revenue Code of 1954 modifications of the procedure for taxing dividends were introduced —an exclusion of the first $50 of dividends ($100 for joint returns) and a personal income tax credit equal to 4 per cent of dividends over and above the amount excluded. How this dividend tax relief would have changed the results for 1950 is considered in Chapter 7.

THE FINDINGS IN DETAIL

Up to this point the discussion has dealt with the findings, presented directly with little elaboration. But the results are the offspring of a long line of assumptions and choices between possible procedures. A detailed discussion of how the findings were derived will serve to point up the specific features of the selected method and to provide a sense of the magnitudes involved. But it will do more. It will also help the reader to a fuller understanding of our measures and their limitations. The derivation of the differentials on joint returns for 1950 (which were over three-fourths of the total number of taxable returns filed by stockholders) will be discussed with reference to the data of Table 4.[4]

In column 1 are listed the nineteen "average" stockholder income levels selected as representing the whole range of stockholder income.[5]

[4] A similar set of computations was undertaken for separate returns in arriving at the differentials discussed earlier in this chapter.

[5] These same nineteen levels were used for every year in the period 1940-1952 (except 1942 and 1943 for which the data necessary for our calculations were not tabulated). Of course, there were stockholders with over $500,000 of imputed gross income, but little would have been gained by adding several more income levels. What happens at the top of the income range is indicated adequately by the $500,000 stockholder income.

TABLE 3

Comparison of Differentials for Separate and Joint Returns, Variant 2 Values, 1950
(per cent)

AVERAGE STOCKHOLDER IMPUTED GROSS INCOME ($000's)	DIFFERENTIAL AGAINST:							
	Earnings for distribution		Earnings for retention		Net corporate earnings		Stockholder imputed gross income	
	Separate	Joint	Separate	Joint	Separate	Joint	Separate	Joint
1	34.3	a	30.0	a	31.7	a	5.7	a
3	34.3	34.3	29.1	29.1	31.1	31.1	6.5	6.5
5	33.0	34.0	26.9	29.4	29.2	31.2	5.7	6.1
8	31.6	34.1	23.4	27.1	26.5	29.8	8.2	9.2
10	31.6	33.1	20.9	27.0	25.1	29.3	8.6	10.2
15	28.5	32.7	13.5	23.3	19.3	26.9	7.3	10.1
25	23.9	30.0	1.2	17.2	10.0	22.2	4.6	10.2
50	18.7	25.8	—10.3	1.9	1.2	11.2	0.5	6.7
100	14.8	19.8	—22.7	—9.7	—8.2	1.7	—5.8	1.2
250	8.6	14.0	—32.9	—25.9	—16.9	—10.5	—12.8	—8.0
500	7.1	10.6	—34.2	—32.6	—18.2	—15.9	—15.9	—14.0

a No joint returns at this income level.

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TABLE 4

Derivation of the Differentials, 1950

(joint returns)

DERIVATION OF THE TAXABLE INCOME EQUIVALENT OF ADJUSTED GROSS INCOME

AVERAGE STOCKHOLDER IMPUTED GROSS INCOME ($000's) (1)	Corporate earnings as a per cent of imputed gross income (2)	Net corporate earnings component (1) × (2) (3)	Other income (1) − (3) (4)	Dividends[a] (3) ÷ 4.4158 (5)	Adjusted gross income component (4) + (5) (6)	Taxable income equivalent[b] (7)
1	18.0%	$ 180	$ 820	$ 41	$ 861	
2	20.2	404	1,596	91	1,687	$ 304
3	20.9	627	2,373	142	2,515	601
4	18.9	756	3,244	171	3,415	1,124
5	19.5	975	4,025	221	4,246	1,711
6	19.4	1,164	4,836	264	5,100	2,438
8	30.9	2,472	5,528	560	6,088	3,330
10	34.8	3,480	6,520	788	7,308	4,348
12	36.0	4,320	7,680	978	8,658	5,532
15	37.6	5,640	9,360	1,277	10,637	7,308
20	42.3	8,460	11,540	1,916	13,456	9,890
25	46.2	11,550	13,450	2,616	16,066	12,403
50	59.7	29,850	20,150	6,760	26,910	22,281
75	68.2	51,150	23,850	11,583	35,433	30,189
100	70.0	70,000	30,000	15,852	45,852	38,837
150	71.6	107,400	42,600	24,322	66,922	56,214
200	72.8	145,600	54,400	32,973	87,373	70,772
250	76.1	190,250	59,750	43,084	102,834	81,959
500	88.1	440,500	59,500	99,755	159,255	118,963

Source: Basic data used for computations from *Statistics of Income for 1950*, Parts 1 and 2.

a Dividends for each income level were obtained by dividing the net corporate earnings component by 4.4158 which is the 1950 ratio of net corporate earnings to dividends.

b The taxable income equivalent is derived by interpolation from a plot of the relation of taxable income to adjusted gross income, both as tabulated in *Statistics of Income*. There is no entry in this column (and in the rest of the table) for the $1,000 average stockholder imputed gross income because it had no taxable income equivalent. *(Table continues on next pages)*

In this connection, all of net corporate earnings is taken to be the measure of personal income from corporate activity. To obtain imputed gross income their pro rata share of corporate income taxes and undistributed profits was added to stockholders' adjusted gross income (which includes dividends), and stockholders were rearrayed in the income classes in which they fell on imputation. The proportion of imputed gross income accounted for by net corporate earnings was computed, class averages were struck, and by interpolation the values in column 2 were obtained. These percentages apply to the average

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a No joint returns at this income level.

Table 4, *continued*

DIFFERENTIAL AGAINST EARNINGS FOR DISTRIBUTION

AVERAGE STOCK-HOLDER IMPUTED GROSS INCOME ($000's) (1)	Corporation income tax on earnings for distribution^c (2) × 0.1594 (8)	Complement of marginal rate of personal income tax applicable to corporate tax payment (9)	Net extra burden on earnings for distribution^d (8) × (9) (10)	Earnings for distribution^e (5) + (8) (11)	Differential against earnings for distribution^f [(10)÷(11)]×100 (12)
1					
2	$ 64	82.60%	$ 53	$ 155	34.2%
3	100	82.60	83	242	34.3
4	121	82.60	100	292	34.2
5	155	82.60	128	376	34.0
6	186	82.60	154	450	34.2
8	394	82.60	325	954	34.1
10	555	79.98	444	1,343	33.1
12	689	79.98	551	1,667	33.1
15	899	79.09	711	2,176	32.7
20	1,349	76.34	1,030	3,265	31.5
25	1,842	72.70	1,339	4,458	30.0
50	4,759	62.51	2,975	11,519	25.8
75	8,155	54.32	4,430	19,738	22.4
100	11,161	47.85	5,341	27,013	19.8
150	17,124	42.09	7,208	41,446	17.4
200	23,215	37.33	8,665	56,188	15.4
250	30,334	33.92	10,288	• 73,418	14.0
500	70,234	25.66	18,019	169,989	10.6

c The multiplier was derived as follows: the dividend ratio of 0.369702 of after-tax earnings of net income corporations multiplied by the tax proportion of 0.431270 of the income of deficit and income corporations combined equals 0.1594, more precisely, 0.159441. Corporate income tax on earnings for distribution, column 8, is the product of net corporate earnings (column 3) and 0.159441. Seemingly roundabout, this procedure was more convenient in computation. It is equivalent to applying a tax rate of 41.317 per cent to earnings for distribution.

d The extra burden on earnings for distribution is derived by multiplying the corporate tax on earnings for distribution (column 8) by the complement of the relevant marginal rate (or weighted average of marginal rates) of personal income tax at each income level (column 9). The rates used in deriving column 9 are those that would apply to an increment of the amount in column 8 to a taxable income of the size given in column 7.

e The amount of earnings for distribution at each stockholder income level (column 11) can be computed from the data in a number of ways, but most simply by adding dividends (column 5) and the corporate tax paid on this portion of corporate earnings (column 8).

f The differential against earnings for distribution is derived by computing column 10 as a per cent of column 11.

stockholder at each income level, and, therefore, represent the composite of experience. In each imputed income class we have stockholders with varying amounts of adjusted gross income. For example, in the imputed income class $5,000 and under $7,000, are stockholders

Table 4, *continued*

DIFFERENTIAL AGAINST EARNINGS FOR RETENTION, VARIANT 2

AVERAGE STOCK-HOLDER IMPUTED GROSS INCOME ($000's) (1)	Earnings for retention (3) − (11) (13)	Corporation income tax on earnings for retention^g (3) × 0.2718 (14)	Taxable income plus corporate tax on earnings for distribution (7) + (8) (15)	Marginal rate of personal income tax applicable to earnings for retention (16)	Potential personal income tax on earnings for retention (13) × (16) (17)	Current extra burden on earnings for retention^h (14) − (17) (18)

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rnings for tribution e (5) + (8) (11)	Differential against earnings for distribution f [(10) ÷ (11)] × 100 (12)
$ 155	34.2%
242	34.3
292	34.3
376	34.0
450	34.2
954	34.1
1,343	33.1
1,667	33.1
2,176	32.7
3,265	31.5
4,458	30.0
11,519	25.8
19,738	22.4
27,013	19.8
41,446	17.4
56,188	15.4
73,418	14.0
169,989	10.6

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DIFFERENTIAL AGAINST EARNINGS FOR RETENTION, VARIANT 2

AVERAGE STOCK-HOLDER IMPUTED GROSS INCOME ($000's) (1)	Earnings for retention (3) − (11) (13)	Corporation income tax on earnings for retentions (3) × 0.2718 (14)	Taxable income plus corporate tax on earnings for distribution (7) + (8) (15)	Marginal rate of personal income tax applicable to earnings for retention (16)	Potential personal income tax on earnings for retention (13) × (16) (17)	Current extra burden on earnings for retention b (14) − (17) (18)
1						
2	$ 249	$ 110	$ 368	17.40%	$ 43	$ 67
3	385	170	701	17.40	67	103
4	464	206	1,245	17.40	81	125
5	599	265	1,866	17.40	104	161
6	714	316	2,624	17.40	124	192
8	1,518	672	3,724	19.57	297	375
10	2,137	946	4,903	20.02	428	518
12	2,653	1,174	6,221	21.22	563	611
15	3,464	1,533	8,207	23.66	820	713
20	5,195	2,300	11,239	27.06	1,406	894
25	7,092	3,140	14,245	30.72	2,179	961
50	18,331	8,114	27,040	46.97	8,610	−496
75	31,412	13,904	38,344	55.10	17,307	−3,403
100	42,987	19,028	49,998	59.89	25,744	−6,716
150	65,954	29,194	73,338	67.19	44,315	−15,121
200	89,412	39,577	93,987	72.15	64,507	−24,930
250	116,832	51,715	112,293	76.09	88,892	−37,177
500	270,511	119,739	189,197	82.74	223,815	−104,074

g The corporate tax on earnings for retention was obtained by multiplying column 3 by 0.2718, or, more precisely, 0.271829. This multiplier is the product of the ratio of retained earnings to the after tax income of net income corporations—0.630298—and the proportion—0.431270—that taxes represented of the net corporate earnings of income and deficit corporations combined. This was the simplest method for computing column 14. It is equivalent to applying a rate of 44.264 per cent to earnings for retention.

h The extra burden on earnings for retention equals the differences between the actual corporate tax liability and the liability that would apply under the personal income tax.

Table 4, continued

DIFFERENTIAL AGAINST EARNINGS FOR RETENTION, VARIANT 2, continued

| AVERAGE STOCK-HOLDER IMPUTED GROSS INCOME ($000's) (1) | Retained corporate earnings (13) − (14) (19) | Annual present value of taxable realized capital gains[1] (19) × 0.04178 (20) | Marginal rate assumed applicable in | | | | | Present value of future capital gains tax on retained earnings of 1950 20[(21) + (22) + (23) + (24) + (25)] (26) | Total extra burden on earnings for retention (18) + (26) (27) | Differential against earnings for retention [(27) ÷ (13)] × 100 (28) |
			1951 (21)	1952 (22)	1953 (23)	1954 (24)	1955 (25)			
1										
2	$ 139	$ 6	20.4	22.2	22.2	20.0	20.0%	$ 6	$ 73	29.3%
3	215	9	20.4	22.2	22.2	20.0	20.0	9	112	29.1
4	258	11	20.4	22.2	22.2	20.0	20.0	12	137	29.5
5	334	14	20.4	22.2	22.2	20.0	20.0	15	176	29.4
6	398	17	20.4	22.2	22.2	20.0	20.0	18	210	29.4
8	846	35	20.4	22.2	22.2	20.0	20.0	37	412	27.1
10	1,191	50	22.4	24.6	24.6	22.0	22.0	58	576	27.0
12	1,479	62	22.4	24.6	24.6	22.0	22.0	72	683	25.7
15	1,931	81	22.4	24.6	24.6	22.0	22.0	94	807	23.3
20	2,895	121	27.0	29.0	29.0	26.0	26.0	166	1,060	20.4
25	3,952	165	30.0	34.0	34.0	30.0	30.0	261	1,222	17.2
50	10,217	427	39.0	42.0	42.0	38.0	38.0	850	354	1.9
75	17,508	731	48.0	52.0	52.0	47.0	47.0	1,798	−1,605	−5.1
100	23,959	1,001	50.0	52.0	52.0	50.0	50.0	2,542	−4,174	−9.7
150	36,760	1,536	50.0	52.0	52.0	50.0	50.0	3,901	−11,220	−17.0
200	49,835	2,082	50.0	52.0	52.0	50.0	50.0	5,288	−19,641	−22.0
250	65,117	2,721	50.0	52.0	52.0	50.0	50.0	6,911	−30,266	−25.9
500	150,772	6,299	50.0	52.0	52.0	50.0	50.0	16,000	−88,074	−32.6

1 Explanation of the derivation of this multiplier is given in detail in the text. Briefly it is: 0.2412 (the relevant proportion of realized capital gains reported as taxable) × 0.866 (the present value of the future value of capital gains) = 0.2089 ÷ 5 (years over which the gains would be realized) = 0.04178.

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Table 4, *continued*

AVERAGE STOCK-HOLDER IMPUTED GROSS INCOME ($000's) (1)	Extra burden on net corporate earnings (10) + (27) (29)	Differential against net corporate earnings [(29) ÷ (3)] × 100 (30)	Differential against stockholder imputed gross income [(29) ÷ (1)] × 100 (31)
	DIFFERENTIALS AGAINST NET CORPORATE EARNINGS AND STOCKHOLDER IMPUTED GROSS INCOME		
1			
2	$ 126	31.2%	6.3%
3	195	31.1	6.5
4	237	31.3	5.9
5	304	31.2	6.1
6	364	31.3	6.1
8	737	29.8	9.2
10	1,020	29.3	10.2
12	1,234	28.6	10.3
15	1,518	26.9	10.1
20	2,090	24.7	10.4
25	2,561	22.2	10.2
50	3,329	11.2	6.7
75	2,825	5.5	3.8
100	1,167	1.7	1.2
150	—4,012	—3.7	—2.7
200	—10,976	—7.5	—5.5
250	—19,978	—10.5	—8.0
500	—70,055	—15.9	—14.0

who formerly fell in adjusted gross income classes $600 and under $1,000, $1,000 and under $1,500, $1,500 and under $2,000, $2,000 and under $2,500, $2,500 and under $3,000, $3,000 and under $4,000, $4,000 and under $5,000, $5,000 and under $7,000. After imputation they are all in the same income class, but their imputed gross income contains very different proportions of net corporate earnings. The entries in column 2 come from interpolations based on the average value in each class. Note that at the lower income levels the ratio of net corporate earnings to imputed gross income is fairly constant, hovering around 20 per cent. From about $8,000 on up, however, it becomes a rapidly rising function of income size. At the top of the income scale, on average, close to 90 per cent of stockholder total income comes from this one source.

Columns 3 and 4 are obtained simply as indicated in the table. Net corporate earnings were 4.4158 as large as dividends in 1950. The entries in column 3 were divided by this figure to obtain the dividend

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(rotated table, left margin)

—5.1	—1,605	1,798	47.0	47.0	52.0	52.0	48.0	731	17,508	75
—9.7	—4,174	2,542	50.0	50.0	52.0	52.0	50.0	1,001	23,959	100
—17.0	—11,220	3,901	50.0	50.0	52.0	52.0	50.0	1,536	36,760	150
—22.0	—19,641	5,288	50.0	50.0	52.0	52.0	50.0	2,082	49,835	200
—25.9	—30,266	6,911	50.0	50.0	52.0	52.0	50.0	2,721	65,117	250
—32.6	—88,074	16,000	50.0	50.0	52.0	52.0	50.0	6,299	150,772	500

1 Explanation of the derivation of this multiplier is given in detail in the text. Briefly it is: 0.2412 (the relevant proportion of realized capital gains reported as taxable) × 0.866 (the present value of the future value of capital gains) = 0.2089 ÷ 5 (years over which the gains would be realized) = 0.04178.

Table 4, continued

NET CORPORATE TAX

AVERAGE STOCK-HOLDER IMPUTED GROSS INCOME ($000's) (1)	Base for net corporate tax on earnings for retention^l (15) + (19) (32)	Complement of marginal rate of personal income tax applicable to corporate tax payment^k (33)	Net corporate tax on earnings for retention^l (14) × (33) (34)	Net corporate tax on net corporate earnings (10) + (34) (35)	Net corporate tax as a per cent of net corporate earnings [(35) ÷ (3)] × 100 (36)	Net corporate tax as a per cent of stockholder income [(35) ÷ (1)] × 100 (37)
1						
2	$ 507	82.60%	$ 91	$ 144	35.6	7.2
3	916	82.60	140	223	35.6	7.4
4	1,503	82.60	170	270	35.7	6.8
5	2,200	82.60	219	347	35.6	6.9
6	3,022	82.60	261	415	35.7	6.9
8	4,570	79.98	537	862	34.9	10.8
10	6,094	79.98	757	1,201	34.5	12.0
12	7,700	77.26	907	1,458	33.8	12.2
15	10,138	76.34	1,170	1,881	33.4	12.5
20	14,134	72.00	1,656	2,686	31.7	13.4
25	18,197	67.52	2,120	3,459	29.9	13.8
50	37,257	49.51	4,017	6,992	23.4	14.0
75	55,852	42.45	5,902	10,332	20.2	13.8
100	73,957	36.99	7,039	12,380	17.7	12.4
150	110,098	29.94	8,742	15,950	14.9	10.6
200	143,822	24.44	9,673	18,338	12.6	9.2
250	177,410	19.94	10,313	20,601	10.8	8.2
500	339,969	16.11	19,285	37,304	8.5	7.5

j This tax base is the sum of stockholder taxable income plus the corporate tax on earnings for distribution (column 15) and retained corporate earnings (column 19).

k The rates in this column are the complements of the personal rates that would apply to the corporate tax on earnings for retention (column 14).

l Column 34 (column 14 × column 33) represents the excess of the actual corporate tax payment over the personal tax that would have been due on an increment to stockholder income (column 32) equal in size to the corporate tax on earnings for retention.

AVERAGE STOCK-HOLDER IMPUTED GROSS INCOME ($000's) (1)	Marginal rate of personal income tax applicable to retained earnings^m (38)
1	
2	17.40%
3	17.40
4	17.40
5	17.40
6	17.40
8	19.15
10	20.02
12	20.02
15	23.66
20	26.36
25	29.33
50	44.17
75	53.15
100	57.33
150	64.92
200	69.44
250	72.95
500	81.82

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Table 4, *concluded*

NET INCOME TAX SAVING

AVERAGE STOCK-HOLDER IMPUTED GROSS INCOME ($000's) (1)	Marginal rate of personal income tax applicable to retained earnings^m (38)	Potential personal income tax on retained earnings^n (19) × (38) (39)	Net income tax saving on retained earnings^o (39) — (26) (40)	Net tax saving as a per cent of net corporate earnings [(40) ÷ (3)] × 100 (41)	Net tax saving as a per cent of stockholder income [(40) ÷ (1)] × 100 (42)
1					
2	17.40%	$ 24	$ 18	4.5	0.9
3	17.40	37	28	4.5	0.9
4	17.40	45	33	4.4	0.8
5	17.40	58	43	4.4	0.9
6	17.40	69	51	4.4	0.9
8	19.15	162	125	5.1	1.6
10	20.02	238	180	5.2	1.8
12	20.02	296	224	5.2	1.9
15	23.66	457	363	6.4	2.4
20	26.36	763	597	7.1	3.0
25	29.33	1,159	898	7.8	3.6
50	44.17	4,513	3,663	12.3	7.3
75	53.15	9,306	7,508	14.7	10.0
100	57.33	13,735	11,193	16.0	11.2
150	64.92	23,864	19,963	18.6	13.3
200	69.44	34,603	29,315	20.1	14.7
250	72.95	47,506	40,595	21.3	16.2
500	81.82	123,362	107,362	24.4	21.5

^{m} The marginal rates of personal income tax that would be applicable (column 38) to retained corporate earnings (column 19) considered as an increment to taxable income plus the corporate tax on earnings for distribution (column 15).

^{n} The potential personal income tax liability on retained earnings was computed (column 39) by multiplying retained corporate earnings (column 19) by the marginal rates of personal income tax (column 38).

^{o} From the potential personal income tax liability on retained earnings (column 39) was subtracted the present value of the future capital gains tax liability on retained earnings (column 26) to arrive at the net income tax saving on reinvested earnings (column 40).

component of stockholders' income, column 5. Adding columns 4 and 5 furnishes column 6—the adjusted gross income component at each average stockholder income level.

From the relation that obtained for all personal income taxpayers was estimated the taxable income equivalent (for normal and surtax) of stockholders' adjusted gross income (column 7). This furnished the base from which to pick off the relevant marginal rates of personal income tax. For, at every step we compare the actual tax liability with

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	18,338	
	20,601	
	37,304	

	24.44	
	19.94	
	16.11	

	9,673	
	10,313	
	19,285	

	143,822	
	177,410	
	339,969	

200	
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^{j} This tax base is the sum of stockholder taxable income plus the corporate tax on earnings for distribution (column 15) and retained corporate earnings (column 19).

^{k} The rates in this column are the complements of the personal rates that would apply to the corporate tax on earnings for retention (column 14).

^{l} Column 34 (column 14 × column 33) represents the excess of the actual corporate tax payment over the personal tax that would have been due on an increment to stockholder income (column 32) equal in size to the corporate tax on earnings for retention.

the potential personal income tax liability, and this latter involves increments to taxable income and the tax rates applicable to them.

Differential against Earnings for Distribution

In the first chapter the extra burden on earnings for distribution was defined as the amount by which the corporate tax on earnings for distribution exceeds the personal tax that would have been due on an increment to taxable income equal in size to the corporate tax. Tabulated in column 8 is the corporate tax on earnings for distribution, obtained by multiplying column 2 by 0.159441. This is a roundabout method that minimized computing. Dividends comprised 0.369702 of after-tax earnings of net income corporations, while corporate tax liability came to 0.431270 of the income of deficit and income corporations combined. The product of these two ratios is 0.159441, which was applied directly to net corporate earnings to get the corporate tax on earnings for distribution.

In effect, the corporate tax was allocated between dividends and retained earnings to arrive at earnings for distribution and earnings for retention on the basis of the relative weights of dividends and retained earnings in the after-tax net income of income corporations. But this procedure, which implicitly assumes that all earnings out of which dividends were paid were subject to this year's corporate income tax, appears open to question since some dividends were distributed by deficit corporations, and, quite obviously out of earnings made in prior years. Little distortion is introduced on this score, however, for in 1950 less than 1 per cent of dividend payments were made by deficit corporations. (Comparable percentages characterize the other years of our study. In no case does the figure reach 3 per cent.) Therefore, even with large variations in effective rates of income tax from year to year, the earnings for distribution figure will be off to an insignificant degree. For example, from 1949 to 1950 the effective rate of corporate tax on earnings of income corporations rose by 7 percentage points—from 34.5 to 41.5. Yet if earnings for distribution had been computed on the assumption that all dividends of deficit corporations had been distributed from earnings taxed at the 1949 rate (a more refined method) the estimate would differ from that of earnings for distribution under the usual procedure by less than one-tenth of one per cent. Not a very serious matter.

The extra burden on earnings for distribution can be written as $C_eE - PC_eE$ (where C_eE equals the corporate tax and P the relevant marginal rate of personal income tax) or $C_eE (1 - P)$. In column 9 are listed the relevant $1 - P$ for increments the size of column 8 to

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each of the taxable incomes of column 7. The extra burden on earn-
ings for distribution appears in column 10. It is obtained by multi-
plying column 8 by column 9. The entries in column 10 indicate how
much more was taken from earnings made for distribution to stock-
holders because they were double taxed, than would have been due
if these earnings had been subject in full to the personal income tax
alone.

For a measure that permits comparability among income levels, the
absolute extra burden has been taken as a percentage of earnings for
distribution. The amount of earnings for distribution at each stock-
holder income level is found in column 11. It can be computed in
a number of ways, but most simply by adding columns 5 and 8.

Column 12—the differential against earnings for distribution—is
derived by dividing column 10 by column 11 and then multiplying
by 100. The evidence of column 12 is clear cut and unequivocal. At
every level of stockholder imputed gross income we find overtaxation
of earnings for distribution due to double taxation. Most worthy of
note is that, taken as an incremental effective rate (here called the
differential), the extra tax burden is a decreasing function of the size
of stockholder income. *The higher the stockholder's income level,
the lower the additional effective rate of tax.* In the discussion of
the conceptual framework of this analysis (see Chapter 1), the reason
for this relationship was given. In developing our formulas, it was
shown that the differential against the earnings for distribution com-
ponent of the income of stockholders is equal to $C_e (1 - P)$, where
C_e is equal to the effective rate of corporate tax and P the marginal
rate of personal income tax that would have applied to a personal
income increment equal to the corporate tax on earnings for distribu-
tion. Since C_e is the same at all stockholder income levels and P rises
with income, $C_e (1 - P)$, the differential against earnings for dis-
tribution, is a declining function of stockholder income. The corpora-
tion income tax on the distributed portion of net corporate earnings
was most burdensome for those at the lower income levels, least
burdensome for those at the top of the income scale. (Stockholders
with income below the taxable minimum are omitted, but they would
be subject to the heaviest extra burden).

So much for the distributed segment of net corporate earnings.
What about the undistributed part?

Differential against Earnings for Retention

The earnings for retention component of net corporate earnings is
defined as the difference between net corporate earnings (column 3)

and earnings for distribution (column 11). Tabulated in column 13, earnings for retention equal net corporate savings plus that portion of the corporate tax not allocated to dividends. In determining net corporate saving, the losses of deficit corporations were subtracted from the undistributed profits of net income corporations. In other words, for purposes of our investigation, not only the pro rata share of the earnings of corporations but also the proportionate share of deficits is imputed to stockholders in determining the amount of personal income derived from corporate activity. In 1950, earnings for retention were considerably greater than earnings for distribution; the ratio of the former to the latter came to about 1.7.[6]

The corporate tax on earnings for retention, column 14, was obtained by multiplying net corporate earnings (column 3) by 0.2718. Use of this multiplier minimized the necessary calculations, and is equivalent to applying a rate of 44.264 per cent to earnings for distribution. (See the explanation below the table.) This is higher than the effective rate of 41.317 per cent that was used in connection with earnings for distribution.[7] But this is as it should be. For the fraction of the total corporate tax to be allocated to undistributed earnings was determined on the basis of the data for net income corporations. But in computing net undistributed earnings, which together with the corporate tax component constitutes earnings for retention, the losses of deficit corporations are subtracted from the retained earnings of income corporations.

So far the actual corporate tax liability on earnings for retention has been measured. To determine the extra burden the benchmark figure—the potential personal income tax liability—must be computed. Column 15 lists for each class the base from which to start this computation—taxable income as defined for the personal income tax plus the corporate tax on earnings for distribution. Then, considering earnings for retention an addition to taxable income as tabulated in column 15, the marginal rates of personal income tax that would have applied are determined (column 16). Column 17, the potential personal income tax on earnings for retention, is the product of columns 13 and 16. If the full amount of earnings for retention had been distributed (or imputed to stockholders for personal income tax purposes) these figures show the ensuing increase in personal income tax liability.

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[6] In every year of our study except 1940 and 1941, earnings for retention exceeded earnings for distribution.

[7] Use of rounded figures causes the values in column 14 to diverge slightly from those that would have been obtained by use of exact figures.

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The difference between the actual corporate tax liability (column 14) and what would have been due under the personal income tax (column 17) constitutes the current extra burden on earnings for retention (column 18). This extra burden can be (and in most years of the study was) either positive or negative. For, depending on the stockholder's income level, the corporate rate will exceed the relevant personal marginal rate as in 1950 at incomes below $50,000, or fall short of it as at higher income levels.[8] Note that this is referred to as the current extra burden, but there is an additional consideration concerning the tax on earnings for retention.

INCREASED STOCK PRICES AND CAPITAL GAINS TAX ON STOCKHOLDERS RESULTING FROM RETENTION OF EARNINGS

When corporations retain earnings and share prices rise as a result, realization of this increment in value will lead to an increased capital gains tax. Should this not be included in the tax load on earnings for retention? The belief that it should leads to the question: how to compute it? Merely to raise some of the more relevant questions indicates the impossibility of arriving at even a fairly accurate answer. By how much do share prices rise? To what extent are the gains realized? How much of this realization is covered by taxable transactions? Over how long a period do the gains accrue? With all these imponderables involved, it should be clear that the figures in column 26 that constitute the estimated additional capital gains tax liability are not precise. They are no more than illustrative. But they are not misleading, for, while a number of arbitrary assumptions were made in their derivation, none of the assumptions seems unreasonable. If, at various points, a number of alternative assumptions had been chosen, the same general picture would have emerged.[9]

More specifically, starting with undistributed earnings (after corporation income taxes), the attempt was made to estimate: (1) to what extent these retentions could be expected to increase the price of stock; and (2) to what degree the personal income tax of stockholders would be increased because of the resulting realized capital gains. To estimate (1), findings of the Cowles Commission study of stock prices were used as the basis for assuming that 72 per cent of such reinvestment would be reflected in share values.[10] The procedures

[8] The exception is the one particular income level at which rates are equal.
[9] A test incorporating a number of alternative assumptions is reported on below.
[10] The 72 cents comes from a finding for the period 1870-1937 "that every $2.50 of earnings retained by a corporation has, on the average, been associated with an increase of $1.80 in the value of its stock." (Alfred Cowles 3rd and Associates, *Common Stock, Indexes 1871-1937*, Principia, 1938, p. 42.)

for arriving at (2) were more complicated. Since not all of capital gains are realized, and some realized gains are not taxable, it seemed reasonable to suppose that only two-thirds of the potential gains would show up on tax returns. It was assumed further that their realization would not begin until under the tax law they would be considered long-term gains, only half of which would be includible in taxable income. Therefore 0.2412 (i.e., the product of 0.72 × 0.67 × 0.5) of retained earnings after corporation income tax was considered to be the relevant proportion of realized capital gains that would show up on stockholders' tax returns. Further, it was supposed that these gains would be realized over a period of five years, representing for each year increments to stockholder taxable income (personal income tax definition) assumed to be the same as in 1950. This provided the basis for computing the future increment to personal income tax liability attributable to the reinvested earnings of 1950. Then, with 5 per cent as a reasonable rate of return on alternative investment opportunities open to stockholders and as the relevant rate for discounting, the present value of this future increment to personal income tax liability was estimated.

For convenience in computation this present value correction (i.e., the present value would be 0.866 of the future value) was applied to the proportion of realized capital gains estimated above as reported for tax purposes—0.2412. The result, 0.2089, was divided by 5, to cover the assumed realization of these capital gains evenly over a 5 year period. This provided the multiplier—0.04178—used in deriving column 20 from the figures in column 19 which are the undistributed (reinvested) earnings, obtained by subtracting column 14 from column 13. To these values was applied the multiplier 0.04178 to obtain the annual present value of taxable realized capital gains (under our assumptions) from 1951 through 1955. These figures comprise column 20.

On a further assumption—that stockholder taxable income from all other sources (personal income tax definition) in all of these years would be the same as in 1950—the marginal rate applicable in each of these years to the capital gains increment was determined. These rates are listed in columns 21 through 25. (The 50 per cent ceiling in 1951, 1954, and 1955, and the 52 per cent maximum in 1952 and 1953 stem from the alternative tax option, open to taxpayers who had net long-term capital gains.)

By multiplying the annual present value of taxable capital gains (column 20) successively by the marginal rate for each of the next five years (columns 21 through 25) and summing up the products,

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estimates were obtained of the present value of the increased future capital gains tax liability attributable to the reinvested earnings of 1950. This item, entered in column 26, constitutes an addition to the income tax load on earnings for retention.

Addition of columns 18 (the current extra burden) and 26 (the present value of the additional future extra burden) furnishes the total extra burden on earnings for retention (column 27). The future capital gains tax liability adjustment does not change the pattern; our conclusion stands, viz., the total extra burden on earnings for retention can be positive or negative depending on the income level of the stockholder. The higher the income level and the potential marginal rate of personal income tax, the more likely a negative extra burden. Thus, on average in 1950, the earnings for retention component of incomes of married stockholders with over $50,000 of imputed gross income was subject to a lower income tax liability than would have been the case had it been reached by the personal income tax alone. Below this income level the reverse was true.

Again, for purposes of comparability among income classes the extra burden was computed relative to its base. The differential against earnings for retention, entered in column 28 (equals the division of column 27 by column 13 expressed as a percent), is an inverse function of stockholder income: the lower the income of stockholders, the higher the differential; after $50,000 for married taxpayers, the higher the income of stockholders, the more strongly negative the relative extra burden on earnings for retention.[11] Comparison of the results

[11] In connection with the future capital gains tax liability adjustment, the reader's suspicions are almost certain to be aroused by the number and breadth of the underlying assumptions. Choice of other assumptions, however, would have made little difference in the findings.

The extent of such changes was tested by sample calculations using different ratios for the proportion of capital gains realized in taxable form, and assuming differing lengths of time over which they were realized. The results of the test, showing the net extra burden on earnings for retention for the weighted average of joint and separate returns, 1950, are summarized in the table below:

Imputed gross income level ($000's)	Standard assumption Two-thirds of gain realized in taxable form over 5 years	Alternative assumption			
		One-third of gain realized in taxable form		Three-fourths of gain realized in taxable form	
		over 1 year	over 10 years	over 1 year	over 10 years
3	29.1%	28.1%	27.8%	29.6%	28.8%
6	29.4	28.2	28.0	29.8	29.1
12	25.7	24.5	24.2	26.2	25.7
20	20.4	18.9	18.6	21.1	20.3
200	−22.0	−24.7	−25.3	−20.7	−22.0

Changing the assumptions would, of course, change the results. But even strongly

at the extremes of the stockholder income scale shows that, whereas the average stockholder with $2,000 was subject to a tax liability on the earnings for retention component of his income more than two and one-half times the liability calculated by applying the rates of the personal income tax alone, the actual corporate-personal tax at the $500,000 average stockholder income level was about three-fifths as high as the potential personal income tax liability on earnings for retention. (Remember these data apply to stockholders who filed joint returns.)

One further point will be mentioned now and elaborated later. The findings just presented are a composite result influenced by both corporation distribution policy and the corporation income tax. For in determining the extra burden (or benefit) on earnings for retention there are two factors at work: (1) the tax saving due to non-distribution; (2) the net burden of the corporation income tax. By the tax saving due to nondistribution is meant the difference between the personal income tax that would have been due had retained earnings (column 19) been fully distributed and the present value of the future capital gains tax on reinvested earnings (column 26). Even at the lowest marginal rate bracket, the potential personal income tax exceeds the future capital gains tax so there is always a tax saving, and it becomes increasingly important as the marginal personal rate that would have applied to retained earnings rises. The net corporate tax burden, on the other hand, is always positive, but it declines in degree as the level of stockholder income rises. For it is the amount by which the actual corporate tax on earnings for retention exceeds the personal tax that would have been due if stockholders had received as personal income the sum paid as corporation income tax. With (1) increasingly negative (i.e., if measured as a burden) and (2) de-creasingly positive as income rises, the extra burden on earnings for retention inevitably falls as average stockholder income rises and, after a point, the burden usually turns to a tax saving.

Differential against Net Corporate Earnings

The extra burden on net corporate earnings tabulated in column 29 is the sum of the extra burden on each of the components of this income share (column 10 plus column 27). Not all stockholders were put at an income tax disadvantage because they were double-taxed.

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different assumptions about the proportion of total gain realized in taxable form, and the period over which the realization would take place, lead to very slight changes in the value of the differential, while the conclusions relating to the income level pattern of the extra burden are not changed at all.

On average, if the corporate tax were abolished and each stockholder's pro rata share of corporate earnings were called fully and promptly to account as part of personal income, those filing joint returns in 1950 would have been affected in either of two ways: stockholders with imputed gross incomes below approximately $150,000 would have paid lower taxes on their share of net corporate earnings; those with incomes above $150,000 would have paid higher taxes on their share of net corporate earnings.

How important was the extra burden or tax saving? It has been measured as a proportion of both the net corporate earnings component and stockholders' imputed gross income. In column 30 the extra burden is tabulated as a percentage of stockholders' pro rata share of net corporate earnings. The differential in this connection is a weighted average of the differentials against earnings for retention and earnings for distribution. Like each of its components, the differential against net corporate earnings is a declining function of the stockholder's income level. Further, after a point, the positive differential against earnings for distribution is outweighed by the negative differential against earnings for retention, leading to a differential in favor of net corporate earnings. Where along the income scale this will occur depends on the relative weights of earnings for retention and earnings for distribution. The heavier the weight of earnings for retention, the more closely will the configurations of the differential against net corporate earnings conform to the differential against earnings for retention, bringing closer their turning points. Because, however, the differential against earnings for distribution is always positive, the turning point for net corporate earnings will come at a higher income level than that for earnings for retention.

In summary, we find a substantial additional tax on the net corporate earnings component of the majority of average stockholder income levels, but near the top of the income range it is replaced by a sizeable tax saving. Our method of taxing corporate earnings—at the corporate level when earned and at the personal level when distributed —led to a declining extra burden as the income level of stockholders rose and at around $150,000 of imputed gross income it became a benefit which continued to rise with income level.

Differential against Stockholders' Income

Column 31 presents the net extra burden as a rate on stockholders' imputed gross income [(column 29 ÷ column 1) × 100], in effect, this is a measure of the incremental tax rate to which stockholders were subject. It shows us how much more heavily, in terms of effective rates,

stockholders were taxed than would have been the case if, with the corporate tax abolished, all their income including their full pro rata share of net corporate earnings had been subject in full to the personal income tax. By use of the personal income tax as the benchmark we find, for example, that because of tax rates actually in effect on corporate earnings the average married stockholder with $3,000 of imputed gross income was subject to a tax six and one-half percentage points *higher,* and the average stockholder with $500,000 was taxed at a rate some fourteen percentage points *lower* than the personal income tax alone would have demanded.

How heavy the income tax differential against (or in favor of) stockholders will be depends on two things: (1) the differential against net corporate earnings and; (2) the proportion of corporate earnings to imputed gross income. In specific terms, the values in column 31 are the product of the differential against net corporate earnings (column 30) and the percentage that net corporate earnings constitute of imputed gross income (column 2); the values in column 31 are, therefore, always lower than those in column 30. Moreover, the differential against stockholders does not trace out precisely the same pattern as the differential against their pro rata share of net corporate earnings. The latter declines continually as stockholder income rises; the former, however, reading up the income scale, tends to rise up to a point ($12,000) and then falls quite steadily. This difference in behavior is a matter of weighting, which requires brief explanation.

The differential against net corporate earnings, as previously noted, is a weighted average of the differentials against earnings for distribution and earnings for retention. Because it was assumed that the same dividends-to-corporate-earnings ratio applied in every one of our stockholder cells, the proportionate weights of earnings for dividends and earnings for retention in net corporate earnings are the same at every average stockholder income level. Since both component differentials are declining functions of income, their weighted average will likewise fall as income levels rise.

The same is not true, however, in the case of the differential against stockholders, which is the differential against net corporate earnings weighted by the proportion of corporate earnings to the whole of stockholder income. For here the weights vary from one average stockholder income to another. The differential against net corporate earnings falls continuously as income rises (with only minor exceptions), while the ratio of net corporate earnings to imputed income behaves irregularly up to the $6,000 stockholder income level and then rises as income increases. Over the lower part of the income range up to

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$12,000, the fall in the differential against net corporate earnings is less rapid than the rise in ratio of net corporate earnings to imputed gross income; consequently, the differential against stockholders increases from income level to income level. (Exceptions are from $3,000 to $4,000 where the ratio of net corporate earnings to imputed gross income falls, and $5,000 to $6,000, where there is no change.) From $12,000 up, the direction is reversed to a continuous fall in the differential (except the slight rise between $15,000 and $20,000).

Three Variants of the Differentials

Table 4 is designed to set forth in detail the procedures used in obtaining the values of the differentials that seem most relevant for analyzing the problem of the relative tax burden on stockholders. Therefore it develops the derivation of what were designated in Chapter 1 as the variant 2 values. However, by reference to the table, the differences between our preferred measure and the two other possibilities, i.e. variants 1 and 3, can be made explicit. In what follows, familiarity with the discussion of the variants in Chapter 1 is assumed.

In arriving at the variant 1 values we use the current extra burden on earnings for retention (column 18) instead of the total extra burden as listed in column 27. This leads to lower values for the differentials against earnings for retention, net corporate earnings, and stockholders than those under variant 2. (It would also cause the entries in column 40—the net income tax saving on corporate earnings—to be higher than those tabulated, but calculations of variant values for this measure were not undertaken.)
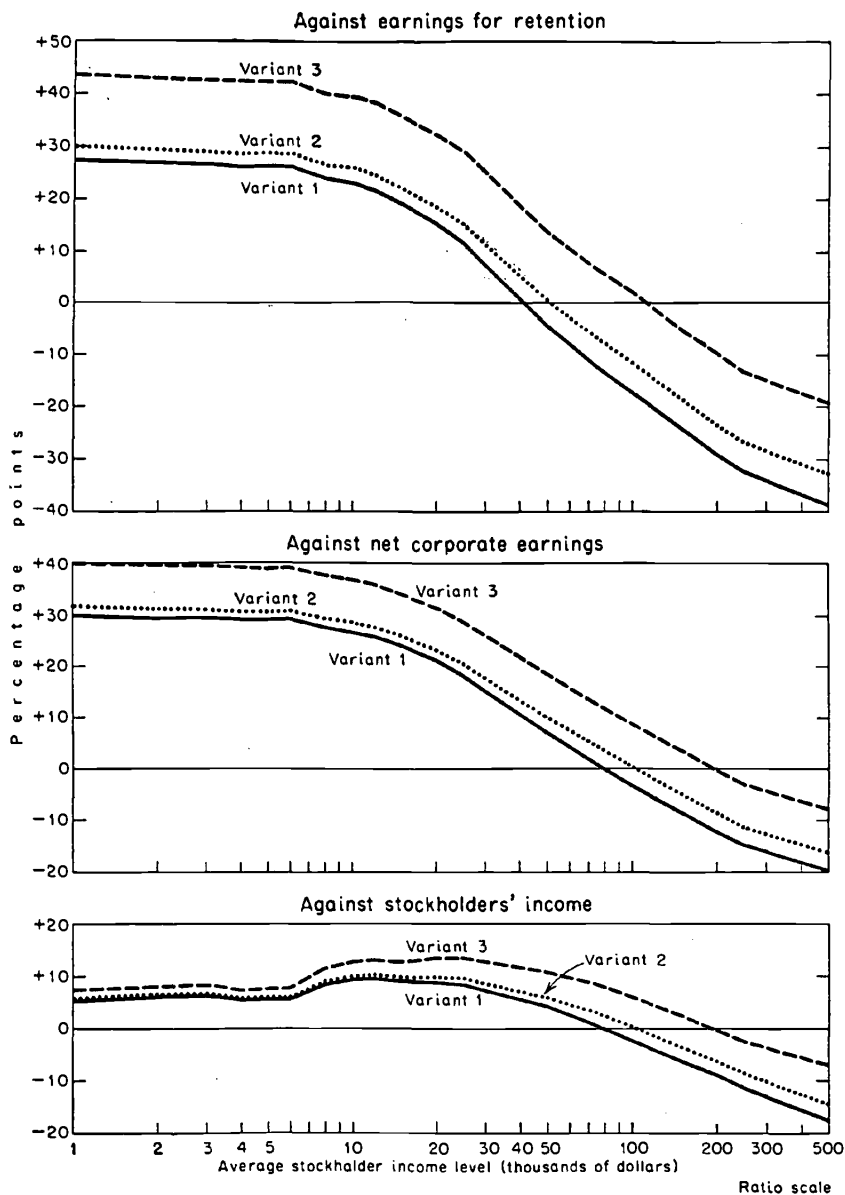
In computing variant 3, it will be recalled, an adjustment was made for the failure of 28 cents of each reinvested dollar to show up as capital gains. The present value of the addition to the "tax liability" of stockholders in this connection comes to 0.2425 of the entries in column 19—retained corporate earnings. In deriving the differentials under variant 3, values this much higher than those in column 27— total extra burden on earnings for retention—are used. Consequently the variant 3 differentials against earnings for retention, net corporate earnings, and stockholders are higher than as measured by our usual procedure.

How different the values are under each of these variants can be judged from the annual tables in Appendix A, and from Chart 2 which plots the 1950 data for joint and separate returns combined. While differences do, of course, show up, the main conclusion is that the basic income class pattern of all three variants is the same. Therefore, although specific magnitudes would differ, the conclusions

CHART 2—Three Variant Measures of the Differentials for 1950

Against earnings for retention

Against net corporate earnings

Against stockholders' income

Average stockholder income level (thousands of dollars)

Ratio scale

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Derivation

AVERAGE STOCK- HOLDER IMPUTED GROSS INCOME LEVEL ($000's) (1)	Joint returns as % of total returns (2)
1	0.0
2	19.1
3	44.6
4	66.1
5	76.9
6	83.2
8	83.9
10	84.3
12	85.1
15	86.4
20	86.9
25	87.2
50	87.6
75	87.1
100	86.8
150	86.2
200	85.6
250	85.2
500	83.8

ª Derivation: column 2
separate returns.

reached earlier by reference to variant 2 values would still be valid no matter which of the variants was chosen.

Weighted Averages of Joint and Separate Returns

Separate calculations for stockholders filing joint returns and those filing separate returns were necessary because different personal income tax rates applied for each type of return. To arrive at a single measure, averages were struck for the joint and separate return differentials. The procedure here was straightforward. On the assumption that the same proportion of joint to separate returns holds for stockholders as for all taxpayers, the proper weights were obtained for application at each imputed gross income level. The weighted averages, plotted on Chart 1, are listed in Table 5.

TABLE 5

Derivation of the Weighted Average Differentials, 1950

AVERAGE STOCK-HOLDER IMPUTED GROSS INCOME LEVEL ($000's) (1)	Joint returns as % of total returns (2)	WEIGHTED AVERAGE DIFFERENTIALS[a] AGAINST:			
		Earnings for distribution (3)[a]	Earnings for retention (4)[a]	Net corporate earnings (5)[a]	Stockholder imputed gross income (6)[a]
1	0.0	34.3%	30.0%	31.7%	5.7%
2	19.1	34.2	29.3	31.2	6.3
3	44.6	34.3	29.1	31.1	6.5
4	66.1	33.9	28.7	30.7	5.8
5	76.9	33.8	28.8	30.7	6.0
6	83.2	34.0	28.7	30.8	6.0
8	83.9	33.7	26.5	29.3	9.0
10	84.3	32.9	26.0	28.6	9.9
12	85.1	32.7	24.6	27.7	10.0
15	86.4	32.1	22.0	25.9	9.7
20	86.9	30.8	18.5	23.3	9.8
25	87.2	29.2	15.2	20.6	9.5
50	87.6	24.9	0.4	10.0	5.9
75	87.1	21.7	—6.7	4.2	2.9
100	86.8	19.1	—11.4	0.4	0.3
150	86.2	16.7	—18.7	—5.0	—3.6
200	85.6	14.6	—23.4	—8.7	—6.3
250	85.2	13.2	—26.9	—11.4	—8.7
500	83.8	10.0	—32.9	—16.3	—14.3

[a] Derivation: column 2 × differential for joint returns + (100 — column 2) × differential for separate returns.
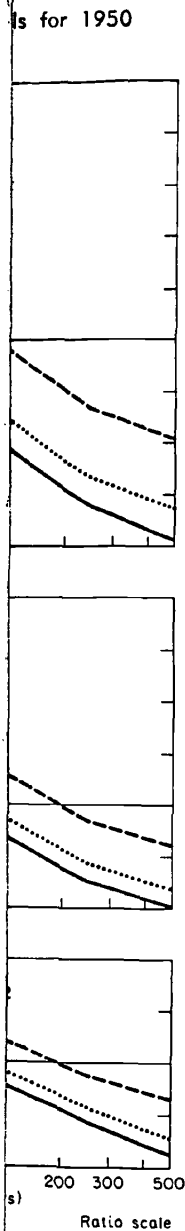
The Net Corporate Tax[12] Distinguished from Other Factors

Up to now the objective of our analysis by a variety of measures based on particular assumptions has been to pin point the results of our system of taxing corporate earnings that involves an income tax on the corporate level when earned and a tax on the personal level when distributed in terms of the differential tax liability of stockholders.[13] In the procedure described above two factors influencing the results —the corporate tax and corporate distribution policy—were not treated separately. The findings so far are composite results in which the effects of both factors are merged. It is useful for analytical purposes to separate these two determinants to delineate more specifically the net corporate tax and the personal income tax saving due to the failure of corporations to distribute the whole of their annual earnings, and analyze the role each plays in this set of interrelated factors. For this purpose the net corporate tax has been measured very simply: it is the difference between the corporate tax actually paid and the liability of stockholders if the sum paid as corporate income tax had been subject instead to the personal income tax.
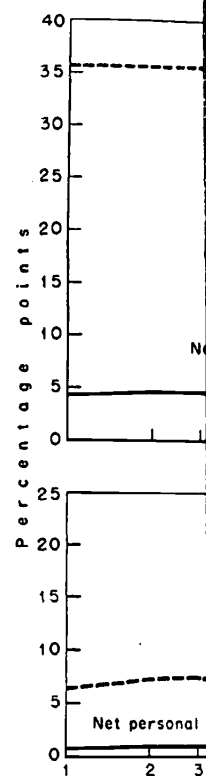
The computation of the net corporate tax on earnings for distribution has already been explained and appears as the extra burden on income from this source (column 10 of Table 4). The derivation of the rest of the net corporate tax is set forth in columns 32 through 35 of Table 4 with explanatory notes below the table. Had there been either full distribution of corporate earnings or the requirement that they be imputed fully to stockholders for personal income tax purposes, that portion of earnings for retention which was paid as corporate income tax would have served instead to enlarge the personal tax base consisting of the stockholder's taxable adjusted gross income, plus the corporate tax on earnings for distribution, plus net corporate saving (retained earnings). This base appears in column 32, as the sum of columns 15 and 19. Column 14 lists the corporate tax on earnings for retention, and column 33 tabulates the complement of the personal marginal rate that would apply to an increment (corporate tax on earnings for retention) the size of column 14 to the tax base in column 32. Column 34 (column 14 × column 33) is the net corporate tax on earnings for retention—the excess of the actual corporate tax payment over what would have been due under the personal income tax had the corporate tax been included as part of

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[12] This phrase is taken from Goode, *op. cit.*, p. 92. Our measure, however, differs in several respects from his.

[13] How our findings are affected by the dividend relief provisions introduced in the Internal Revenue Code of 1954 is considered in Chapter 7.

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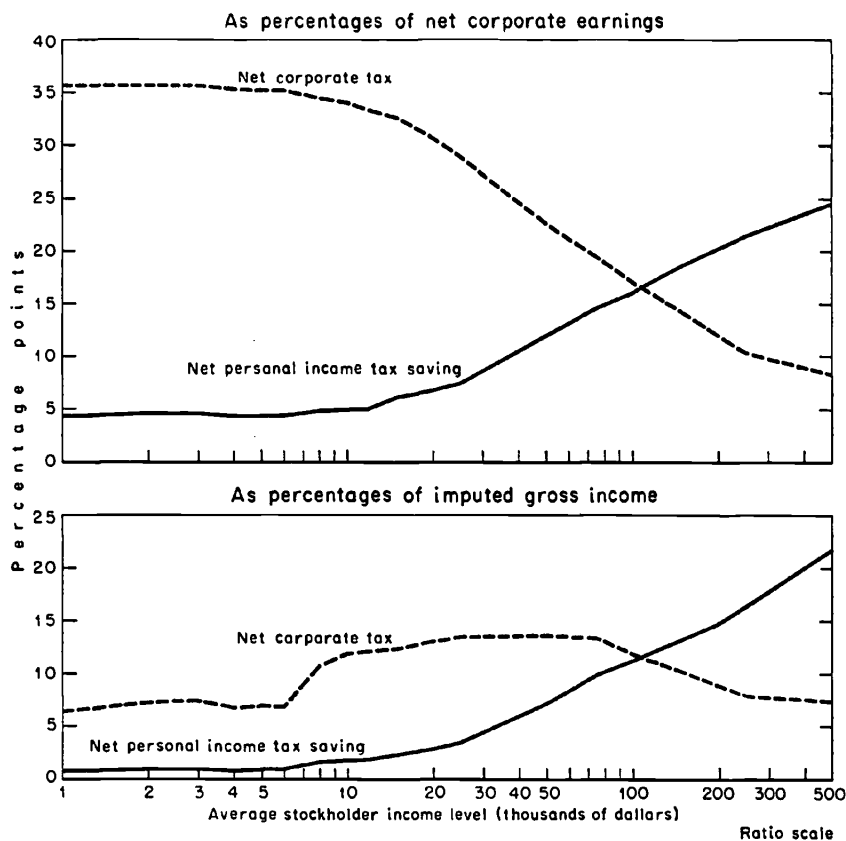

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the stockholder's taxable income. Addition of the net corporate tax on each of its components—earnings for distribution column 10, and earnings for retention, column 34—furnishes the net corporate tax on net corporate earnings, presented in column 35. The net corporate tax has been converted to an effective rate on net corporate earnings (column 36) and on all of stockholder income (column 37). Weighted averages of these data for joint and separate returns are plotted on Chart 3.

CHART 3—Net Corporate Tax and Net Personal Income Tax Saving, 1950

As percentages of net corporate earnings

As percentages of imputed gross income

Average stockholder income level (thousands of dollars)

Ratio scale

Viewed in this light, the corporate tax, per se, constituted a substantial additional levy on stockholders' net corporate earnings—ranging for joint returns from an extra tax of nearly 36 percentage points at the lower income levels to over 8 points at the $500,000 level. A declining function of income, it fell steadily between these two ex-

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tremes. Considered in relation to all of a stockholder's income, the net corporate tax, of course, represented a smaller but not an inconsiderable increase in effective rates. The corporate tax raised the rate of income taxation between 7 and 14 points higher than the rates at the same income levels of the personal income tax alone. Here, however, no steady decline is seen reading from low to high incomes, but rather a pattern of rise followed by fall, with the values at the two extremes of the income array about equal. The reasons for this pattern—variations in the rate of fall in net corporate tax on corporate earnings, and in rise of corporate earnings as a per cent of imputed gross income —were discussed in connection with data in column 31, the differential against stockholders.

The reader is reminded that the net corporate tax neglects one salient feature of the taxation of stockholders—their immunity from the current personal income tax liability on earnings retained by corporations. This results in a tax saving, even when the present value of future capital gains tax liability on retained earnings is taken into account. The net tax saving is estimated for 1950, in column 40. The procedure consists of computing the potential personal income tax on retained earnings (net of corporate income tax) and subtracting from it the future capital gains tax adjustment, previously described. Individual steps in the procedure are set forth in columns 38 through 40.

Considering retained corporate earnings (column 19) as an increment to taxable adjusted gross income plus the corporate tax on earnings for distribution (column 15), the marginal rate of personal income tax that would have applied was determined. These rates appear in column 38. Then column 39—the potential personal income tax liability on retained earnings—was computed by multiplying column 19 by column 38. From this the present value of the future capital gains tax liability due to reinvested earnings was subtracted (column 26), the result being the net income tax saving on retained earnings (column 40). Finally, the tax saving was converted to a percentage of net corporate earnings (column 41) and stockholders income (column 42). Weighted averages of these percentages for joint and separate returns are plotted on Chart 3.

For both measures, it is no surprise to find the tax saving increasing in relative importance as stockholder income rises. For example, the estimated tax saving on this score increases from under 5 per cent of corporate earnings and 1 per cent of stockholder income near the bottom of the income scale, to 24 per cent of net corporate earnings and 22 per cent of imputed gross income at the $500,000 income level.

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Now we come up against an old friend in a somewhat different guise: addition of the percentages for the net corporate tax and the tax saving (with its sign taken as negative) furnishes the differential. The net corporate tax falls as income rises; the tax saving increases in relative importance with income. Hence our finding that, after a point (on the chart where the tax saving and net corporate tax lines intersect) the tax saving outweighs the corporate tax—stockholders are undertaxed.

Specifically with reference to the data of Table 4, the reader will note that the algebraic sum of the net corporate tax percentage (column 36) and the tax saving on net corporate earnings percentage (column 41) equals the differential against net corporate earnings (column 30). Also, the differential against stockholders (column 31) is equal to the sum of the net corporate tax on stockholders percentage (column 37) and the net tax saving percentage of stockholder income (column 42).[14] (There will, of course, be slight differences due to rounding.)

[14] As mentioned earlier, in these summations the sign of the tax saving is negative.