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YIELD OF THE INDIVIDUAL INCOME TAX DURING A RECESSION

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Although the individual income tax is of relatively recent origin in this country, it is now the most important single source of federal revenues. Despite its present importance, the full revenue potentialities of the individual income tax have been recognized only recently. For almost thirty years after its adoption, exemptions were high and relatively few people were subject even to the starting tax rate, let alone the higher graduated rates. In the early 1940's, as a result of the urgent need for revenues in World War II, personal exemptions were reduced and tax rates were increased, especially in the low and middle income brackets. At the same time, money incomes increased substantially. In combination, the lower exemptions, higher tax rates, and higher incomes increased the yield of the individual income tax from about $1 billion in 1939 to $17 billion in 1945. Since the end of the war, exemptions have been increased somewhat, but tax rates have remained high even by wartime standards. In addition, incomes have continued to increase. As a result, individual income tax liabilities have almost doubled in the past seven years—from a little over $16 billion in 1946 to an estimated $32 billion in 1953.

Almost as important as the change in the structure of the tax has been the change in the methods of tax payment. Prior to 1943, individuals had the option of paying their taxes in four equal installments in the year following the receipt of income. Now taxes are withheld currently from wages and salaries; individuals with other incomes are required to estimate their liabilities and to pay their taxes in four installments beginning on April 15th of the current year and ending on January 15th of the following year. Two important by-products of this current-payment system are that it synchronizes tax payments closely with receipt of income and that it permits tax rates to be raised or lowered at any time during the year, with assurance that the changes will affect disposable incomes of most taxpayers almost immediately. These features of the individual income tax make it admirably suited for economic stabilization purposes.

Both the revenue potential of the individual income tax and its adaptability to changing economic conditions were illustrated dramatically during the Korean emergency. In June 1950 the Congress was engaged in a revision of the tax system which had been promised since the end of World War II. An excise tax bill was then in process and the House of Representatives had already voted a $1 billion tax reduction. The greatly increased revenue needs of the emergency were imposed in the midst of this atmosphere of tax reduction. As an interim measure, the bill was quickly rewritten in the Senate and, within a few weeks, the excise tax reductions were eliminated, and corporation and individual income tax rates were raised by $4.6 billion in a full year. Of this total yield, the individual income tax contributed $2.9 billion.[1] The act was approved by the President on September 23, 1950, and the higher withholding rates became effective October 1, 1950.

Again, in 1951, the individual income tax was called upon to produce additional revenues. Under the 1951 act, effective November 1 of that year, tax rates in all the major categories of the federal tax system were increased to produce $5.4 billion in a full year.[2] The individual income tax contributed $2.5 billion of this additional yield.[3]

Even though the individual income tax remained unchanged between the fall of 1951 and the end of 1953, its yield increased as incomes rose. At 1951 income levels the yield of the 1953 rates and exemptions would have been approximately $27 billion, but they produced $32 billion in 1953. During the same period, total adjusted gross incomes in the United States increased from $227 billion to almost $252.5 billion. Thus the $25.5 billion increase in total incomes was associated with a rise in individual income tax liabilities of $5 billion; "built-in flexibility" therefore averaged $1.9 billion for every $10 billion increase in total incomes, or .19.[4]

[1] "The Revenue Act of 1950," Dept. of the Treasury, mimeographed, December 20, 1950.

[2] "The Revenue Act of 1951," Dept. of the Treasury, mimeographed, November 14, 1951.

[3] The combined $5.4 billion increase in individual income taxes between October 1950 and November 1951 may appear to be small in absolute terms, but it is actually a substantial fraction—one-fifth—of the rise in personal incomes in this thirteen-month period.

[4] The term "built-in flexibility" should be distinguished from "elasticity." Built-in flexibility equals $\Delta T/\Delta Y$, while elasticity equals

$$\Delta T/T \cdot Y/\Delta Y$$

where T is tax liability and Y is income. The figures cited above yield an elasticity of 1.6 (using the average 1951–1953 levels for T and Y).

The built-in flexibility of the individual income tax as economic activity drops cannot be estimated precisely, since we have had over a dozen years of almost sustained rise in incomes. However, a workable approximation can be obtained on the basis of the behavior of the individual income tax in the recent past. The basic data needed for the analysis are available in government publications. The problem is to select from the great mass of information the materials which are required to measure changes in the components of the individual income tax structure as incomes change. Part 1 will be devoted to this analysis.

In Part 2 we will attempt to show how the built-in flexibility of the individual income tax can be supplemented by discretionary changes in rates and exemptions. Our objective is to determine the direct revenue effects of these discretionary measures. An evaluation of their potential contribution to the maintenance of individual spending is beyond the scope of this paper.

The results of the analysis may be summarized briefly as follows:

1. Even though personal exemptions were somewhat higher than they were during World War II, the individual income tax base (i.e. total income after deductions and exemptions) reached an all-time high in 1953. It is estimated that the base in 1953 was about $117 billion, or 46 per cent of total adjusted gross income in the United States.

2. The $32 billion yield of the individual income tax in 1953 was also an all-time high. The tax reductions which became effective on January 1, 1954 reduced liabilities by $3 billion, or almost 10 per cent, assuming 1953 income levels.

3. Based on the record in the post-World War II period, the built-in flexibility of the individual income tax *base* is roughly .65. That is, a $10 billion change in total adjusted gross income produced a $6.5 billion change in the tax base. Our data indicate that the built-in flexibility of the tax base has not changed significantly since 1946, even though total incomes have risen by almost $100 billion.

4. Under 1953 tax rates the average effective rate applying to the tax base would have been roughly 27 per cent in each year since 1948. (While this result may be surprising, it can be explained by the fact that a large proportion of the additions to the tax base have been concentrated in the lowest tax brackets.) Since the *average* rate remained about the same during the period 1948–1953, the *marginal* rate applying to additions to the tax base was about equal to the average rate.

5. Since both the built-in flexibility of the *base* and the marginal

rate appear to have been constant, the built-in flexibility of the individual income *tax* was roughly constant. At 1953 rates it was between .17 and .18 (.65 × .27). Due to the 10 per cent tax reduction at the beginning of 1954, the built-in flexibility of the tax at 1954 rates will probably be 10 per cent lower, or between .15 and .16. Thus at 1954 rates the individual income tax will automatically offset $1.5 or 1.6 billion of a $10 billion decline in total adjusted gross income.

6. At 1953 income levels and 1954 rates, a reduction of one percentage point in the tax rates in all surtax brackets would reduce tax liabilities by $1.2 billion; an increase in exemptions from $600 to $700 per capita would reduce liabilities by $2.5 billion. In combination these changes in rates and exemptions would reduce tax liabilities by $3.6 billion. However, as incomes decline, built-in flexibility would reduce the size of the tax base and hence the tax reduction that might be obtained from rate and exemption changes. For example, if total adjusted gross incomes fall by $50 billion, the combined effect of a $100 increase in exemptions and a general rate reduction of one percentage point would be $2.8 billion.

7. Moderate rate and exemption changes combined with the effect of built-in flexibility can provide fairly substantial offsets to moderate declines in income. For example, if adjusted gross incomes drop by $25 billion, or 10 per cent below 1953 levels, built-in flexibility would reduce tax liabilities by $4 billion and a one percentage point rate reduction combined with an increase in exemptions to $700 would reduce them another $3.2 billion. In total, the offset would be $7.2 billion, or almost 30 per cent of the $25 billion drop in total income.

8. The larger the decline in individual incomes, the more difficult it becomes to offset the decline through the individual income tax alone. For example, to offset 30 per cent of a $50 billion drop in total income below 1953 levels, it would be necessary to raise exemptions to $700 per capita and to reduce the tax rates in all brackets by 7 percentage points. Much more drastic changes in rates and exemptions would be required to offset as much as one-quarter or one-third of a larger drop in income.

1. Built-in Flexibility of the Individual Income Tax

In order to trace the changes in the historical record of the individual income tax, the tax base since the end of World War II is converted to a comparable basis by adjusting for changes in exemptions and deductions. Yields of the adjusted base in each year since

1948 (when the present exemptions and income splitting were adopted) are then estimated on the basis of 1953 tax rates. In this way we measure not only the built-in flexibility for the individual income tax as a whole, but also the relative contributions of changes in the tax base and the graduated tax rates to this flexibility.

COVERAGE OF TAX RETURNS

Changes in the individual income tax base depend primarily on changes in the total amount of *adjusted gross income* received. This is the sum of all taxable sources of income in a given year before allowing for personal exemptions and deductions. It includes wages and salaries, interest (other than that paid by state and local governments), dividends, rents and royalties, business incomes, capital gains, and a number of other minor sources.[5] The principal items of personal income that are specifically exempt are nonmoney and imputed incomes and transfer payments.

A good estimate of the adjusted gross incomes reported by individuals filing returns can be obtained from the annual tabulations in *Statistics of Income*, but relatively little is known about the amounts not reported.[6] If the *Statistics of Income* total is compared with an income aggregate, such as the Department of Commerce estimate of personal income, a very large "gap" is found. For example, personal income exceeded total adjusted gross income reported on tax returns by an average of $46 billion or about 22 per cent in the period 1948–1950. Actually, a sizable portion of the gap can be accounted for by differences in definition. There is, of course, evidence of nonreporting and underreporting of income on tax returns, but the unadjusted gap overstates these amounts by a substantial margin.

To reconcile the Department of Commerce estimates of personal income with adjusted gross income, two sets of adjustments must be made: first, items included in personal income but not subject to tax must be deducted from personal income; second, several items included in taxable income but not in personal income must be added.[7]

[5] E.g. incomes from estates and trusts, annuities and pensions (other than old age and survivors' insurance and railroad retirement benefits), gambling winnings, competitive prizes, and awards.

[6] The *Statistics of Income* tabulations are based on a large sample of tax returns and the sampling error of the income aggregate is small. For a discussion of the sampling procedures see *Statistics of Income for 1947*, Bureau of Internal Revenue, Part 1, 1953, pp. 44–51.

[7] The laborious job of reconciling personal income and adjusted gross income was pioneered by Selma Goldsmith. See her article "Appraisal of Basic Data Available for Constructing Income Size Distributions," *Studies in Income and Wealth, Volume Thirteen*, National Bureau of Economic Research, 1951, pp. 266–373.

The most important items which are deducted are transfer payments, other labor income, income in kind, imputed interest, and nontaxable military pay and allowances. The most important additions are employee contributions to social insurance and net gains from the sale of assets. The adjustments are illustrated in detail in Appendix Table A-1 for one year (1948). Some of the adjustments may be estimated fairly accurately and others are little better than informed guesses. Fortunately, the largest adjustments can be obtained directly from the income accounts published by the Department of Commerce and from *Statistics of Income*.[8]

Total adjusted gross income and personal income are compared in Table 1 for the years 1939 through 1953.[9] In every year since 1939,

TABLE 1

Comparison of Total Personal and Adjusted Gross Income, 1939–1953

(*dollars in billions*)

	PERSONAL INCOME	ADJUSTED GROSS INCOME	DIFFERENCE	
			Amount	*Per Cent of Personal Income*
1939	$ 72.6	$ 63.4	$ 9.2	12.7%
1940	78.3	69.1	9.2	11.7
1941	95.3	84.0	11.3	11.9
1942	122.7	105.9	16.8	13.7
1943	150.3	127.7	22.6	15.0
1944	165.9	136.8	29.1	17.5
1945	171.9	139.9	32.0	18.6
1946	177.7	155.1	22.6	12.7
1947	191.0	170.9	20.1	10.5
1948	209.5	184.4	25.1	12.0
1949	205.9	181.9	24.0	12.1
1950	226.7	200.4	26.3	11.6
1951	254.3	226.9 [a]	27.4	10.8
1952	269.7	240.2 [a]	29.5	10.9
1953	284.0 [a]	252.4 [a]	31.6	11.1

[a] Estimates based on incomplete data.

personal income has exceeded adjusted gross income. Percentagewise, the differences are largest in 1942–1945, when much of the pay of members of the armed forces was not subject to tax. For the other

[8] Except for employee contributions for social insurance, the estimate of taxable income not included in personal income covers only amounts reported by individuals filing returns. Since nonfilers also receive such incomes, the estimate somewhat understates total adjusted gross income.

[9] The 1953 estimate of adjusted gross income assumes total personal income of $284 billion.

years, adjusted gross income averaged 11 to 13 per cent less than personal income.[10]

Table 2, which compares the adjusted gross income reported by all individuals filing returns (including nontaxables) with the total adjusted gross income shown in Table 1, measures the changes in the coverage of federal tax returns since 1939. The striking feature of this

TABLE 2

Proportion of Total Adjusted Gross Income Reported on Individual Income Tax Returns, 1939–1953

(*dollars in billions*)

	TOTAL ADJUSTED GROSS INCOME	ADJUSTED GROSS INCOME REPORTED ON TAX RETURNS	
		Amount	*Per Cent of Total*
1939	$ 63.4	$ 25.2	39.7%
1940	69.1	39.4	57.0
1941	84.0	62.5	74.4
1942	105.9	84.9	80.2
1943	127.7	105.7	82.8
1944	136.8	116.5	85.2
1945	139.9	120.1	85.8
1946	155.1	134.1	86.5
1947	170.9	149.7	87.6
1948	184.4	163.5	88.7
1949	181.9	160.6	88.3
1950	200.4	179.1	89.4
1951 [a]	226.9	205.9	90.7
1952 [a]	240.2	219.2	91.3
1953 [a]	252.4	231.4	91.7

[a] Estimates based on incomplete data.

table is the sharp rise in income covered by tax returns. In 1939 about 40 per cent of all adjusted income was reported on tax returns. The percentage rose sharply between 1939 and 1942 and then more gradually thereafter; in 1953, income tax returns probably covered about 92 per cent of total adjusted gross income. The trend was not reversed when exemptions were increased in 1946 and 1948, because millions of individuals continue to file, even though they are not taxable, in order to claim refunds on account of overwithholding or

[10] It should be noted that the concept of adjusted gross income dates back to 1944. For each of the prior years the estimates are derived from the definitions of taxable income then in effect.

overpayment of tax on estimated declarations.[11] Thus the upward sweep of income overwhelmed the effect of the increased exemptions, and the income coverage of tax returns continued to increase.[12]

DERIVATION OF THE TAX BASE

The derivation of the individual income tax base is shown in Appendix Table A-2, again using the year 1948 for illustrative purposes. This table duplicates the steps in the computation of taxable income on page 3 of the individual income tax Form 1040. From the adjusted gross income of taxable individuals we subtract personal deductions and personal exemptions and the amount of capital gains subject to the flat alternative tax rate.[13] The result is "surtax net income," which

[11] Actually, all persons with gross incomes of $600 or more are required to file returns, whether those incomes are taxable or not. However, the incentive provided by the prospective refund check is much more significant for most nontaxable individuals than the legal requirement to file. For the year 1950, 62 per cent of the 14.9 million nontaxable individuals who filed federal income tax returns received refunds.

[12] A discussion of the gap between personal and adjusted gross income which remains after adjustments are made for underreporting of income is beyond the scope of this paper. However, by pushing the above calculations a little further, a rough outside limit may be obtained.

Independent evidence on underreporting was made available for the first time by the Audit Control Program conducted by the Internal Revenue Service for the year 1948. (The preliminary results were summarized by Marius Farrioletti in the *National Tax Journal,* March 1952, pp. 65–78.) This study indicates that, if every return filed in 1948 were audited, the government would collect 9 per cent more tax than the total amount voluntarily reported, or 8 per cent of the correct tax liability. A substantial proportion of this tax deficiency is the result of errors in claiming exemptions and deductions and mathematical errors, all of which affect the tax liability without altering adjusted gross income. Accordingly, the underreporting of adjusted gross income is substantially less than 8 per cent —probably in the neighborhood of about 4 per cent.

Subtracting this 4 per cent from the 11 per cent of adjusted gross income not covered by tax returns in 1948 (see Table 2), the gap is reduced to about 7 per cent. Even this percentage is too high, because it does not take into account the incomes of persons not required to file. According to an estimate by Ulric Weil, these nonfilers received roughly 2 per cent of our estimated adjusted gross income in 1948 (*Journal of the American Statistical Association,* September 1950, p. 445). This leaves a discrepancy of no more than 5 per cent. The actual discrepancy may be less than 5 per cent because: (1) the sample of the Internal Revenue Service was confined to persons who filed returns, and therefore it failed to pick up the incomes of those who did not file; and (2) it is hardly likely that the field audits disclosed all the incomes not reported by taxpayers.

It should be noted that the 5 per cent estimate is an average which conceals significant variations for different income sources. Selma Goldsmith (*op. cit.*) found that income tax returns in 1946 covered 95 per cent of total wages, 76 per cent of dividends, 71 per cent of entrepreneurial incomes, and only 45 per cent of rents and 37 per cent of interest.

[13] As a final adjustment, the small amount of income of taxable fiduciaries which is subject to the individual income tax rates is added to the taxable income of individuals.

is equivalent to the individual income tax *base* for all practical purposes.[14]

The relationship between total adjusted gross income and surtax net income is shown in Table 3 for the years 1939–1953. The estimates of surtax net income were derived from *Statistics of Income* through 1950, the last year for which these tabulations are now available. To complete the series from 1951 through 1953, it was necessary to extrapolate the adjustments itemized in Appendix Table A-2.[15]

Table 3 shows the tremendous increase in the proportion of ad-

TABLE 3

Relationship between Total Adjusted Gross Income and Surtax Net Income, 1939–1953

(*dollars in billions*)

	TOTAL ADJUSTED GROSS INCOME	SURTAX NET INCOME	
		Amount	*Per Cent of Adjusted Gross Income*
1939	$ 63.4	$ 7.5	11.8%
1940	69.1	11.0	15.9
1941	84.0	23.0	27.4
1942	105.9	36.3	34.3
1943	127.7	50.1	39.2
1944	136.8	55.3	40.4
1945	139.9	56.7	40.5
1946	155.1	64.8	41.8
1947	170.9	75.2	44.0
1948	184.4	74.6	40.5
1949	181.9	71.6	39.4
1950	200.5	83.9	41.8
1951 [a]	226.9	99.9	44.0
1952 [a]	240.2	109.0	45.4
1953 [a]	252.4	117.2	46.4

[a] Estimates based on incomplete data.

justed gross income subject to tax which resulted from the reductions in exemptions in the early 1940's and the persistent rise in income

[14] Although surtax net income differs from income subject to the normal tax rate, the difference is now very small. Beginning in 1946, all income subject to the surtax is also subject to the normal tax, except for "partially" tax-exempt interest and certain dividends of Federal Savings and Loan Associations. In aggregate, these items now amount to less than $100 million, or roughly .1 per cent of total surtax net income.

[15] For the year 1951, estimates by the Department of the Treasury were helpful as guides in the extrapolation. See the distribution given in the *Annual Report of the Secretary of the Treasury*, Fiscal Year 1952, Table VI, p. 483. For the years 1952 and 1953 the extrapolation is entirely my own.

since the beginning of World War II. In 1939 the tax base was $7.5 billion, or only 12 per cent of adjusted gross income; by 1947 it was $75 billion, or 44 per cent. The upward trend was interrupted by the increase in the per capita exemption from $500 to $600 in 1948 and by the slight fall in income in 1949. Beginning in 1950, however, the trend upward was reestablished as incomes rose. For 1953 it is estimated that the tax base was at an all-time peak of $117 billion, about 46 per cent of total adjusted gross income.

CORRECTION OF THE TAX BASE FOR CHANGES IN EXEMPTIONS AND DEDUCTIONS

The important statutory changes that have affected the tax base in the post-World War II period are: an increase in the per capita exemption from $500 to $600, an allowance of an additional exemption of $600 for taxpayers who are sixty-five or over or blind, and an increase in the maximum standard deduction for single persons and married persons filing joint returns from $500 to $1,000. Since these provisions were enacted in 1948, it was necessary to adjust the 1946–1947 estimates of surtax net income to obtain a comparable series based on present exemptions and deductions.[16]

The corrected surtax net income series is compared with total adjusted gross income in Table 4. The effect of the adjustments in 1946 and 1947 is to give a series which rises continuously from 1946 through 1948, falls slightly in 1949 as a result of the small drop in incomes in that year, and then rises continuously from 1950 through 1953.

Over the entire period 1946–1953, total adjusted gross incomes rose from $155.1 to 252.4 billion, an increase of $97.3 billion. At 1953 exemptions and deductions, the tax base rose from $55.9 to 117.2 billion, an increase of $61.3 billion. Thus from 1946 to 1953 the tax base increased about $6.3 billion for every $10 billion increase in total adjusted gross income.

[16] The effect of the increase in the per capita exemption can be computed fairly accurately from the distribution of taxpayers by income classes and by exemption status published in *Statistics of Income*. See, for example, *Statistics of Income for 1947*, Part 1, Table 9. The increased standard deduction was taken into account by increasing the ratio of total deductions to adjusted gross income in 1946 and 1947 to the average ratio in the years 1948 and 1949. The effect of the additional exemption for the aged and the blind was more difficult to determine, since there are no statistics on the number of such taxpayers in 1946 and 1947. As a rough guide, it was assumed that the annual increase in the number of exemptions for the aged was the same in the two-year period 1946–1948 as it was between 1948 and 1949 and that there was no change in the number of exemptions for the blind between 1946 and 1948.

TABLE 4

Relationship between Total Adjusted Gross Income and Surtax Net Income, Assuming 1953 Exemptions and Deductions, 1946–1953

(*dollars in billions*)

	TOTAL ADJUSTED GROSS INCOME	SURTAX NET INCOME ASSUMING 1953 EXEMPTIONS AND DEDUCTIONS	
		Amount	*Per Cent of Total Adjusted Gross Income*
1946	$155.1	$ 55.9 [a]	36.0%
1947	170.9	65.7 [a]	38.4
1948	184.4	74.6	40.5
1949	181.9	71.6	39.4
1950	200.5	83.9	41.8
1951 [b]	226.9	99.9	44.0
1952 [b]	240.2	109.0	45.4
1953 [b]	252.4	117.2	46.4

[a] Adjusted for changes in exemptions and deductions under the Revenue Act of 1948.

[b] Estimates based on incomplete data.

These are average figures and therefore may cover up significant year-to-year variations. To determine whether such variations have in fact occurred, the ratios of the increase in the tax base to the increase in total adjusted gross income were computed for each year in the period 1946–1953 (see Table 5).[17]

As might be expected, this table shows some small, erratic changes from year to year, since the basic figures are not accurate enough to provide precise estimates. However, the ratios are remarkably stable, varying from a low of .61 for 1950–1951 to a high of .68 for 1951–1952. Equally important, the figures do not indicate any tendency to increase as incomes increased. We conclude that the built-in flexibility

[17] The change from 1948 to 1949 is not included in Table 5 because of the elimination of the tax exemption accorded to servicemen, effective January 1, 1949. As a result of this change, adjusted gross income was understated in 1948 relative to 1949. Surtax net income was probably not affected to the same extent, since much of the servicemen's salaries would have been absorbed by personal exemptions and deductions had they been taxable in 1948. Rough calculations indicate that the built-in flexibility of the tax base between the two years was probably in the neighborhood of .63, if this element of noncomparability is removed. This is within the range of the figures for the other years in the period 1946–1953, shown in the last column of Table 5.

of the tax base is roughly .6 to .7 for the income ranges covered by our data.

TABLE 5

Built-in Flexibility of the Individual Income Tax Base, 1946–1953

(*dollars in billions*)

	INCREASE		RATIO OF INCREASE IN SURTAX NET INCOME TO INCREASE IN ADJUSTED GROSS INCOME
	Total Adjusted Gross Income [a]	*Surtax Net Income* [a]	
1946–1947	$15.8	$ 9.8	.62
1947–1948	13.5	8.9	.67
1949–1950	18.6	12.3	.66
1950–1951	26.4	16.0	.61
1951–1952	13.3	9.1	.68
1952–1953	12.2	8.2	.67

[a] Based on data in Table 4.

CORRECTION OF TAX LIABILITIES FOR CHANGES IN RATES

To measure the effect of the graduated rate structure on built-in flexibility, it is necessary to convert the individual income tax liabilities as given in *Statistics of Income* to a comparable series, assuming present rates, exemptions, and deductions. This conversion can be made on the basis of the estimated changes in tax liabilities prepared by the Department of the Treasury after the passage of the revenue bills enacted since 1948.[18] Appendix Table A-3 shows the steps in the procedure used to obtain the corrected series. This series extends back only to 1948, when income splitting and present exemptions and deductions were adopted.[19]

Table 6 compares the corrected tax liability figures with the tax base at present exemptions and deductions for the years 1948–1953. The average effective rates applying to the tax base in each year are shown in the last column of this table. Neglecting small variations, it appears that, at 1953 rates and exemptions, individual income tax

[18] See the summaries of the Revenue Acts of 1950 and 1951, cited in footnotes 1 and 2.

[19] It is possible, of course, to recompute the tax liability figures for 1946 and 1947, but this would require a long series of time-consuming computations to correct for the change in exemptions and for income splitting.

liabilities were roughly 27 per cent of the tax base, and this average rate apparently did not change significantly between 1948 and 1953.[20]

The fact that the *average* rate remained unchanged implies that the *marginal* rate on the additions to the tax base was about equal to this average rate. This may be surprising, because we are dealing with a graduated rate structure. Ordinarily, we would expect that the marginal rate would rise as incomes are pushed into higher surtax brackets. Actually, however, there is no basis for judging how the marginal rate will behave. It can go up or down, or remain constant, depending on the distribution of the increased income and the rate structure.

TABLE 6

Comparison of Total Tax Liabilities and Surtax Net Income, at 1953 Rates and Exemptions, 1948–1953

(*dollars in billions*)

	Tax Liability	*Surtax Net Income*	*Effective Rate*
1948	$20.2	$ 74.6	27.1%
1949	19.0	71.6	26.5
1950	22.9	83.9	27.3
1951	27.1	99.9	27.1
1952	29.5	109.0	27.1
1953	32.0	117.2	27.3

The constancy of the marginal rate under the present rate structure during the 1948–1953 period is, of course, a historical accident, and it may well be due to offsetting errors in the various approximations we were forced to make. However, it is not unreasonable in view of the following factors: (1) As incomes rise, practically all of the taxable incomes of those who become subject to tax for the first time are subject to the first bracket tax rate. (2) If it is assumed that adjusted gross incomes increase approximately proportionately throughout the income scale, the increase in *surtax* net income will be much larger for low- than for high-income taxpayers.[21] The changes in the relative distribution of income in the past few years were probably not large enough to overcome this tendency. (3) The surtax brackets

[20] An interesting by-product of this result is that the average effective rate exceeds the first bracket rate of 22.2 per cent by only 4.8 percentage points. This means that only about 18 per cent of the total tax yield (4.8 ÷ 27) is attributable to graduation above the first bracket.

[21] For example, assume two married taxpayers (each with two children) have adjusted gross incomes of $3,000 and $8,000 respectively. If their incomes in-

are so wide that few low-income taxpayers are likely to be pushed into higher brackets as their incomes increase.[22] Thus a large proportion of any increase in income is bound to fall in the two lowest brackets, where the rates are below the average rate.[23] Our finding that the average rate in 1953 was about the same as that in 1948 implies that the effect of graduation in the higher brackets was just enough to offset the effect of the additions to the tax base at the bottom of the scale.

Assuming that this conclusion is correct, the built-in flexibility of the individual income tax may be established within fairly narrow limits. Applying the 27 per cent marginal rate to the $6 to 7 billion increase in the tax base for every $10 billion increase in total adjusted gross incomes, we obtain an increase of $1.6 to 1.9 billion in *tax*. If, on the other hand, the marginal rate to be applied to the increase in the tax base differs from the effective rate, the range is increased. Since the first bracket rate is now 22.2 per cent, it is hardly likely that the marginal rate can be much lower than 25 per cent or much higher than 30 per cent. Applying the 25 per cent rate to the lower limit established for the built-in flexibility of the tax base ($6 billion) and the 30 per cent rate to the upper limit ($7 billion), we find that the individual income tax would have increased between $1.5 and 2.1 billion for every $10 billion increase in total adjusted gross incomes, if present tax rates had been applicable since 1948.

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crease by 10 per cent, their surtax net incomes will increase by 90 per cent and 15 per cent respectively. This result was obtained as follows:

	Taxpayer A		*Taxpayer B*	
Adjusted gross income	$3,000	$3,300	$8,000	$8,800
Deductions (10 per cent)	300	330	800	880
Net income	$2,700	$2,970	$7,200	$7,920
Exemptions	2,400	2,400	2,400	2,400
Surtax net income	$ 300	$ 570	$4,800	$5,520
Per cent increase	–	90%	–	15%

[22] Since the enactment of income splitting in 1948, the brackets for married couples have been, in effect, doubled. Thus, whereas the statutory rate brackets cover $2,000 of taxable income at the bottom of the income scale, the actual rate brackets for married persons, after income splitting is taken into account, cover $4,000 of taxable income (see Appendix Table A-4). In terms of adjusted gross income, this means that a married man with no children remains taxable at the first bracket rate if his income varies from $1,333 to $5,778; if he has two children, he remains taxable at the first bracket if his income varies from $2,667 to $7,111. (These computations assume the taxpayer elects the optional standard deduction.)

[23] For 1953 the marginal rates in the first two brackets were 22.2 and 24.6 per cent (see Appendix Table A-4). As noted above, the average rate was 27 per cent.

In either case it seems clear that, at 1953 rates, built-in flexibility alone would offset no more than about 20 per cent of a change in total income. Our best guess is that the offset is more likely to be in the neighborhood of 17 or 18 per cent. Moreover, tax rates were reduced by almost 10 per cent beginning January 1, 1954. *It follows that, at 1954 tax rates, the offset due to built-in flexibility will probably be about 15 or 16 per cent.* This conclusion is based on data for a period of almost continuously rising incomes. I cannot predict whether it can be applied to a cyclical downswing. It seems clear, however, that only substantial changes in the relative distribution of income will alter the result significantly.

2. *Discretionary Changes in Rates and Exemptions*

As was demonstrated in the year following the outbreak of hostilities in Korea, rate changes can be employed to increase revenues substantially and quickly. They can be equally effective in reverse. If necessary, substantial additional reductions can be made by raising the personal exemptions. In combination, rate and exemption changes would greatly increase the offset to a drop in individual incomes which can be expected from built-in flexibility alone.

RATE REDUCTIONS

The effects of various types of rate reductions can be computed from a distribution of the tax base by rate brackets. The number of taxpayers and their surtax net incomes distributed by surtax net income classes are shown in columns 2 and 3 of Table 7, which is based on estimates for calendar year 1953.[24] The last five columns distribute the surtax net incomes by rate brackets.[25]

The shape of the distribution of surtax net incomes by rate brackets is very different from the distribution by size shown in column 3. Whereas taxpayers with surtax net incomes of less than $2,000 ac-

[24] In this table, married couples are counted as two taxpayers and their combined incomes are divided equally between the two spouses.

[25] For example, taxpayers with surtax net incomes between $2,000 and $4,000 received an estimated total of $27 billion. We know that they were taxed at the first bracket rate on their first $2,000, and at the second bracket rate on the remainder. Since there were 10 million taxpayers in the $2,000–4,000 bracket, $2,000 × 10 million, or $20 billion, was taxable at the first bracket rate and the remaining $7 billion was taxable at the second bracket rate. We proceed in this way for each bracket, multiplying the size of the bracket by the number of taxpayers; the entry for the last bracket is computed by subtracting the entries for all of the lower brackets from the total surtax net income in the class. The totals for the columns give the total amount of surtax net income which was taxable at the various bracket rates.

count for 45 per cent of total surtax net income, the first bracket accounts for 69 per cent of the total. By contrast, taxpayers with surtax net incomes of $8,000 or more account for 20 per cent of total surtax net income, but only 11 per cent is taxable at the rates applying to the brackets above $8,000.

TABLE 7

Estimated Distribution of Surtax Net Income by Size and by Rate Bracket, 1953

(number of taxpayers in millions; surtax net income in billions)

SURTAX NET INCOME CLASS (1)	NUMBER OF TAXPAYERS [a] (2)	SURTAX NET INCOME (3)	DISTRIBUTION OF SURTAX NET INCOME BY RATE BRACKET				
			$0–2,000 (22.2%) (4)	*$2,000–4,000 (24.6%)* (5)	*$4,000–6,000 (29%)* (6)	*$6,000–8,000 (34%)* (7)	*$8,000 & over (38–92%)* (8)
$ 0–2,000	63.0	$ 53.0	$53.0				
2,000–4,000	10.0	27.0	20.0	$ 7.0			
4,000–6,000	2.0	9.0	4.0	4.0	$1.0		
6,000–8,000	.7	4.7	1.4	1.4	1.4	$ .5	
8,000 & over	1.3	23.5	2.6	2.6	2.6	2.6	$13.1
Total	77.0	$117.2	$81.0	$15.0	$5.0	$3.1	$13.1

[a] Married couples are counted as two taxpayers, each with half of the combined surtax net income.

Given the data in Table 7, it is simple to estimate the revenue effects of rate changes and their distribution by brackets. The following magnitudes may be helpful in judging the revenue potential of rate reductions:

1. Each percentage-point reduction in the rates in all brackets would reduce revenues at 1953 income levels by almost $1.2 billion.

2. A reduction of 1 percentage point in the first bracket rate would lose $810 million. By contrast, the same reduction in all tax rates above the first bracket would lose $360 million. Thus a reduction of 1 percentage point in the first bracket rate is equivalent to a reduction of about 2¼ percentage points in all other rates.

3. Reductions in the first bracket rate would be heavily concentrated in the lowest income classes. Of the $810 million loss resulting from a reduction of 1 percentage point in the first bracket rate, $530 million would go to taxpayers with surtax net incomes of less than $2,000 and $730 million to those with surtax net income of less than $4,000.

Since these figures are based on 1953 income levels they cannot be used directly to estimate the revenue loss from rate reductions if incomes decline. Under such circumstances built-in flexibility would

reduce the size of the tax base and hence the tax reduction that might be expected from rate changes. For example, if total adjusted gross incomes fall from 1953 levels by $10 billion, the tax base will drop $6 to 7 billion. Using the midpoint of $6.5 billion, this means that the tax base would be reduced from $117.2 to 110.7 billion. Accordingly, the revenue loss from a reduction of 1 percentage point in all tax rates would be reduced from $1.17 to 1.1 billion. If adjusted gross incomes fall by as much as $50 billion, a 1-percentage-point rate reduction would reduce tax liabilities by only $850 million.

It is evident, however, that even small rate reductions could greatly enhance the effect of built-in flexibility in offsetting a drop in individual incomes. The combined effect under 1953 and 1954 tax rates is shown in Table 8.

TABLE 8

Revenue Effect of $10 Billion Decline in Adjusted Gross Incomes Combined with a Rate Reduction of 1 Percentage Point

(*billions of dollars*)

	1953 Rates	*1954 Rates*
Reduction in taxes due to built-in flexibility	1.8	1.6
One-percentage-point reduction	1.2	1.1
Total reduction	3.0	2.7

Assuming a reduction of $10 billion in adjusted gross income, a general rate reduction of only 1 percentage point would increase the offset due to built-in flexibility by about two-thirds. Larger reductions in tax rates would, of course, provide correspondingly larger offsets.

INCREASES IN EXEMPTIONS

In 1953, taxable individuals probably claimed about 120 million exemptions on their returns. At $600 for each exemption, the total value of the allowance for exemptions is $72 billion. If exemptions were increased to $700 per capita, the value of these exemptions would rise by one-sixth, or $12 billion. However, not all of this increase would affect the tax base, because some taxpayers would "waste" part of it, i.e. they would not have sufficient taxable income to use all of the additional exemptions. Assuming the wastage is about 7 per cent,[26] the total reduction in the tax base due to a $100

[26] We do not know precisely how much this wastage would be. However, at 1948 income levels rough calculations based on *Statistics of Income* data indicate that it was in the neighborhood of 6 per cent, and it has probably increased somewhat because of the large number of entries into the lower tax brackets since then.

increase in the per capita exemption would be $11.2 billion (.93 × $12 billion) at 1953 income levels.

The marginal rate applying to this reduction in the tax base is probably roughly equal to the rate in the second surtax bracket. Thus the rate to be applied is approximately 25 per cent under the 1953 rate schedule and 22 per cent under the rate schedule for 1954 (see Appendix Table A-4). The revenue loss due to a $100 increase in the per capita exemption is, therefore, $2.8 billion at 1953 rates and $2.5 billion at 1954 rates.

The revenue effect of successive $100 increases in exemptions can be computed in a similar manner.[27] The reductions in the tax base and the revenue loss resulting from increases up to $1,000 per capita are summarized in Table 9 (assuming 1953 income levels).

TABLE 9

Revenue Effect of Successive Increases in Income Tax Exemptions

PER CAPITA EXEMPTION	CUMULATIVE REDUCTION IN TAX BASE	CUMULATIVE REVENUE LOSS	
		At 1953 Tax Rates	*At 1945 Tax Rates*
		(*billions of dollars*)	
$ 700	$11.2	$2.8	$2.5
800	20.8	5.3	4.6
900	29.1	7.4	6.4
1,000	36.4	9.2	8.0

COMBINED EFFECTS OF RATE AND EXEMPTION CHANGES AND BUILT-IN FLEXIBILITY

The combined effects of rate and exemption changes and built-in flexibility, assuming reductions in total adjusted gross incomes ranging from 5 to 25 per cent below the 1953 level, are shown in Table 10. Since the tax rates were reduced at the end of 1953, the computations are based on 1954 rates. The top line of Table 10 shows the reductions in tax liabilities due to built-in flexibility. The remaining figures indicate the combined effect of rate and exemption changes, *including* the reductions due to built-in flexibility. For example, if incomes decline by $25 billion below 1953 levels, or 10 per cent, individual income tax liabilities would fall automatically by $4 billion. If exemptions were raised to $700 per capita and all rates were reduced by

[27] That is, adjust the total value of exemptions for wastage of about 7 per cent and then apply the second surtax rate to estimate the revenue loss. The percentage allowance for wastage and the marginal tax rate should fall somewhat with each successive increase in exemptions, but the effect would be small and our figures are too rough to warrant this refinement.

5 percentage points, tax liabilities would be reduced by an additional $6.8 billion; accordingly, the total reduction would be $10.8 billion.[28]

TABLE 10

Combined Effect of Built-in Flexibility and Rate and Exemption Changes on Individual Income Tax Liabilities [a]

(*dollars in billions*)

REDUCTION IN TAX RATES	REDUCTION IN TAX LIABILITIES ASSUMING TOTAL ADJUSTED GROSS INCOME FALLS BY:				
	$12.5 (5%)	*$25 (10%)*	*$37.5 (15%)*	*$50 (20%)*	*$62.5 (25%)*
	No Change in Exemptions				
0 [b]	$ 2.0	$ 4.0	$ 6.0	$ 8.0	$10.0
1%	3.1	5.0	6.9	8.8	10.8
3	5.3	7.0	8.8	10.5	12.3
5	7.5	9.1	10.6	12.2	13.8
7	9.6	11.1	12.5	13.9	15.4
10	12.9	14.1	15.3	16.4	17.7
	Increase in Exemptions to $700 per Capita				
0	$ 4.4	$ 6.3	$ 8.1	$10.0	$11.9
1%	5.4	7.2	9.0	10.8	12.6
3	7.3	9.0	10.6	12.3	13.9
5	9.3	10.8	12.3	13.8	15.3
7	11.3	12.6	14.0	15.3	16.7
10	14.2	15.4	16.5	17.6	18.7

[a] These computations are based on 1954 tax rates; the reductions in adjusted gross income are from the average 1953 level of $252 billion.

[b] This line shows the effect of built-in flexibility alone.

To summarize, if incomes decline moderately, the individual income tax can be used to hold the drop in disposable incomes to much smaller proportions. Although built-in flexibility alone would not necessarily be sufficient, it can easily be supplemented by moderate rate and exemption changes. However, if the income decline is substantial, the job becomes more difficult, because built-in flexibility cuts into the tax base and therefore reduces the effectiveness of both

[28] Although Table 10 indicates the potentialities of rate and exemption changes as incomes decline from 1953 levels, it can also be used to approximate revenue losses after incomes have already declined. Suppose incomes have already dropped by $12.5 billion and rates and exemptions have not been changed. Referring to the top line of Table 10, we find that tax liabilities have been reduced by $2 billion. Suppose that incomes decline another $25 billion, and that rates are reduced by 5 percentage points and exemptions are increased to $700 per capita. Then the total reduction in tax liabilities below the original level would be $12.3 billion. Subtracting $2 billion, we obtain a net tax reduction of $10.3 billion. Thus 41 per cent of the second decline of $25 billion (10.3 ÷ 25) would be offset by tax reduction.

rate and exemption changes.[29] Thus use of the individual income tax alone to offset as much as one-quarter or one-third of a large drop in incomes from 1953 levels would require substantial changes in rates and exemptions. For example, built-in flexibility combined with an increase in exemptions to $700 per capita and a reduction in tax rates by 7 percentage points would offset only $15.3 billion, or 30 per cent, of a $50 billion decline in total adjusted gross incomes. (This would reduce the yield of the individual income tax from $29 billion in 1954 to less than $14 billion.)

Although these results may be disappointing to those who expected more of a stabilizing effect from small changes in individual income tax rates and exemptions, it would be erroneous to conclude that individual income tax reduction should be discarded as an antirecession measure. It should be recognized that we have been dealing with only one of a number of measures which can be used to bolster individual incomes. Our results indicate that individual income tax reduction can be an important element in a well-rounded program to combat recession, but it will need to be supplemented by other measures in the event of a substantial decline in income.[30]

[29] The analysis in Part 1 provides no information regarding the effect of a higher level of exemptions on built-in flexibility. In the absence of such data, it was assumed that built-in flexibility at exemptions of $700 per capita would be about 10 per cent lower than built-in flexibility at present exemptions, i.e. that the reduction would be proportionate to the reduction in the tax base resulting from a $100 increase in exemptions at 1953 income levels.

[30] I should like to add a word of caution regarding the reliability of the conclusions in this paper and also to indicate the most important gaps in the data.

As the reader will have noted, rough approximations were necessary at crucial points in the analysis. Fortunately, even if the estimates are incorrect by a substantial margin, the conclusions will not necessarily be wrong. Table 10, for example, is probably accurate enough to support the inferences I have drawn from it.

It is clear, however, that further work is needed, especially at the points where I have been forced to substitute judgment for fact. In particular, the conclusion that the built-in flexibility of the individual income tax has been roughly the same since 1948 (assuming present rates and exemptions) needs further verification. This can be done on the basis of the data now available, but the computations would be too laborious and time-consuming for an individual research worker to undertake.

The most important missing link is a distribution of the tax base by rate brackets for past years. A fairly good approximation to this distribution can be obtained from the detailed tables now provided in the annual *Statistics of Income* volumes published by the Internal Revenue Service of the Department of the Treasury. This would require a substantial investment in clerical time, but it would add immeasurably to the value of the data we now have. For future years I would strongly suggest that the Department add such a table to its annual volumes. This table would be much more valuable for economic analysis (and also for the tax analysis needed by the Department) than any number of the tables now published.

Given a series of distributions by rate brackets for past years, it would be

Appendix

TABLE A-1

Adjustments of Department of Commerce Estimates of Personal Income Used in Arriving at Adjusted Gross Income, 1948

(*billions of dollars*)

1. Personal income		209.5
2. Portion of personal income not included in adjusted gross income	30.8	
a. Transfer payments (except fees and military retirement pay)	11.3	
b. Other labor income (except pay of military reservists)	2.5	
c. Food and fuel produced and consumed on farms	2.9	
d. Imputed gross rental value of tenant-occupied farmhouses	.4	
e. Other personal income in kind except services of financial intermediaries	4.6	
f. Noncorporate nonfarm inventory valuation adjustment	—.4	
g. Value of change in farm inventories	1.3	
h. Imputed interest	3.7	
i. Nontaxable military pay and allowances	2.6	
j. Accrued interest on U.S. government bonds	.6	
k. Tax-exempt interest	.2	
l. Fiduciary income (other than capital gains) not distributed to individuals	.7	
m. Property income of nonprofit organizations	.4	
n. Dividends received by mutual life insurance companies	.1	
3. Portion of adjusted gross income not included in personal income	5.7	
a. Employee contributions for social insurance	2.2	
b. Net gains from sale of assets reported on indivdual income tax returns	2.2	
c. Adjusted gross income of residents of Alaska and Hawaii reported on individual income tax returns	.7	
d. Miscellaneous income (except other income on Form 1040A) reported on individual income tax returns	.7	
e. Annuities and pensions reported on individual income tax returns	.3	
f. Deductions for net operating loss carry-over and depletion	—.3	
4. Total adjustment for conceptual differences (lines 2–3)		25.1
5. Estimated adjusted gross income of taxable and nontaxable individuals (lines 1–4)		184.4

Note: Figures are rounded and will not necessarily add to totals.

Source: Lines 2a, 2b, 2c, 2e, 2f, 2g, 2h, 2n, and 3a—Department of Commerce. Lines 2j and 2k—Estimates based on data in the *Annual Report of the Secretary of the Treasury*. Lines 2e, 3b, 3c, 3d, and 3e—*Statistics of Income for 1948*, Internal Revenue Service, Part 1, 1953. Lines 2d, 2i, 2m, and 3f—Based on estimates prepared by Selma Goldsmith.

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possible to determine how the additions to the tax base since the end of the war have been distributed by brackets, and to test whether the marginal rate applying to these additions would have been constant if present rates had been in effect throughout the period. More generally, if such a series were available, it would be possible to establish the relationship between changes in the distribution of adjusted gross incomes and changes in the distribution of the tax base.

TABLE A-2

Derivation of the Individual Income Tax Base, 1948

(*billions of dollars*)

Total adjusted gross income	184.4
Deduct: Nonreported adjusted gross income	−20.8
Equals: Adjusted gross income reported on individual returns	163.5
Deduct: Adjusted gross income of nontaxable individuals filing returns	−21.5
Equals: Adjusted gross income of taxable individuals	142.1
Deduct: Deductions of taxable individuals	−16.5
Equals: Net income of taxable individuals	125.6
Deduct: Personal exemptions	−50.9
Equals: Surtax net income of taxable individuals	74.7
Add: Taxable income of fiduciaries	+.5
Deduct: Income subject to alternative tax	−.6
Equals: Total surtax net income	74.6

Note: Figures are rounded and will not necessarily add to totals.

Source: Table A-1 and *Statistics of Income for 1948,* Internal Revenue Service, Part 1, 1953.

TABLE A-3

Method of Estimating Tax Liabilities at 1953 Tax Rates and Exemptions, 1948–1953

(*dollars in billions*)

Year (1)	*Actual Tax Liability* [a] (2)	*Average Increase in Tax Rates over Prior Year* (3)	*Index of Tax Rates (1948 = 100)* (4)	*Correction Index* (5)	*Tax Liability at Present Rates and Exemptions* (6)
1948	$15.6	. . .	100.0	1.295	$20.2
1949	14.7	. . .	100.0	1.295	19.0
1950	18.5	4.4%	104.4	1.240	22.9
1951	25.0	14.5	119.5	1.084	27.1
1952	29.5	8.3	129.5	1.00	29.5
1953	32.0	. . .	129.5	1.00	32.0

[a] Includes normal tax, surtax, and alternative tax.

Column	Source
2	1948–1950: *Statistics of Income,* Internal Revenue Service, Part 1. 1951–1953: Estimates based on individual income tax collections.
3	Based on estimates prepared by the Department of the Treasury (see "Revenue Act of 1950," mimeographed, December 20, 1950, and "Revenue Act of 1951," mimeographed, November 14, 1951).
4	Based on column 3.
5	Index for 1953 ÷ column 4.
6	Column 2 × column 5.

TABLE A-4

Federal Individual Income Tax Rate Schedules for 1953 and 1954

SURTAX NET INCOME		COMBINED NORMAL TAX AND SURTAX RATES	
Single Persons	*Married Couples Filing Joint Returns*	*1953*	*1954*
$ 0– 2,000	$ 0– 4,000	22.2%	20%
2,000– 4,000	4,000– 8,000	24.6	22
4,000– 6,000	8,000– 12,000	29	26
6,000– 8,000	12,000– 16,000	34	30
8,000– 10,000	16,000– 20,000	38	34
10,000– 12,000	20,000– 24,000	42	38
12,000– 14,000	24,000– 28,000	48	43
14,000– 16,000	28,000– 32,000	53	47
16,000– 18,000	32,000– 36,000	56	50
18,000– 20,000	36,000– 40,000	59	53
20,000– 22,000	40,000– 44,000	62	56
22,000– 26,000	44,000– 52,000	66	59
26,000– 32,000	52,000– 64,000	67	62
32,000– 38,000	64,000– 76,000	68	65
38,000– 44,000	76,000– 88,000	72	69
44,000– 50,000	88,000–100,000	75	72
50,000– 60,000	100,000–120,000	77	75
60,000– 70,000	120,000–140,000	80	78
70,000– 80,000	140,000–160,000	83	81
80,000– 90,000	160,000–180,000	85	84
90,000–100,000	180,000–200,000	88	87
100,000–150,000	200,000–300,000	90	89
150,000–200,000	300,000–400,000	91	90
200,000 and over	400,000 and over [a]	92	91

[a] Subject to a maximum effective rate limitation of 88 per cent in 1953 and 87 per cent in 1954.

COMMENT

PAUL J. STRAYER, Princeton University

Pechman has made a valuable contribution to our understanding of the effect of built-in flexibility and rate and exemption changes under the federal individual income tax during a recession. Because of the radical transformation of this tax during the war years, he has limited his statistical analysis to the period since World War II. As this period is one of boom, with the single exception of the slight readjustment in 1949, the factual record can show only the relation-

ship between the important variables in a period of full employment, and the changes in yield that might be expected in a recession have to be inferred rather than measured. The primary question raised by Pechman is whether the relations found in a period of rapidly rising money and real incomes, inflation, and a general leveling of income distribution will be reversible in the event of a recession. He believes that such reversibility is a reasonable hypothesis, although he does not claim that there are sufficient data to prove his case or that his conclusions, at this stage, are more than tentative.

With regard to the built-in flexibility of the individual income tax he finds that there is a constant relationship between adjusted gross income and the tax base and that there is a constant average and marginal rate of tax. This leads him to the conclusion that the relation between tax yield and national income will be constant. Thus, if the postwar relations hold throughout a recession, we should expect that approximately $1.5 to 1.6 billion of a $10 billion decline in adjusted gross income would be offset by the built-in flexibility of the individual income tax rates which may be expected to prevail in 1954. This assumes that the relation of tax base to adjusted gross income and the marginal rates of tax which have been constant over the period since the end of World War II will hold in the event of a recession of some magnitude.

Although there is no direct evidence that can be brought to bear on this point, the following reasons may be cited to suggest that a more reasonable assumption is that the relations that will prevail in the event of a recession will be different from those which have held over the past few years. First, the inflation since the end of the war has lowered the real value of the exemptions and has tended to throw a disproportionate part of the rising total income within the tax base. Second, since the end of the war, changes in income distribution have occurred because of the leveling influence of full employment, private and governmental action taken to raise the level of those at the bottom of the income pyramid, and the long-range effects of progressive taxation which have reduced the number at the top. Third, the changes in the size and age composition of the population since the end of the war have been ignored by Pechman, as have their implications for the future.

Much more needs to be learned about the distribution of the expected cut in real and money incomes before it can be said that the tax base and marginal tax rate will decline in a constant pattern consistent with that followed in the period of rapid rise. A sense of proportion must also lead one to conclude that however much these

relationships may vary, the magnitudes will not be too different from those assumed by Pechman and that the need for discretionary action to supplement the gain from built-in flexibility cannot be controverted. It is this point that is of the greatest importance as a matter of public policy.

Pechman's findings about the effectiveness of rate and exemption variation as a means of sustaining individual incomes in the event of a recession are not subject to major qualification. They also reveal that there is less potency in this type of remedy than has been alleged by some. To put it another way, the type of action required to offset a sizable decline in income is much more drastic than has been assumed or suggested by many. This raises the question, only briefly touched upon by Pechman, of the practical political and administrative problems of gaining greater discretionary or legislative flexibility in our revenue measures. It is my belief that the cautious optimism he expresses about recent gains must be questioned. The lowering of exemption levels has transformed the income tax to a broad base tax and greatly increased its potential, as have the current-payment and deduction-at-the-source developments of recent years. The record following the outbreak of the Korean war at both executive and Congressional levels proved to be remarkably good. Two major tax increases were passed within a few months of the beginning of the war and their effectiveness in counteracting the inflation cannot be questioned. There still is, however, much evidence that the gap between executive and legislative thinking about tax policy and stabilization policy is substantial. There is also the problem of gaining the objective of coordinated economic policy within either branch of government. The recent record suggests that although there have been several instances when Congress followed a more intelligent policy than might have been expected, the reasons have been as often wrong as right. Current debates in Congress over tax revision and budget policy indicate that there is still a long way to go before we can give up the fear that too often the government will act in such a way that it aggravates the problem rather than corrects it. Memory of World War II debates over the need for additional taxes and the type of revenue measures required does not encourage one to believe that tax changes can be passed with dispatch whenever the economic situation requires them. The problem of those at or below the exemption level raises the question of the political practicality of tax reductions that do little for the group at the bottom of the income pyramid. Negative taxes or family allowances may prove to be the answer, but much more thought must be given to such measures be-

fore they can gain the sort of acceptability required to make them effective parts of an antidepression program.

In conclusion, it is well to emphasize that there still must be much more thought and attention directed to this issue. Experimentation, experience, and precedent must all be more extensive before the sort of countercyclical tax flexibility that is called for by most stabilization models can be thought of as a practical operating device. Let us hope that in the meantime the lessons of the past have been well enough learned so that we may at least avoid the worst sins of the past and may gradually move closer to the perfection and degree of rational behavior so ardently desired.