Income Tax Compliance Research

Gross Tax Gap Estimates and Projections for 1973-1992

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This report contains the Internal Revenue Service's new estimates of the gross income tax gap. Earlier estimates were revised to reflect recent tax law changes, recent compliance data, and improvements in tax gap estimation methods.

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Introduction

The mission of the Internal Revenue Service is to collect the proper amount of tax revenue at the least cost to the public, and in a manner that warrants the highest degree of public confidence in our integrity, efficiency and fairness. To achieve this purpose, IRS must determine the extent of noncompliance with the tax law and regulations. The tax gap is a comprehensive measure of noncompliance which conveys significant information on the challenges faced in collecting taxes that are not voluntarily paid. This report presents IRS's revised estimates of the gross tax gap, which is the amount of income tax owed but not voluntarily paid. The "net tax gap" is the gross tax gap less taxes paid as a result of IRS enforcement activity.[1] In this report the words "gap" or "tax gap" always refer to the gross tax gap.

The tax gap consists of unpaid individual and business income taxes on legally earned income. The gap exists because some individuals and businesses understate income, overstate deductions, credits, and exemptions, and make math errors on the tax returns they file. It exists also because some do not file the tax returns they are required to file, and because some do not voluntarily pay taxes they report. (This report, however, does not contain estimates for taxes reported but not paid.) The tax gap estimates presented in this report do not include gaps resulting from failure to report employment or excise taxes, or any tax other than the Federal income tax.

IRS has revised the tax gap estimates for 1987 and forward in order to reflect effects of recent tax legislation on individual and corporation income tax liabilities, the availability of more recent data, and improvements in estimating methods. The estimates are projected forward to 1992. Chapter I presents the tax gap estimates in detail for 1987 and analyzes trends and projections through 1992. Chapter II compares the new with the old estimates and discusses the reasons why the new estimates are lower than those published in 1983. (The previous IRS tax gap estimates appeared in *Income Tax Compliance Research: Estimates for 1973-1981*, published in July 1983.) Chapter III describes the methods used in making the estimates.

[1] IRS annually collects over $20 billion of income tax through enforcement programs. Estimates of the net tax gap are currently being developed for publication in a later report. The report should be available in the summer of 1988.

Chapter I

The Estimates

IRS estimates the gross income tax gap for tax year (TY) 1987 to be $84.9 billion. This consists of a $63.5 billion gap for individuals and a $21.4 billion corporate gap. This chapter explains what these gap estimates measure, discusses individual and corporate noncompliance in 1987, and sets the 1987 tax gap in the context of preceding years and projections through 1992.

A. Definitions

The income tax gap is the amount of income tax owed for a given year, but not voluntarily paid. The word "voluntarily" means without actual enforcement action, such as examination, collection, or criminal investigation. These estimates do not correspond directly to any figures in the budget of the Federal Government. IRS, through enforcement programs, does assess and collect part of what taxpayers owe but do not voluntarily pay and, thus, closes part of the tax gap. The tax gap estimates in this report do not net out this enforcement revenue, however; nor do they include penalties and interest, which Federal budget receipts include. Although the estimates prepared for this report are called gross tax gap measures, they are net of tax which is voluntarily overreported.

The unreported income estimates should not be equated with income earned in the so-called "underground economy." Press reports and scholarly works have defined the underground economy in various ways. In particular, it is not clear which types of business activities should be included. Such ambiguities make this "economy" more a figure of speech than an operational concept that can be measured. Further, this term usually encompasses both illegal and legal transactions. Although income from illegal transactions is taxable, it is extremely difficult to measure and to tax, and is therefore not included in the estimates prepared for this report. IRS estimates, besides accounting for unreported income earned in the regular economy, also account for noncompliance in the legal portion of the underground economy, such as unreported informal supplier income and unreported tip income. (Informal suppliers include roadside or sidewalk vendors, moonlighting craftsmen or mechanics, unlicensed providers of child or elderly care services, and similar operators with informal business styles.)

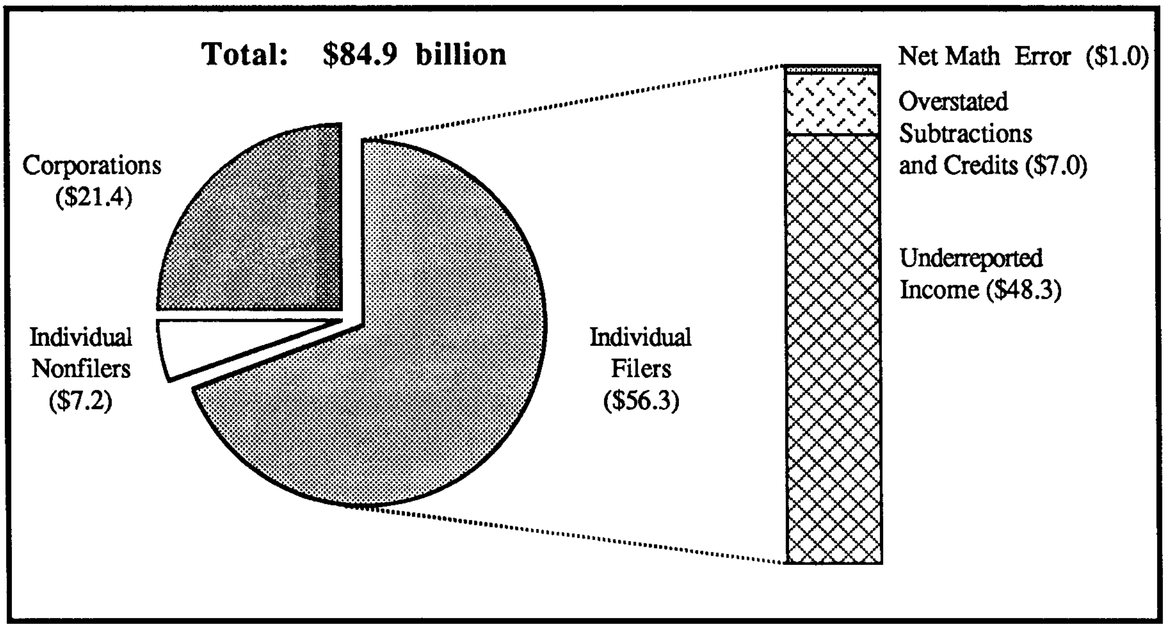
B. Noncompliance in 1987

The estimates of noncompliance in 1987 are essentially projections from earlier data. Tax year 1982 is the latest year for which we have compliance data for individual taxpayers. We based the 1987 tax gap figures on the assumption that voluntary reporting percentages (VRPs—amounts reported expressed as percentages of amounts which should have been reported) have remained at 1982 levels for each income, deduction, and credit item. (Estimated effects of the compliance provisions of the 1982, 1983, 1984 and 1986 tax acts were superimposed on this baseline.) Notwithstanding the assumption of constant VRPs, recent tax legislation will reduce the individual income tax gap by reducing the number of tax items that may be overreported and by lowering marginal tax rates.

1. Individual Gross Tax Gap for 1987

As Chart 1 and Table I-1 show, individual taxpayers who file returns but underreport their tax liabilities account for most tax dollars lost to noncompliance. For TY 1987, we estimate the filer tax gap to be $56.3 billion, which is almost eight times as large as the gap resulting from individuals who fail to file required tax returns. There are three sources of this gap: underreported income, overstated subtractions (itemized deductions, adjustments, and exemptions) and credits, and "math errors." Of the three parts, income underreported by individual filers contributes by far the largest amount to the tax gap. In 1987, this amounted to $48.3 billion. Nonfarm and farm sole proprietor incomes account for over half ($26.3 billion) of this amount.

Chart 1. Revised Estimates of the Gross Tax Gap (in billions), Tax Year 1987



In Table I-1, tax on underreported nonfarm proprietor income is divided into two major parts. First, an estimated $7.7 billion of tax on underreported proprietor income was earned by "informal suppliers" who tend to operate "off the books." Second, about $16.6 billion of the tax gap was due to understated nonfarm business income of self-employed individuals operating in more conventional ways. Tax on underreported farm proprietor income is $1.9 billion.

Table I-1 combines partnership income and small business corporation distributions to individuals.[2] Inadequate reporting of these incomes on 1987 returns contributed an estimated $3.2 billion to the tax gap. Underreported net rent and royalty income accounts for $3.1 billion. Failure to report capital gains contributed another $6.6 billion, while underreported interest and dividends accounts for $3.2 billion. The shortfall in reported tax due to underreported wages, salaries, pensions and annuities is approximately $1.5 billion.

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[2] The net income of a qualified small business corporation (defined in section 1371 of the Internal Revenue Code), whether or not distributed, is taxed as ordinary income through each stockholder. Therefore, it is quite similar to partnership income for tax purposes.

Table I-1. Distribution of the Gross Income Tax Gap by Source, Tax Year 1987

Source of Gap	Tax Gap ($ millions)		Percentage Distributions of the Tax Gap	
Total Income Tax		**84,874**		100.0
Individual Income Tax		63,475		74.8
Filers of tax returns		56,301		66.3
Underreported income	48,292		56.9	
Wages and salaries	1,417		1.7	
Interest and dividends	3,227		3.8	
Capital gains	6,650		7.8	
Informal suppliers [1]	7,739		9.1	
Other nonfarm proprietor income	16,646		19.6	
Farm income	1,904		2.2	
Partnership and small business corporation income	3,216		3.8	
Pensions and annuities	123		0.1	
Rents and royalties	3,141		3.7	
Estate and trust income	64		0.1	
State income tax refunds	86		0.1	
Alimony income	173		0.2	
Taxable unemployment and Social Security benefits	338		0.4	
Other income	3,566		4.2	
Overstated subtractions	6,062		7.1	
Adjustments	545		0.6	
Deductions	3,478		4.1	
Exemptions	2,039		2.4	
Credits	899		1.1	
Math Errors	1,049		1.2	
Nonfilers of tax returns		7,174		8.4
Corporation Income Tax		21,399		25.2
Small corporations (assets under $10 million)		5,225		6.2
Unreported income	2,519		3.0	
Overstated deductions	2,706		3.2	
Large corporations (assets of $10 million or more)		15,845		18.7
Other [2]		329		0.4

[1] Informal suppliers are proprietors who operate with informal business styles. See page 1.

[2] Consists of $164 million gap for fiduciaries and $165 million gap for unrelated business income of tax exempt organizations.

Note: Details do not add due to rounding.

The remaining $4.2 billion is attributed to estate and trust income, underreported state income tax refunds, alimony, taxable social security and unemployment insurance payments, and other income. "Other income" consists of such items as prizes, awards, gambling profits, recovery of bad debts, insurance received as reimbursement for medical expenses incurred in a previous year, and deductions for carryovers or carrybacks of business net operating losses.

2. Corporation Gross Tax Gap for 1987

The corporation tax gap estimates shown in Table I-1 refer to filers of corporate returns. Due to lack of specific compliance data for large corporations, unreported income and overstated expenses appear as separate sources only for small corporations.

The first column of Table I-1 shows that large corporations ($10 million or more in assets), with a tax gap of $15.8 billion, dominate the total corporate tax gap of $21.4 billion . The relative sizes of the gaps largely reflect the much larger aggregate tax liability of large corporations. Small corporations (less than $10 million in assets) account for $5.2 billion of the total, split almost equally between underreported income and overstated deductions and credits.

C. Voluntary Reporting Percentages

Voluntary reporting percentages (VRPs) measure the relationships between the total amounts of income or other related items that are voluntarily reported for any given year, and the corresponding correct amounts that should have been reported for that year. The correct amounts depend on the income tax provisions of the Internal Revenue Code in effect for that year as well as such things as the strength of the economy during that year.

1. Individual VRPs for 1987

Noncompliance means reporting too little or too much tax, income, or any of the various deductions or credits that taxpayers may subtract from tax or income. Underreporting or overreporting is measured on a net basis. Ordinarily, taxpayers underreport incomes more frequently than they overreport them. Consequently, VRPs for income items are less than 100 percent. Conversely, offsets to tax or income, such as credits and exemptions, are overreported more frequently than they are underreported. Consequently, VRPs for these items generally exceed 100 percent.

Table I-2 shows estimates of how much income and offsets to income individual filers underreported or overreported in 1987, along with the corresponding VRPs. Note that these estimates do not reflect nonfiler noncompliance. Estimates of unreported nonfiler income can be misleading because tax on such incomes has frequently been fully or partially paid, principally through withholding of tax by the taxpayer's employer. Thus, for tax year 1987, although delinquent nonfiler[3] incomes totaled $158.7 billion, the nonfiler tax gap was only $7.2 billion (see Table I-1). Moreover, data on nonfilers, available only for 1972 and 1977, are much less conclusive than data on filers, whose returns are scientifically sampled and thoroughly examined.

[3] We distinguish delinquent nonfilers from legitimate nonfilers who are not required to file tax returns since their total incomes fall below the filing thresholds. Legitimate nonfilers do not contribute to the tax gap.

Table I-2. Reported and Underreported Incomes, Overstated Items and Voluntary Reporting Percentages (VRPs) for Individual Tax Return Filers, Tax Year 1987

	Amount Reported ($ millions)	Amount Under/ Overreported ($ millions)	VRP [1]
Total Income of Filers	2,750,292	247,734	91.7
Wages and salaries	2,051,093	9,427	99.5
Interest and dividends	229,078	13,153	94.6
Capital gains	191,002	25,261	88.3
Informal suppliers [2]	7,740	51,417	13.1
Other nonfarm proprietor income	89,330	86,018	—
Farm proprietor income	-11,313	11,289	—
Partnership and small business corporation income	10,607	14,589	—
Pensions and annuities	125,589	2,103	98.4
Rents and royalties	67	15,715	—
Estate and trust income	15,138	285	98.2
State income tax refunds	9,287	463	95.2
Alimony income	3,341	1,362	71.0
Taxable unemployment	16,113	1,965	89.1
Taxable Social Security benefits	10,785	364	96.7
Other income [3]	2,435	14,323	—
Total Subtraction Items	867,345	36,522	104.4
Adjustments	36,686	2,186	106.3
Deductions	390,189	16,555	104.4
Exemptions	440,470	17,781	104.2
Taxable Income of Filers	2,078,015 [4]	284,254	88.0

[1] Five VRPs are not shown because they would be distorted by the combination of positive and negative amounts of income. The VRPs that are shown would have been lower if the unreported incomes of nonfilers had been included.

[2] Informal suppliers are proprietors who operate with informal business styles. See page 1.

[3] Includes deductions for carryovers and carrybacks of business net operating losses.

[4] Reported taxable income exceeds total reported income less subtractions because, for returns with subtractions greater than income, taxable income is zero.

In tax administration, it is axiomatic that when third parties report to the tax agency the income they pay to individuals, compliance in reporting such income markedly improves. Withholding tax at the source has proven to be an even more effective means of assuring compliance. Due to the variety of circumstances under which income is earned and paid in a modern economy, one cannot precisely quantify the impacts of information reporting or withholding on compliance. Nevertheless, the VRPs in Table I-2 reflect the positive influence of withholding and information reporting on compliance.

For example, a very large portion of wage and salary income is covered by withholding, and we estimate the VRP for wages and salaries to be 99.5 percent for filers. The VRP for pensions and annuities is almost as high—98.4 percent. Although withholding is optional to the taxpayer, pensions and annuities are almost universally covered by information reporting. At the other extreme, when IRS has no information on the incomes earned and taxpayers keep poor books and records, compliance tends to be very low. For example, we estimate the VRP for informal supplier income to be only 13.1 percent.

Most interest and dividend income is covered by information reports. However, substantial amounts of interest and dividends, particularly when received from abroad, are not subject to information reporting. Information reporting for capital gains is less complete than for interest and dividends. For example, brokers' reports to IRS are limited to information on the sale of their clients' publicly traded securities. Reflecting the more limited information IRS receives from third parties, the estimated filer VRPs for interest and dividends and capital gains are 94.6 percent and 88.3 percent, respectively.

Notice that Table I-2 does not present VRPs for some income categories. When a particular income type can be negative as well as positive, the VRP may become inaccurate. Moreover, negative values included in the aggregate for an income type will distort VRPs even if the aggregate in question is positive.

2. *Corporation VRPs for 1987*

VRPs cannot be calculated for large corporation income and deduction items because specific data on what should have been reported are not available. (Taxpayer Compliance Measurement Program [TCMP] studies have not been conducted for large corporations.) In the case of small corporations, for which TCMP studies are available, the VRPs for 1987 are 97.3 percent for total income reported (after expansion for unreported income not detected in TCMP—see page 15) and 101.4 percent for deductions reported.

D. Trends

Knowledge of income tax compliance patterns for a given year is vital for effective tax administration. However, compliance trends also provide important information. These

Chart 2. Estimates of the Gross Tax Gap by Major Component, Selected Tax Years, 1973-1992

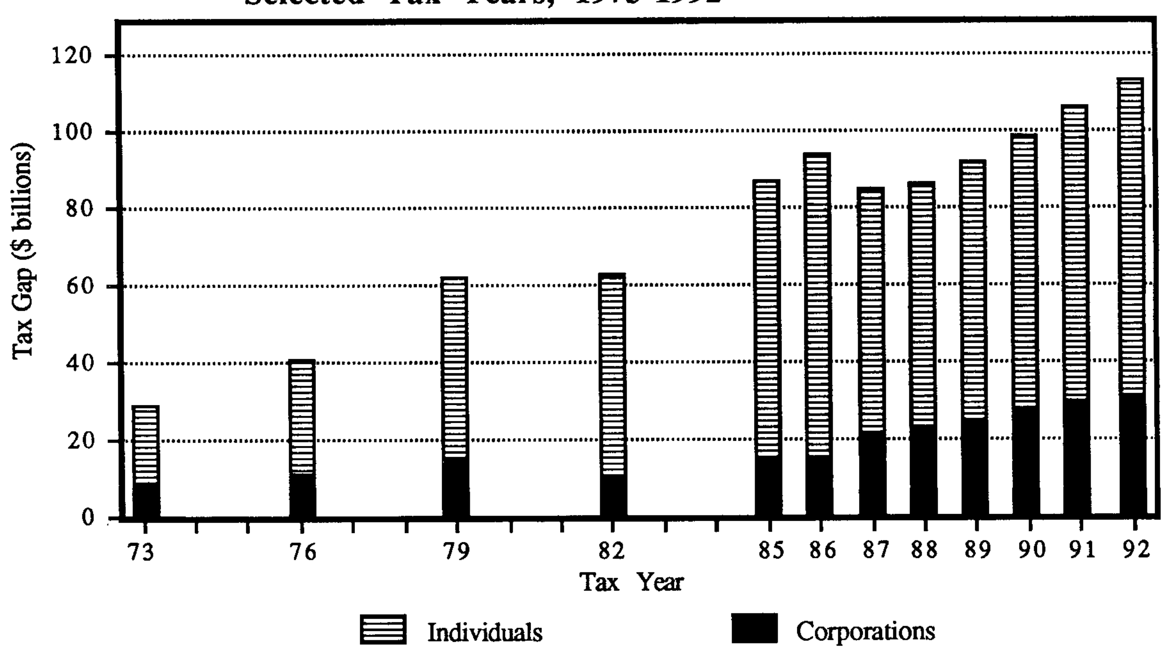

Table I-3. Gross Tax Gaps and Voluntary Compliance Rates, Selected Tax Years, 1973-1992

	1973	1976	1979	1982	1985	1986	1987	1988	1992
Tax Gap[1] ($ billions)									
Total	28.4	40.7	61.7	62.6	87.8	95.0	84.9	87.1	113.7
Individuals	19.7	29.6	46.8	51.9	73.3	79.3	63.5	64.3	82.6
Filers	17.9	26.8	42.3	46.2	65.5	71.2	56.3	56.9	72.4
Understated income	15.4	24.6	36.4	38.1	54.6	60.0	48.3	48.5	62.8
Overstated deductions	2.4	2.0	4.7	6.5	8.6	8.9	6.0	6.1	6.8
Overstated credits	-0.1	-0.3	0.6	0.9	1.2	1.3	0.9	1.1	1.3
Math errors	0.2	0.2	0.5	0.7	1.0	1.0	1.0	1.1	1.5
Nonfilers	1.8	2.8	4.5	5.7	7.8	8.1	7.2	7.3	10.2
Corporations[2]	8.8	11.1	15.0	10.7	14.4	15.6	21.4[3]	22.8	31.1
Voluntary Compliance Rate (percent)									
Total	83.7	82.4	81.7	83.4	81.6	81.1	83.2	83.6	84.2
Individuals	84.6	82.6	81.8	83.7	81.6	81.0	83.5	84.0	84.9
Corporations[2]	81.3	81.6	81.3	81.8	81.7	81.7	82.5	82.4	82.5

Source: See text.

[1] Alternate estimates, based on tax that would be assessed after all appeals, are shown below. See page 8.

	1973	1976	1979	1982	1985	1986	1987	1988	1992
Gross Tax Gaps (in $ billions)									
Total	23.7	34.2	52.0	53.9	75.5	81.1	71.2	72.8	95.0
Individuals	17.5	26.3	41.4	46.3	64.8	70.1	56.1	56.8	73.1
Corporations[2]	6.2	7.8	10.6	7.6	10.7	11.0	15.1	16.0	21.9
Voluntary Compliance Rates (in percent)									
Total	86.0	84.8	84.1	85.3	83.8	83.4	85.6	85.9	86.6
Individuals	86.1	84.3	83.6	85.2	83.4	82.9	85.1	85.6	86.4
Corporations[2]	85.9	86.2	86.0	86.3	85.8	86.4	87.0	86.9	87.1

[2] Includes the tax gaps for fiduciaries and unrelated business income tax of tax-exempt organizations.

[3] The increase in the corporate tax gap from an estimated $15.6 billion in 1986 to an estimated $21.4 billion in 1987 is attributable to the increase in corporate tax liabilities due to tax law changes enacted in 1986 and to the increase in corporate profits.

trends are illustrated in Chart 2, and are detailed in Table I-3. The estimates of the total tax gap in current dollars show an increase from $28 billion for 1973 to $62 billion for 1979 and to $85 billion for 1987. The gap is projected to increase to $114 billion for 1992.

The estimated growth of the tax gap is due in large part to the growth of income tax liabilities through real expansion of the economy and through inflation. The growth rate also reflects changes in the voluntary compliance rate (VCR), which for each year is the total amount of tax voluntarily reported as a percent of total tax liability. For example, the individual gap grew rapidly from 1973 to 1979, but from 1979 to 1982 it grew at a much slower rate. This change in the growth rate reflects corresponding changes in the VCR for individuals, which decreased from 84.6 percent in 1973 to 81.8 percent in 1979, and increased back to 83.7 percent in 1982. The most recent year for which TCMP data exist for individuals is 1982. For years after TY 1982, IRS assumed that the VRP for each source of individual income (e.g., sole proprietor income or wage income) and for each deduction item remained constant.

Some types of income, such as proprietor income, are not reported as completely as other types. Consequently, when the relative importance of the more poorly-reported types increases in response to changing economic conditions, the VCR for individual income tax declines. Thus, the individual VCR declined from 83.7 percent in 1982, a recession year, to 81.6 percent in 1985, a year of expansion. The combined influence of a period of prosperity, which enlarged the tax base, and the decline in the VCR accelerated the growth rate of the individual tax gap from 1982 through 1985.

The tax gap estimates themselves, however, were lowered for years after 1982 to account for the expected impact of all recent tax law changes designed to improve compliance. The drop in the individual tax gap from $79.3 billion in 1986 to $63.5 billion in 1987 is primarily due to the reduction of individual income tax liabilities enacted in 1986. This legislation lowered marginal tax rates, but it also repealed or limited many deductions from taxable income, thereby minimizing the possibility for taxpayers to overstate these income offsets.

Corporate compliance data over time are quite limited. Consequently, in estimating and projecting the total corporate tax gap, essentially one composite VCR was used to represent corporate compliance for all years. The decline in the corporate gap from an estimated $15.0 billion in 1979 to an estimated $10.7 billion in 1982 does not reflect VCR changes, but rather the drop in corporate tax liabilities over that period due to the two back-to-back recessions of 1980 and 1981-1982 plus tax cuts enacted in 1981. The increase in the corporate tax gap from an estimated $15.6 billion in 1986 to an estimated $21.4 billion in 1987 is attributable to the increase in corporate tax liabilities enacted in 1986 and to the increase in corporate profits. The VCR for all corporations in TY 1987 was approximately 82.5 percent.

The primary estimates for individual filers and corporations depend on the results of audits of tax returns. The recommendations of the IRS examiners are the basis for our estimates of tax liabilities, and of tax gaps. Taxpayers are, of course, provided the opportunity to contest the recommendations of IRS examiners. In some cases, the appeals processes reverse the examiners' recommendations in part or altogether. In these cases, the amount of additional tax *assessed* is smaller than the amount *recommended* by the examiners.

Our alternate estimates, shown in a footnote to Table I-3, reflect the difference between the amounts recommended and assessed. The adjustments are based on data from the Audit Information Retrieval System (AIRS), which tracks aggregate recommendations of tax change, including recommendations made on TCMP examinations, through assessments of additional tax. This system does not state the issues (underreported income vs. overstated subtractions) on which recommendations were reduced. Thus, the alternate estimates are not available by source, and the aggregate alternate estimates cannot be derived precisely from the primary estimates. Furthermore, in using the AIRS data, we were not able to account for the following considerations: (1) in some cases, IRS appeals officers settle for less than the full liabilities to avoid the hazards and costs of litigation; (2) taxpayers whose audits did not reveal deductions, business expenses, exemptions, or adjustments which they had overstated on their returns do not appeal; (3) taxpayers who disagree with their examiners' recommendations for small increases in tax may not appeal.

Chapter II

Comparisons With Prior IRS Estimates

The previous IRS tax gap estimates, published in 1983, were based largely on compliance data on individuals for 1976 and earlier years. For large corporations, the most recent compliance data used were from examinations closed in 1980; for small corporations, the most recent data came from a TCMP study of firms with accounting periods centered around tax year 1977. The revised estimates incorporate compliance data on individuals derived from TCMP examinations of returns filed for TYs 1979 and 1982. The revised compliance estimates for corporations are based on examinations closed as recently as 1986. This report also incorporates data from a 1985 household survey that provided information on informal suppliers working "off the books," and from other special studies.

In addition to these new data, significant improvements in estimation methods and changes in the tax laws have contributed to making the old estimates out of date. The estimates in this report, therefore, replace those published in 1983. Our analysis of the differences will focus on tax year 1987 as well as on 1981, since the latter was the last tax year for which the 1983 report contained detailed estimates.

Table II-1 highlights the four principal reasons why the new tax gap estimates are lower than those published in 1983. These are: effects of recent tax legislation on individual and corporate tax liabilities, the availability of new compliance and other data, improvements in methodology, and the omission of a remittance gap in the new estimates.

A. Shift of Tax Liabilities from Individuals to Corporations

In 1986, the tax base was broadened by legislation that eliminated, restricted, and phased out a number of subtractions from individual income. To the extent that, under new law, a subtraction from income is no longer allowed, a taxpayer cannot overstate it on the tax return. This reduces noncompliance. Moreover, because rates at which individual incomes are taxed were reduced, the tax gap associated with any given amount of unreported income fell. (However, because the 60-percent deduction for capital gains income was repealed, the capital gains tax gap increases.) As a consequence, recent legislation decreased the individual income tax gap estimate for 1987 by $14.4 billion. This measures the direct impact of the new law on the individual tax gap resulting from tax base broadening and lowered marginal tax rates. No attempt was made to estimate the more subtle effects this comprehensive tax legislation may have on individual attitudes and reporting behavior.

Despite a cut in the top tax rate from 46 percent to 34 percent, corporate tax liabilities increased. Therefore, our estimate of the corporate tax gap has been increased.

B. New Data

Both the 1981 and 1987 tax gap estimates of this report were affected by new data that became available since the 1983 IRS report on the tax gap was published. New TCMP data for tax year 1982 showed that filers of individual tax returns had not underreported their incomes by as much as had been projected from earlier data. On the other hand, a new and

Table II-1. Differences Between Old and New Gross Tax Gap Estimates for Tax Years 1981 and 1987 by Reason for Change (in $ billions)

	Total	Individuals	Corporations
		1987	
Old estimate of legal sector tax gap[1]	115.2	104.0	11.2
Legislative changes in tax liability	-7.6	-14.4	+6.8 [2]
New data	- 8.8	- 8.4	- 0.4
Improved methods	- 6.8	- 10.7	+3.9
Omission of remittance gap in the new estimate	- 7.0	- 7.0	—
New estimate of legal sector tax gap[3]	84.9	63.5	21.4
		1981	
Old estimate of legal sector tax gap[1]	81.5	75.3	6.2
New data	+0.7	- 4.3	+5.0
Improved methods	- 8.5	- 10.7	+2.2
Omission of remittance gap in the new estimate	- 6.8	- 6.8	—
New estimate of legal sector tax gap[3]	66.9	53.6	13.3

[1] For the prior report, an additional partial tax gap estimate of $9.0 billion was prepared for the illegal sector. The illegal sector tax gap was not estimated for this report.

[2] Predicting the impact of recent legislation on corporation compliance is difficult. We have no studies, and little experience, to guide us in judging the effects of a major change in tax law. Therefore, we assumed that the corporate voluntary compliance rates (VCRs) for tax liability will remain constant. The estimated tax gap rises because of the increases in corporate tax liabilities. An alternative method would assume constant voluntary reporting percentages (VRPs) for the elements used to calculate net corporate income (receipts, cost of goods sold, expenses). With this method, the effect would be to leave the corporate tax gap estimate unchanged or to reduce it. This result would imply that VCRs would rise.

[3] The estimates of the legal sector tax gaps are on a recommended basis; that is, they include some taxes that would be recommended, but which would not be assessed on appeal. The gross tax gap estimates on an assessed basis are (in $ billions):

	1981	1987
Total	57.0	71.2
Individuals	47.6	56.1
Corporations	9.4	15.1

Note: Details do not add due to rounding.

more elaborate IRS-sponsored survey of expenditures in the informal economy for 1985 indicated that the comparable survey for 1981 had understated informal supplier incomes. The scope of the previous study had omitted significant transaction categories, including informal sales to businesses. New IRS-sponsored studies of tipping practices for various periods from 1979 to 1985, together with another IRS study of tips reported on Forms 941 before and after the new tip information reporting requirements mandated by TEFRA, led to reductions of the estimate of tip-related tax gap. An IRS study of unreported capital gains for 1979 also led to further reductions of the individual tax gap. For individuals, the combined impact of all these new data sources was to lower the estimates of the individual gap by $4.3 billion for 1981 and by $8.4 billion for 1987.

For corporations, the major new data were from TCMP examinations of small corporation tax returns essentially for 1980, new Statistics of Income (SOI) data, revised Treasury projections of corporation tax liabilities, and operational examination results for Fiscal Years 1984, 1985 and 1986. These taken together raised the corporation tax gap estimate by $5.0 billion for 1981 and reduced it by $0.4 billion for 1987.

C. Improved Methods

For the individual tax gap, improvements in methods include new procedures for expanding TCMP data to estimate the unreported income that was not detected in TCMP audits, case-by-case imputation of the additional unreported income not detected in TCMP examinations to the TCMP data files for calculating the additional tax due, and a new analysis of nonfiler data files (exact-match data) to estimate the nonfiler tax gap. These improvements lowered the individual tax gap estimate for 1981 by $10.7 billion, and, by coincidence, the corresponding estimate for 1987 also by $10.7 billion.

For the corporation estimates, new methods include the use of "yield curves" to estimate tax gap not detected in operational examinations for corporations with assets between $10 million and $100 million, and expansion of TCMP-detected unreported income for corporations with less than $10 million in assets. These changes in tax gap estimation methods raised the corporation tax gap estimate for 1981 by $2.2 billion and the corresponding estimate for 1987 by $3.9 billion.

D. Remittance Gap

The individual income tax gap estimated for the earlier report had two components: the tax liability reporting gap and the tax remittance gap. The latter, in turn, consisted of two component gaps. These were the sum of reported tax balances due which were not remitted when individuals filed their tax returns, and the sum of employer underpayments of tax they withheld from the wages of their employees. The remittance gap estimates of the previous IRS report were not sufficiently accurate. Hopefully, we shall succeed in correcting this situation in the near future. In the meantime, however, our revised estimates of the tax gap exclude measures of the remittance gap. Table II-1 shows that the omission of the remittance gap in the new estimates lowered the 1981 tax gap estimate by $6.8 billion and the 1987 tax gap estimate by $7.0 billion.

Chapter III

Methodology

Tax noncompliance occurs either when a taxpayer does not file an obligatory return or when a taxpayer files a return that does not accurately report the tax obligation incurred. (Taxpayers may also fail to pay tax they report as due; estimates of this "remittance gap" are not included in this report.) Because these two forms of noncompliant behavior are quite distinct, different sources of data and different estimation methods are necessary to determine the resulting tax loss to the government.

To estimate the noncompliance of filers, we examine a representative sample of the returns that are filed to see whether the tax due has been accurately reported. Examiners, however, cannot always find the incomes that are not reported on returns, particularly if these incomes are earned "off the books." Consequently, special compliance studies and surveys must supplement data from the examination of tax returns adequately to measure some components of the tax gap. In the case of individual nonfilers, we work with a public-use computer file of survey data from a representative sample of the general population. Through exact matching of tax return records with the survey data, we estimate the aggregate income of individual taxpayers who had not filed the required tax returns.

A. Filers of Individual Returns

The estimates of underreported income and overstated items of filers of tax returns presented in this report are grounded in thorough IRS examinations of a representative sample of such returns. These examinations are conducted every three years under IRS's Taxpayer Compliance Measurement Program (TCMP). The TCMP surveys of individuals are probability samples of approximately 50,000 tax returns. With appropriate "weighting," the TCMP data give us estimates of the aggregate error on each tax return line item that would be found if all returns were examined.

Surveys based on examinations generally disclose overstated deductible items on tax returns considerably better than they disclose understated income. This is because, to disallow deductions, the examiner need only note the lack of adequate justification or proof for them. To recommend assessment of tax on unreported income, however, the examiner must locate evidence that the unreported income has in fact been received. Since it is obviously more difficult to do the latter, the underreported incomes disclosed on TCMP examinations are not adequate measures of the actual income tax noncompliance of filers.

A study of TY 1976 TCMP cases estimated the degree to which unreported incomes covered by information returns (Forms W-2 or 1099, for example) were not disclosed on TCMP examinations. This study provided a factual basis for raising the TCMP-derived estimates to more accurate levels. Underreported incomes from all sources were not expanded uniformly by the same multiplier. Cases in which underreporting occurred because taxpayers made specific claims relating to the income that can be rebutted by an examiner were distinguished from cases involving underreported receipts or other hidden incomes that do not necessarily come to an examiner's attention during the course of an audit. The former cases, in contrast, cover (overstated) offsets to business income or other items that an examiner would normally not miss in auditing a taxpayer's return or books and records. For example, taxpayers may understate royalty income by overstating their depletion allowances, which examiners would readily discern. Another example is the case of underreported capital gains income. This may occur because taxpayers overstate the basis, understate the sales proceeds, miscalculate the gain, or fail to report the sale of an asset. On a TCMP audit, in the absence of information returns from third parties, the failure to report the sale of an asset may never surface. However, in the case of a reported transaction, the auditor normally will have access to information to determine whether the reported capital gain has been understated due to overstating the basis or due to calculation errors. In these instances, there is no need to expand with the aid of a multiplier the unreported income to reflect more accurate levels. Special studies were conducted to help determine what proportions of various types of underreported incomes (such as capital gains, royalties, dividends, and other income) should be expanded and what proportions should not.

For every type of income, however, the expansion of the underreported income was done in the aggregate first. Then, the expanded underreported totals from each income source were imputed to different records in the IRS research data base with the aid of a computerized microdata tax model. This procedure made it possible to apply appropriate marginal tax rates to the underreported incomes from various sources.

Data from special IRS-sponsored surveys were used for tip income and net receipts of informal suppliers. The data on tips (relating to various periods from 1979 to 1985) and on informal suppliers (relating mainly to years 1981 and 1985) were extrapolated to the years for which TCMP studies were conducted and imputed by the microdata model to individual records for purposes of calculating tax gaps.

TCMP data from tax years 1973, 1976, 1979, and 1982 provide the basis for IRS individual tax gap estimates. Data from SOI provided a basis for extending the compliance estimates through 1985—the last year for which SOI data are available.

We projected the tax gap and related compliance measures beyond 1985 in four steps. First, we projected to 1992 voluntarily-reported income, deductions, and taxes paid under pre-1986 law. We did this by combining forecasts from the Office of Management and Budget and Wharton Econometrics. Second, assuming that VRPs for each tax return line item remained constant at 1982 levels, we extended the estimates of unreported incomes, overstated deductions, and underreported taxes through 1992 on the assumption that reporting for each tax return line item remained constant at the 1982 rates. Third, using a computerized microdata tax model, we adjusted the projections to reflect the impact of new tax law on each item reported. The new law lowered tax rates and made structural changes in the tax base. These affect the composition of taxable income and, at constant item-by-item compliance, the tax gap. For example, for 1987 through 1992, the proportion of gains on sales of assets rises because of the repeal of the 60-percent capital gains deduction, while the proportion of non-mortgage personal interest falls.

Finally, we adjusted the estimates and projections to reflect the estimated impacts of the compliance provisions of the Tax Acts of 1982-1986. For example, we recognized that new information-reporting requirements would raise the amount of tips, capital gains, or state tax refunds that are voluntarily reported, and that they would lower amounts overreported for interest deductions or exemptions for dependents.

B. Individual Nonfilers of Returns

The estimation started with an analysis of the public-use computer files from two studies that matched data from a national household survey with data from the Social Security Administration and IRS to estimate numbers and incomes of nonfilers of tax returns. For calendar years 1972 and 1977, about 40,000 households were randomly selected, forming a nationwide probability sample. Thus, the individuals and families surveyed were representative of the entire U.S. population regardless of whether they had received a Social Security card or whether they had filed a tax return with IRS. Individual records were linked by identifiers—mainly Social Security numbers—to generate statistical information on nonfilers and their incomes from various sources. The data for the two different years were adjusted to make them comparable and appropriate for use in estimating the nonfiler tax gap.

After the tax-related incomes of the nonfiler households were estimated, the records of low-income households who would not be required to file were dropped. Next, the tax consequences of the remaining households' failing to report their incomes were estimated. This was done by calculating the tax liabilities implied by the nonfiler incomes earned with the use of the data base mentioned above. Estimates of withholding and prepayment were based on SOI figures for the same years. These were subtracted from the tax liability estimates to obtain the tax gap estimates. Projections for other years were prepared by relating data on nonfilers to the projections for comparable filers for corresponding years.

C. Corporations

Different methods were used to derive the tax gaps for small corporations and for large corporations. For small corporations, TCMP survey data were available for estimating the tax gap. For large corporations, operational examination data were used since TCMP data were not available.

1. Small Corporations

The definition and method of estimating the tax gap for small corporations (those with assets under $10 million) are similar to those used for individuals. Both start with TCMP data for basic compliance rate information on a recommended basis and both convert this to an assessed basis to develop an alternative estimate of the final tax gap. Both also use SOI as the basis for projecting the TCMP results.

For years for which SOI tax data do not exist, projections for small corporations were based on projections of total corporate tax liability made by the Office of Tax Analysis (OTA) of the Treasury Department. Compliance rates for small corporations were based on TCMP studies done mainly for tax years 1977 and 1980. For years after 1980, the compliance rate was assumed to remain constant. We also recognized that it is not possible to detect all of the underreported income of small business entities. Unreported incomes disclosed on TCMP audits of small corporations were expanded in a manner similar to the expansion procedures used for individuals.

To compute the tax gap on the expanded amount of unreported income, a tax rate higher than the marginal tax rate from TCMP examinations was used. Under a progressive rate schedule, unreported incomes not disclosed by TCMP audits would in some instances raise the taxable incomes of smaller corporations into higher tax brackets.

For 1987 and later years, IRS adjusted the estimates to account for the recent tax law changes. The portion of the tax gap attributable to unreported income which TCMP does not detect was *reduced* to allow for the reduction in marginal tax rates. The portion of the gap attributed to the TCMP estimate of understated tax was *increased* to allow for the net increase in corporate income taxes on account of the rate reductions, base broadening, and accounting rules. For this purpose, IRS used OTA's estimates of the increases in tax liabilities of corporations due to the new tax law.

2. Large Corporations

As stated earlier, no TCMP exists for large corporations (those with assets of $10 million or more). Consequently, we used data from regular examinations—either actual or augmented with the aid of yield curves—to calculate the tax gap for large corporations. Tax reported by these corporations was obtained from SOI and from OTA projections.

For corporations with assets of over $100 million, tax increases resulting from actual examinations were used to calculate the tax gap. Although audit coverage for these large corporations is about 86 percent, effective coverage may be close to 100 percent since relatively little tax deficiency is thought to exist for the returns not examined.

For corporations with assets of between $10 million and $50 million and between $50 million and $100 million, IRS has estimated yield curves that show the average expected audit yields at all levels of audit coverage. The estimates of audit yield at 100 percent audit coverage were used to calculate the tax gap for corporations in these size classes.

For all large corporation classes, we averaged audit results or yield curves for the three most recent years to estimate the compliance rate for reporting of tax liability. The averaging eliminates the year-to-year variations due to administrative factors. The compliance rates were computed separately for each of three audit classes defined in terms of total assets: $10 million to $50 million; $50 million to $100 million; and $100 million and over. The compliance rates were then applied to SOI estimates of reported tax liabilities for each of the years 1973 through 1984, and to OTA estimates and projections for 1986 through 1992. For 1987-1992, the OTA projections included the expected additional reported tax liabilities arising from enacted legislation. Since the principal reason for the increase in corporate tax liabilities is the repeal of the investment tax credit, our assumption of a constant compliance rate for reporting of tax liability implies a falling voluntary reporting percentage for reporting of net income. We have no studies, and little experience, to guide us in judging the effects of such a major change in tax law. Therefore, the estimates are particularly subject to uncertainty.

For small corporations, we increased the TCMP-based tax gap estimates to reflect unreported income not detected on examination. Since incomplete detection of unreported income also occurs in operational examinations of large corporations, tax gap estimates for large corporations may be understated.

3. "Other" Tax Gap

The "other" income tax gap estimate, which is included with the corporation gap shown in Table I-1, is composed of tax gap estimates for fiduciaries (the retained income of trusts and estates) and for tax on the unrelated business income of tax-exempt organizations (UBIT). The tax gap estimate for each of these two components is based on a TCMP study. The resulting compliance rate in each case was applied to SOI and OTA estimates or projections of tax liability for all years 1973 through 1992 to generate a tax gap estimate for each year.