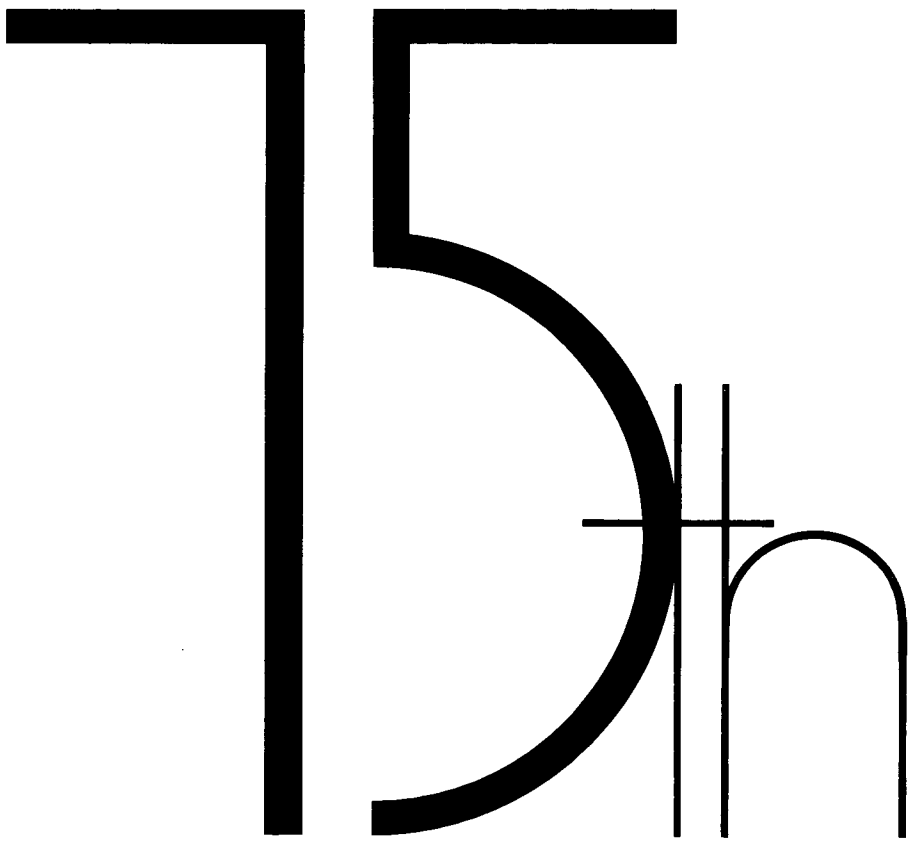
Statistics of Income

SOI BULLETIN

Department of the Treasury
Internal Revenue Service

Volume 8, Number 2 Fall 1988



1913-1988 ANNIVERSARY

Statistics of Income

Publication 1136 (Rev. 12-88)

Statistics of Income

SOI BULLETIN

Department of the Treasury
Internal Revenue Service

Publication 1136 (Rev. 12-88)

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(Operations)

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Director, Statistics of Income Division

The SOI Bulletin provides the earliest published annual financial statistics from various types of tax and information returns filed with the Internal Revenue Service. It also includes information from periodic or special analytical studies of particular interest to tax administrators. In addition, historical data are provided for selected types of taxpayers, as well as the gross internal revenue collections and other tax related items.

Information on the availability of additional unpublished data concerning the topics in this issue may be obtained by writing to the Statistics of Income Division, TR:S Internal Revenue Service, Washington, DC 20224.

In addition, special Statistics of Income tabulations based on income tax returns can be produced upon request on a reimbursable basis. Requests for this service should be addressed to the Director, Statistics of Income Division, at the address shown above.

Overall policy review of the SOI Bulletin is conducted by the Office of Tax Analysis, under the direction of Thomas Neubig. Robert A. Wilson and Bettye Jamerson of the Statistics of Income Division were the technical editors and were assisted by Wendy Alvey and Beth Kilss, editors of the SOI Bulletin Board, and Clementine D. Brittain who provided editorial assistance and prepared the copy.

Suggested Citation

Internal Revenue Service
Statistics of Income Bulletin
Summer 1988
Washington, D.C. 1988
Fall 1988
For sale by the Superintendent of Documents,
U.S. Government Printing Office,
Washington, D.C. 20402

SOI STATISTICAL SERVICES

(Available from Statistics of Income Division)

As part of the Statistics of Income program a series of special services is now being offered to data users (see below). Detailed information on these statistical services can be obtained by writing to Director, Statistics of Income Division (TR:S), Internal Revenue Service, 1111 Constitution Avenue, N.W., Washington, DC 20224. Purchase is by check made payable to the IRS Accounting Section.

Studies of International Income and Taxes, Publication 1267 — Price $45.00

Purchase price includes a 516-page document for 1979–83 that presents information from 13 Statistics of Income studies in the international area, including:

- Foreign activity of U.S. corporations
- Activity of foreign corporations in the U.S.
- Foreign interests in U.S. corporations
- Statistics related to individuals, trusts, and estates
- Data presented by— geographical area or industrial activity, as well as other classifiers

Purchasers of this service also will be provided with additional information for one year as it becomes available. The one year period for receiving additional information can be extended at a cost of $35.00 per year. A long-term subscription ($150) includes the compendium and additional information as it becomes available through August 1990. (The next compendium is scheduled for release in September 1990.)

Individual Income Tax Returns, Publication 1304 — Price $32.00

Purchase price includes a 196-page document for 1985 presenting Statistics of Income data and tables on:

- Sources of income
- Exemptions
- Itemized deductions
- Tax computations
- Data presented by— size of adjusted gross income, marital status

Purchasers of this service also will be provided with additional articles relating to 1985 data and preliminary 1986 data as they become available and will be notified of future statistical releases relating to individual income tax returns.

Partnership Returns, Publication 369 — Price $22.00

Purchase price includes a 314-page document for 1978–82 presenting previously unpublished Statistics of Income data for 1980, 1981 and 1982, as well as data previously issued in other publications. Features include:

- Number of partnerships
- Limited partnerships
- Receipts
- Cost of sales and operations
- Deductions
- Net income
- Capital gains
- Data presented by— industry size of total assets state number of partners

Purchasers of this service also will be provided with data for 1983–1985 as they become available and will also be notified of future statistical releases relating to partnership returns.

Other Services — Price dependent on the request

- Unpublished tabulations from SOI program are available. Includes detailed tables underlying those published in SOI Bulletin.
- Special tabulations produced to user specifications.
- Public use tape files, including the Individual Tax Model (1978–1985), among others. (Earlier files are available from the Machine Readable Branch (NNSR) of the National Archives, Washington, DC 20408.

BUSINESS SOURCE BOOKS

(Available from Statistics of Income Division)

In addition to the Corporation Source Book, two others are now being offered by the Statistics of Income Division (see below). Information can be obtained by writing to Director, Statistics of Income Division (TR:S) at the address above. Purchase of Source Books is by check made payable to the IRS Accounting Section.

Corporation Source Book, 1985, Publication 1053 — Price $175.00

This is a 480-page document that presents detailed income statement, balance sheet, tax and investment credit items by major and minor industries and size of total assets. This report is part of an annual series and can be purchased for $175 (issues prior to 1982 are for sale at $150). A magnetic tape containing the tabular statistics for 1985 can be purchased for $1,500.

Partnership Source Book, Publication 1289 — Price $30.00

This is a 291-page document showing key partnership data for 1957 through 1983, at the minor, major and division industry level. Includes a historical definition of terms section and a summary of legislative changes affecting partnerships during that period. Tables feature:

- Number of partnerships
- Number of partners
- Business receipts
- Depreciation
- Taxes paid deduction
- Interest paid
- Payroll
- Payments to partners
- Net income

Purchasers of this service also will be advised of the release of subsequent years' data. A magnetic tape containing the tabular statistics can be purchased for an additional $200.

Sole Proprietorship Source Book, Publication 1323 — Price $95.00

This Source Book is a companion to that for partnerships, shown above. It is a 244-page document showing key proprietorship data for 1957 through 1984. Each page contains statistics for a particular industry. Included will be data on:

- Number of business
- Business receipts
- Interest paid
- Depreciation
- Taxes paid deduction
- Payroll
- Net income

As with Partnerships, a magnetic tape containing the tabular statistics can be purchased for $245.

OTHER PUBLICATIONS

(Available from Superintendent of Documents GPO, Washington, D.C. 20402)

The Statistics of Income (SOI) Bulletin (Quarterly) — Publication No. 1136

Subscription price $16.00; Single copy price $6.00

The SOI Bulletin provides the earliest published financial statistics from the various types of tax and information returns filed with the Internal Revenue Service. The Bulletin also includes information from periodic or special analytical studies of particular interest to tax administrators and economists.

Statistics of Income—1984, Corporation Income Tax Returns, Publication No. 16

Price $8.50

Presents information on—

- Receipts
- Deductions
- Net income
- Taxable income
- Income tax
- Tax credits
- Distribution to stockholders
- Assets
- Liabilities

Data classified by—

- industry
- accounting period
- size of total assets
- size of business receipts

CONTENTS

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SOME OBSERVATIONS AND INSIGHTS

This issue of the *Bulletin* is special in that it commemorates 75 years of *Statistics of Income* (SOI) data. The first data were for 1913, the year when modern U.S. income taxation began. The information for each year provides not only a history of the Federal income tax, but a history of the Nation's economy. This history is recorded by the Internal Revenue Service (IRS) in the SOI series of reports, which are required by law in order to show how the tax system is operating.

Statistics on individuals and corporations have been annual features from the very beginning. Other SOI programs are of more recent duration; some are annual, some are occasional. The content of all of these programs is far different now from what it was in the earlier years. Changes in the tax law and the resulting evolution of the tax return forms have made tax return data a valuable source of economic as well as tax information. Needs of tax policymakers and estimators of future tax revenue—such as those at Treasury's Office of Tax Analysis—have also evolved considerably. At the same time, IRS and SOI processing methodologies and technologies have continued to change and grow, leading to the creation of the IRS Master File system, the use of computers, the introduction of statistical sampling, the demand for files of disaggregated data that users can access by computer, as well as the development of new media for publishing the aggregated totals. All of these factors have combined to make SOI what it now is.

As just mentioned, some of the major users of SOI are in the Office of Tax Analysis. At the program held in honor of the 75th Anniversary of Statistics of Income on November 16, 1988, C. Eugene Steuerle, Deputy Assistant Secretary of the Treasury (Tax Analysis) spoke about SOI. Because we thought you might be interested in the comments made from the perspective of the tax policymaker, we have included the full text of his speech here, in place of our usual "Bulletin Board" features.

It is an honor for me to be with you here today to celebrate the 75th anniversary of what is clearly one of the most important agencies in all of the Government. The Statistics of Income Division of the Internal Revenue Service has an enormous impact—an impact even greater than many of its members realize—on the way that the population thinks about itself, on the way past policy action is understood, and on the way in which Congress enacts legislation.

There is a good reason why the importance of Statistics of Income (SOI) work is not always fully understood, especially by outsiders. Almost all statistical work is long-run in nature. Often those who start on a project, or who provide the motivation for a project, are not working on the same project, or even in the same job, by the time the work is done. Moreover, work begun during one high level official's tenure is probably not completed until that official has been succeeded at least once.

This creates a somewhat interesting incentive system. A Secretary of the Treasury or a Commissioner of Internal Revenue can often ask for the development of new data, but seldom will he or she see the results of that request. The improvements in the gathering, sampling, and coding of the statistics, and in the design and implementation of studies, therefore, come about mainly because people like those who work on SOI simply care, and care greatly, about the results. It is the Statistics of Income Division's *professionalism* and *dedication* that bring about ultimately the information from which so much understanding and so many policy decisions are made. And again, it is *SOI's* anticipation of future needs that is the basis on which many needs are met when they become current.

The Statistics of Income Division's missions and goals are appropriately long-run in nature. They really cannot be otherwise. Statistical research requires much planning and development. Reliability of data and robustness of results are absolutely essential. Even when dealing with undependable clients, the staff must maintain a reputation for depend ability. Moreover, data produced today often have their greatest impact only many years into the future. Sometimes, it is only when trends are detected that we can begin to comprehend the impact of the data that have been produced.

One recent example of the impact of the Division's work stands out in my mind. SOI staffers are the professionals who produce individual income tax data by which the distribution of taxes among taxpayers is assessed. Those distributional tables form a fundamental part of every major tax debate that now takes place before Congress. The presentation of these tables has become a tradition that cannot easily be abandoned. In Tax Re-

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form, for instance, the goal of distributional neutrality was one of three major constraints on the actions of all participants from the President through Congress.

No one, no matter how powerful, could afford to ignore the impact of a policy proposal upon the distribution of tax burdens. It was an extra ordinary constraint and had an enormous impact on the final outcome of the 1986 Act. As a side light, my understanding of tax reform in other countries is that it has been much more contentious—and less successful than in the United States—precisely for the reason that many of these countries did not deal fully with distributional implications. In turn, distributional goals were not adequately articulated because they had no strong history of presenting and developing data through institutions like the Statistics of Income Division.

The distribution of taxes among taxpayers is only one of many areas in which SOI has a fundamental impact. Let me mention a few more. SOI is the researcher who produces many of the underlying data by which we measure income in our economy. National income measures, although often used inappropriately to denote welfare, nonetheless, are extraordinarily valuable in measuring changes in what we produce and how the benefits of that production, or incomes, are spread among different households and firms in the economy.

SOI is also responsible for giving us a fundamental understanding of the wealth of top wealthholders and its distribution over time. How is this wealth distributed, not only among estates, but among the living? What has happened to the relative status of top wealthholders over the last few decades? Again, to find an answer, we turn to SOI.

SOI is the source of our understanding of corporate taxation. How do corporations adjust their behavior over time? What industries rise and decline and how are their tax payments affected both by economic conditions and by changes in the tax laws? Where do we get the answer? From the Statistics of Income Division.

SOI provided the Congress with much of the underlying data describing the growth of tax shelters. Using partnership data, as well as partnership income reported on individual income tax returns, we were able to see the extent to which more and more taxpayers were generating significant positive income, yet negative taxable income. We all knew what was occurring, yet, as one private sector consultant told me, the assembling of the partnership data was the smoking gun that, in many ways, forced Congress to deal with this problem.

Who is now engaged in extensive efforts to provide more information to Congress and the public on the activities of charitable organizations? The Statistics of Income Division. Will this have a large impact upon future policy? You bet your calculator it will. In fact, I would argue that the principal deterrent to decision making right now is the lack of better data.

What about an understanding of the growth of non-corporate business? Are businesses beginning to unincorporate? To whom are we going to turn for an answer? Of course, the Statistics of Income Division.

Do we need a better understanding of portfolio activity of individuals? Of what types of stocks they hold, and how such holdings vary by taxpayer characteristic? Previous studies developed by the Division are now quite old. Well, we know where to turn to increase our current knowledge—to the Statistics of Income Division, of course.

Are arguments made with respect to charitable giving and capital gains behavior of individuals? These claims are all tested with Statistics of Income data from individual income tax return files, as well as individual "panel" files and matches of estate and income tax files developed in more recent years.

How about employee benefit and pension plans? How are the benefits of these plans being distributed across the population? How well are Federal tax and labor laws working? Well, we've put forward very little data so far, but who inevitably is going to have to give us the answers? You're right, the Statistics of Income Division.

Issues of international taxation are clearly a growth field. Who anywhere in the world produces better information than the Statistics of Income Division on the behavior of multinationals? No one. Do we need to know who benefits from special tax rules such as those that created Foreign Sales Corporations or Domestic International Sales Corporations? Or how much foreign tax credit is taken for taxes paid in various countries? Or how much of a tax incentive is applied to firms operating in Puerto Rico? Or the behavior of insurance companies with foreign subsidiaries? Or a whole host of other behavioral questions? Note, again, that this information is used not merely to determine the appropriateness of various tax rules, but, more broadly, to gather an understanding of the aggregate impact of this Nation's businesses on international markets.

I obviously could go on and on. The studies SOI performs have far reaching implications, many of which cannot be anticipated at the

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time each study is designed. Often a well-performed study has more impact on policy than the strong advocacy of the best political leader. Believe me, I have seen in several cases how particular studies ultimately led to the enactment of legislation.

Statistics of Income work is on the frontier of knowledge. As the SOI staff pushes back that frontier they allow others to see what before was hidden. They allow them to develop a comprehension that was not possible before, to fit together old data and new data into coherent patterns. It is through that growth of knowledge that we, as a people, progress, grow, and mature.

So again, I want to thank the Statistics of Income Division and join with many others in congratulating its staff for their outstanding work over the last 75 years. Today, they can take justifiable pride in that work. Its importance and the staff's importance is further reflected in several ways: the loyalty of alumni of the organization; the fondness with which a former assistant director, Howie Wilson, and others today tell of the program's formal history (as well as some of the informal history and anecdotes that probably can't be written down); and, if I may add, the attachment and concern of many like myself who have come to depend upon SOI's good graces. Congratulations!

It is our objective in producing this special issue of the *SOI Bulletin* to review the SOI programs—as they are today and what they may be tomorrow, based on what they were yesterday. Accordingly, this commemorative volume has been drawn together from articles previously published in the *Bulletin* and elsewhere. One of the latter articles was selected because it provides a history of tax return processing for statistics with an emphasis on current methods; another shows how the Office of Tax Analysis uses SOI data in its tax models at the present time and mentions some of its data needs for future models. The remaining articles were selected for their fairly comprehensive look at the SOI studies now being conducted. Taken together, the content of this compendium should be a useful reference source for those with an interest in SOI data, their users and uses.

We hope you, our customers, will enjoy this special issue, even though it includes some material that you may have already seen. Thank all of you for your continued interest.

Fritz Scheuren
Director, Statistics
of Income Division

UPCOMING FEATURES

We will resume publication of statistics and articles related to them starting with the Winter 1988–89 issue. The following are a few of the articles to look for in upcoming issues of the *SOI Bulletin:*

- Income of the deaf;
- Projections of tax return filings;
- Income and tax distributions;
- Reconciliation of personal income and AGI; and
- Foreign recipients of U.S. income.

For those of you interested in the effects of the 1986 tax reform, the first comprehensive statistics based on 1987 individual income tax returns will appear in the Spring 1989 issue. Some early results, based on returns filed through April 1988, were published in the Summer 1988 *SOI Bulletin.*

Statistics of Income: 75 Years of Service

By Bettye Jamerson and Robert A. Wilson*

The year 1988 marks the 75th anniversary of the ratification of the Sixteenth Amendment to the Constitution in 1913 and the subsequent enactment by Congress of the Nation's first modern income tax law [1]. Three years later, Congress passed the Revenue Act of 1916, which included a provision requiring the annual preparation of statistics with respect to the operation of the tax law. This provision, with practically no change, has been repeated in each major rewrite of the tax law since then.

The first Statistics of Income (SOI) report, based on income tax returns filed by individuals and corporations for Calendar Year 1916, was released in 1918 [2]. The initial volume also contained some information for 1913–1915, as well, which was secured from earlier Annual Reports of the Commissioner of Internal Revenue [3]. Thus, the data published in SOI cover the entire period of the modern income tax.

In commemoration of these 75 years, it is appropriate to contrast the early years with more recent times. Exhibit A of this article provides what is essentially a reprint of a paper written in 1933 by Dr. Edward White, who directed the SOI program from its inception for almost 30 years. White's comments, written for his employees in an era long past, provide a snapshot of SOI as it was then, its users and uses. Much has changed since, yet much of White's description still applies, notwithstanding the many innovations that have taken place in technology, statistical methodology, as well as in SOI and Government statistics generally and the uses made of them [4].

In the very beginning, SOI reports were almost entirely used for tax research and for estimating revenue, especially by officials in the Office of the Secretary of the Treasury. Today, tax analysts in the Office of the Secretary and in the Congressional Joint Committee on Taxation, continue to be the main users of SOI, although they now rely primarily on microdata rather than just aggregate tabulations. Since the 1930's, the third major user of SOI has been what is now called the Bureau of Economic Analysis in the Department of Commerce. It relies on tax return data extensively for the National Income and Product Accounts [5]. Of course, there are many other users in Government, universities, and the private sector. There are also literally thousands of special requests each year from the general public.

Compared to the single SOI reports for years through 1933 which contained annual data mostly for individual and corporation returns, later years witnessed increases in both the volume of statistics and in the types of returns covered in response to user needs [6]. At first, this meant separate reports on individuals and corporations. This was followed by a number of other SOI reports and supplements, particularly during the 1960's and 1970's. A contributing factor was the increasing tendency for new provisions of the tax law to require separate reports to Congress by the Department of the Treasury, which first required new SOI data. Frequently, SOI supplements resulted as a by-product. The topics requiring special statistics included individuals with high income, capital gains taxation, international boycott participation, taxation of corporate income from U.S. possessions, income of citizens working abroad, and the operations of Domestic International Sales Corporations [7–12].

While the advent of the computer has certainly increased the amount of SOI data produced over the years (and the speed with which they can be prepared), in many respects these increases have only served to whet the appetite of data users. Not only are more global totals now needed by size or by industry or some other taxpayer characteristic, but information about the computations underlying these totals is also required so the user can better understand the totals. This has necessitated more sophisticated (and usually more costly) statistics from tax return schedules in support of the tax return totals.

The advent of the 1980's has seen a continuation of the demand for more data. A new catalyst has been the recently-enacted Tax Reform Act of 1986. As the first major overhaul of the U.S. tax system since 1954, it is expected to impact heavily on the SOI program, with new kinds of user requirements anticipated in order to evaluate the new provisions.

Needless to say, statistical budgets can never keep pace with user requests and the SOI budget is no exception. In recent years, in particular, reduced budgets for statistics have led to major reassessments of the SOI program. New technologies and methodologies have come to the rescue to a certain extent. The institution of user-funding on a wider scale has helped, too, since it forces users to be more discriminating in defining requirements. However, the computer (which facilitated the proliferation of statistics in the first place) may also be part of the solution, not only in the new processing efficiencies it offers, but also in the increased number of computers of all sizes now at the disposal of data analysts. With personal computers, for

*Coordination and Publications Staff.

example, many of the new demands on SOI are likely to be for more special purpose, public-use microdata files that users can manipulate on their own and from which they can produce tabulations geared to their specific needs; in other words, SOI expects to be moving away from an increase in published statistics [13]. Nothing is free, however, for with this new role comes an added responsibility—the need to improve methods to safeguard identification of individual taxpayers [14].

All of these factors are already reflected in an SOI program which is increasingly characterized by fewer, more streamlined, publications than in the recent past. The *SOI Bulletin* (which was first published during 1981) is an example of this streamlining process, containing as it does preliminary data, data on unincorporated businesses, and data from special studies. All of these were formerly published in considerably more detail in separate SOI reports in the areas of sole proprietorships, partnerships, estates and personal wealth, sales of capital assets, and foreign income and taxes, among others. Most recently, in 1987, the SOI Bulletin Selected Statistical Series tables, containing historical tax return statistics, were produced in a new mode, a diskette.

Exhibit B, which outlines the SOI projects now underway, is evidence that SOI and the topics it now encompasses, continue to grow. This growth, though, cannot be successful unless it takes into consideration the needs of its customers. Therefore, as the kinds and numbers of users increase along with advancing technology, the Statistics of Income Division hopes to continue its tradition of being responsive to user needs. One way in which this can be done is through the User Survey, which appears in the back of each *SOI Bulletin*. Each *Bulletin* reader is encouraged to use this vehicle, as well as personal contact with the staff people, such as those listed in Exhibit B. Results from the User Surveys and a summary of letters received from our readers, will appear in a future issue of the "SOI Bulletin Board," a new column introduced starting with the Winter 1987–1988 *Bulletin*.

These 75 years have seen many changes and many more are anticipated in the years to come. It is with optimism and enthusiasm that SOI looks forward to the years ahead.

NOTES AND REFERENCES

[1] The Nation's first income tax law was enacted in 1862, during the Civil War. However, it was repealed in 1872. The 1894 revival of the income tax was declared unconstitutional in 1895 by the Supreme Court. An excise tax on the income of corporations was in effect from 1909 until 1913.

[2] U.S. Department of Treasury, Bureau of Internal Revenue, *Statistics of Income Compiled from the Tax Returns for 1916.*

[3] U.S. Department of Treasury, Bureau of Internal Revenue, *Annual Reports of the Commissioner of Internal Revenue,* Fiscal Years 1914–1916.

[4] For a good overall reference, see Duncan, Joseph W. and Shelton, William C., *Revolution in United States Government Statistics, 1926–1976,* Office of Federal Statistical Policy and Standards, U.S. Department of Commerce, 1978.

[5] See, for example, *Corporate Profits: Profits Before Tax, Profits Tax Liability, and Dividends,* Methodology Paper Series MP-2, Bureau of Economic Analysis, U.S. Department of Commerce, May 1985.

[6] For some of these earlier years, the single SOI report also included data from other returns, e.g., partnerships and estates, as well.

[7] See, for example, Lerman, Allen H., "High-Income Tax Returns, 1984," *Statistics of Income Bulletin,* Spring 1987, Volume 6, Number 4.

[8] Clark, Bobby and Paris, David, "Sales of Capital Assets, 1981 and 1982," *Statistics of Income Bulletin,* Winter 1985–86, Volume 5, Number 3, and U.S. Department of Treasury, Office of Tax Analysis, *Capital Gains Tax Reductions of 1978,* September 1985.

[9] See, for example, Mose, Vergie, "Report on International Boycotts, 1976–1982: A Focus on the Middle East," *Statistics of Income Bulletin,* Summer 1985, Volume 5, Number 1, and U.S. Department of Treasury, Office of Tax Analysis, *The Operation and Effect of the International Boycott Provisions of the Internal Revenue Code,* annual report.

[10] See, for example, Szeflinski, Kenneth, "U.S. Possessions Corporation Tax Credit, 1980," *Statistics of Income Bulletin,* Spring 1983, Volume 2, Number 4, and U.S. Department of the Treasury, Office of Tax Analysis, *The Operation and Effect of the Possessions Corporation System of Taxation,* annual report.

[11] See, for example, Paris, David, "Foreign Income and Taxes Reported on U.S. Individual Tax Returns, 1983: An Overview," *Statistics of Income Bulletin,* Summer 1987, Volume 7, Number 1.

[12] See, for example, Hartzok, Jeffrey, "Domestic International Sales Corporation Returns, 1980," *Statistics of Income Bulletin,* Fall 1983, Volume 3, Number 2, pp. 9–24, and U.S. Department of Treasury, Office of Tax

Analysis, *The Operation and Effect of the Domestic International Sales Corporation Legislation*, annual report.

[13] Public use tape files, consisting of detailed information taken from a stratified sample of actual individual tax returns, are available for purchase from the Statistics of Income Division for 1978–1985. Earlier files are available for purchase from the Machine Readable Branch (NNSR) of the National Archives and Records Service, Washington, DC 20408.

[14] Strudler, Michael, Oh, H. Lock, and Scheuren, Fritz, "Protection of Taxpayer Confidentiality With Respect to the Tax Model," *1986 American Statistical Association Proceedings, Section on Survey Research Methods*, and Wilson, Oliver H. and Smith, William J., Jr., "Access to Tax Records for Statistical Purposes," *1983 Proceedings of the American Statistical Association, Section on Survey Research Methods*.

EXHIBIT A.—Descriptive Synopsis of Economic Data Compiled from Federal Income Tax Returns of Individuals and Corporations and Federal Estate Tax Returns and of the History, Scope and Functions of the Statistical Section

By Edward White*

Members of the Statistical Section:

In the belief that it is the desire of each of you to better comprehend the purposes of the Statistical Section and to visualize the various steps leading to the compilation and publication or otherwise presentation of the statistical reports emanating from this Section, there is attached a descriptive synopsis outlining to some extent its history, the purpose of its creation, the value of its compilations and the importance attached to the work in which each of you is taking part, whether it be coding, transcribing, card punching, tabulating or compiling and analyzing the data.

In the knowledge that the data compiled by this Section are of real and far-reaching value in connection with the economic problems of our government, I am sure that you will read the "Descriptive Synopsis" with the greatest interest and that it will give you a better conception of the value of each step of the work and your connection with it.

EDWARD WHITE,
Chief, Statistical Section.

February 1, 1933.

DESCRIPTIVE SYNOPSIS

Statistical Section, Income Tax Unit

Authority, Origin, Purpose, Scope, and Nature and Value of Compilations

Authority

To the Congress, framing the Revenue Act of 1916, it became apparent that accurate information regarding the distribution of income in the United States was necessary. Accordingly, there was incorporated in that act a provision (Section 21) requiring the preparation of statistics with respect to the operation of the income tax law, statistics covering classification of taxpayers and of income, the amounts allowed as deductions and exemptions, and any other facts deemed pertinent and valuable.

Due to the subsequent enactment of the war profits and excess profits tax provisions, the Revenue Act of 1918 broadened the foregoing requirement relative to the collection of statistics so as to also include data concerning the operation of these provisions. By all succeeding acts the Commissioner is required to collect and make available data from the income, war profits and excess profits tax returns in the same manner as set forth above.

Origin of Statistics of Income

In accordance with the above referred to provision of the law, there was compiled from the income tax returns filed by individuals and corporations for the calendar year 1916, the first volume of "Statistics of Income."

Following this volume, there have been issued successively both Preliminary and Complete Reports of "Statistics of Income," compiled from the returns filed for each year.

Prior to 1916 the income tax was of minor importance as a source of Federal revenue. Its relative importance with respect to total ordinary receipts of the Federal Government which are comprised principally of customs, income and war profits tax, miscellaneous internal revenue tax, sales of public lands and other miscellaneous receipts, is shown in the following summary of income tax collections covering the years 1910 to 1932, inclusive:

Income and Profits Tax Collections, 1910 to 1932, Inclusive, Showing the Revenue Acts, Years Comprising the Collections, Total Income and Profits Tax Collections, and Per Cent of Income Tax to Total Ordinary Receipts

Revenue Acts	Years in which tax was collected (Fiscal year ended June 30)	Income and profits tax collections	Per cent of income to total ordinary receipts
Corporation Excise Tax of 1909	1910 to 1913	$ 118,058,362	4.25%
Revenue Act of 1913	1914 to 1916	276,520,287	12.48
Revenue Act of 1916 (amended Mar. 3, 1917, and Oct. 3, 1917) and Act of 1917	1917 to 1918	2,673,687,520	55.83
Revenue Act of 1918	1919 to 1921	10,169,779,133	58.21
Revenue Act of 1921	1922 to 1924	5,588,880,039	46.08
Revenue Act of 1924	1925	1,760,537,824	46.57
Revenue Acts of 1926 and 1928	1926 to 1932	14,040,414,394	54.45

*Edward White was the Chief, Statistical Section, Income Tax Unit, Clearing Division of the Bureau of Internal Revenue, from 1918 until 1946.

Purpose Underlying the Collection of Statistics from Income Tax Returns

The obvious reasons which compel an individual or a corporation to maintain accounting records showing sources and amount of income and nature and amount of expenditures are identical with those which compel the Federal Government to compile a composite statement of the income and expenditures of all its citizens and corporations upon whom it depends for close to half of all its revenue. To an individual or corporation, the single source from which an individual or corporation derives half of its income is subject to the most careful analysis because changes affecting it could prove more serious than total loss of any one of the many single sources which compose the other half of total revenue. Similarly, the Federal Government must keep close watch upon the composition of its aggregate of income tax returns.

Specifically, these reasons are:

1. To provide Congress with an analytical statement of that portion of the nation's income as disclosed on income tax returns on which its policies with respect to tax levies on income are determined.

2. To provide the President and the Secretary of the Treasury with basic data upon which recommendations to Congress as to income tax legislation are based.

3. To provide the Secretary of the Treasury with basic data concerning income distribution in the United States which serves as an important factor in the formula used in arriving at the official Treasury estimates of anticipated revenue.

4. To provide the Commissioner of Internal Revenue with certain basic data as to the average gross sales, average net income, etc., of industrial groups as a means of administering the tax law in those cases where taxpayer's records are inadequate.

The foregoing reasons imply a more concrete and definite purpose for the assembly of economic and financial data than is customarily imputed to collection of data in the usual statistical sense. In the first place, the figures are more nearly absolute than merely representative, they are rigidly coordinated as between the millions of highly technical schedules (income tax returns), rather than merely tallied from uniform schedules, and they stand alone in their field without the benefit of the usual checks for accuracy that exist from a knowledge of other closely related data. In the second place, the compilations are not utilized solely by the students of social sciences in arriving at valuable conclusions not heretofore reached but also serve as a positive base upon which definite action is taken by the Department and Congress.

Further statements as to purpose for which financial data from income tax returns are collected follow:

"Its (the Statistical Section) objective is primarily twofold; First, that of compiling statistics from the returns of net income as required by Congress, and Second, the preparation of special compilations and other research data from the returns of net income for use in the administration of the law.

"It will be seen from the above that its functions are not to indulge in ethical speculation, abstract theories, or personal philosophies, but its economic service is that of providing Congress with concrete information as to classes of taxpayers, sources of income or nature of business pursuits; or preparing special compilations for use in the administration of the Income Tax Laws, or perhaps through its publications, 'Statistics of Income,' giving to the public information of value, not only in the study of the economic conditions of the country, but likewise facts and figures upon which and through which the business statistician and business administrator may chart comparisons of productions and gauge the potential absorption power by geographical divisions."[1]

"These statistical reports have inaugurated an epoch in income statistics. Never before had the economist, the statistician, or the business executive either a contemporaneous or historical presentation of the financial status of the civil organization of a nation so vital, so valuable, or so helpful in determining the distribution of incomes, the rise and fall of profits or the purchasing power of communities. Nor had the legislator prior to this time comprehensive data by which to gauge either the tax productivity of proposed legislation or the economic reaction to such legislation."[2]

Scope of Data Collected and Utilized

Fundamentally, interest attaches only to sources of income, deductions against income, net income, and a statement of assets and liabilities in which changes have an effect upon income.

The statutory definition of gross income is as follows:

" 'Gross income' includes gains, profits, and income derived from salaries, wages, or compensation for personal service, of whatever kind and in whatever form paid, or from professions, vocations, trades, businesses, commerce, or sales, or dealings in property, whether real or personal, growing out of the ownership or use of or interest in such property; also from interest, rent, dividends, securities, or the transaction of any business carried on for gain or profit, or gains or profits and income derived from any source whatever."[3]

The statutory definition of deductions against gross income is as follows:

"All the ordinary and necessary expenses paid or incurred during the taxable year in carrying on any trade or business, including a reasonable allowance for salaries or other compensation for personal services actually rendered; traveling expenses (including the entire amount expended for meals and lodging) while away from home in the pursuit of a trade or business; and rentals or other payments required to be made as a condition to the continued use or possession, for purposes of the trade or business, of property to which the taxpayer has not taken or is not taking title or in which he has no equity."[4]

The statutory definition of net income means the excess of the gross income as defined by Section 22(a), over the deductions as defined by Section 23(a).[5]

"Economic theory and accounting practice have long been in utter disagreement as to what constitutes 'net income'. The courts, which had the opportunity to arbitrate between the opposing concepts of the economist and the accountant, have avoided the issue by declaring that the use of the term 'in common speech' is sufficient for purposes of law. (Eisner v. Macomber, 252 U.S. (1920) 189; Merchants Loan and Trust Co. v. Smietanka, 255 U.S. (1921) 509.) Congress and the state legislatures have wisely given more consideration to the accountants' concept of net income than to the economists' view.

"The accountants' concept of personal net income may be defined as the monetary or material receipts of an individual in the course of a period of time, say a year, in excess of the monetary or material costs of obtaining those receipts."[6]

From the foregoing, it will be observed that the income tax blank furnished the taxpayer, both individual and corporate, upon which is to be reported the net result of all his manifold transactions involving financial gain or loss must be sufficiently comprehensive to provide a space for the entry of the net results of all transactions which affect the correct determination of statutory net income and final tax liability.

It is from this type of return from which the tabulations are made and since only minor items on the return are not tabulated separately it may be stated that the data collected are a comprehensive tabulation of the net result of all financial transactions affecting the incomes and deficits of all corporations and of all individuals required to file returns.

The classification of the data tabulated is made with a view towards providing an analytical statement of the data upon which the effects of contemplated action by Congress with respect to the taxation of income in its entirety or of any of its forms may be intelligently estimated. A summary of the classifications follows:

"The data compiled from the individual income tax returns include such important matters as the number of returns filed and the net income shown upon these returns, classified by sex, family relationship, and geographically; the income from business classified by industrial groups; the income from specific sources, such as salaries, business, etc., classified by size; and the interest and principal shown for total and partially tax-exempt obligations of the Federal Government, United States possessions, and obligations of States and Territories and political subdivisions thereof, as reported on the income tax returns filed by individuals and corporations.

"In addition data are compiled in regard to deductions from income and income exemptions and credits, classified by size of net income and geographically. And, of course, information is gathered in regard to tax liability.

"Data compiled from the corporation income tax returns include receipts and disbursements of corporations filing income tax returns, and the assets and liabilities of a large number of these corporations classified by industrial groups. Information is presented in regard to such important matters as the number of returns filed, the gross income, the net income or deficit, and the tax liability shown on these returns, classified by size of net income or deficit, by industrial groups and by geographical areas. In addition, data are tabulated separately for those corporations which file fiscal year returns for periods ending other than at the end of a calendar year."[7]

Value of Data Compiled
(Commercial Viewpoint)

The test of the value lies in the practical utilization of the data compiled and its practical use is evidenced by concrete examples constantly exhibited. Among the many coming to the attention of the office, a few will be cited as illustrative of the use which the data constantly serve.

1. In a report recently released by Moody's Investors Service, entitled "A Nation Wide Survey of Public Utility Progress," prepared for the reason that, as it states "The place of the public utility business in the industrial life of the American people is here pictured through a long series of totals which have been especially selected to answer the questions most frequently arising in the minds of investors," there is contained the following reference:

"The above tables are designed to replace similar previous compilations, the publication of which in this Manual was discontinued two years ago. Instead of being based on a distant official estimate, such as the Census of Manufactures for 1919, and brought up to date with the help of data on new security issues, they are now for the most part official figures, at least up to 1929, inclusive. The sources for the tabulation of corporate debt and capital are the Statistics of Income, published by the Treasury Department and the data are based on the balance sheets of about 400,000 corporations reporting to the United States Treasury."[8]

Moreover, in a letter dated August 19, 1932, from Moody's Investors Service to the Commissioner of Internal Revenue, the following comment is observed:

"In the 'Statistics of Income' your Bureau compiles very valuable statistics showing total assets and liabilities of corporations. This organization is particularly interested in the total of bonded debts and mortgages outstanding and we have been using your figures in response to a very keen interest in this subject on the part of investors."

2. A study of W.L. Crum, Editor, *Review of Economic Statistics*, entitled "Corporate Earning Power," contains the following foreword:

"Individual and group studies undertaken in universities and elsewhere are gradually assembling data which enable the executive to compare his operations with some form which the studies develop. Bureaus of business research and others who make studies of business publish from time to time, analyses of enterprise . . . This study deals with a subject that has interest for all business men, and, unlike those occupied with sample concerns, employs data for all corporations which report income to the United States Government."

and in the preface to the volume contains the following:

"The following chapters constitute a first report of the findings of an analytical examination into the corporation statistics regularly published by the United States Treasury in its annual compilation, 'Statistics of Income'."[9]

3. Perhaps no greater general economic interest lies in any forecasts than that of business income and profits. The results of experimental studies along these lines having for their basis the financial and economic data compiled from income tax returns of corporations are contained in the October 1929 issue of the *Journal of Business* of the University of Chicago. As illustrative of the part played by the income statistics and the nature of their analyses, the following quotation will serve:

"Much economic interest has been attached to the statistics of income and profits since the annual publications of the Bureau of Internal Revenue appeared, at about the same time of our entrance into the World War. In recent years Friday, Foster and Catchings, Hastings, Crum, Sloan and many others have made interesting contributions on the subject of profits, both descriptive and theoretical in their consideration. All of the large corporations that have their stocks listed on the New York Stock Exchange are required to report their earnings annually, and these annual, and also many quarterly, statements of earnings are now published. In number, however, these few large corporations that publish their statements form an extremely small proportion of all corporations in the United States. The total earnings of these large and, for the most part, successful corporations, now tabulated by various organizations, are not similar enough to the totals of the 450,000-odd corporations reporting income to the Federal government to be used as a basis of estimating total annual profits of all corporations before the official figures finally become available. Thus, in addition to the statistical interest in existing relationships and variations between income, profits, and business, there is the interest in and need of some means of approximating current total business income and profits of the entire country."[10]

An extremely important point respecting value of the corporate data compiled from income tax returns is brought out in the foregoing quotation which relates to the fact that at the present time corporate income and disbursement data are only fragmentary in the case of all sources with the exception of the Bureau of Internal Revenue. A notable example of the incomplete state of the data is illustrated by the figures showing amount of cash dividends paid by corporations. Outside of the Bureau of Internal Revenue, one of the most widely used sources for this particular item is the *New York Journal of Commerce,* which figures are reprinted in the official publications entitled "Survey of Current Business" and "Statistical Abstract of the United States."

A summary comparison of the figures from that source, with those compiled from income tax returns, follows:

Years	Cash dividends[1] Statistics of Income	New York Journal of Commerce[2]
1930	8.2	4.2
1929	8.3	3.4
1928	7.0	2.3
1927	6.4	2.1
1926	5.9	1.1
1925	5.1	1.0
1924	4.3	1.0
1923	4.1	.9
1922	3.4	.9

[1] All figures in billions and tenths of billions of dollars.
[2] Statistical Abstract of the United States, p. 291.

4. As to the value of data respecting the distribution of income among individuals, perhaps the most important

commercial use lies in the determination of purchasing power throughout the country. Foremost among those using these data for this purpose which come to the attention of the office is the Curtis Publishing Company [11].

The income tax figures constitute an important element in the formula used by that company in classifying the potential purchasing power of the communities throughout the United States. Many other formulas are in use by other agencies which include these data as an element.

Chief among these others is a study entitled "Selling Your Market," prepared by the *Quality Group* (*The Atlantic Monthly, The Century, Harper's Magazine, The Review of Reviews, Scribner's Magazine*). In connection with their use of the figures, the following comment is observed:

> "While it seems evident from an analysis of incomes that a large part of the surplus income in the United States is in the Quality Market, it is always interesting to have evidence in substantiation, which in this case is strikingly given by the latest Federal Income Tax returns available."[12]

Likewise, the data are used officially by the Department of Commerce as evidenced in its tri-monthly publication entitled "Domestic Commerce," which states:

> "Final figures on the income tax returns for the year 1930 and a preliminary report covering income tax returns for the year 1931 which were filed prior to August 31, 1932, were released a few days ago by the Bureau of Internal Revenue. The increases in numbers of returns referred to in the item above on this page and shown in the map on the following page are significant as market indicators . . ."[13]

5. A general statement in the *Economic World* sums up in a brief way the value of the figures relating to individuals in the following manner:

> ". . . it is also true that in the long run public thinking about matters of the greatest consequence is much affected by these statistics, as their meaning from various standpoints is gradually elucidated by those who are called upon to deal theoretically or practically with the national economy in its different aspects. It goes without saying, for instance, that in the domain of taxation, whether National, State or local, the information supplied by the income tax figures is invaluable and virtually indispensible now that we have it. Apart from this directly practical use of the figures, however, they are of the greatest assistance in arriving at sound conclusions with regard to the economic situation of the American people in successive years and successive periods of years. Conjoined with the statistics of industrial and agricultural production from year to year, with such statistics as we have for the volume of the country's domestic and international trade, with the available figures for the accumulation of wealth through savings, life insurance and other forms of thrift, and with the estimates now regularly made at frequent intervals by competent authorities of the total national income and the total national wealth, the income tax statistics enable us to form a reasonably accurate picture of the true economic state of the country. It may be added that they also throw much light upon such matters as the stability of the general price level for commodities and services of all kinds, the adequacy of the remuneration and profits of the various classes of persons engaged in production and distribution in all their forms, the general prosperity (or the reverse) of industry and trade at any given time, and a long series of other similar matters of economic importance."[14]

Value of Data Compiled
(Governmental Viewpoint)

1. An income tax law framed without regard to the amount and distribution of income and estimates as to tax such a law might produce would, no doubt, miss the mark by far of the end intended to accomplish. Fortunately, a fair idea of the amount of the several forms of income, as well as its distribution among the several net income classes is made available by the Statistical Section, and the framers of the laws and official estimates take the data into very serious consideration. As to the official estimates, a series of articles appearing in the *Review of Economic Statistics* explains in detail the method of estimating revenue on the basis of data tabulated from the income tax returns of both individuals and corporations [15]. It is true, as is pointed out in those articles, that many adjustments of the data are necessary to fit the peculiar problem at hand but nevertheless the data as tabulated form the basis from which the work is performed. The fact that such adjustments are necessary is not serious so long as the data tabulated from year to year are comparable. It is, of course, the effort of the Section at all times to keep the figures comparable as between the several years.

2. As to legislation, much evidence is found of the practical use of income statistics by the committees of both houses of Congress charged with handling tax legislation.

A few illustrations will be of interest.

(a) Senate Resolution 253 directed the Secretary of the Treasury to furnish the Senate with the following information:

> "First, Any and all facts, figures, data, or information now in possession of the Treasury Department relative to profiteering which would in any way enable Congress to

deal with the matter either through the present proposed revenue legislation or through enactment of more effective criminal statutes. That such report shall contain a list of all corporations with the amount of their earnings which have earned in excess of fifteen per centum on their capital stock, as shown by their returns to the Internal Revenue Bureau for the calendar year nineteen hundred and seventeen, accompanied by such statement as will show net earnings of the same corporation for the calendar year nineteen hundred and sixteen."

"Corporate Earnings and Government Revenues" (388 pages) embodies the response to this resolution. This document contains statistical data compiled from 31,500 income and excess-profits tax returns of corporations.

(b) Senate Resolution 115 requested the Secretary of the Treasury to furnish information regarding the excess-profits taxes of corporations based upon the business of 1921 and for which returns or assessments were made during the year 1922 as follows:

"For each serial number of corporations as indicated on pages 58 to 65, inclusive, Table 9, 'Statistics of income from returns of net income for 1921,' as compiled and published under the direction of the Commissioner of Internal Revenue.

"(a) The number of corporations in each serial number reporting income subject to taxation under the first bracket of the revenue act of 1921, together with the amount of net earnings subject to such tax and the amount of tax assessed thereon.

"(b) The number of corporations in each serial number reporting income subject to taxation under the second bracket of said act, together with the amount of net earnings subject to such tax and the amount of tax assessed thereon."

The reply to this resolution is contained in Senate Document No. 67 (82 pages).

(c) Senate Resolution 110 directed the Secretary of the Treasury to furnish information relative to profit, surplus and dividends of corporations reporting net taxable income of $2,000 and over in 1922. The reply to this resolution is contained in Senate Document No. 85 (132 pages).

(d) Senate Resolution 99 directed the Secretary of the Treasury

". . . to furnish to the Senate a statement based on corporation income tax returns covering the year 1924, showing for each corporation engaged in the mining of anthracite coal, the amount of capital stock, the amount of invested capital, the amount of net income, the amount charged to depletion and depreciation accounts, and the amount of Federal tax paid by each such corporation."

The reply to this resolution is contained in Senate Document No. 48, (10 pages).

(e) The utilization of data compiled from income tax returns is especially noted in the case of the Joint Congressional Committee on Internal Revenue Taxation and its staff which determines the effect of certain tax proposals upon revenue. The two following illustrations will suffice:

1. In letter dated March 23, 1931, to Hon. Willis C. Hawley, Chairman, Joint Committee on Internal Revenue Taxation, Mr. Parker, Chief of Staff, discusses the importance of certain tax proposals and closes his letter with the following recommendations:

"It is recommended in view of the importance of this subject that the Treasury Department be requested to give us a preliminary tabulation of the facts set forth in the chart attached for the 1930 returns by November 15, 1931. This will enable the committee to discuss this matter in the light of the true facts."

By letter of March 23, 1931, addressed to Hon. Ogden L. Mills, Mr. Hawley concurred in Mr. Parker's recommendation and further states:

". . . you will appreciate the fact that if the Committee is to discuss this subject intelligently it will be necessary to have the facts for 1930 on account of the unusual economic conditions obtaining in that year."

2. Another evidence of the use by the Joint Congressional Committee of income statistics is found in an interesting report entitled "Preliminary Report on Earned Income." All the statistical tables reprinted in this report and on which the report was based had as their source the "Statistics of Income" series.

(f) Illustrations of use made of income statistics by other branches of the Government are as follows:

The Federal Trade Commission in response to Senate Resolution 451 of the 67th Congress concerning an estimate of National Wealth and Income relied considerably upon the figures tabulated from income and estate tax returns [16].

The Department of Commerce is at this time compiling an estimate of national income in response to Senate Resolution 220 of the 72nd Congress which reads as follows:

"Resolved, that the Secretary of Commerce is requested to report to the Senate of United States on or before December 15, 1933, estimates of the total national income of the United States for each of the calendar years 1929, 1930, and 1931, including estimates of the portions of the national income originating from agriculture, manufacturing, mining, transportation, and other gainful industries and occupations, and estimates of the distribution of the national income in the form of wages, rents, royalties, dividends, profits, and other types of payments. These estimates shall be prepared by the Bureau of Foreign and Domestic Commerce, and the Bureau shall use available official and unofficial statistics and such relevant data as may be in the possession of the various departments, bureaus, and independent establishments of the Federal Government."

Pursuant to the authority contained in the resolution, the Department of Commerce has requested the assistance of the Statistical Section. In fact, much work has already been performed.

The Timber Conservative Board which was appointed by the President on November 12, 1930, to seek the development of sound and workable progress of private and public effort, with a view to securing and maintaining an economic balance between production and consumption of forest products and to formulate and advance a deliberate plan of forest conservation, made the following comment in a letter to Hon. David Burnet, Commissioner of Internal Revenue, dated December 19,1931:

"The information and statistical tables furnished this Board by the Statistical Section of the Income Tax Unit have been exceedingly helpful in determining the trend of taxation in relation to the Forest Products Industries . . . Except for the comprehensive and efficient manner in which these data were assembled, segregated, distributed, and kept by your Statistical Section, it would have been very difficult, if not impossible, for the Board to have secured this essential information from any other source. It has enabled the Board to compile a complete financial set-up for the Timber Industry for each of the States and regions involved."

The United States Coal Commission in its final report, Part IV, page 2,516 contains the following:

"The tables of invested capital and net income of bituminous coal mining companies as shown by their Federal Income Tax returns, given in Part IV, were prepared by Mr. Edward White, Head of the Statistical Division, Income Tax Unit of the Bureau of Internal Revenue, with the courteous permission of the Secretary of the Treasury."

Use Made of Income Statistics by the States

1. In many of the states in which consideration has been given to enactment of state income tax laws, the Statistical Section has furnished data for use in framing the tax laws. The requests have been varied and numerous. Typical of these requests is the following from the State of Kansas, State Tax Code Commission:

"At our request you furnished us a few months ago with some very valuable data relative to the number of returns, taxable income, etc., on banks, both state and national, in Kansas, and like information of other financial institutions, loan companies, mortgage companies, etc.

"The Tax Code Commission now has under consideration in order to work out the complications arising over the national banks tax situation, a franchise tax for all corporations based upon income.

"In the consideration of this proposal, we need all information available relative to other corporations. You have furnished the same to us for the financial groups and if we could get like information from all other corporations, excluding the financial group, similar to the analysis which you furnished us recently on the financial group, same will be of great benefit to this commission.

"The information desired is as follows for all corporations except the financial group:

1. Total number of all returns.
2. Of those reporting net income
   (a) Number of returns
   (b) Statutory net income
   (c) Tax-exempt income
      (1) Dividends on capital stock of domestic corporations.
      (2) Interest on Federal, state and municipal bonds.
   (d) Total net income
   (e) Taxes paid other than income tax
   (f) Amount of income tax
3. Of those reporting no net income.
   (a) Number of returns
   (b) Statutory deficit
   (c) Tax-exempt income.
      (1) Dividends on capital stock of domestic corporations.
      (2) Interest on tax-exempt securities.
   (d) Deficit plus tax-exempt income
   (e) Taxes paid other than income tax."

2. Moreover, in the annual and special reports of state and tax commissions much evidence is found of the value of income statistics as compiled from the Federal income

tax returns. One citation of this will illustrate the point. In the report of the State Tax Commission of North Carolina for 1930, the following appears:

"In planning the study, the Tax Commission had the advice and criticism of Mr. Edward White, Chief, Statistical Section, Income Tax Unit of the Bureau of Internal Revenue. While this report does not follow the style or contents of the annual report 'Statistics of Income from Returns of Net Income' of the United States Bureau of Internal Revenue, its general conception and set-up were based upon a careful examination of that report; and the study undertakes to present such similar statistical information as would be most valuable in a critical evaluation of the North Carolina State Income Tax."[17]

Probable Future Value of the Income Statistics

"At the close of first session of the Seventy-second Congress, the Committee on Ways and Means authorized and directed the appointment of a special subcommittee for the purpose of making a study of Federal and State taxation with particular reference to the duplications which occur through overlapping authority."[18]

Pursuant to this authorization, there was prepared recently a preliminary report by the staff of the Joint Committee on Internal Revenue Taxation and transmitted with the following letter, dated December 28, 1932, addressed to Hon. Fred M. Vinson by Mr. L. H. Parker, Chief of the Joint Committee's staff:

"My dear Mr. Chairman: At the direction of Hon. James W. Collier, Chairman of the Joint Committee on Internal Revenue Taxation, there is submitted herewith a 'Preliminary Report on Federal and State Taxation, and duplications therein'. This report has been prepared at your request and it is hoped that it may be of sufficient value to form a basis for the future work of your committee.

"At the completion of some months of study of our taxation system as a whole, it is our opinion that very substantial improvements can be made therein, through cooperation between the Federal Government and the States. The tax burden is great and the public are fully conscious of this burden in these times of stress. A more equitable distribution of the burden and its ultimate reduction through a judicious curtailment in expenditures would doubtless not only be welcomed by the public but would also have a most beneficial effect on business."[19]

In the report accompanying the letter, a very prominent place is assigned to the importance and discussion of the income tax principle as a means of raising revenue and the need for a review of the whole income tax structure with thought in mind of more practical and scientific application in the future.

Pertinent statements indicating the need for and the probability of future serious consideration of the income tax as a source of Governmental revenue are quoted from the report:

"Our income tax law is decidedly complex in spite of many efforts in the direction of simplification. The complexity comes about in a great measure by a very proper solicitude on the part of Congress in the direction of equity."[20]

"A desirable and comprehensive plan for making our taxing system as a whole more equitable, more productive, and less complicated, can only be arrived at by sincere cooperation between our Government officials, our legislators, our economists and the public."[21]

". . . income taxes on individuals constitute one of our most satisfactory forms of taxation. With a proper scale of graduated rates, they stand in the fore of all of our taxes based on the principle of ability to pay. They are open to two serious defects; first, the revenue derived is subject to severe fluctuation between times of depression and times of prosperity; second, when designed with a strict view to equity, the income tax statutes are cumbersome, complicated and a source of litigation and controversy. These taxes deserve study to minimize the defects noted.

". . . the same general remarks made in connection with income taxes on individuals hold in the case of income taxes on corporations. The corporation income tax has, however, one added defect, namely, no satisfactory system of applying the graduated rate principle to the net income of corporations has, as yet, been devised. This problem is difficult but deserves consideration."[22]

And under "Questions which should be discussed and solved," the following is quoted:

"A review of our tax system as a whole suggests at once many issues which should be discussed. As stated before, we shall not discuss these issues here, but shall merely mention those which would seem to merit attention. For instance, the following questions may well be considered:

"First, which taxes are most adaptable for the use of the Federal government and which taxes are most adaptable for the use of the State governments?

"Second, what taxes may be properly imposed by both State and Federal Governments without serious objection from the standpoint of equity?

"Third, what means should be adopted to set forth model tax system for the whole country?

"Fourth, what means can be adopted to bring into practical operation a model system of taxation?"[23]

Public hearings are being held February 3, 1933 "for the purpose of obtaining the views of public officials, legislators, economists, and the interested public on methods and means of improving our tax system as a whole."

It is obvious from the above quotations from the report which already has depended to a large extent upon income statistics for certain of the facts brought to light, that as this study progresses much emphasis will be placed upon the data tabulated from income tax returns and Federal estate tax returns in finding a solution to the problem of building a model tax system, and such statistics will serve an ever increasing need in helping Congress and the state legislatures in adjusting that tax system so as to maintain the income tax in its proper relationship to all other forms of taxes and to the ever changing economic conditions of the people.

Outline of the Major Administrative Organizations of the Statistical Section and Principal Functions of each Administrative Unit

Office of Chief of Section

Directs the preparation of the annually published report, "Statistics of Income," containing fiscal and other economic data compiled from income and estate tax returns, and conducts special income and tax studies for legislative and administrative purposes.

Coding and Transcribing Subsection

Classifies income and estate tax returns for statistical segregation by code designations and prepares card transcripts of the data reported on certain income and estate tax returns selected on the basis of economic importance.

Card Punch, Verifying and Tabulation Subsection

Records on tabulation cards, by means of card punch machines, data reported on income and estate tax returns; also, certain administrative records of tax deficiencies and overassessments. Verifies the punched data to insure accuracy. Tabulates the punched cards by geographic and economic groups, and maintains current file of tabulation cards.

Research and Compilation Subsection

Prepares compilations from the data tabulated from the punched cards for publication in "Statistics of Income" and for other forms of presentation. Selects for special studies, data shown on income and estate tax returns. Prepares comparative data on incomes, deductions and tax to aid in the investigation and audit of returns of taxpayers having inadequate bookkeeping records. Comptometerizes tabulations and compilations. Maintains file of card transcripts of certain income tax returns of individuals beginning with 1914 and corporations with 1917 for historical income and tax studies.

NOTES AND REFERENCES

[1] Excerpt from address of Edward White before the Monday Lunch Club of Washington, D.C., January 31, 1921.

[2] Excerpt from address of Edward White before the American Association of University Instructors in Accounting, *The Accounting Review,* Volume III, Number 1, pp. 14–17.

[3] Section 22(a), Revenue Act of 1928.

[4] Section 23(a), Revenue Act of 1928.

[5] Section 21, Revenue Act of 1928.

[6] Shultz, W.J. "American Public Finance and Taxation," p. 540.

[7] David Burnet, "United States Daily," February 26, 1931.

[8] Moody's Public Utility Manual, 1932, p. xxii.

[9] W.L. Crum, "Corporate Earning Power," p. xi.

[10] *The Journal of Business* of the University of Chicago, Oct. 1929, pp. 345–346.

[11] "Sales Opportunities," Curtis Publishing Company, 1932, 1933, p. 3.

[12] "Selling Your Market," The Quality Group, p. 8.

[13] "Domestic Commerce," U.S. Department of Commerce, January 10, 1933, p. 9.

[14] Arthur Richmond Marsh, "The Economic World," June 20, 1925, p. 867.

[15] "Income Forecasting by the Use of Statistics of In-

come Data," by J. Franklin Ebersole, Susan S. Burr, George M. Peterson, in *Review of Economic Statistics,* November 1929, p. 171; February 1930, p. 39; and May 1930, p. 59.

[16] "National Wealth and Income," a report by the Federal Trade Commission, 1926.

[17] Report of the Tax Commission of North Carolina, p. 442.

[18] Letter dated December 29, 1932, to Hon. James W. Collier, Chairman, Committee on Ways and Means, House of Representatives, from Hon. Fred M. Vinson, Chairman, Subcommittee on Double Taxation.

[19] "Double Taxation," Preliminary Report of Subcommittee of the Committee on Ways and Means, p. vii.

[20] ***Ibid*, p. 76.**

[21] ***Ibid*, p. 238**

[22] ***Ibid*, pp. 239–240.**

[23] ***Ibid*, pp. 241–242.**

CORPORATION STATISTICS BRANCH PROJECTS AND PRIMARY CONTACTS

Project	Primary Contacts Area Code (202)	Frequency and Program Content
Corporation Income Tax Returns: 1986 Program 1987 Program 1988 Program	Victor Rehula David Jordan Tim Wheeler (376-0102)	Basic SOI program. Data are produced annually and cover complete income statement, balance sheet, tax and tax credits, distributions to stockholders, and detail from supporting schedules.
Corporation Tax Adjustment Study (CORTAX)	Nick Greenia (376-0124)	This is a periodic study which examines the effect of corporate tax adjustment transactions (primarily those due to carrybacks of unused net operating losses and tax credits) on the tax liabilities of previous tax years. The first such effort is approaching completion for Tax Years 1978–1983, but because of the dynamic nature of the process and the length of statutory time periods affecting adjustment transactions, subsequent studies are expected to reveal more changes to these as well as future years.
Partnership Returns of Income	Joseph Middough (376-0761)	Basic SOI program. Data are produced annually and cover income statement, balance sheet, and detail from supporting schedules.
Secretary's Percentage Study	Joseph Middough (376-0761)	This study is conducted annually and includes data for computation of percentage used in determining income tax liability of foreign life insurance companies with operations in the United States.
Partnership Schedule K/K-1 Study	Alan Zempel (376-0761)	This is a periodic study based on the availability of outside funding. It is an examination of the recognized "gap" between income reported on the partnership return and income reported to partners through a linkage of Schedules K and K-1 (used for partnership distributions) to the Form 1065 partnership return. Study for 1983 is completed.
Statistical Subscription Series: Corporation Source Book	Sandy Byberg (376-0102)	Annual industry data and other information. Corporation data provide information by more detailed industries than those used in the regular SOI reports.
Partnership Source Book	Gail Moglen (376-0761)	

FOREIGN STATISTICS BRANCH (DOMESTIC STUDIES) PROJECTS AND PRIMARY CONTACTS

Project	Primary Contacts Area Code (202)	Frequency and Program Content
Private Foundations	Peggy Riley Jan Huffman (376-0199)	This study is conducted annually and includes information on net worth and various data from the balance sheet and income statement. A compendium of previously published SOI articles on tax-exempt organizations will be published in the summer of 1989. Other research papers and previously unpublished articles and tables will also be included.
Nonprofit Charitable Organizations	Cecelia Hilgert Susan Mahler (376-0199)	This study is conducted annually and includes information on net worth and various data from the balance sheet and income statement for only those organizations classified as tax-exempt under subsection 501(c)(3) of the Internal Revenue Code. The groups covered are religious, educational, scientific, and literary (excluding private foundations). However, for Tax Year 1988, the study will be expanded to include all 501(c) organizations.
Charitable and Split-Interest Trusts	Mike Alexander (376-0199)	This is a periodic study, planned for every 3 years. The next study is for Tax Year 1989 and will include primarily balance sheet and income statement information.
Exempt Organizations Business Income Tax Returns	Ed Chung Sara Perry (376-0199)	This study is to be conducted annually. The first is for Tax Year 1987 to be published in 1989 and will include tabulations of "unrelated business" income and deductions. The data file will also be linked with the Form 990 data files of the tax-exempt organizations.
Private Foundation Grant Administrative Expenses	Sara Perry Ed Chung (376-0199)	This is a one-time study mandated by Congress in the Tax Reform Act of 1984 to assess the impact of current rules governing the treatment of grant administrative expenses.
Farmers' Cooperatives	John Kozielec (375-0199)	This is a periodic study to be done every 3 years. The next study is planned for 1990. The last complete study was for Tax Year 1977. Results from this study will be published in the tax-exempt organization compendium to be published in the summer of 1989.
Estate Tax Returns	Marvin Schwartz Barry Johnson Janet McCubbin (376-0199)	This study is conducted annually and includes information on gross estate and its composition, deductions, and tax. Also included is information on the age, sex, and marital status of the decedents. Basic estate tax return data by year in which returns are filed are produced every year. Other statistics are available on a year-of-death basis (approximately every 3 years).

FOREIGN STATISTICS BRANCH (DOMESTIC STUDIES) PROJECTS AND PRIMARY CONTACTS

Project	Primary Contacts Area Code (202)	Frequency and Program Content
Personal Wealth	Marvin Schwartz Janet McCubbin Barry Johnson (376-0199)	This study is periodic, providing data estimates of personal wealth of top wealthholders that are generated from estate tax return data using the "estate multiplier" technique, in conjunction with both filing-year and year-of-death estate data bases. The most recent data (1982) are based on returns filed from 1982 to 1984. A compendium of previously published SOI articles on wealth and wealth-related studies will be published in the fall of 1989. Other research papers and previously unpublished articles and tables will also be included.
Estate Collation	Marvin Schwartz Janet McCubbin Barry Johnson (376-0199)	This study is periodic, linking estate data for decedents and beneficiaries. Income information for beneficiaries is available both for years preceding and following the decedent's death. Information on gift tax returns is available for the last 2 years of the decedent's life. The most recent study is based on decedents who died in 1982. The next study is planned for decedents who died in 1989.
Intergenerational Wealth	Marvin Schwartz Janet McCubbin Barry Johnson (376-0199)	This is a one-time study which involves estate returns filed since the inception of the estate tax (1916). It focuses on the changes in the concentration of wealth and the intergenerational transfer of wealth, as well as the history of the estate tax system. The asset composition, available demographic information, and an analysis of beneficiaries of the estates will be emphasized.
Fiduciary Income Tax Returns	John Kozielec (376-0199)	Conducted periodically, the next full-scale fiduciary study will be done in conjunction with the 1989 estate program and will provide data on income, deductions, and taxes for 1989. The last complete study was for Tax Year 1982.
Gift Tax Returns	John Kozielec (376-0199)	This study is periodic, covering data on the types of gifts, deductions, and taxes. The last complete study was for 1965. The next study will be done in conjuction with the 1989 Estate program.
Environmental Excise Taxes (Superfund)	John Kozielec (376-0199)	The Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) authorized the collection of environmental taxes, a type of excise tax. This study, published annually, is the only source of data that provides detailed tabulations by type of chemical. CERCLA has been replaced by the Superfund Amendments and Reauthorization Act of 1986 (SARA).

FOREIGN STATISTICS BRANCH (DOMESTIC STUDIES) PROJECTS AND PRIMARY CONTACTS

Project	Primary Contacts Area Code (202)	Frequency and Program Content
Tax-Exempt Private Activity Bonds	Ed Chung Sara Perry (376-0199)	This study is conducted annually and provides information on industrial development bonds, student loan bonds, and qualified mortgage bonds, by industry, type of property financed, size of face amount, of bond, and State. Starting in 1987, information on public purpose bonds will be included.
Corporation Foreign Tax Credit: 1984 Program 1986 Program 1988 Program	 Vergie Mose Bill States Chris Carson (376-0177)	This is a periodic study planned for every 2 years and provides data on foreign income and taxes paid, and on foreign tax credit shown on corporation income tax returns. Data are classified by industry and country.
Foreign Corporations: 1984 Program 1986 Program	Maggie Lewis (376-0177)	This is a periodic study planned for every 2 years and provides data on activities of corporations which are controlled by U.S. corporations. Data are classified by industry and country.
U.S. Possessions Corporations	Mary Barlow (376-0177)	This is a periodic study planned for every 2 years and provides data on income statement, balance sheet, tax and "possessions tax credit" data for "qualifying" U.S. possessions corporations. (Most of these corporations are located in Puerto Rico.)
International Boycott Participation	Art Gianelos (376-0177)	This study is conducted annually and provides data on business operations of U.S. persons in boycotting countries, as well as the requests and agreements to participate in, or cooperate with, international boycotts not sanctioned by the U.S. Government.
Foreign Recipients of U.S. Income	Lynn Flaherty (376-0177)	This study is conducted annually and provides data on U.S. income paid to nonresident aliens and the amount of tax withheld for the U.S. Government.
Interest Charge Domestic International Sales Corporations (IC-DISC): 1985 Program 1986 Program 1987 Program 1988 Program	 Bill States Chris Carson Mary Barlow Mary Barlow (376-0177)	These corporations replaced the DISC as of January 1, 1985. Balance sheet, income statement, and export-related data will be tabulated annually.

FOREIGN STATISTICS BRANCH (DOMESTIC STUDIES) PROJECTS AND PRIMARY CONTACTS

Project	Primary Contacts Area Code (202)	Frequency and Program Content
Foreign Sales Corporations (FSC):		These corporations replaced the DISC as of January 1, 1985. Balance sheet, income statement, and export-related data will be tabulated annually.
1985 Program	Chris Carson	
1986 Program	Chris Carson	
1987 Program	Chris Carson	
1988 Program	Vergie Mose (376-0177)	
Foreign Trusts	Jim Hobbs (376-0159)	This is a periodic study conducted every 4 years which provides data on foreign trusts that have U.S. persons as grantors, transferors, or beneficiaries. Data include country where trust was created, value of transfer to the trust, and when trust was created.
Nonresident Alien Estates	DeWitt Long (376-0177)	This is a periodic study planned for every 4 years which provides data on estates of nonresident aliens who have more than $60,000 of assets in the United States. The estates are subject to U.S. estate taxation on the U.S. property.
Sales of U.S. Real Property Interests by Foreign Persons	Chris Carson (376-0177)	This study is conducted annually and provides data on transfers of U. S. real property interests, when these interests are acquired from foreign persons. Data will include amount realized on the transfer, amount of U.S. tax withheld, and country of foreign person.

INDIVIDUAL STATISTICS BRANCH
PROJECTS AND PRIMARY CONTACTS

Project	Primary Contacts Area Code (202)	Frequency and Program Content
Individual Income Tax Returns: 1986 Program 1987 Program	Michael Strudler Charles Hicks (376–0083)	Basic SOI program. Data are produced annually and cover income, deductions, tax, and credits reported on individual income tax returns and associated schedules.
Sole Proprietorships: 1986 Program	Michael Strudler (376–0083)	Basic SOI program. Data are produced annually and cover business receipts, deductions, and net income reported on Schedule C (for nonfarm proprietors). Similar data from Schedule F (for farmers) are available on an occasional basis.
Americans Living Aboard	Dan Holik Clay Christian	This is a periodic study to be done every 4 years and covers foreign income and taxes paid, and foreign tax credit reported on individual income tax returns. Data are classified by adjusted gross (AGI) and country.
Sales of Capital Assets: 1985 Program 1985–89 Panel Study	Dan Holik John Labate (376–0083)	This is a periodic study to be done every 4 years and provides detailed data on the sales of capital assets reported on Schedule D, plus sales of residences, and sales of personal or business depreciable property. The panel study provides the same data on capital asset transactions for a subsample of the returns in the Sales of Capital Assets basic study; however, data for these taxpayers are obtained over a 5-year period.
Taxpayer Usage Study	Michael Weber Laura Prizzi (376–0081)	Basic SOI program. Data are produced annually and provide frequencies of specific line entries made by taxpayers, the use of various return schedules and associated forms, as well as general characteristics of the individual taxpayer population. Weekly reports are produced during the primary filing season (January through April).
Tax Model	Mario Fernandez (376–0081)	Microdata files are produced annually containing detailed information obtained from the Individual SOI program with identifiable information omitted to make the file available for public dissemination. In addition to microdata files, specific tabulations from them are produced on a reimbursable basis.
Small-Area Data	Bob O'Keefe Bobby Clark (376–0104)	This is a periodic study based on availability of outside funding. It includes the development of a program to provide selected tax return information obtained from the IRS Master File system at the county level. In addition, the program provides migration flow data at the county and State levels.

INDIVIDUAL STATISTICS BRANCH
PROJECTS AND PRIMARY CONTACTS

Project	Primary Contacts Area Code (202)	Frequency and Program Content
Sole Proprietorship Historical Source Book	Dodie Riley (376-0104)	A tape file of basic SOI program data is produced annually and covers the same data provided in the Sole Proprietorship SOI program, including business receipts, depreciation deduction, taxes paid deduction, interest paid deduction, payroll, and net income since 1957, by year and by industry. A printed copy is published every 5 years.
Occupation Studies	Bobby Clark (376-0104)	This is a periodic study based on availability of outside funding, designed to classify individual income tax returns by occupation and to develop a dictionary of occupation titles that can be used to enhance the economic data of many other individual income tax return studies.
W-2 Study	Barry Windheim (376-0104)	This is a periodic study done every 2 years based on a linkage of data from Forms W-2 (Wage and Tax Statement) and individual income tax returns. It provides separate data on the salaries and wages of primary and secondary taxpayers filing joint returns. For Tax Year 1979, taxpayers were further classified by sex, whereas for 1983 they were classified by age.

Statistics Of Income Studies Of International Income And Taxes

By Daniel F. Skelly and James R. Hobbs*

The Statistics of Income Division of the Internal Revenue Service regularly conducts studies of international income and taxes. Historically, the main users of these studies have been the Office of Tax Analysis in the Office of the Secretary of the Treasury, and the Congressional Joint Committee on Taxation. Increasingly, however, interest in this area has been evidenced by other government agencies, universities, trade associations, corporate tax departments and private citizens. To meet the growing demand, the Statistics of Income Division recently initiated a new statistical service that will routinely provide data from the sixteen studies now being conducted in the international area. The main purpose of this article is to discuss the content and timing of each of these sixteen studies.

The Statistics of Income Division plans and conducts international studies in two broadly-defined areas. These areas are foreign investment and activity abroad by U.S. "persons" and, conversely, investment and activity in the United States by foreign "persons" [1,2]. Table 1 provides information on the cycling of the studies and shows population and sample estimates for each projected study. Specific descriptions of the studies in each area are provided below.

Foreign Investment and Activity Abroad by U.S. Persons.—This area includes the following studies: Corporation Foreign Tax Credit, Foreign Corporation Information Returns, Domestic International Sales Corporations, Interest Charge Domestic International Sales Corporations, Foreign Sales Corporations, U.S. Possessions Corporations, International Boycott Participation, Individual Foreign Tax Credit, Individual Income Earned Abroad, Excluded Income from U.S. Possessions, and Foreign Trusts. (Seven of these studies either have been, or will be, used for Treasury Department reports to Congress that are mandated by law [3].)

Investment and Activity in the United States by Foreign Persons.—This area includes the following studies: Foreign Corporations with Income Derived from U.S. Sources, U.S. Corporations with 50 Percent or More Ownership by a Foreign Entity, Nonresident Alien Income and Tax Withheld, Nonresident Alien Estates, and Sales of U.S. Real Property Interests by Foreign Persons.

*Chiefs, Foreign Statistics Branch and Foreign Returns Analysis Section, respectively.

FOREIGN INVESTMENT AND ACTIVITY ABROAD BY U.S. PERSONS

This broad area consists of eleven studies. It includes the foreign activities of U.S. corporations, as well as the activities of foreign corporations controlled by U.S. corporations. For purposes of this article, U.S. corporations deriving most of their income from U.S. possessions are also included in this grouping. Other studies cover both domestic and foreign corporations that were created under legislation aimed at increasing U.S. exports. Finally, certain studies in this group focus on the foreign activities of all U.S. persons (corporations, individuals, etc.).

International operations of U.S. corporations have grown to the point that overseas income contributes substantially to U.S. corporate worldwide income; indeed, foreign investments now account for a sizable portion of total investment by U.S. corporations. According to Department of Commerce data, foreign direct investment by U.S. firms during the period of 1977 to 1983 increased 55 percent (from $146.0 billion to $226.1 billion, as measured in current dollars) [4].

Corporation Foreign Tax Credit

The general philosophy of the foreign tax credit, despite its numerous changes over time, has remained basically the same. Domestic corporations are subject to U.S. tax on their worldwide income. When part of that income is earned in foreign countries, the income may also be subject to tax in that country. In order to prevent double taxation of the same income, U.S. law permits corporations to claim a credit, thereby reducing their U.S. income tax for the taxes paid to the foreign country [5]. In effect, the corporation pays tax at the higher of the U.S. tax rate or the overall foreign country tax rate on its foreign-source income.

The corporation foreign tax credit statistics are designed to show the effects of specific provisions of the Internal Revenue Code on the income and taxes of corporations. The statistics show the country of origin of the foreign income and taxes which generate the credit. Also shown is the industry of the corporation claiming the credit. In general, the data are classified not only by country, industry, and type of foreign income, but also by size of total assets of the domestic corporation, and by ratios of foreign source taxable income to U.S. taxable income, total foreign taxes to taxable foreign income, and U.S. income tax to worldwide taxable income. The most detailed statistics

currently available are for Tax Year 1982. These data are summarized in Figure A. Less detailed information is also available for the period 1925–83 (see Figure C).

One indicator showing the activity of American corporations in foreign markets is the amount of "foreign source taxable income" reported by corporations claiming a foreign tax credit on their tax returns. This foreign taxable income primarily consists of profits earned by their "branches" in foreign countries, and dividends distributed to U.S. corporations by their subsidiary foreign corporations. It also includes other income received from foreign sources such as rentals, royalties, interest, and compensation for services performed.

The foreign source taxable income of corporations with foreign tax credits rose from $3.6 billion in 1961 to $59.5 billion in 1982. During the same period, the total worldwide taxable income (which is the basis for computing U.S. tax liability) reported by these corporations also increased, from $22.9 billion to $107.2 billion.

Using the amount of taxable income reported by domestic corporations that claimed a foreign tax credit, a percentage of the portion that foreign source taxable income contributed to the total taxable income can be derived [6]. That percentage is plotted for certain years in Figure B. It reveals that the percentage increased from 15.7 percent for 1961 to 55.5 percent for 1982, indicating the overall growing importance of the foreign activity of domestic corporations.

Figure C shows the growth of the foreign tax credit claimed by corporations during the past 58 years. The early eighties, unlike the sixties and seventies, began with a decline in the amount of foreign tax credit claimed. The decline for 1980 through 1982 in the credit resulted, in part, from the foreign nationalization of certain oil interests in the Middle East. This nationalization resulted in the deduction of substantial foreign income taxes in lieu of the crediting of these taxes because use of the tax credit for certain new foreign taxes was not allowed. In addition, the climate of nationalization generally brought with it a diminished role of U.S. corporations in the oil-related activities of Middle East countries. When coupled with generally lower corporate profits in the early eighties, which produced generally lower U.S. income taxes against which to apply foreign tax credits, the resulting total foreign tax credit claimed fell to less than $20 billion for both 1982 and 1983.

The foreign tax credit studies are conducted for even tax years, based on returns included in the same samples used for the Statistics of Income (SOI) corporate program. For Tax Years 1984, 1988, and 1990, foreign tax credit data will be compiled only by country from Forms 1118 (the foreign tax credit computation schedule) included with returns filed by "giant" corporations [7]. (These so-called "giants" reported total assets of $250 million or more for 1984. The defining limitation will be raised to $1 billion for giant corporations for 1988 and 1990.) In addition, for these years, summary totals (i.e., without country detail) for "non-giant" corporations will be compiled for all of the returns in the SOI corporate sample with foreign tax credits. For Tax Years 1986 and 1992, foreign tax credit data will be compiled by country for every corporation in the SOI corporate sample with a foreign tax credit. Data on the expected sample and population sizes for the foreign tax credit studies are shown in Table 1 of this article. As shown in that table, the 1984 sample will consist of approximately 2,400 corporation returns from an expected population of 4,900. These 2,400 returns are comprised of all "giant" returns (900) and a sample (1,500 out of 4,000) of all other corporation returns claiming a foreign tax credit.

Foreign Corporation Information Returns

Information Returns with Respect to Foreign Corporations (Forms 5471) are required to be attached to the income tax returns of U.S. persons, for each foreign corporation in which a person has an "interest." These foreign corporations are frequently established by domestic corporations in order to engage in foreign business activities [8].

The 1984 study, which is in progress, will include data from all Forms 5471 attached to U.S. corporation income

Figure A.—Corporation Returns with Foreign Tax Credit and Supporting Forms 1118 Credit Computation Schedule, by Size of Total Assets, 1982

[All figures are estimates based on samples—money amounts are in millions of dollars]

Size of total assets	Number of returns	Income subject to U.S. tax		Foreign taxes paid [2]	U.S. income tax before credits	Foreign tax credit claimed
		Total	Foreign source taxable income [1]			
	(1)	(2)	(3)	(4)	(5)	(6)
All returns, total	4,931	$107,140	$59,482	$22,795	$48,642	$18,932
Zero under $250,000,000	4,190	8,998	2,423	798	4,023	720
$250,000,000 under $1,000,000,000	329	11,772	3,480	1,119	5,366	1,054
$1,000,000,000 or more	412	86,371	53,579	20,879	39,253	17,158

[1] Represents foreign source taxable income before loss recapture.
[2] Represents foreign taxes paid or accrued and deemed paid.
NOTE: Detail may not add to total because of rounding.

Figure B.

Corporation Returns with Foreign Tax Credits: Foreign Source Taxable Income as a Percentage of Worldwide Taxable Income, 1961-1982

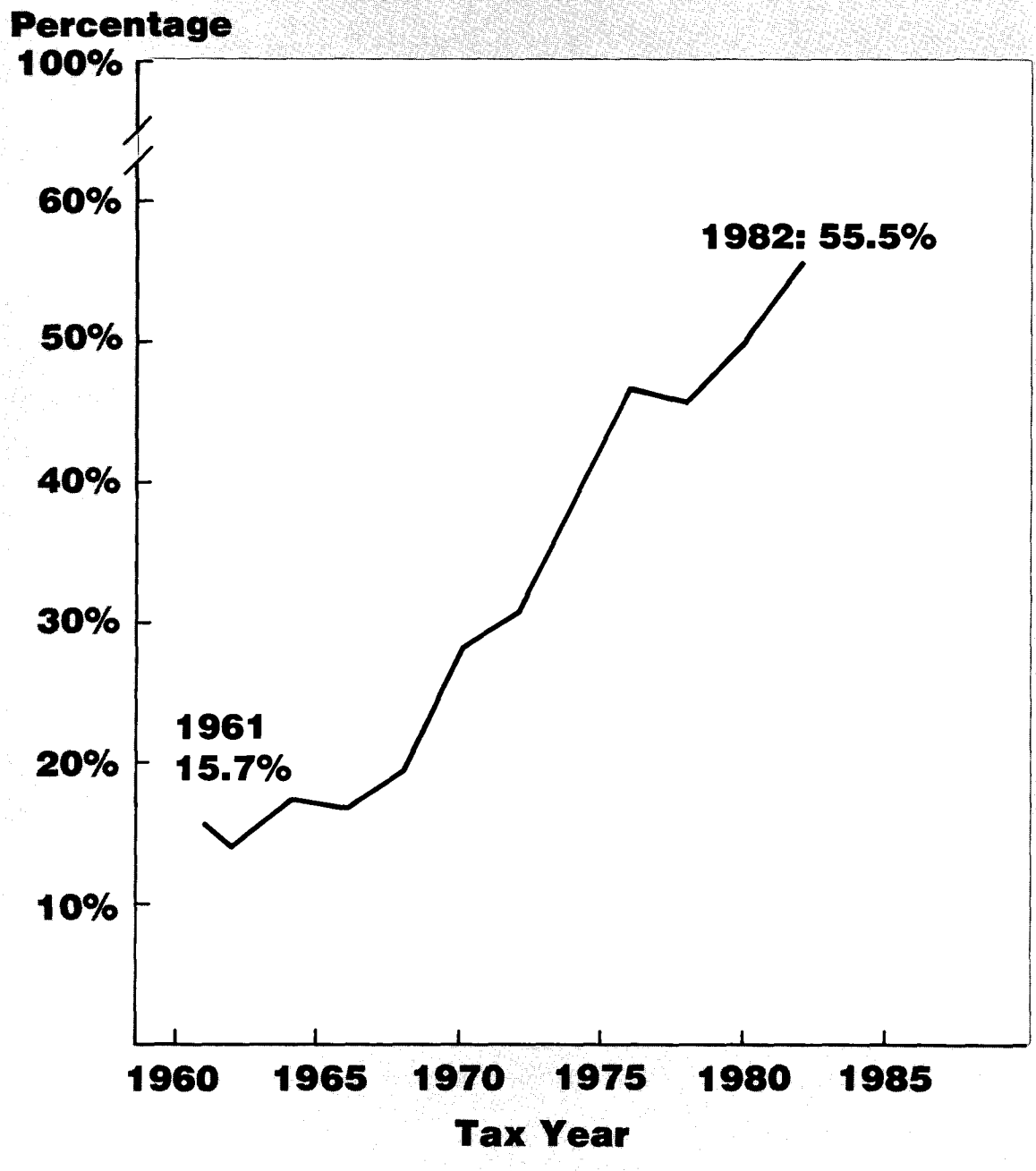


Figure C.—Growth of the Corporation Foreign Tax Credit, 1925–1983

[For most years, figures are estimates based on samples—money amounts are in millions of dollars]

Tax year	Foreign tax credit claimed
1925	$ 20
1930	29
1935	32
1940	58
1945	96
1950	464
1955	959
1960	1,224
1965	2,616
1970	4,549
1972	6,315
1974	20,753
1976	23,579
1978	26,357
1980	24,880
1981	21,829
1982	18,932
1983	19,951

NOTE: Year-to-year comparability is affected by changes in the law.

tax returns with total assets of $250 million or more. While most of these forms will be filed for "Controlled" Foreign Corporations (CFC's), the 1984 study will include data on other foreign corporations in which a U.S. corporation had a relatively small amount of ownership, such as only 5 percent of the outstanding stock of the foreign corporation. A Controlled Foreign Corporation is a foreign corporation in which more than 50 percent of the total combined voting power of all classes of stock is owned (directly, indirectly, or constructively) by U.S. shareholders.

Previous studies included only data for CFC's that reported information on Form 2952, Information Return With Respect to a Controlled Foreign Corporation, attached to U.S. corporation returns. With the replacement of Form 2952 with Form 5471, the content of the 1984 study is being expanded to include detail for complete income statements and balance sheets for all foreign corporations, a summary of Subpart F income for Controlled Foreign Corporations, and undistributed income and taxable dividends paid by Foreign Personal Holding Companies [9,10]. The data from similar studies have traditionally been used by the Office of the Secretary of the Treasury to determine the location of investments and sources of income abroad through investment in foreign corporations and to estimate the impact of various U.S. tax proposals regarding the deferral of tax on earnings and profits from investments abroad by U.S. corporations.

The most current available statistics are for Tax Year 1982 and are limited to foreign corporations controlled by U.S. corporations with $250 million or more in total assets [11]. These data are summarized in Figure D, which shows that CFC's were predominantly engaged in manufacturing, trade, financial, and service activities. Manufacturing CFC's led all other industries in both numbers and assets; however, their relative importance has declined because of the more rapid growth of financial corporations in recent years.

Figure E shows the geographic locale of incorporation of Controlled Foreign Corporations. It should be pointed out that some corporations are incorporated in one country while conducting business in one or more other countries; however, the statistics indicate that over 90 percent of them conduct their business in the same country in which they were organized. The countries shown in Figure E represent the most prevalent countries where domestic corporations establish foreign operations via incorporation. The United Kingdom and Canada are the favorite locations of American companies in terms of CFC incorporations. Collectively, these companies accounted for more than one-fourth of the total number and nearly one-third of the total assets of all CFC's in the 1982 study.

Figure F presents selected historical information on the entire population of foreign corporations controlled by U.S. corporations. While the number of CFC's nearly tripled between 1962 and 1980, their activity as measured by assets, and by receipts and earnings in current dollars, increased at an even faster rate.

Future Foreign Corporation Information Returns studies will be conducted for even tax years. The studies for Tax Years 1984, 1988, and 1990 will be limited to those foreign corporations for which information is included in "giant" U.S. corporation returns (i.e., returns of U.S. corporations with total assets of $250 million or more). For Tax Years 1986 and 1992, foreign corporation data will be included from all returns ("non-giants" as well as "giants") in the SOI corporate sample. As shown in the sample and population estimates in Table 1, the 1984 study will encompass 1,100 U.S. parent corporation returns with 32,000 foreign corporations.

Domestic International Sales Corporations

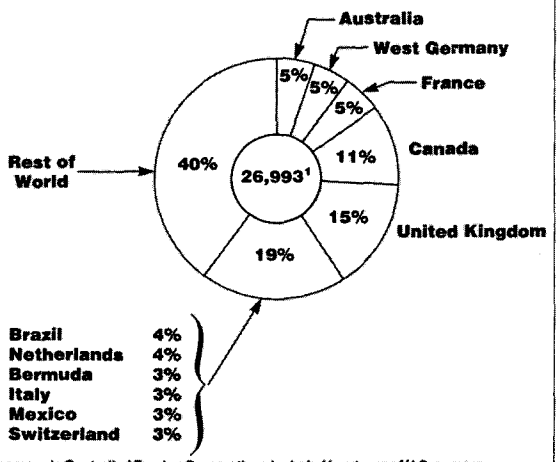
The Domestic International Sales Corporation (DISC) was a special type of corporation established by the Revenue

Figure D.—Returns of U.S. Corporations with Total Assets of $250 Million or More: Number of Controlled Foreign Corporations (CFC's) and CFC Total Assets and Earnings and Profits, by CFC Industrial Division, 1982

[Money amounts are in millions of dollars]

CFC industrial division	Number of Controlled Foreign Corporations	Total assets	Current earnings and profits (less deficit) before taxes
	(1)	(2)	(3)
All industries, total	26,993	$557,209	$36,696
Agriculture, forestry and fishing	174	702	10
Mining	792	26,356	4,764
Construction	358	5,891	636
Manufacturing	7,682	215,671	18,602
Transportation and public utilities	730	20,506	529
Wholesale and retail trade	4,861	83,027	3,791
Finance, insurance and real estate	3,667	179,497	6,249
Services	2,655	21,903	2,110
Nature of business not allocable	288	187	6
Inactive	5,786	3,470	-

Figure E.
Distribution of Controlled Foreign Corporations in the World, 1982



[1]Represents Controlled Foreign Corporations included in returns of U.S. corporations with total assets of $250 million or more.
NOTE: Detail may not add to total because of rounding.

Figure F.—Growth of Controlled Foreign Corporations, 1962–1980

[All figures are estimates based on samples—money amounts are in millions of dollars]

Tax year	Number of Controlled Foreign Corporations	Total assets	Business receipts	Current earnings and profits (less losses) before taxes
	(1)	(2)	(3)	(4)
1962	12,073	$46,102[1]	$49,859	$4,181
1972	29,221	167,830	172,407	16,943
1980	35,471	508,032	699,003	47,622

[1] Estimated.
NOTE: Data for all Controlled Foreign Corporations are not available for 1982.

Act of 1971. The purpose of this legislation was to provide a system of tax deferral and thereby stimulate U.S. exports. The profits of a DISC were not taxed to the DISC itself, but instead were taxed to the stockholders when distributed or deemed distributed. Stockholders of DISC's (typically other U.S. corporations) were deemed to receive annually a portion of the DISC's earnings and profits. U.S. income taxation was deferred indefinitely, for the most part, on the remainder of the DISC's earnings and profits.

The number of DISC returns, DISC taxable income, and amounts deemed distributed from 1972 to 1983 are presented in Figure G. The difference between the amount of DISC taxable income and the amount deemed distributed out of that taxable income for each year represents the amount of DISC income that could be deferred indefinitely from U.S. income taxation.

Figure H shows a comparison of DISC exports to total U.S. exports for the period 1973 through 1983 [12]. As might be expected, total exports and DISC exports have moved in the same direction over this period of time.

The DISC tax provisions were a point of contention between the United States and other signatory countries of the General Agreement on Tariffs and Trade. The Deficit Reduction Act of 1984, therefore, ended corporations operating and filing tax returns as Domestic International Sales Corporations. It closed every DISC tax year by December 31, 1984. As a result, the series of studies of DISC returns conducted by the SOI Division since 1972 culminates with DISC returns for accounting periods ending during the 6-month period, July 1984 through December 1984.

Interest Charge Domestic International Sales Corporations and Foreign Sales Corporations

While the Deficit Reduction Act of 1984 terminated the existence of Domestic International Sales Corporations after 1984, it allowed for two new tax entities, the Foreign Sales Corporation (FSC) and the Interest Charge Domestic International Sales Corporation (IC-DISC) to replace the old DISC.

The Foreign Sales Corporation study will largely consist of newly-formed foreign subsidiaries of former owners of large DISC's. An FSC is a corporation that has elected to be an FSC and is incorporated in a qualifying foreign country or U.S. possession (except Puerto Rico). FSC's receive U.S. tax benefits on a portion of their foreign trade income. The amount of this income excluded from taxation is determined

Figure G.—Number of DISC Returns, DISC Taxable Income, and Amounts Deemed Distributed, 1972–1983[1]

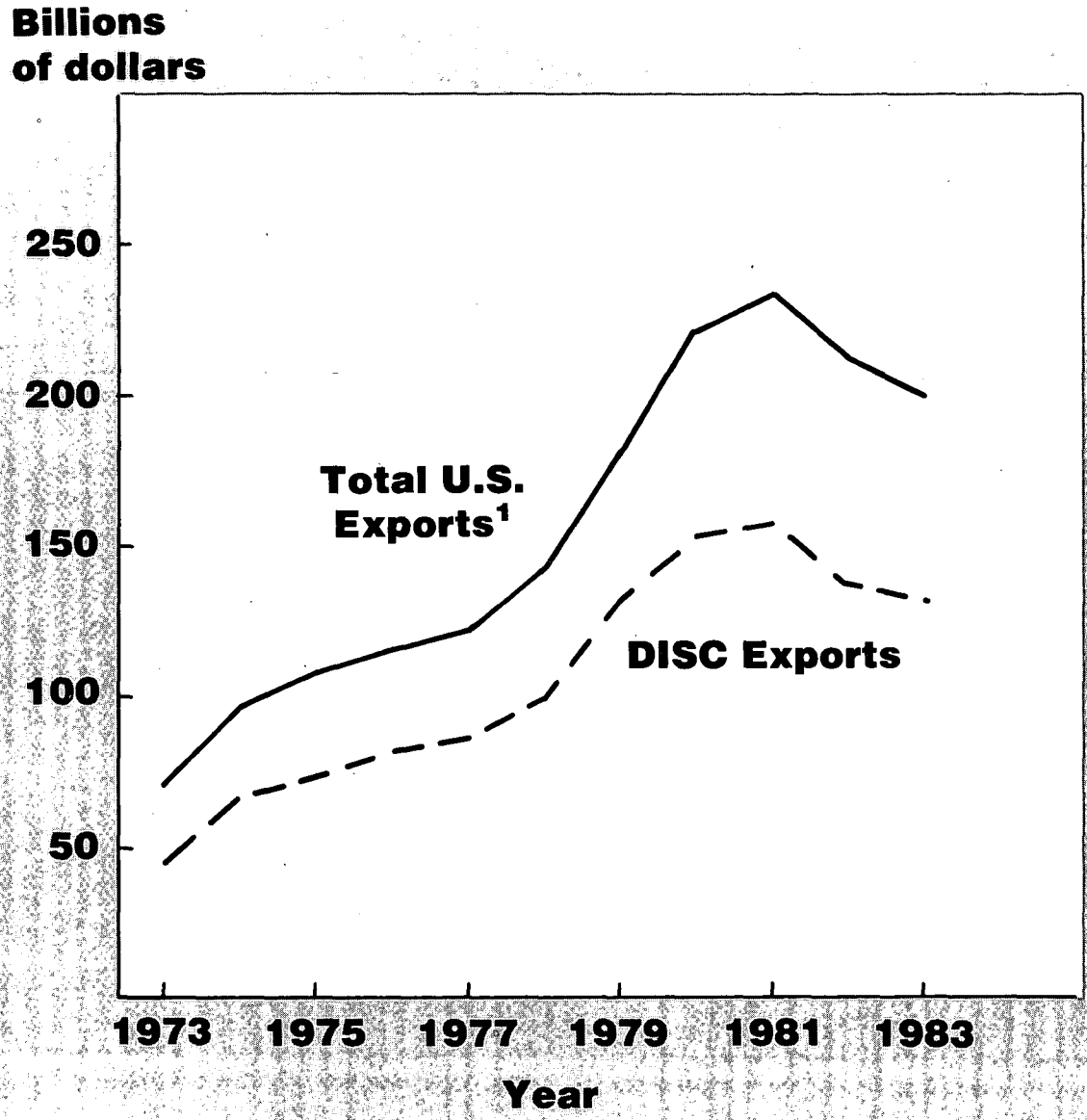
[All figures are estimates based on samples—money amounts are in millions of dollars]

Tax year	Number of returns	DISC taxable income	Amount deemed distributed [2]
	(1)	(2)	(3)
1972 [1]	2,826	$1,566	$776
1973	4,162	3,149	1,579
1974	5,498	4,783	2,416
1975	6,431	4,772	2,420
1976	6,911	5,071	3,499
1977	6,665	5,234	3,715
1978	7,208	6,427	4,360
1979	7,933	8,461	5,397
1980	8,665	9,875	6,270
1981	9,408	10,952	7,187
1982	9,663	10,156	7,080
1983	9,898	10,082	7,692

[1] Tax year refers to accounting periods ended between July of one year and June of the following year. However, for 1972, the effective date of the legislation was January 1, 1972; therefore, they include only part-year accounting periods for some corporations.
[2] Estimates include small amounts ofdistributions considered received by stockholders from prior years' DISC taxableincome.
NOTE: DISC means Domestic International Sales Corporation.

Figure H.

DISC Exports vs Total U.S. Exports, 1973-1983



[1]Source: U.S. Department of Commerce, Bureau of the Census, Highlights of U.S. Export and Import Trade, FT990, monthly.

NOTE: DISC means Domestic International Sales Corporation.

by the type of pricing method used and the percentage of corporate ownership. The study will show FSC income, deductions, foreign trade income, tax and balance sheet items. These data will be classified by industry, country of incorporation, size of total assets, type of pricing rules, and other classifiers.

The Form 1120-IC-DISC is an information return filed by a domestic corporation that has elected IC-DISC status and meets certain other requirements. Two of the requirements are that a minimum of 95 percent of its gross receipts be "qualified export receipts" and that at least 95 percent of its assets be "qualified export assets." Corporations electing IC-DISC status and meeting all IC-DISC requirements are generally not subject to U.S. income tax. However, shareholders of an IC-DISC are taxed on a portion of the IC-DISC's income when it is deemed to be or actually is distributed and they are assessed an interest charge on the tax-deferred income. Corporations electing IC-DISC status are generally small exporters, as the tax law requires that all income from export receipts in excess of $10 million be fully taxable to the IC-DISC shareholder(s).

In addition to basic corporate data, additional data unique to the Form 1120-IC-DISC will also be compiled. Such data will include the amount and nature of export gross receipts and the amount of tax-deferred IC-DISC income. These data will be classified by industry of the IC-DISC, product or service of the IC-DISC, size of corporate shareholder assets, type of pricing rules, and other classifiers.

The IC-DISC and FSC statistics are new for 1985 and will be compiled annually. The FSC population is currently estimated at 4,000 with a sample of 1,700. The corresponding population and sample estimates for IC-DISC's are 2,500 and 600, respectively. (See Table 1.) The FSC and IC-DISC samples are included in the complete sample of returns for each corporate program.

U.S. Possessiona Corporations

A U.S. possessions corporation is a domestic corporation that elects to be treated as a possessions corporation by filing a Form 5712, Election to be Treated as a Possession Corporation. In general, this type of corporation is usually a subsidiary of another U.S. corporation. To qualify, the possessions corporation must derive 80 percent or more of its gross income from sources within a U.S. possession and 65 percent or more of its gross income from the active conduct of a trade or business within a U.S. possession. Corporations which meet these requirements for a period of 3 years (the current- and 2-preceding years) are allowed a credit against their U.S. tax liability for that portion of the U.S. tax liability attributable to income derived from U.S. possessions.

All of the information reported on Form 5735, Computation of Possessions Corporation Tax Credit, and selected information reported on Schedule P (Form 5735), Allocation of Income and Expenses Under Section 936(h)(5), is captured for this study. This information includes gross income from the current- and 2-preceding taxable years, applicable deductions and loss adjustments for the current year, and the computation of the possessions tax credit. Also included are data items relating to the allocation of income and expenses from intangible property between possessions corporations and their U.S. affiliates. Selected Form 1120, U.S. Corporation Income Tax Return, and Form 940, Employer's Annual Federal Unemployment Tax Return, data are also included in this study. Form 940 data provide employment and payroll information related to U.S. possessions corporations. The possessions study is based on all returns with elections for treatment as possessions corporations. This study is conducted on a biennial basis for odd-numbered tax years. For 1985, nearly 700 returns are expected to be filed for U.S. possessions corporations.

The most recent data obtained by the Statistics of Income Division are for Tax Year 1982 and are summarized in Figure I. There were 544 returns for 1982 which claimed over $2 billion of U.S. possessions tax credit (compared to 384 returns for 1976, the first year of the credit, with $700 million of credit). The 15 return difference in Figure I represents those corporations that claimed the credit but did not file the supporting information on Forms 5735. Puerto Rico has been the primary beneficiary of the possessions corporation system of taxation. More than 98 percent of U.S. possessions corporations conducted business in Puerto Rico, which is considered to be a U.S. possession for purposes of the credit.

International Boycott Participation

The Tax Reform Act of 1976 instituted provisions of the Internal Revenue Code denying certain benefits to taxpayers who participate in, or cooperate with, an international

Figure I.—Selected Financial Data for Returns with a U.S. Possessions Corporation Tax Credit, 1982

[Money amounts are in millions of dollars]

Item	All returns with a credit	Possessions corporations with Form 5735 attached	
		Total	With operations in Puerto Rico
	(1)	(2)	(3)
Number of returns	544	529	522
Total assets	$18,790	$18,014	$17,997
Retained earnings	13,666	12,995	12,986
Total receipts	14,067	13,478	13,458
Business receipts	13,045	12,504	12,486
Net income (less deficit)	4,610	4,387	4,384
Total income tax	2,092	1,990	1,988
Possessions tax credit	2,056	1,954	1,953
Income tax after credits	35	35	35

NOTE: Form 5735 is entitled "Computation of Possessions Corporation Tax Credit Allowed Under Section 936."

boycott unsanctioned by the United States. U.S. taxpayers are required to report operations (direct and indirect) in or related to a boycotting country, or that are conducted with a government, a company, or a national of a country, that requests participation in, or cooperation with, an unsanctioned boycott. The term "operations" encompasses all forms of business and commercial transactions.

The affected tax benefits include the foreign tax credit, deferral of taxation of foreign subsidiaries, and deferral of taxation on earnings of a Domestic International Sales Corporation (DISC), each of which can be denied under the 1976 Act. The Deficit Reduction Act of 1984 provided that certain tax benefits to be afforded to Interest Charge Domestic International Sales Corporations and Foreign Sales Corporations (previously mentioned as DISC replacements beginning with 1985), also be subject to the international boycott provisions. Therefore, the tax deferral benefit of a DISC is replaced by the deferral of taxation on certain income of an IC-DISC, beginning with 1985. The income of a FSC that can be exempt from taxation is also added (beginning with 1985) to the tax benefits affected by the international boycott provisions. (The foreign tax credit that can be claimed by a FSC is also subject to these provisions.)

Data from those boycott reports indicating a reduction of tax benefits due to boycott participation are produced annually, showing the number of reports and amount of reduced benefits. Additional information based on all boycott reports, with and without tax benefit reductions, is compiled on a 4-year cycle, with the Tax Year 1982 study being the most recently completed "full-scale" study. Tabulated data from the full-scale studies include information on the "person" that filed the boycott report, countries requesting the boycotts, countries in which boycotts are directed, the number and type of requests and agreements to participate in or cooperate with boycotts, and the computations of the reductions in tax benefits.

As shown in Figure J, a loss of tax benefits is reported on only a small portion of the total boycott reports filed. For 1982 and 1983, fewer than 100 reports out of 2,800 received each year included data on the loss of tax benefits resulting from agreements to boycott requests. (U.S. taxpayers do not agree to participate in, or cooperate with, all boycott requests made of them.)

Figure J.—Number of Boycott Reports, Requests, Agreements, and Tax Effects of International Boycott Participation, 1982 and 1983

[Money amounts are in thousands of dollars]

Item	1982	1983
ALL PERSONS		
Number of boycott reports	2,822	2,789
Number of requests received	16,824	n.a.
Number of agreements	5,809	n.a.
Number of returns indicating a negative tax effect	87	76
Reduction in foreign taxes eligible for a foreign tax credit [1]	$2,001	$1,928
Reduction of foreign tax credit [2]	1,343	1,301
Subpart F boycott income	4,073	6,047
DISC boycott income	1,093	1,030
CORPORATIONS (INCLUDING DISC'S)		
Number of boycott reports	2,583	2,550
Number of requests received	15,072	n.a.
Number of agreements	5,189	n.a.
Number of returns indicating a negative tax effect	87	76
Reduction in foreign taxes eligible for a foreign tax credit [1]	$2,001	$1,928
Reduction of foreign tax credit [2]	1,343	1,301
Subpart F boycott income	4,073	6,047
DISC boycott income	1,093	1,030
NUMBER OF BOYCOTT REPORTS FOR OTHER TYPES OF PERSONS		
Individuals	118	126
Partnerships	95	93
Trusts and others	26	19

n.a. - not available

[1] Represents the reduction in foreign taxes eligible for a foreign tax credit computed under the "specifically attributable taxes and income" method.

[2] Represents the reduction in foreign tax credit computed using the "international boycott factor" method.

NOTE: DISC means Domestic International SalesCorporation.

Individual Foreign Tax Credit

The United States imposes its income tax on the worldwide income of individual citizens and residents without regard to the geographic source of that income. U.S. individual taxpayers, who also pay or accrue foreign taxes on their foreign source income, are eligible to use those taxes to claim a tax credit (or an itemized deduction) on their U.S. income tax returns. As in the case of corporations, the credit is generally more advantageous to the individual than a deduction because it results in a dollar-for-dollar reduction of U.S. tax liability. The credit is claimed on Form 1116, Computation of Foreign Tax Credit—Individual, attached to Form 1040, U.S. Individual Income Tax Return.

Figure K compares the number of returns and amount of foreign tax credit claimed for each year of the 13 years, 1972-1984. It also indicates that for the few years just prior to enactment of the Economic Recovery Tax Act of 1981 (ERTA), the vast majority of the credit was claimed by individuals in the upper income classes (adjusted gross income, AGI, of $50,000 or more). However, ERTA lowered the maximum marginal tax rate from 70 percent to 50 percent and reduced the other marginal tax rates across-the-board by approximately 23 percent over a 3-year period (1982-1984). See the "Individual Income Earned Abroad" section of this article for an additional tax law change that resulted from ERTA. A consequence of the various provisions of ERTA was a decrease in the total amount of foreign tax credit claimed, in particular a sharp decrease in the amount claimed on those returns in the higher marginal tax brackets associated with an AGI of $50,000 or more.

The last detailed statistics on the foreign tax credit claimed by individuals, for Tax Year 1979, indicate that ten

Figure K.—Foreign Tax Credit Claimed on Individual Income Tax Returns, 1972–1984

[All figures are estimates based on samples—money amounts are in thousands of dollars]

Tax year	All returns		Returns with Adjusted Gross Income of $50,000 or more		
	Number	Foreign tax credit	Number	Foreign tax credit	Percent of total credit
	(1)	(2)	(3)	(4)	(5)
1972	202,440	$221,387	48,875	$137,312	62.0%
1973	223,127	255,286	48,861	135,265	53.0
1974	233,191	291,730	57,698	153,816	52.7
1975	231,078	345,928	60,043	168,926	48.8
1976	255,749	427,627	70,728	253,368	59.2
1977	240,874	451,033	70,529	248,766	55.2
1978	278,267	901,030	95,257	585,801	65.0
1979	287,508	842,176	107,778	627,128	74.5
1980	393,074	1,341,675	153,227	996,957	74.3
1981	387,680	1,233,564	169,887	1,019,780	82.7
1982	361,413	757,326	147,725	574,299	75.8
1983	373,360	617,749	147,453	488,432	79.1
1984	434,419	738,014	156,905	626,364	84.9

NOTE: Year-to-year comparability is affected by changes in the law.

countries accounted for $823 million of the total $842 million of foreign tax credit claimed by individuals. The next detailed statistics are currently being compiled for Tax Year 1983. They will contain data for each type of foreign source income by the country to which foreign taxes were paid or accrued. The study is conducted once every 4 years.

Individual Income Earned Abroad

As previously stated, U.S. citizens are generally taxed on their worldwide income regardless of the geographic source of that income; however, qualifying citizens with earned income (i.e., salaries, wages, commissions, and fees) for personal services performed in a foreign country were accorded certain tax advantages.

The Economic Recovery Tax Act of 1981 simplified the foreign earned income provisions. For Tax Year 1982, qualifying taxpayers were allowed to exclude up to $75,000 in foreign earned income from their adjusted gross income. The maximum annual exclusion then increased by $5,000 per year until Tax Year 1986, when the maximum exclusion is $95,000. There is also an exclusion for "excess foreign housing costs." These exclusions are reported on Form 2555, Foreign Earned Income, attached to the Form 1040, U.S. Individual Income Tax Return.

The most recent study for which data are available is for Tax Year 1979. For this tax year, U.S. citizens with foreign earned income were allowed a deduction for excess foreign living expenses and an exclusion of income earned abroad while living in a hardship camp. (As previously explained, these tax benefits were replaced by the 1981 Act with a foreign earned income exclusion.) Figure L shows the number of Forms 2555 filed and total income earned abroad. This study is conducted on the same 4-year cycle as that for the Form 1116 (individual foreign tax credit) study. Statistics for Tax Year 1983 are currently being compiled.

Excluded Income from U.S. Possessions

A U.S. citizen who works as an employee or operates a business in certain U.S. possessions may qualify for an exclusion from gross income, as calculated for U.S. income tax purposes. The exclusion is for that income received from sources outside of the United States. When the exclusion is elected, that individual loses certain other tax benefits, such as the loss of dependent exemptions, a limitation on individual income tax deductions and denial of the foreign tax credit. For this reason, the income exclusion is not always advantageous to qualifying individuals. A study of this income exclusion was last done for 1983. Another study is planned for 1987 and every 4 years thereafter. The statistics will show worldwide and excluded income from U.S. possessions as shown on Forms 4563, Exclusion of Income from Sources in U.S. Possessions, and selected data from related Forms 1040, U.S. Individual Income Tax Returns and from the attached Forms W-2, Wage and Tax Statements.

For Tax Year 1983, there were 134 U.S. citizens who elected to exclude $3.3 million from their gross income for U.S. tax purposes. This excluded income was received from sources outside of the United States, with over 99 percent of it being derived from U.S. possessions. The individuals who qualified for the income exclusion either

Figure L.—Adjusted Gross Income, Tax, and Income Earned Abroad, by Size of Adjusted Gross Income, 1979

[All figures are estimates based on samples—money amounts are in thousands of dollars]

Size of adjusted gross income	Number of Forms 2555	Adjusted gross income (less deficit)	Total U.S. income tax	Total income earned abroad
	(1)	(2)	(3)	(4)
All returns, total	119,430	$3,859,092	$516,996	$4,527,210
No adjusted gross income	6,009	−17,869	-	81,372
$1 under $5,000	14,434	34,417	149	155,446
$5,000 under $10,000	13,975	106,678	3,614	196,925
$10,000 under $20,000	21,050	307,464	21,700	437,140
$20,000 under $30,000	16,661	413,114	41,734	526,701
$30,000 under $50,000	23,317	906,967	120,099	1,033,059
$50,000 under $100,000	18,371	1,248,003	173,072	1,338,827
$100,000 under $200,000	4,941	641,019	106,248	609,159
$200,000 under $500,000	623	164,783	35,002	128,082
$500,000 or more	48	44,514	15,375	20,499
Taxable returns, total	80,721	3,364,590	516,996	3,651,818
Under $10,000	9,559	71,347	3,763	132,382
$10,000 under $20,000	14,820	220,465	21,700	305,675
$20,000 or more	56,342	3,072,779	491,533	3,213,762
Nontaxable returns, total	38,709	494,501	-	875,392
Under $10,000	24,859	61,879	-	301,361
$10,000 under $20,000	6,230	87,000	-	131,464
$20,000 or more	7,620	345,622	-	442,565

NOTES: Form 2555 is entitled "Deduction from, or Exclusion of, Income Earned Abroad." Total income earned abroad is before the deduction for excess foreign living expenses and the exclusion of income earned abroad while living in a hardship area camp. Adjusted gross income (less deficit) is after the deduction, exclusion, and other adjustments to income. Detail may not add to total because of rounding.

worked as employees or operated businesses in these possessions. Johnston Island was the principal location of economic activity for individuals electing the exclusion, accounting for 103 of the individuals and $2.4 million of the excluded income.

Foreign Trusts

Foreign trusts which have U.S. "persons" as grantors, transferors, or beneficiaries are subject to U.S. tax laws. For purposes of this study, U.S. persons include citizens and residents of the United States, domestic corporations and partnerships, and estates and trusts. Information filed with the Internal Revenue Service on Forms 3520, Creation of, or Transfers to, Certain Foreign Trusts, and Forms 3520A, Annual Return of Foreign Trusts with U.S. Beneficiaries, is used for the statistics. This study, which is based on returns sampled at a 100-percent rate, was last conducted for 1982 and will be conducted on a 4-year cycle, i.e., again for Tax Years 1986 and 1990. There are between 350 and 400 Forms 3520 and an equal number of Forms 3520A in the population. Tabulations provide data showing the type of trust, type of person filing the return, country of residence of person filing, and country where trust was created. Also shown are the number and value of transfers, assets, income, and year when the trust was created.

As shown in Figure M, transfers by U.S. persons of $11.3 million in money and property were made to trusts located in foreign countries during 1982. There were 342 trusts reporting transfer activity. Most trusts were located in Canada (283) and were Registered Retirement Savings Plans (244). These Canadian retirement accounts were treated for Canadian income tax purposes in a manner similar to the Individual Retirement Arrangements used by U.S. taxpayers to defer taxation on current income set aside for retirement purposes.

INVESTMENT AND ACTIVITY IN THE UNITED STATES BY FOREIGN PERSONS

This broad area includes studies on foreign corporations with income derived from U.S. sources, domestic corporations with 50 percent or more ownership by a foreign entity, and nonresident alien income and tax withheld. Taken together, these studies show increases in the level of investment and activity in the United States. Two other studies are on nonresident alien estates and sales of U.S. real property interests by foreign persons.

Foreign Corporations with Income Derived From U.S. Sources

A foreign corporation is generally any corporation which is not "created or organized" in the United States or under the laws of the United States or any State. Foreign corporations that have income considered "effectively connected" with a U.S. trade or business or that receive income from U.S. investments must file U.S. income tax returns (i.e., Forms 1120F). SOI studies, which are done annually, cover only those returns which show income and deduction items "effectively connected" with U.S. trade or business activities. Some of these same returns, however, also contain amounts of investment income from U.S. sources. Foreign corporations are taxed on their "effectively connected" income in the same general manner as domestic corporations [13]. However, their U.S. investment income is generally taxed at a 30-percent rate unless a lower tax rate had been set by a tax treaty between the United States and the country in which the foreign corporation was incorporated.

Figure N presents selected data from Form 1120F returns filed for Tax Year 1983 compared to 1972 and 1977. Foreign corporations with "effectively connected" income from U.S. sources increased during the period. These corporations were primarily engaged in banking and real estate activities.

U.S. Corporations with 50 Percent or More Ownership by a Foreign Entity

In addition to foreign corporations with income from sources in the United States described above, there are

Figure M.—Number of Trusts, With Total and Average Transfer Value, by Country Where Trust Was Created, 1980–1982

[Money amounts are in thousands of dollars]

Country where trust was created	1980			1981			1982		
	Number of trusts	Total transfer value	Average transfer value per trust	Number of trusts	Total transfer value	Average transfer value per trust	Number of trusts	Total transfer value	Average transfer value per trust
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Total	331	$15,946	$48	357	$6,731	$19	342	$11,321	$33
Canada	260	5,955	23	315	1,715	5	283	1,253	4
Cayman Islands	27	5,152	191	16	2,860	179	8	1,513	189
Bermuda	14	2,407	172	4	76	19	8	639	80
United Kingdom	[1]	[1]	[1]	-	-	-	9	65	7
The Bahamas	[1]	[1]	[1]	-	-	-	11	5,247	477
Channel Islands	16	74	5	11	963	88	6	421	70
Other countries	14	2,358	168	11	1,117	102	17	2,183	128

[1] Data were combined with "Other countries" to avoid disclosure of information about specific trusts.

Figure N.—Active Foreign Corporations with U.S. Business Operations, 1972–1983

[All figures are estimates based on samples—money amounts are in millions of dollars]

Item	1972	1977	1983
	(1)	(2)	(3)
Number of active foreign corporations with U.S. business operations, total	796	3,093	8,001
Total receipts	$3,567	$10,398	$20,794
Business receipts	2,490	7,157	5,477
Interest	886	2,454	13,567
Dividends received from domestic corporations	85	53	65
Total deductions	3,379	10,572	21,882
Cost of sales and operations	1,687	4,476	3,723
Taxes paid	57	219	272
Interest paid	584	2,501	13,460
Depreciation	37	257	449
Net income (less deficit)	161	−188	−1,118
Total income tax	77	124	469
Foreign tax credit	4	9	25

NOTE: Data exclude returns of foreign corporations whose only income was derived from U.S. investments (subject to U.S. withholding tax).

domestic corporations whose voting stock is 50 percent or more directly or indirectly owned by at least one foreign entity, such as a corporation. These foreign-owned domestic corporations could result from stock acquisitions by foreign entities, be newly-formed subsidiary corporations, or result from joint ventures between two or more corporations, at least one of which is a foreign corporation (to mention a few of the possibilities). These corporations are taxed by the United States in a manner similar to that of other domestic corporations [14].

Data for these corporations are compiled annually, generally by the industry of the domestic corporation and by the country of the foreign owner. The data include income statements, balance sheets, tax items, and distributions to stockholders.

Figure O shows for two years the number of domestic corporations that indicated they were 50 percent or more owned by a foreign entity, together with selected financial data for them. From 1972 to 1983, the number of these corporations rose from 6,198 to 33,622. Their assets similarly rose from $46.9 billion to $530.3 billion, and the receipts they generated increased from $50.8 billion to $389.9 billion. For 1983, these corporations accounted for 5.2 percent and 5.5 percent of total assets and receipts, respectively, for all corporation income tax returns.

Nonresident Alien Income and Tax Withheld

In general, U.S. individuals or organizations paying income to nonresident aliens are subject to a U.S. withholding tax. A nonresident alien is an individual who is neither a U.S. citizen nor a resident of the United States. However, the term also includes corporations, estates, and trusts that are created outside of the United States. The tax liability is withheld by the U.S. payor or by its representative, usually

Figure O.—Domestic Corporations Indicating 50 Percent or More Ownership by a Foreign Entity, 1972 and 1983

[All figures are estimates based on samples—money amounts are in millions of dollars]

Item	1972	1983
Number of returns	6,198	33,622
Total assets	$46,868	$530,334
Total receipts	50,814	389,909
Business receipts	48,932	359,793
Interest received	752	17,590
Total deductions	49,496	387,981
Cost of sales and operations	37,613	271,373
Interest paid	1,071	22,255
Net income (less deficit)	1,295	1,849
Total income tax before credits	741	4,849
Foreign tax credit	28	671
Total income tax after credits	658	3,419
Distributions to stockholders except in own stock	568	4,327

a financial institution. Forms 1042S, Income Subject to Withholding Under Chapter 3, Internal Revenue Code, are filed each year by domestic tax withholding agents. The Form 1042S provides information on the gross income paid to nonresident aliens and the tax withheld at the source on such income. The form also provides information on the type of income paid (e.g., dividend, interest, royalty, or personal services), applicable withholding rate, type of recipient (e.g., individual, corporation, or a nominee), and the recipient's country of legal residence.

U.S. payers are generally subject to a 30-percent withholding tax on dividends, interest, and certain other income paid to nonresident aliens. However, the withholding tax rate may be reduced (even to zero) if the country of the nonresident alien has an Income Tax Convention (tax treaty) with the United States [15].

Each annual study includes all Form 1042S returns filed with the Internal Revenue Service. Most payments go to individuals, although the size of the payments are substantially less than those made to corporations. As one might expect, dividends and interest represent the majority of income paid. Figure P shows gross income paid and tax withheld classified by country of recipient, for 1984. Starting with Tax Year 1985, Social Security Administration (SSA) and Railroad Retirement Board (RRB) payments made to nonresident aliens will be included in the statistics. The estimated number of additional Forms 1042S to be filed by SSA and RRB for 1985 was 240,000.

Nonresident Alien Estates

Forms 706NA, U.S. Nonresident Alien Estate Tax Returns, are filed for U.S. estates of decedents who at the time of death were neither residents nor citizens of the United States and for decedents who acquired U.S. citizenship solely in connection with a U.S. possession. The U.S. estates were valued above a certain limit, generally $60,000, in order to be taxable. Statistics were recently

Figure P.—Number of Forms 1042S, Tax Withheld, and Income Paid to Nonresident Aliens, by Selected Country of Recipient, 1984

[Money amounts are in thousands of dollars]

Selected country	Number of Forms 1042S	Tax withheld	Income paid			
			Total	Interest	Dividends	Rents and royalties
	(1)	(2)	(3)	(4)	(5)	(6)
All countries, total	780,708	$969,553	$17,106,632	$10,035,675	$5,617,707	$899,426
United Kingdom	136,555	178,172	3,091,489	1,560,455	1,308,979	144,309
Netherlands Antilles	3,257	18,844	2,812,549	2,619,895	115,981	62,090
Netherlands	9,919	66,137	1,918,889	995,643	865,187	39,645
Canada	310,976	124,055	1,814,713	842,381	715,657	130,400
Switzerland	23,904	141,565	1,450,913	463,715	909,130	55,332
Japan	12,264	130,418	1,393,545	886,476	280,717	165,819
Germany	46,638	42,398	963,166	539,477	287,934	88,437
Belgium	12,264	16,896	826,995	746,165	53,115	14,242
France	18,565	60,396	819,180	251,052	430,028	116,488
Saudi Arabia	3,370	1,532	351,990	327,576	15,969	145

NOTE: Form 1042S is entitled "Income Subject to Withholding Under Chapter 3, Internal Revenue Code."

compiled for the 169 nonresident alien estate tax returns with 1982 year of death. These estates had $148 million of worldwide assets, of which 32 percent or $47 million were assets located in the United States. Nonresident aliens from 36 countries left estates with large amounts of U.S. property. The net U.S. estate tax payable on the U.S. property was nearly $4 million, or 8 percent of the value of the property.

The estimated population for the next study (for estates of 1986 decedents) is 225 returns. Tables will show data classified by country of residence at time of death and by size of the gross estate both in and outside the United States.

Sales of U.S. Real Property Interests by Foreign Persons

This new study will be conducted beginning with sales of U.S. real property interests in 1985 and will be continued annually thereafter. In general, a 10-percent withholding tax is imposed on the buyer or other transferee when a U.S. real property interest is acquired from a foreign person. This withholding is required under the Foreign Investment in Real Property Tax Act (FIRPTA). The Form 8288 is used to report and transmit the total amount withheld, while the Form 8288A is used to show the gain realized and tax withheld attributable to each foreign transferor of U.S. real property.

Each annual study is based on the population of Forms 8288 and 8288A filed. The estimated population for Form 8288 in 1985 is 3,050 and the estimated population for Form 8288A is 9,150. Data will be produced showing the total amount realized, total tax withheld, and the number of Forms 8288A filed, by the transferor's country of residence (and the tax treaty status of the country).

INTERNATIONAL STUDIES PRODUCTS

The Statistics of Income Division regularly produces articles for the quarterly *Statistics of Income Bulletin* that present statistics on topics in the international area. In the last year, articles have appeared on Nonresident Alien Income and Tax Withheld, 1983; Corporate Foreign Tax Credit by Industry, 1982; and Controlled Foreign Corporations by Industry, 1982. Previously, articles also appeared on International Boycotts, 1976–1982; and Domestic International Sales Corporations, 1980. In the current issue, articles appear on Nonresident Alien Income and Tax Withheld, 1984; and Foreign Tax Credit by Country, 1982. Articles are now planned on Controlled Foreign Corporations by Country, 1982; U.S. Possessions Corporations, 1983; and Individual Foreign Income and Tax, 1983.

The first "compendium" on international studies was published by the Statistics of Income Division in September 1985. This compendium contains in one volume results from all of the recent studies conducted on international income and taxes. The majority of data presented are for Tax Years 1979 through 1983. The material selected for the compendium is comprised chiefly of articles and tables previously published in the *Statistics of Income Bulletin* and facsimiles of tax forms and instructions. Also included are research papers and previously unpublished articles and tables. This material is intended as a reference source for statisticians, economists and other researchers with interests and responsibilities in the international area; however, the articles are designed so that readers unfamiliar with these studies can also gain an understanding of them.

The international compendium represents only a sampling of the statistical information that might be of value to practitioners and researchers. Although public use microdata files are not now available, research efforts are underway to investigate whether they can be released in the future. This research will determine whether the microdata can be included in the files in such a way that the identity of individual taxpayers is protected. Unpublished or special tabulations from SOI studies, edited to protect taxpayer's confidentiality, are also available on a cost-reimbursable basis. Requests for these tabulations should be addressed to the Director, Statistics of Income Division, D:R:S, Internal

Revenue Service, 1111 Constitution Ave., NW, Washington, DC 20224.

INTERNATIONAL INCOME AND TAXATION STATISTICAL SERVICE

The Statistics of Income Division has introduced a new statistical service relating to international income and taxes. This service was introduced in response to numerous requests for more detailed and previously unpublished information on our international studies.

Subscribers to this service will receive a copy of the report, *Compendium of Studies of International Income and Taxes, 1979–1983* (Publication 1267), described above, and updated data (as it becomes available) on the studies mentioned in this article.

The price of the service is $45.00 for the first year. The one-year period for receiving additional information can be extended at a cost of $35.00 for each additional year. A long-term subscription ($150.00) includes Publication 1267 and additional information as it becomes available through August 1990. The next compendium is scheduled for release in September 1990.

FOOTNOTES

[1] These two areas are meant to be very broad in nature. Specific descriptions of each study are provided later in this article.

[2] The term "persons" includes individuals, corporations, trusts, estates, partnerships, ships, and associations.

[3] The Congressionally-mandated reports are U.S. Possessions Corporations; International Boycott Participation Reports; Individual Foreign Tax Credit and Individual Income Earned Abroad (combined for one report); and Foreign Sales Corporations and Interest Charge Domestic International Sales Corporations (which will be combined for a report that will replace the existing reports on Domestic International Sales Corporations). These reports are prepared by the Office of Tax Analysis and issued by the Office of the Secretary of the Treasury.

[4] U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, November 1984, Vol. 64, No. 11, pp. 24–27.

[5] U.S. corporations may deduct foreign taxes rather than claim a credit for them. However, corporations almost always benefit more by crediting the foreign taxes.

[6] An extensive description of total taxable income is available under the heading "Income Subject to Tax," in *Statistics of Income—1982, Corporation Income Tax Returns*, pp. 76–77.

[7] Returns of giant corporations are selected at a rate of 100 percent for the corporate studies. These corporations account for the largest part of the totals included in the foreign tax credit studies. For instance, for 1982, giant corporations accounted for 96 percent of both foreign-source taxable income and foreign tax credit claimed by all corporations which had a foreign tax credit.

[8] Beginning with accounting periods starting in 1985, Forms 5471 will include the new Foreign Sales Corporations. See the separate discussion on these corporations in this article.

[9] Under Subpart F provisions of the Internal Revenue Service Code (section 952), the United States taxes U.S. shareholders of Controlled Foreign Corporations on certain types of income that, although undistributed to them, were deemed to have been distributed (and were thereby taxable, generally at the same rate(s) as dividends).

[10] A Foreign Personal Holding Company generally derives at least 60 percent of its gross income from interest, dividends, rents, royalties, annuities, gains from stock and commodity transactions, and personal service contracts. In addition, over 50 percent of its outstanding stock is directly or indirectly owned by five or less U.S. citizens or residents.

[11] Foreign corporations controlled by U.S. corporations with $250 million or more in total assets generally account for the largest part of the CFC statistics. For instance, for 1980, CFC's owned by these "giant" U.S. corporations accounted for the major portion of total assets (94 percent) and business receipts (93 percent) of CFC's owned by all U.S. corporations.

[12] The total U.S. export statistics come from the U.S. Department of Commerce, Bureau of the Census, *Highlights of U.S. Export and Import Trade*, FT 990, monthly.

[13] Foreign corporations with income derived from U.S. sources are included in the sample used for the SOI corporate program.

[14] Domestic corporations with 50 percent or more ownership by a foreign entity are included in the sample used for the SOI corporate program.

[15] If income paid to nonresident aliens is considered "effectively connected" with the conduct of a trade or business within the United States, then the tax rate applicable to the income is substantially the same as that for U.S. residents.

Table 1.—International Statistical Programs: Measures of Population and Sample

Study	Tax Year								
	1984	1985	1986	1987	1988	1989	1990	1991	1992
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Corporation Foreign Tax Credit:									
Form 1120 Population	4,900	4,950	5,000	5,050	5,100	5,150	5,200	5,250	5,300
Form 1120 Sample	2,400	N/A	2,400	N/A	2,200	N/A	2,200	N/A	2,400
Foreign Corporation Information Returns:									
Population:									
Form 1120	5,100	5,175	5,250	5,325	5,400	5,475	5,550	5,575	5,650
Form 5471	45,000	46,000	47,000	48,000	48,000	49,000	49,000	50,000	50,000
Sample:									
Form 1120	1,100	N/A	4,000	N/A	1,000	N/A	1,000	N/A	4,050
Form 5471	32,000	N/A	40,000	N/A	30,500	N/A	30,500	N/A	41,000
Domestic International Sales Corporations, Form 1120-DISC:									
Population	10,900[1]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sample	2,200[1]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Interest Charge Domestic International Sales Corporations, Form 1120-IC-DISC:									
Population	1,750[2]	2,500	2,560	2,620	2,680	2,740	2,800	2,860	2,920
Sample	1,750[2]	600	615	625	640	650	665	680	690
Foreign Sales Corporations, Form 1120-FSC:									
Population	2,850[2]	4,000	4,100	4,200	4,300	4,400	4,500	4,600	4,700
Sample	2,850[2]	1,700	1,725	1,750	1,775	1,800	1,825	1,850	1,875
U.S. Possessions Tax Credit, Form 5735:									
Population	700	700	720	720	720	740	740	740	760
Sample	N/A	700	N/A	720	N/A	740	N/A	740	N/A
Employer's Annual Federal Unemployment Tax Return for Possessions Corporations, Form 940:									
Population	700	700	720	720	720	740	740	740	760
Sample	N/A	700	N/A	720	N/A	740	N/A	740	N/A
International Boycott Participation Report, Form 5713:									
Population	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Sample	3,000[3]	3,000[3]	3,000	3,000[3]	3,000[3]	3,000[3]	3,000	3,000[3]	3,000[3]
Individual Foreign Tax Credit, Form 1116:									
Population	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000
Sample	N/A	N/A	N/A	13,000	N/A	N/A	N/A	13,000	N/A
Individual Income Earned Abroad, Form 2555:									
Population	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000
Sample	N/A	N/A	N/A	7,000	N/A	N/A	N/A	7,000	N/A

Footnotes at end of table.

Table 1.—International Statistical Programs: Measures of Population and Sample—Continued

Study	Tax Year								
	1984	1985	1986	1987	1988	1989	1990	1991	1992
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Excluded Income from U.S. Possessions, Forms 1040 and 4563:									
Population	140	150	160	170	180	190	200	210	220
Sample	N/A	N/A	N/A	170	N/A	N/A	N/A	210	N/A
Creation of, or Transfers to, Certain Foreign Trusts, Forms 3520 and 3520A:									
Population [4]	370	380	390	400	410	420	430	440	450
Sample [4]	N/A	N/A	390	N/A	N/A	N/A	430	N/A	N/A
Foreign Corporations with Income Derived from U.S. Sources, Form 1120F:									
Population	12,000	13,000	14,000	15,000	16,000	17,000	18,000	19,000	20,000
Sample	3,000	3,250	3,500	3,750	4,000	4,250	4,500	4,750	5,000
U.S. Corporations with 50 Percent or More Ownership by a Foreign Entity, Form 1120:									
Population	40,000	44,000	48,000	52,000	56,000	60,000	64,000	68,000	72,000
Sample	3,000	3,300	3,600	3,900	4,200	4,500	4,800	5,100	5,400
Nonresident Alien Income and Tax Withheld, Form 1042S:									
Population	780,000	1,020,000	1,020,000	1,025,000	1,025,000	1,030,000	1,030,000	1,035,000	1,035,000
Sample	780,000	1,020,000	1,020,000	1,025,000	1,025,000	1,030,000	1,030,000	1,035,000	1,035,000
Nonresident Alien Estates, Form 706N/A:									
Population	200	225	225	250	250	250	275	275	275
Sample	N/A	N/A	225	N/A	N/A	N/A	275	N/A	N/A
Sales of U.S. Real Property Interests by Foreign Persons, Forms 8288 and 8288A:									
Population:									
Form 8288	N/A	3,050	4,000	4,000	4,000	4,000	4,000	4,000	4,000
Form 8288A	N/A	9,150	12,000	12,000	12,000	12,000	12,000	12,000	12,000
Sample:									
Form 8288	N/A	3,050	4,000	4,000	4,000	4,000	4,000	4,000	4,000
Form 8288A	N/A	9,150	12,000	12,000	12,000	12,000	12,000	12,000	12,000

N/A - Items not applicable because there will be no study conducted for the tax year.

[1] The 1984 Form 1120-DISC study includes only returns with accounting periods ending between July and December of 1984.

[2] The 1984 Forms 1120-IC-DISC and 1120-FSC studies are "special" studies. Because of the effective date of the enacting legislation, only returns with accounting periods ending between January and June 1985 will be included.

[3] Data will be tabulated for only approximately 100 reports which show a denial of certain tax benefits. For the remaining reports for these years, only a count of reports filed will be obtained.

[4] Counts reflect population and sample estimates for *each* of Forms 3520 and 3520A.

Statistics of Income Domestic Special Studies

By Daniel F. Skelly and John A. Kozielec*

The Statistics of Income Division regularly conducts more than 40 studies of tax return data [1]. While the basic studies of individual and corporation income tax returns are well known, the studies of international income and taxes and the various domestic special studies are generally less well known. To remedy this, an article on the international statistics program was published in 1986 [2]. The present article is a sequel to that article and takes a look at the many domestic special studies that are currently underway or in the planning stages. Many of these studies are conducted annually, whereas others are conducted less frequently or even on a one-time basis.

Statistics of Income (SOI) domestic special studies covered by this article can be classified into three groups:

- *Tax-Exempt Organizations Studies.*—This group includes annual studies of returns filed by private foundations, nonprofit charitable and other organizations exempt under Internal Revenue Code section 501(c), exempt organizations with "unrelated business income," and tax-exempt private activity bonds. Also included are periodic studies of returns filed by nonexempt charitable and split-interest trusts and farmers' cooperatives. A one-time study of private foundation grant-administrative expenses is also included in this category.

- *Estate Tax and Wealth Studies.*—Besides the basic annual study based on data from estate tax returns, studies are conducted periodically to estimate personal wealth and to look at the intergenerational transfers of wealth through inheritance. Occasional studies involving fiduciary and gift tax returns are also included in this category.

- *Excise Tax Studies.*—Currently this group includes studies of returns relating to the quarterly crude oil windfall profit tax and the environmental excise tax on certain hazardous substances (i.e., the so-called "Superfund Tax").

As is true of most SOI studies, the main users of these statistical reports are the Office of Tax Analysis in the Office of the Secretary of Treasury and the Congressional Joint Committee on Taxation. In addition, detailed information is provided to other Government agencies— notably the Environmental Protection Agency, the Federal Reserve Board, and the Bureau of Economic Analysis in the Department of Commerce. Partial funding of the effort to compile statistics on tax-exempt organizations is provided by the Independent Sector, a nonprofit coalition of corporations, foundations, and voluntary organizations whose mission is to encourage giving, volunteering, and not-for-profit initiatives.

Exhibit 1 shows the estimated population and the size of statistical samples underlying the data, as well as the content and frequency of each of the studies. To meet the growing need for data, the Statistics of Income Division plans, in the near future, to initiate new statistical services in the personal wealth and tax-exempt areas that will provide university scholars, research organizations, and others with expanded access to the information.

TAX-EXEMPT ORGANIZATIONS STUDIES

This broad area currently consists of those exempt studies mentioned previously. SOI data indicate that the growth of tax-exempt organizations has kept pace with the national economy as a whole, or even exceeded it, during the past decade. For example, while the real Gross National Product (GNP) nearly doubled in the period from 1974 to 1983 (increasing by 92 percent), the receipts of private foundations, adjusted for inflation, increased by 125 percent. The total revenue of other charitable organizations exempt from income tax under Code section 501(c)(3) also grew by 95 percent from 1975 (the first recent year for which statistics were produced) to 1983.

Private Foundations

A private foundation is a nonprofit corporation, association, or trust with a narrow source of funds which supports

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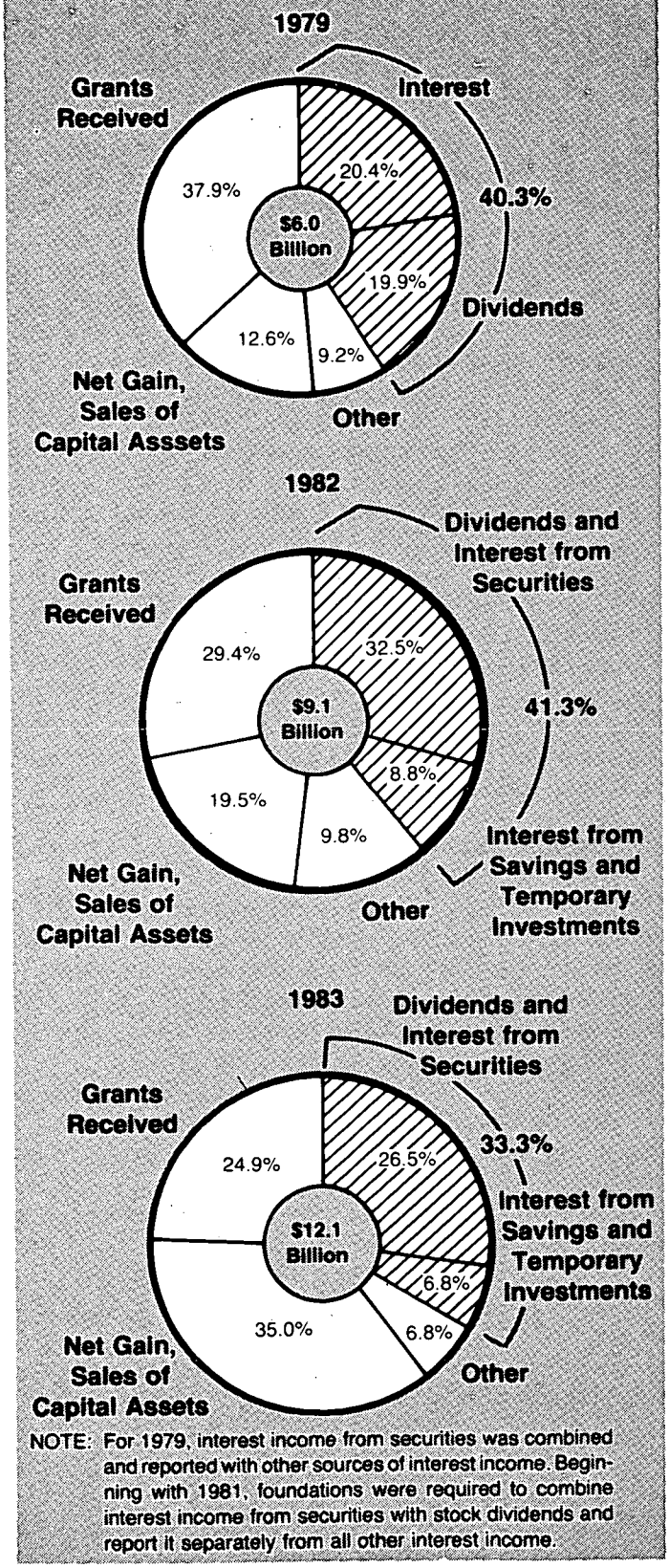
Figure A.
Sources of Private Foundation Revenue, 1979, 1982, and 1983



NOTE: For 1979, interest income from securities was combined and reported with other sources of interest income. Beginning with 1981, foundations were required to combine interest income from securities with stock dividends and report it separately from all other interest income.

social, educational, scientific, charitable, religious, or other programs dedicated to improving the general welfare of society. These organizations qualify for tax-exempt status under section 501(c)(3). The primary difference between private foundations and other tax-exempt charitable organizations is that foundations usually receive their funds from an individual, family, or corporation, while other nonprofit charitable organizations (described below) derive their funds from a large number of sources within the general public. In addition, private foundations generally do not operate their own charitable programs.

The first SOI studies of information returns filed by private foundations were published for 1974–1978 and 1979 [3,4]. Then in 1982 the study was redesigned as an annual series which will form a longitudinal data base (i.e., essentially the same organizations will be observed over time) [5,6]. Included in the annual samples are the returns of all private foundations with total assets (book value) of $10 million or more (about 700 returns in 1983, the most recent year for which data are available) [7]. These 700 returns accounted for 70 percent of the total assets of all private foundations and formed approximately half of the 1,375 sampled returns used for the study. The returns in the other half of the sample were randomly selected at various rates, ranging from 0.7 percent to 10 percent, depending on the book value of total assets.

Private foundation revenue more than doubled between 1979 and 1983. Figure A illustrates the significant shifts in sources of foundation income which occurred during this period. By 1983, substantial increases in net gains from sales of capital assets established this component as the leading source of foundation revenue, displacing both dividend and interest income and grants received, which were traditionally the major revenue sources. A fast-paced securities investment environment and a 1981 tax law change (which eliminated the requirement that foundations pay out as charitable distributions all of their investment income) may have encouraged the restructuring of foundation investment portfolios and may have been primary contributors to these shifts.

Figure B shows selected financial data by size of total fair market value of assets for 1983. Nearly 30,000 foundations filed returns, 5.4 percent more than 1982, with total revenue of $12.1 billion reported, a 33 percent increase.

Charitable and Split-Interest Trusts

Nonexempt trusts are legal instruments established by an individual or organization with either income or remainder interests (or both) devoted to charitable purposes. There are two types of nonexempt trusts: purely charitable trusts, which are intended exclusively for charitable purposes, and split-interest trusts, which have both charitable and noncharitable beneficiaries. Both types of trusts are

Figure B.—Private Foundations by Size of Total Assets, 1983

[All figures are estimates based on samples—money amounts are in millions of dollars]

Item	Total	Size of total fair market value of assets				
		Under [1] $1,000,000	$1,000,000 under $10,000,000	$10,000,000 under $25,000,000	$25,000,000 under $100,000,000	$100,000,000 or more
	(1)	(2)	(3)	(4)	(5)	(6)
Number of returns	29,863	24,717	4,237	543	273	93
Total fair market value of assets	$71,935	$4,163	$14,054	$8,207	$12,897	$32,614
Total book value of assets	56,768	3,769	11,874	6,484	10,541	24,099
Total revenue	12,132	1,159	2,602	1,125	2,006	5,240
Net gain (loss) from sales of capital assets	4,249	86	418	282	487	2,976
Interest and dividend income	4,034	281	846	487	761	1,659
Grants received	3,025	759	1,052	286	584	344
Total expenses	5,883	934	1,560	721	1,073	1,595
Total qualifying grants paid	4,363	822	1,092	550	756	1,143

[1] Includes foundations with zero assets and unreported assets.
NOTE: Detail may not add to total because of rounding.

nonexempt in the sense that they do not have to be formally recognized as tax-exempt under the Internal Revenue Code. Although they are exempt from income taxation, they are treated by Internal Revenue Service (IRS) as foundations and taxed on their income not distributed to charities.

The most recent data available for nonexempt charitable trusts and split-interest trusts are for 1979. As noted in Exhibit 1, a study in this area is planned for 1989 and every third year thereafter.

In 1979 there were 15,846 nonexempt trusts, including 2,103 charitable trusts with reported assets of $894 million and 13,743 split-interest trusts with reported assets of $2.5 billion. The charitable contributions of these trusts totaled $118 million, including $56 million given by charitable trusts and $61 million by split-interest trusts [8]. Split-interest trusts contributed only 33 percent of their revenue to charities as compared to almost 58 percent for charitable trusts.

Nonprofit Charitable and Other Organizations Tax-Exempt under Code section 501(c)

The Statistics of Income Division's study of nonprofit charitable organizations includes all organizations exempt from Federal income tax under Code section 501(c)(3), except private foundations (discussed previously). These organizations are principally religious, educational, health-related, scientific, and literary organizations. As indicated previously, they differ from private foundations in that they derive their funds from the general public.

The most recent financial data available for nonprofit charitable organizations are for 1983 [9]. Of the approximately 280,000 organizations recognized by the IRS as nonprofit charities in that year, an estimated 89,000 were required to file returns (Form 990). Organizations with gross receipts of $25,000 or less, and churches, were not required to file. The sample returns used for the statistics for 1983 on nonprofit charitable organizations consisted of all organizations with total assets (book value) of $10 million or more (approximately 4,500 for 1983), plus a random stratified sample of approximately 500 returns from the remaining population of 84,500 returns. Data were also published for these section 501(c)(3) organizations for 1982 [10].

Earlier data, however, for the period 1975-1978, included all section 501(c) organizations, charitable as well as other organizations [11]. The three major groups in terms of numbers of organizations in 1975 (excluding section 501(c)(3) organizations) were civic leagues, social welfare organizations, and local associations of employees—section 501(c)(4); labor, agricultural, and horticultural organizations—section 501(c)(5); and social and recreational clubs—section 501(c)(7).

Future plans call for annual studies beginning with 1985 which will grow larger in size and scope. Beginning with 1988, the study will be expanded to again include all 501(c) organizations. The sample returns used will be increased from 5,500 for 1985 to 35,000 for 1988.

One of the dominant characteristics of the nonprofit sector and, in particular, of charitable organizations has been the concentration of financial resources among a small number of large organizations (see Figure C). Organizations (other than private foundations) with assets of $10 million or more filed only 5 percent of the returns for 1983, but accounted for 80 percent of total assets. In contrast, approximately 40 percent of the returns were filed by organizations with asset holdings under $100,000. Yet these nearly 35,000 small organizations accounted for only 0.3 percent of the total assets of all nonprofit charitable organizations.

Figure C.—Nonprofit Charitable Organizations by Size of Total Assets, 1983

[All figures are estimates based on samples—money amounts are in millions of dollars]

Size of total assets	Number of returns	Total assets
Total, all organizations	89,052	$331,227
Under $100,000 [1]	34,650	1,153
$100,000 under $500,000	23,625	4,651
$500,000 under $1,000,000	10,574	7,237
$1,000,000 under $10,000,000	15,433	53,027
$10,000,000 under $50,000,000	3,653	84,167
$50,000,000 or more	1,113	180,992

[1] Includes returns with zero assets or assets not reported.
NOTE: Detail may not add to total because of rounding.

As shown in Figure D, program service revenue (fees collected to administer charitable programs) was the largest component of total revenue for 1983, accounting for nearly two-thirds ($147.5 billion) of total revenue of all nonprofit charitable organizations. A look at the 1983 data by type of

charitable organization shows that program service revenue accounted for 90 percent ($93.8 billion) of total receipts for hospitals and 60 percent ($24.2 billion) of total receipts for educational institutions. Program service revenue includes a broad spectrum of revenue sources such as hospital charges for patient care (whether paid by the patient or through third-party reimbursement); tuition, fees, and day-care charges at educational institutions; admissions to museums, concerts, and other performing arts events; educational workshop fees; charges for athletic programs and housing facilities at YMCA's; and payments received for insurance and retirement coverage by pension and annuity fund companies.

However, while program service revenue was the major source of revenue for the large nonprofit charities, contributions (received directly from the public, or indirectly through fundraising campaigns and from Government grants) comprised the major portion of the revenues of the smaller organizations. For 1983, contributions represented 60 percent ($13.1 billion) of the total revenues ($21.8 billion) of organizations with assets of less than $1 million. Contributions received by educational organizations accounted for 24.8 percent ($10.2 billion) of total receipts and only 2.4 percent ($2.5 billion) of total receipts for hospitals. The remainder of the revenue received by charities was in the form of dues and assessments, interest, dividends, and other investment income.

Figure D.—Nonprofit Charitable Organizations, 1975, 1982, and 1983

[All figures are estimates based on samples— money amounts are in billions of dollars]

Item	1975	1982	1983
	(1)	(2)	(3)
Number of returns	82,048	75,738	89,052
Total assets	$108.5	$279.6	$331.2
Total revenue	65.5	196.3	224.0
Contributions, gifts, and grants	17.1	41.3	46.4
Dues and assessments	1.5	2.5	3.1
Program service revenue	n.a.	124.4	147.5
Total expenses	62.6	181.3	207.5
Program service expenses	36.8	151.7	173.6
Fundraising expenses	1.4	1.7	1.8
Management and general expenses	n.a.	27.4	31.8

n.a. - Not available.
NOTE: Year-to-year comparability is affected by tax law changes.

Organizations receiving tax-exempt status under section 501(c)(3) represent the largest group of organizations with tax-exempt status. For 1975, when the minimum filing requirement was more than $10,000 in gross receipts, they represented 37 percent of all returns filed and accounted for 68 percent of the total assets of all tax-exempt organizations. (Labor organizations and civic leagues followed in terms of the numbers of returns filed.) Since then, the filing requirement has been increased to more than $25,000, so exact comparisons are not possible. However, the most recent data from the IRS Business Master File indicate that the organizations exempt under section 501(c)(3) still outnumber all other types of tax-exempt organizations. For 1986, returns filed by these charitable organizations represented 48 percent of the returns filed by all tax-exempt organizations and accounted for 63 percent of the total assets reported.

Exempt Organizations' Unrelated Business Income

In 1950, Congress imposed a tax on the income of tax-exempt organizations from a trade or business not substantially related to an organization's exempt purpose or function. The law's purpose was to restrict the potential for unfair competition between nonprofits and taxable, for-profit, businesses that provide the same services. The Tax Reform Act of 1969 revised and expanded this tax on "unrelated business income".

In more recent years, with Federal cutbacks in funding for social programs, there has been a major focus on the movement of exempt organizations into commercial activities and the resulting impact on for-profit businesses. In 1984, the Small Business Administration issued a report, "Unfair Competition for Nonprofit Organizations With Small Business: An Issue for the 1980's," that was critical of exempt organizations operating commercial activities [12]. In September 1986, the Ways and Means Committee of the House of Representatives began a comprehensive review of the Federal tax treatment of commercial and other income-producing activities of tax-exempt organizations. Hearings were held in the summer of 1987, with recommendations to follow [13]. It is anticipated that the Subcommittee on Oversight will call for expanded information to be reported on the Form 990 regarding taxable and nontaxable subsidiaries, as well as additional information on related and unrelated business activities of exempt organizations [14].

Against this backdrop of intensifying interest and concern regarding the possible conflict between the private sector and the income-producing activities of the nonprofit sector, the Statistics of Income Division is undertaking a major new annual study. This study, for 1987, is based on a sample of approximately 5,000 returns selected from an estimated population of 30,000 tax returns filed by exempt organizations with unrelated business income. Presently, data from the IRS Master File System for 1985 and 1986 are being analyzed for possible use in the study. Figure E shows the most recent information available from exempt organizations' business income tax returns (Form 990-T).

Figure E.—Exempt Organization Unrelated Business Income Tax Returns: Number of Returns and Unrelated Business Income Tax Collections, Fiscal Years 1985–1987

[Money amounts are in thousands of dollars]

Fiscal year	Number of returns	Unrelated business income tax
1985	24,103	30,208
1986	32,224	54,943
1987	33,286	119,875

NOTE: Fiscal Year 1984 covers returns filed in October 1983 through September 1984. Data for other years are similarly defined.
SOURCE: Business Master File Reports of Revenue Receipts, Internal Revenue Service. Unpublished annual reports.

Private Foundation Grant-Administrative Expenses

As part of the Tax Reform Act of 1984, Congress mandated a one-time study of the expenses of private foundations in administering grants. The purpose was to assess the impact of current provisions of the Internal Revenue Code governing the treatment of such expenses. This information collected by the Statistics of Income Division will enable the Office of Tax Analysis to report its findings and recommendations to Congress so that statutory or regulatory changes to the private foundation tax provisions of the Internal Revenue Code can be made if they are deemed necessary. A subsample of approximately 800 returns from the SOI 1985 private foundation study is being used in this study. The results will be provided to the Office of Tax Analysis for use in its report to Congress due in January 1990.

Farmers' Cooperatives

The Statistics of Income Division periodically publishes statistics on farmers' cooperatives. The last published study was for 1963 [15]. A more recent study on tax-exempt (under Code section 521) as well as nonexempt farmers' cooperatives, however, was conducted for 1977 with the assistance of the Department of Agriculture. Results will be published in an SOI compendium on exempt organizations scheduled for release in the fall of 1988. Figure F compares data for exempt and nonexempt cooperatives for 1963 and 1977. Although the number of exempt cooperatives dropped by almost half between 1963 and 1977, their total assets increased by approximately 44 percent. Total assets of nonexempt cooperatives, which were reported on Form 1120, the corporation income tax return, up until 1982, increased more than tenfold over the same period. Information for nonexempt cooperatives are now reported on Form 990-C, the same form filed by tax-exempt cooperatives.

Figure F.—Exempt and Nonexempt Farmers' Cooperatives, 1963 and 1977

[Figures for nonexempt cooperatives are based on samples—money amounts are in millions of dollars]

Item	1963		1977	
	Exempt cooperatives	Nonexempt cooperatives	Exempt cooperatives	Nonexempt cooperatives
	(1)	(2)	(3)	(4)
Number of returns	5,574	3,021	2,933	3,175
Total assets (book value)	$4,065	$1,927	$ 5,854	$20,377
Total receipts	8,940	4,937	15,340	34,471
Total deductions	8,919	4,908	15,330	34,298
Net income (less deficit)	21	29	12	172
Net income	42	40	54	201
Income subject to tax	7	36	25	177
Income tax after credits	2[1]	13	6[1]	61

[1] Exempt farmers' cooperatives are not exempt from income tax but are taxed at the same corporate rates (as are nonexempt cooperatives). However, exempt cooperatives are allowed to deduct from earnings dividends paid on capital stock and distributions of any net margins from nonpatronage business (which includes income from investments, sales of capital assets and the like). Nonexempt cooperatives may not deduct these two items, which in the case of exempt farmers' cooperatives totaled $31 million for 1963 and $23 million for 1977.

NOTE: Detail may not add to totals because of rounding. Year-to-year comparability is affected by tax law changes.

The next farmers' cooperative study is planned to coincide with the 1992 quinquennial economic census. Plans are to obtain most of the data from information already transcribed for tax administration purposes and included in the IRS Master File system. These data will be augmented by data abstracted from the returns processed for statistical purposes only. The Department of Agriculture is expected to help with the 1992 study as it did for the 1977 study.

Tax-Exempt Private Activity Bonds

Private activity tax-exempt bonds are issued by State and local Governments or their authorized agents for the direct benefit of private businesses, organizations, and individuals. The original intent of the Federal income tax exemption for interest earned on State and local bonds was to provide a subsidy for Government projects (such as highways) by making it possible to obtain funding at lower interest costs. However, there was nothing to prevent State and local Governments from also issuing private-purpose bonds to promote economic development and housing within their jurisdictions, while incurring little or no costs themselves. As a result, investment dollars were shifted away from other taxable, interest-producing alternatives which could lead to a significant loss in Federal tax receipts. The shifting of bonds toward these non-Government uses recently prompted the Federal Government to reexamine its policies in this area. The dollar volume of these bonds accounted for 54 percent of the $119.4 billion of total long-term tax-exempt bond volume for 1985 [16].

The Tax Equity and Fiscal Responsibility Act of 1982 required State or local Government issuers of private-purpose tax-exempt bonds to file information returns with the IRS describing the nature and uses of the bonds. Data obtained from these returns (Form 8038) for bonds issued in 1983 through 1985 have been published annually [17].

While the number of bond issues reported each year has remained steady at just under 15,000, the dollar volume of new issuances shot up from $49.9 billion in 1983 to $99.4 billion in 1985 (see Figure G). Figure G shows the massive growth in this 3-year period of private exempt entity bonds, in particular.

Figure G.—New Issue Private Activity Bond Volume, by Type of Bond, 1983–85

[Billions of dollars]

Selected type of bond	New issue volume			Percentage change, 1983 to 1985
	1983	1984	1985	
Total	$49.9	$65.8	$99.4	99.2%
Student loan bonds	3.1	1.4	2.8	-8.5
Private exempt entity bonds	8.2	9.0	26.1	218.0
Mortgage bonds[1]	10.8	13.9	13.4	24.5
Industrial development bonds	27.8	41.5	57.1	105.1

[1] Data for 1983 and 1984 are based on information compiled by the Department of Housing and Urban Development; for 1985, the data were compiled by IRS, based on Form 8038, Information Return for Private Activity Bond Issues.

NOTE: Year-to-year comparability is affected by tax law changes.

Future Plans in the Tax-Exempt Area

Although exempt organizations received little direct attention in the Tax Reform Act of 1986, several of the provisions dealing with individuals and taxable corporations will have a major impact on the operation and well-being of exempt organizations.

Basically, the 1986 Act increases the after-tax cost of charitable giving for several reasons. First, taxpayers whose marginal tax rates are decreased under the 1986 Act will realize a smaller tax benefit from their deductions for charitable contributions, while taxpayers subject to a higher marginal tax rate (due to changes in provisions dealing with tax shelters and the alternative minimum tax) will find the Government subsidizing a larger portion of their charitable giving. However, since the majority of taxpayers will have lower marginal tax rates, overall charitable giving is projected to decline. In addition, a provision enacted in 1981 permitting individuals who did not itemize their deductions to deduct part or all of their charitable contributions expired after 1986 and was not reinstated by the Tax Reform Act of 1986. Thus, these nonitemizers must again bear the entire cost of charitable contributions they make after 1986 (the same as they did before 1981) [18]. Finally, a number of other changes are expected to reduce the number of itemizers, further reducing the tax incentive to make charitable donations. This expected fall in donations may force nonprofit organizations to increasingly move into commercial activities in which they typically compete with for-profit firms in order to finance their programs.

There seems to be a general agreement among the users of SOI data on exempt organizations that there is a strong need to expand the data bases available so that policymakers can make more informed decisions in this area. Thus, if reimbursement can be obtained, the Statistics of Income Division will greatly expand its data on exempt organizations. Already, SOI studies of private foundations and nonprofit charitable organizations are being resumed on an annual basis, beginning with Tax Year 1985. Second, SOI plans to substantially increase the sample sizes for both the private foundation and nonprofit charitable organization studies beginning with 1987. Third, beginning with Income Year 1988, the exempt organization study will be expanded to include all section 501(c) organizations (rather than just 501(c)(3) organizations) and the sample will be increased from approximately 5,500 to 35,000 exempt organizations. Fourth, the study of the exempt organization unrelated business income tax, which is being conducted for the first time for 1987, will be done on an annual basis. Fifth, periodic studies (at least every 3 years) will be conducted on farmers' cooperatives, charitable and split-interest trusts, and also on excise taxes paid by private foundations and public charities.

SOI also is working on a compendium of exempt studies which will be available in the fall of 1988. The one-volume compendium will be comprised chiefly of articles published in the *Statistics of Income Bulletin* and in the *Proceedings of the American Statistical Association,* along with facsimiles of tax forms and instructions. Also included will be other research papers and previously unpublished articles and tables. This material will serve as a reference source for statisticians, economists, and researchers. However, the compendium represents only a sampling of the available statistical information that might be of value to interested parties. Some microdata files are already available for public use, and efforts are underway to determine whether additional microdata files can be provided while protecting the identity of individual organizations wherever required under the law. Unpublished or special tabulations are also available on a cost-reimbursable basis [19].

ESTATE TAX AND WEALTH STUDIES

The Statistics of Income Division conducts five studies relating to estate taxes and its direct and indirect effects on transfers of wealth. To look at the direct effects, SOI analyzes estate and fiduciary taxation. Studies which focus on the indirect effects include those of personal wealth estimated from estate data (described in the Personal Wealth Estimates Section, below), intergenerational wealth transfers, and the relationship between income and wealth.

Perhaps the most important change in this area in recent years was the increase in the filing requirement for estate tax returns. From 1942 to 1976, the floor for the estate filing requirement was $60,000 in gross estate. The Tax Recovery Act of 1976 and the Economic Recovery Tax Act of 1981 (ERTA) mandated a series of increases in the filing requirement which doubled this floor for 1977 decedents and then further increased it for each of the next 10 years (see below). The filing requirement is scheduled, at least for now, to remain constant at $600,000 beginning with estates of taxpayers who died in 1987 and thereafter. Not surprisingly, the filing requirement changes have resulted in a dramatic decline in the number of returns. Just 68,000 returns were filed in 1985, 66 percent less than the nearly 201,000 returns filed in 1977 [20].

Year of death	Size of gross estate filing requirement
1976	$ 60,000
1977	120,000
1978	134,000
1979	147,000
1980	161,000
1981	175,000
1982	225,000

1983	275,000
1984	325,000
1985	400,000
1986	500,000
1987 and later	600,000

The rapid rise in the estate tax filing requirement has also narrowed the group of individuals whose personal wealth can be estimated from estate data. Nonetheless, estimates can still be generated for the richest 1 or 2 percent of the population, which still includes a significant portion of the Nation's wealth. For example, estimates of personal wealth in 1982 showed that there were approximately 4.5 million Americans with gross assets of $325,000 or more. Although these individuals represented only 2.8 percent of the Nation's adult population, their net worth (the value of their assets after reduction for debts) made up approximately 30 percent of the wealth in the United States held by U.S. households [21].

Each of the studies in the estate tax/wealth area is described in greater detail in the sections that follow. SOI plans for a major expansion of studies in this area are also highlighted.

Estate Tax

Statistics from estate tax returns are periodically published in the *Statistics of Income Bulletin*; the most recently published data were for 1983 [22]. (Limited data for returns filed in 1984 and 1985 are available directly from the Statistics of Income Division.)

Despite major changes in the estate tax law in recent years, taxation of estates continues to be based primarily on the total value of the decedent's property and not upon the shares received by the individual beneficiaries (although the liberalization of the marital deduction, described below, is an important change here). When a citizen or resident of the United States dies, a Form 706 must be filed by the executor or administrator of the estate if the value of the decedent's gross estate exceeds the filing threshold [23]. As noted already, the filing threshold which stood at $60,000 in 1976 has now increased to $600,000.

Estate tax return data available for 1982 through 1985 for decedents with gross estates of at least $300,000 show the impact of ERTA on estate taxation, exclusive of the changes in the filing requirement [20]. The liberalization of the marital deduction that was enacted as part of ERTA resulted in a significant decrease in the estate tax liability, even though the number of estate tax returns filed and particularly the size of total gross estate each increased. The total estate tax liability dropped by nearly 25 percent, from $6.2 billion in 1982 to $4.7 billion in 1984, before increasing to $5.0 billion in 1985. (The 1985 increase would have been more substantial if it were not for the aforementioned increases in the filing requirement for 1984 and 1985 decedents.) The liberalization of the marital deduction resulted from eliminating the monetary ceiling on the deduction for estates of decedents dying after 1981. Thus, unlimited amounts of property, except for certain terminable interests, could be transferred between spouses free of estate or gift taxes.

The number of estate tax returns with gross estate of $300,000 or more increased between 1982 and 1985 from approximately 60,000 to 68,000, while total reported gross estate grew by almost 40 percent (see Figure H). The major reasons for these increases were the overall expansion in the economy, accompanied by lower interest rates, both of which contributed to an increase in the value of residential and commercial real estate, and investment portfolios. For these reasons and with the moderate increase in inflation over this time period, more and more estates grew in size to the point that they exceeded the increased filing threshold.

Figure H.—Gross Estates of $300,000 or More, by Filing Year, 1982–1985

[All figures are estimates based on samples—money amounts are in millions of dollars]

Filing Year	Number of returns	Gross estate	Total deductions	Taxable estate	Estate tax after credits
	(1)	(2)	(3)	(4)	(5)
1982	59,597	$45,412	$17,897	$27,568	$6,226
1983	63,251	50,390	24,322	26,235	5,170
1984	60,316	49,954	25,553	26,421	4,667
1985	67,961	62,805	31,364	31,645	5,035

NOTE: Returns were not required for decedents who died in 1984 or 1985 with gross estates under $325,000 or $400,000, respectively. Year-to-year comparability is also affected by other tax law changes. Returns filed each year primarily reflect deaths that occurred during the preceding year.

Personal Wealth Estimates

The estate tax return requires a great deal of information to be reported concerning the financial and demographic characteristics of the decedent. This includes data on assets and liabilities, as well as on age, sex, marital status, and State of residence. The extent and quality of these data are such that, since 1962, the personal wealth of the richest Americans has been estimated as a by-product of the SOI program generating estate tax return statistics [24,25].

The underlying assumption in making these estimates is that death draws a random sample of the living population. The technique used to derive the estimates, called the "estate multiplier," relies on the fact that for the general population the mortality rate is known for each age and sex group. Therefore, if the number that died in each age/sex group is known, and the mortality rate for each group is known, then the population is the inverse of the mortality rate times the number of deaths in each group. The estate multiplier technique for certain data sets may yield more accurate data than sample survey methods which suffer from problems of nonresponse and inexact responses.

The estate multiplier technique assumes that estate tax returns provide a representative sample of the living population for the purpose of estimating the personal wealth of that segment of the population which holds a substantial portion of the wealth of all individuals. The wealth of the living population can be estimated from those returns by using the mortality rates of wealthy individuals to develop multipliers to weight the data up to the living population [26].

In order to improve the accuracy of the personal wealth estimates, the SOI sample design was restructured beginning in 1982 to select returns based on the year of the taxpayer's death rather than on the year in which the estate tax return was filed. Returns filed during a 1-year period include returns for more than a single year of death. In addition, a core group of returns is selected without regard to the year of death. This enables estate tax return data to continue being produced on a filing-year basis (thus preserving the historical SOI time series) and, at the same time, allows for periodic estimates of wealth to be produced based on deaths in a specific year. Limited personal wealth data based on the returns filed each year are also prepared annually [27].

As shown in Figure I, the number of Americans with a net worth of $5 million or more grew more than tenfold between 1962 and 1984. Between 1981 and 1984 alone, the number almost doubled. These are among the statistics derived from the estate returns using the technique described above.

Figure I.—Number of Individuals with Net Worth of $5 Million or More, 1962–1984

[All figures are estimates based on samples]

Year	Number of individuals
1962	4,500
1969	9,300
1972	11,300
1981	24,100
1982	32,000
1983	40,200
1984	46,300

Figure J shows the contrast in composition of assets between the "very wealthy" (persons with net worth of $5 million or more) and for the "moderately wealthy" (persons with net worth between $250,000 and $500,000). More than a third of the assets of the very wealthy were represented by corporate stock, compared to 14 percent for the moderately wealthy. For the moderately wealthy, real estate accounted for nearly 43 percent of total assets, compared to less than 14 percent of the assets of the very wealthy.

Revised personal wealth estimates for 1982 based on estate tax returns filed between 1982 and 1984 are published in the *1987 Proceedings of the American Statistical Association* and in more detail elsewhere [28, 29].

A number of efforts are underway to improve SOI personal wealth estimates. Comparisons are being made, for example, between pre- and post-audit values, by asset type, from a sample of estate tax returns. This will allow the issue of undervaluation of assets reported on estate tax returns to be addressed. Second, comparisons are currently being made between certain published financial and demographic information from outside sources and SOI demographic data and wealth estimates [30]. Direct comparisons of information from outside sources with that reported on estate tax returns may provide information about the types of assets and amounts of wealth not captured by the estate multiplier technique.

Figure J.—Percentage of Estimated Personal Wealth, by Asset Type and by Selected Sizes of Net Worth, 1982

[All figures are estimates based on samples]

Type of asset	Size of net worth	
	$250,000 under $500,000	$5 million or more
All asset types	100.0%	100.0%
Corporate stock	14.3	35.9
Real estate	42.8	13.6
Bonds	1.5	9.6
Noncorporate business assets	8.5	9.5
Cash	6.6	4.2
Notes and mortgages	4.0	4.2
Life insurance	2.7	0.2
Other assets	19.6	22.7

NOTE: Detail may not add to totals because of rounding.

Other research relating to personal wealth being pursued includes an examination of mortality rates of estate tax decedents, compared with the general population, based on actual experience to see if revisions to the SOI multipliers are needed. The Statistics of Income Division is also working closely with representatives from the Federal Reserve Board (FRB) who have produced wealth estimates from survey data collected during the 1983 Survey of Consumer Finances [31]. By studying both IRS and FRB data, improvements in SOI wealth estimates can be made. Survey data also allow analyses to be made of the distribution of wealth for individuals with assets totaling less than the estate tax filing requirement.

Intergenerational Wealth Transfers

The Statistics of Income Division has begun a long-term research project involving all estate tax returns filed since the inception of the estate tax in 1916 [32]. This study will focus on the changes in the concentration of wealth and on the transfer of wealth from one generation to another. Emphasis will be placed on asset composition, demographic information available from the returns, and information about the beneficiaries of the estates.

Data have thus far been abstracted from all estate tax returns of decedents who died from 1916 through 1945. Information from estate tax returns will enable a match to be made between heirs of an estate and the estate tax returns that may eventually be filed for those heirs. For the estates of decedents who died after 1945, information will be obtained only for decedents with gross estates in excess of an annually increasing amount.

Detailed asset information has been obtained from estate tax returns for a sample of decedents for 1916 to 1920 and for 1928 to 1930. Similar data will also be picked up for returns filed for decedents who died in the following years: 1938 to 1940, 1944, 1948 to 1950, 1953, 1958 to 1960, 1968 to 1970, and 1978 to 1980. Groups of 3 years have been selected to center around years ending with a 9 (e.g., 1928 to 1930 centers on 1929) in order to coincide with years for which income data are available from the Bureau of the Census. The single years 1944 and 1953 were included so that a comparison could be made between SOI wealth estimates based on weights applied to individual estate tax records and estimates produced by Horst Mendershausen for 1944 and Robert Lampman for 1953 [33].

Data from the intergenerational wealth study have been published for estate tax returns with years of death between 1916 and 1931 [34]. Additional data for 1932 through 1945 will be available in the spring of 1989. No data are yet available, however, on linking beneficiaries and heirs; this will be covered in a later phase of this project.

Estate Collation

This study is another by-product of the basic estate tax return statistics program. The purpose of the collation study is to generate data that will be useful for conducting research on the relationship between income and wealth. This is done by matching the estate tax return with the income tax returns for a given decedent and each beneficiary of the estate. For decedents, income tax returns for the year of death and the 2 preceding years, and for beneficiaries, the returns for the year prior to the decedent's death and 3 years after the decedent's death, are collated with the estate tax returns. This permits comparisons to be made of the wealth and income levels of decedents with the income levels of their beneficiaries, both before and after the year of death of the benefactor or at the point at which the transfer of wealth occurred.

Estate collation studies have been done for 1976 and for 1982. For the 1982 study, fiduciary income tax returns were included when a trust was listed as a beneficiary. Also included were gift tax returns filed by the decedent for the 2 years preceding death. This collation study will be repeated again for 1989.

Some significant results from these collation studies have been produced by Steuerle and Greenwood [35, 36]. In particular, Steuerle noted that for the very wealthy the rate of return on all financial assets was much less than if their funds had been invested in savings accounts. Steuerle also noted that the rate of return on all assets was found to be around 2 percent (see Figure K). Even when wage income was added to capital income, the amount of realized income was still less than 4 percent of the total value of assets.

Figure K also shows Steuerle's observation that the realized rate of return varies inversely with the size of the estate. The realized rate of return differs from the economic rate by the amount of unrealized income or other capital income not reported on the tax return. Thus, without adjustments, realized income as shown on the Form 1040 individual income tax return is not a very reliable measure of wealth for the richest people.

Figure K.—Realized Rates of Return on Assets, 1982

Type of asset	Size of gross estate		
	$60,000 under $362,000	$362,000 under $840,000	$840,000 or more
	(1)	(2)	(3)
Closely-held business (noncorporate)	2.22%	1.78%	0.47%
Corporate stock:			
Total	0.81	2.18	1.24
Closely-held	0.21	2.26	0.93
Non-closely-held	4.14	2.10	2.27
All assets (capital income only)	3.24	3.33	1.29
All assets (capital and wage income)	6.57	4.67	2.99

NOTE: The percentages represent weighted average rates of return (income divided by the value of assets). Estate classes were split so as to provide equal sample sizes in each class.
SOURCE: See footnote 36 at the end of this article.

Greenwood noticed that realized rates of return on financial assets varied not only with the level of assets, but also with the taxpayer's age, and with the marginal tax rate on income. Both Steuerle and Greenwood have suggested using capitalization of income as another approach to estimating wealth. In this approach, wealth is derived by dividing realized income from a particular asset by an expected rate of return and adjusting for unrealized gains and losses.

Fiduciary Income

Fiduciary income tax returns are filed by the person or institution that has power and control over the property of an estate or trust to report its income and tax when gross income is $600 or more. The most recent detailed statistics from fiduciary returns are for 1982 [37]. As shown in Figure L, over 1.6 million fiduciary income tax returns were filed for 1982, an increase of nearly 30 percent over 1974, the last previous year for which detailed data are available. Total income (less loss) almost tripled over the same period. In constant (1972) dollars, the increase was 60 percent using the GNP implicit price deflator developed by the Bureau of Economic Analysis.

Figure L.—Fiduciary Income Tax Returns for Estates and Trusts, Tax Years 1974 and 1982

[All figures are estimates based on samples—money amounts are in thousands of dollars]

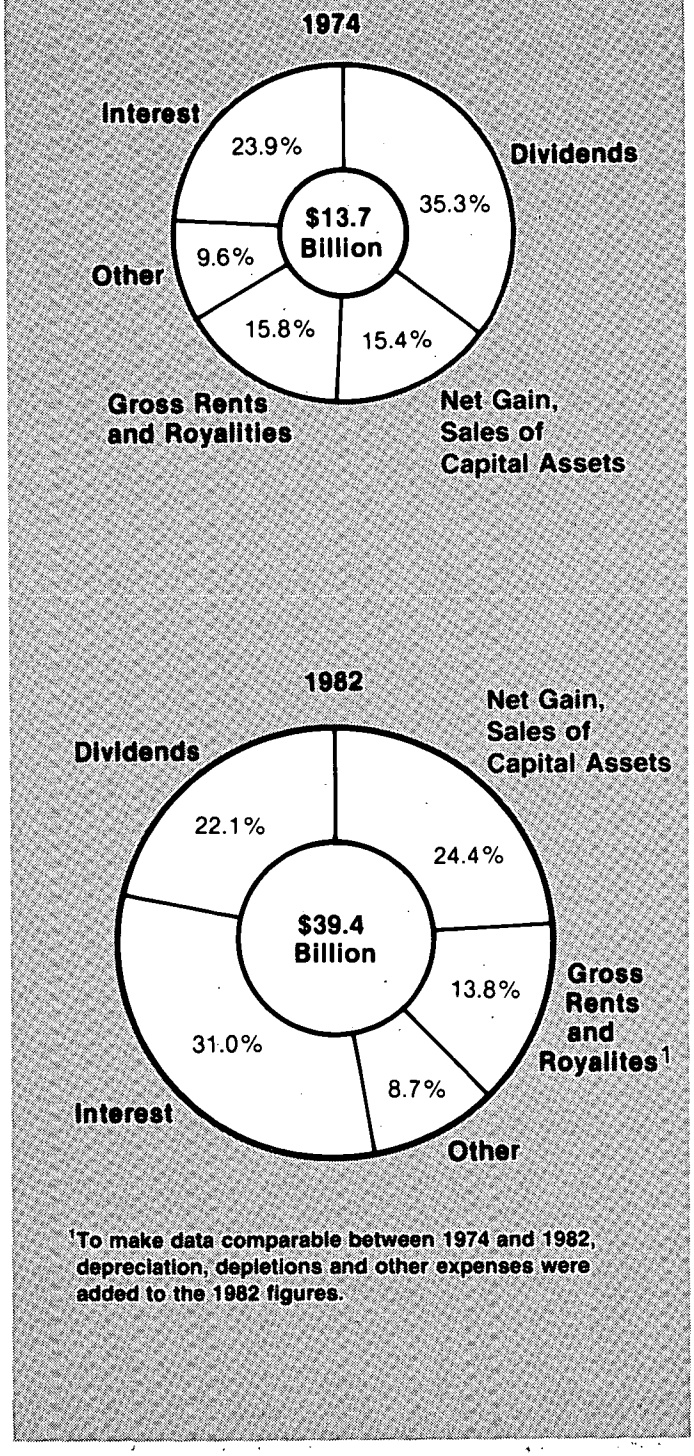
Item	1974	1982	Percentage increase
	(1)	(2)	(3)
Number of estates and trusts, total	1,258,116	1,631,645	29.7%
Estates	336,475	422,734	25.6
Trusts	921,641	1,208,911	31.2
Number of taxable estates and trusts, total	403,886	597,100	47.8
Estates	139,963	168,441	20.3
Trusts	263,923	428,659	62.4
Total income (less loss)	$13,737,886	$39,410,572[1]	186.9
Taxable income	2,403,040	7,353,461	206.0
Total tax	835,575	2,617,771	213.3

[1] Total income (less loss) from 1982 tax returns was $36,677,858,000. This figure includes net (rather than gross) rent and royalty income. To facilitate comparison with 1974, when gross rents and royalties were included in total income (less loss), total income for 1982 has been adjusted to include the gross amounts. See also footnote 1, Figure M.

NOTE: Grantor trusts are not included in these statistics. Year-to-year comparability is affected by tax law changes.

Figure M.

Income Reported on Fiduciary Income Tax Returns, 1974 and 1982



[1]To make data comparable between 1974 and 1982, depreciation, depletions and other expenses were added to the 1982 figures.

Figure M shows the changes in the major sources of estate or trust income for 1974 and 1982 as reported on fiduciary income tax returns (Forms 1041). Interest and net gains (less losses) from sales of capital assets increased sharply as percentages of total income, while dividends decreased correspondingly.

Future Plans in the Estate Tax and Personal Wealth Areas

The Statistics of Income Division is mounting a large research effort aimed at improving the quality and usefulness of estate tax data. Specific issues being addressed include the treatment of jointly-owned property, the special use valuation of certain business assets, the valuation of non-corporate business assets, and the timing of estate valuations. Projects which have already begun include a review of audited returns, among others.

Other plans will be implemented in the future. Consideration is being given to exploring the feasibility of retrieving a small sample of estate tax returns from years for which wealth estimates have been made so that valuation issues can be studied in detail. As a follow-up to the 1982 estate collation study, an extension of the tracking of the beneficiaries listed on the estate tax returns in the SOI sample is being considered. Beginning with 1986, the estate data file contains the name and social security number for each beneficiary. This will make it possible to trace individual income information for the beneficiaries over time. Additional analysis of matched income tax data and estate tax data is also planned in order to develop better estate tax multipliers (for use in wealth estimation techniques) that will be differentiated by wealth [38]. In addition, a study is needed to compare income and estate tax data for given individuals collected at several points in time in order to study and adjust for the decrease in wealth which often occurs around the time of death [39].

A cooperative effort of interested parties, including the IRS, Federal Reserve Board, Social Security Administration, and many academicians will, it is hoped, lead to significant advancements in the measurement of wealth and its distribution. The Statistics of Income Division, at the request of the Office of Tax Analysis, designed the high-income supplemental sample for the 1983 Survey of Consumer Finances used by the University of Michigan's Survey Research Center. Since then the Division has been closely involved with both the University of Michigan and the Federal Reserve Board in designing the methodologies employed in weighting the supplemental and the cross-sectional samples [40].

At this point in the evaluation of wealth data for 1982 based on estate tax returns and results of the 1983 Survey of Consumer Finances, it appears that the survey record and estate multiplier technique approaches to measuring

wealth have distinct advantages and disadvantages. The goal should be to combine both methodologies in order to arrive at the best possible way of measuring wealth for the Nation as a whole. The Statistics of Income Division would like to utilize both survey data and administrative records for conducting a wealth study for 1989. In particular, the Division may again be involved in the design of the high-income supplemental sample for the 1989 Survey of Consumer Finances. If possible, the objective would be to arrive at a sample size of perhaps as many as 2,500 high-income individuals. From estate tax returns, plans are to improve the capture of information on assets held by trusts and closely-held businesses.

In order to develop a complete picture of wealth, plans are to examine closely the gift and trust behavior of wealthy individuals in both the high-income supplemental sample and the estate/personal wealth sample. To carry out this study, the gift tax returns filed by decedents before death and the gift tax returns filed by individuals in the supplemental sample will be examined. This will provide an insight into the relationship between wealth transferred inter vivos (during life) and that transferred by bequest (will). A trust study based on fiduciary income tax returns is also planned in conjunction with the supplemental high-income and estate samples. Trusts will be identified on estate returns and in the supplemental sample; copies of the fiduciary and related estate and gift tax returns will then be obtained. The objective is to examine the role and importance of trusts and the distribution of trust income in the overall wealth generation process.

The most significant change mandated by the Tax Reform Act of 1986 to the unified Federal estate and gift transfer tax system may be the revival of the generation-skipping transfer tax. This tax was originally established in 1976 to tax trusts which provided for the distribution of benefits to beneficiaries assigned to more than one generation. The new tax, which applied to transfers occurring after October 22, 1986, also covered direct gifts and bequests made to recipients at least two generations younger than the donor. Since generation-skipping transfer tax returns are filed with the estate tax return, a review will be made of these returns as part of the regular SOI estate tax study. An assessment will then be made of the impact of the new tax and of plans for future studies of it.

Finally, a compendium on wealth and wealth-related studies will be published in the fall of 1989. This compendium will contain, in one volume, results of all recent SOI studies conducted in those areas. The material will be composed chiefly of articles published in the *Statistics of Income Bulletin* and in the *Proceedings of the American Statistical Association*, along with facsimiles of the tax forms and instructions. Other research papers and previously unpublished articles and tables will also be included. In addition, efforts are underway to investigate how to release microdata files in such a way that the identity of the taxpayers is protected. Unpublished or special tabulations will continue to be available on a cost-reimbursable basis [41].

EXCISE TAX STUDIES

The Statistics of Income Division currently conducts two studies on excise taxes each year. One study is on the windfall profit tax, an excise tax on oil producers and royalty owners of crude oil. The other covers environmental taxes, which are imposed on crude oil and petroleum, certain chemicals, and hazardous wastes. The latter taxes are often referred to as the "Superfund taxes."

Total excise tax collections declined slightly from 1981 to 1985 as shown in Figure N. This fall was due primarily to the reduction in windfall profit tax revenue. Fiscal Year 1981 was the first full year that the windfall profit tax was collected. The revenues amounted to $16.9 billion, almost 42 percent of the year's total excise tax revenue of $40.4 billion. However, by Fiscal Year 1985, windfall profit tax revenues had fallen to approximately $5.1 billion (14 percent of the year's total excise taxes) because of reduced tax rates and lower crude oil prices. In contrast, environmental tax payments averaged only about $235 million annually from 1981 to 1985 [42].

Figure N.—Gross Excise Tax Collections By Type, Fiscal Years 1981 and 1985

(Billions of dollars)

Type of excise tax	Fiscal Year	
	1981	1985
Total	$40.4	$37.0
Alcohol taxes	5.7	5.4
Tobacco taxes	2.6	4.5
Gasoline taxes	4.0	9.1
Manufacturers' excise taxes (except gasoline)	2.1	0.9
Windfall profit tax	16.9	5.1
Environmental taxes	0.1	0.3
Retailers, special fuels and unclassified excise taxes	6.2	6.1
All other miscellaneous excise taxes	2.8	5.6

NOTE: Year-to-year comparability is affected by tax law changes.

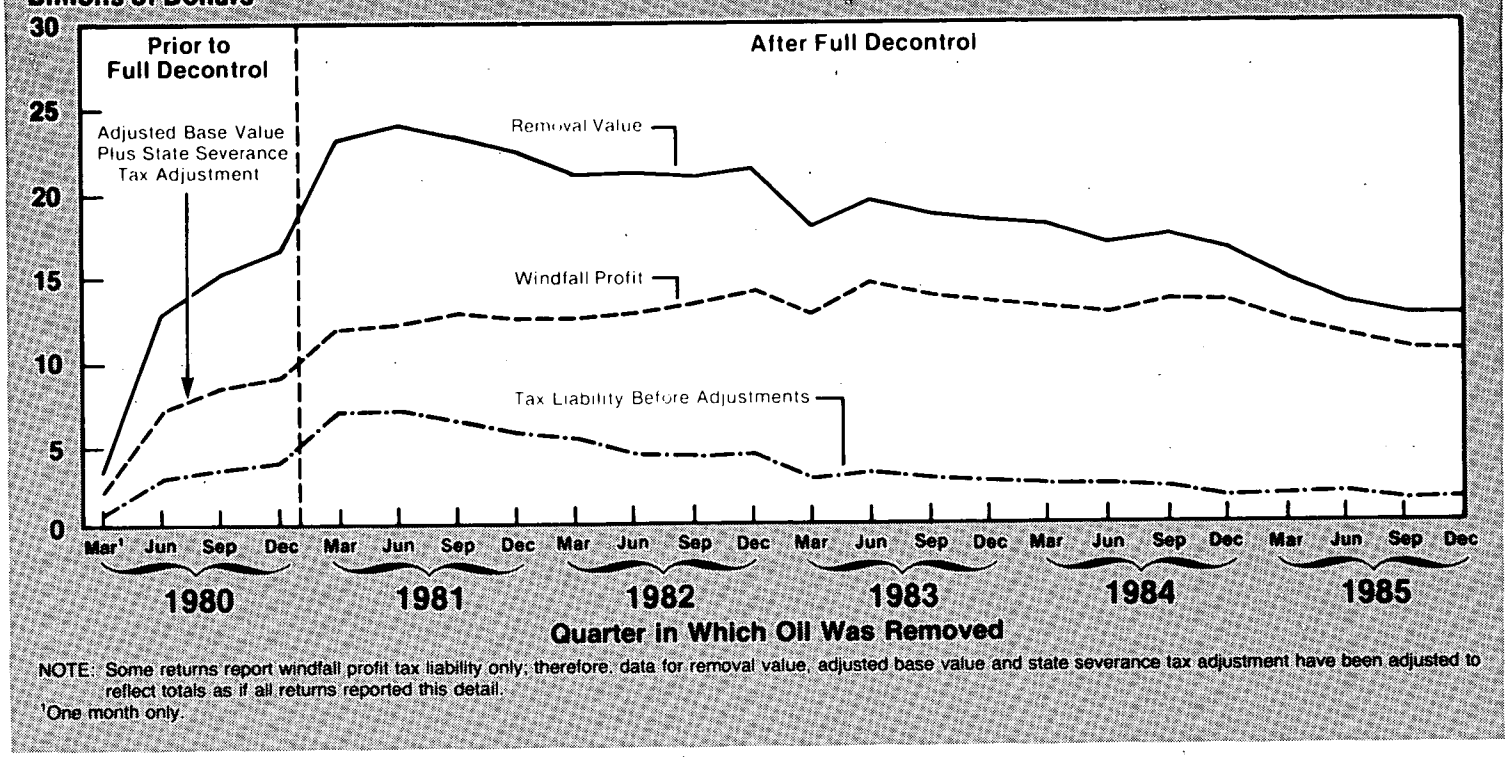
SOURCE: U.S. Department of Treasury, Internal Revenue Service, *Annual Report, Commissioner and Chief Counsel, Internal Revenue Service.* See reports for Fiscal Years 1981 and 1985.

Windfall Profit Tax

The Crude Oil Windfall Profit Tax Act of 1980 imposed a Federal excise tax on domestic crude oil extracted on or after March 1, 1980. The tax was enacted in response to the planned phaseout of Federal price controls on domestic crude oil. Congress mandated that the tax be temporary, with a 33-month gradual phaseout. This phaseout was to begin in January 1988 if $227.3 billion in net revenue had been realized by then; otherwise, it was to begin no later than January 1991.

The windfall profit tax is reported on the Quarterly Federal Excise Tax Return, Form 720, and Form 6047, Windfall Profit Tax, which is filed as an attachment to Form 720. SOI tabulations are based only on the population of Forms 6047 that show a tax liability. Therefore, since not all oil production is

Figure O.
Components of Windfall Profit Tax Liability Before Adjustments: Aggregate Values by Quarter in Which Oil Was Removed, 1980-1985



NOTE: Some returns report windfall profit tax liability only; therefore, data for removal value, adjusted base value and state severance tax adjustment have been adjusted to reflect totals as if all returns reported this detail.
¹One month only.

taxable, total domestic production is somewhat understated in the statistics. The sample includes all returns with a tax liability before adjustments of $1 million or more and a 10-percent sample of returns with a tax liability less than $1 million.

As shown in Figure O, windfall profit tax before adjustments declined from a high of $7.2 billion for the quarter ending June 1981 to $1.2 billion for the quarter ending December 1985. This decline was principally a result of a decrease in the price of oil. Almost $84 billion in taxes before adjustments was reported during this period; the amount after adjustments was nearly $78 billion [43]. The data in Figure O are not altogether comparable with the data on windfall profit tax collections in Figure N because of the difference between the year in which the tax liability was incurred and the year in which the returns were filed, processed, and recorded on the IRS Business Master File, and also because tax in Figure N is after adjustments while tax in Figure O is before adjustments [44].

Environmental Excise Tax

The Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) called for the creation of a $1.6 billion Hazardous Substance Response Fund, commonly referred to as the Superfund. The initial law, which took effect on April 1, 1981, and expired on September 30, 1985, imposed an excise tax on the sale or use of petroleum and 42 chemicals. (The law was reinstated for 1987.)

In addition to the Superfund, CERCLA established the Post-closure Liability Trust Fund. This Fund was financed by the Hazardous Waste Tax, an excise tax which took effect on October 1, 1983, and was based on the receipt of hazardous waste at a qualified hazardous waste disposal facility.

Figure P shows that for the period from June 1981 to September 1985, approximately $1.2 billion in environmental taxes were reported to IRS. Two-thirds of the excise taxes were derived from the tax on petrochemicals, while 18 and 15 percent, respectively, were derived from the tax on inorganic chemicals and petroleum. Only 1.3 percent was derived from the tax on hazardous waste [45]. The tax rates for each chemical were formulated so that the tax liability would reflect the respective percentages in which the substances were found in the hazardous waste sites [46]. Again, the data in Figure P are not altogether comparable with the data in Figure N. Excise tax collections as reported on Form

720, are entered onto the IRS Business Master File (BMF) each quarter as the returns are received, regardless of tax period. Because the interval between the close of the tax period and the recording of the return onto the BMF often varies, the BMF totals may represent more than one taxable period.

Figure P.—Environmental Excise Taxes by Category, Tax Years 1981–1985

[Millions of dollars]

Tax year	Total [1]	Petro-chemicals	Inorganic chemicals	Petroleum	Hazardous waste [2]
	(1)	(2)	(3)	(4)	(5)
All years	$1,181.8	$780.6	$208.3	$176.2	$15.6
1981 [3]	198.8	131.4	36.2	31.2	—
1982	232.3	153.3	41.3	37.6	—
1983	258.8	173.3	44.8	38.7	1.8
1984	280.9	183.3	49.6	39.3	8.7
1985 [4]	210.0	139.3	36.4	29.4	5.0

[1] Includes taxes not allocable to a specific category. For this reason, and also because of rounding, detail will not add to totals.
[2] The Post-closure Liability Trust Fund Tax was levied on hazardous waste received at a qualified hazardous waste disposal facility. This tax did not go into effect until October 1, 1983.
[3] 1981 data are for quarters ending June through December 1981.
[4] 1985 data are for quarters ending March through September 1985.
NOTE: Year-to-year comparability is affected by tax law changes.

Future Plans in the Excise Tax Area

There has been renewed interest in recent years in excise taxes as a source of expanded revenue to help alleviate the Nation's budget deficit. Current plans are to continue the two existing excise tax studies and to mount one or two major new efforts.

While the environmental excise taxes (as imposed by CERCLA) on petroleum, chemicals, and hazardous wastes expired on September 30, 1985, a new Superfund Amendments and Reauthorization Act of 1986 reinstated some of these taxes. Effective after 1986, taxes on crude oil received at a U.S. refinery and petroleum products were reimposed at increased rates. In addition, the tax on taxable chemicals sold by producers, manufacturers, or importers was reimposed at prior rates, except that the tax on xylene was increased. After 1988, a new tax on certain imported taxable substances manufactured or produced from taxable chemicals will be imposed. Finally, for tax years beginning after 1986 and before 1992, a corporation is liable for an environmental excise tax equal to 0.12 percent of "the modified alternative minimum taxable income" in excess of $2 million.

Since the Tax Reform Act of 1986 did not affect the crude oil windfall profit tax, plans are to continue generating quarterly windfall profit tax statistics; however, the data will be published only once a year in the *Statistics of Income Bulletin*. The same will be true for statistical studies of environmental excise taxes. Plans are to continue producing quarterly tabulations which will be summarized once a year in the *Statistics of Income Bulletin*.

While current plans do not call for publishing a separate compendium or providing a special statistical service for excise taxes, unpublished tables or special tabulations are available on a cost-reimbursable basis [47].

NOTES AND REFERENCES

[1] These regularly conducted studies are listed and briefly described in Jamerson, Bettye, "New SOI Statistical Services, 1985–86," *Statistics of Income Bulletin*, Spring 1986, Volume 5, Number 4, pp. 1–8.

[2] Skelly, Daniel F., and Hobbs, James R., "Statistics of Income Studies of International Income and Taxes," *Statistics of Income Bulletin*, Fall 1986, Volume 6, Number 2, pp. 1–20.

[3] Skelly, Daniel F., *Statistics of Income—1974–1978, Private Foundations*, U.S. Department of Treasury, Internal Revenue Service, Washington, DC, 1981.

[4] See Petska, Thomas B., "An Examination of Private Foundations for 1979," *Statistics of Income Bulletin*, Fall 1982, Volume 2, Number 3, pp. 9–29.

[5] For an analysis of the 1982 study data, see Riley, Margaret, "Private Foundation Information Returns, 1982," *Statistics of Income Bulletin*, Fall 1985, Volume 5, Number 2, pp. 1–27. For a further discussion of the 1982 study results, see Riley, Margaret, "A Survey of Private Foundations," *Working Papers*, Independent Sector and The United Way Institute, 1986. (Certain data published for 1982 have been revised and are available upon request from the Director, Statistics of Income Division TR:S, Internal Revenue Service, 1111 Constitution Avenue, N.W., Washington, DC 20224.)

[6] The Statistics of Income Division will carry out annual studies of private foundations provided sufficient resources are available. Resource limitations caused the 1984 study to be cancelled.

[7] See Riley, Margaret, "A Private Foundation Profile for 1983," *Statistics of Income Bulletin*, Winter 1986–87, Volume 6, Number 3, pp. 11–24.

[8] For more detail about charitable and split-interest trusts, see Petska, Thomas B., "Charitable Trusts: An IRS Examination of Nonexempt Philanthropic Organizations," *1983 Proceedings of the American Statistical Association, Section on Survey Research Methods.*

[9] Hilgert, Cecelia, "Nonprofit Charitable Organizations, 1983," *Statistics of Income Bulletin*, Spring 1987, Volume 6, Number 4, pp. 31–42.

[10] Heuchan, Laura M., "Nonprofit Charitable Organizations, 1982," *Statistics of Income Bulletin*, Winter 1985–

86, Volume 5, Number 3, pp. 21–40.

[11] Sullivan, John, and Coleman, Michael, "Nonprofit Organizations, 1975–1978," *Statistics of Income Bulletin*, Fall 1981, Volume 1, Number 2, pp. 6–38.

[12] The Small Business Administration report concluded, among other things, that the traditional rationale for granting Federal tax-exempt status to nonprofit organizations was no longer applicable to many so-called "commercial" nonprofit groups established during the past 20 years. A commercial nonprofit organization was defined as one that receives little or no income from donations, but rather derives all or nearly all of its income from prices charged for the goods or services it produces. See U.S. Small Business Administration, Office of Advocacy, "Unfair Competition by Nonprofit Organizations with Small Business: An Issue for the 1980's," November 1983, pp. 1–16.

[13] Broaddus, Will, "Crying Foul," *Foundation News*, July/August 1984, The Council on Foundations, pp. 56, 57, and 61.

[14] See Statement of O. Donaldson Chapoton, former Deputy Assistant Secretary (Tax Policy), U.S. Department of the Treasury, before the Subcommittee on Oversight of the Committee on Ways and Means, U.S. House of Representatives, June 22, 1987.

[15] Scheuren, Fritz J., *Statistics of Income—1963, Farmers' Cooperative Income Tax Returns*, U.S. Department of Treasury, Internal Revenue Service, Washington, DC, 1966.

[16] See Clark, Phillip, "Private Activity Tax-Exempt Bonds, 1985," *Statistics of Income Bulletin*, Spring 1987, Volume 6, Number 4, pp. 31–43.

[17] See Clark, Phillip, "Private Activity Tax-Exempt Bonds, 1985," *Statistics of Income Bulletin*, Spring 1987, Volume 6, Number 4, pp. 31–43; "Private Activity Tax-Exempt Bonds, 1984", *Statistics of Income Bulletin*, Winter 1985–86, Volume 5, Number 3, pp. 55–64; and "Private Activity Tax-Exempt Bonds, 1983", *Statistics of Income Bulletin*, Summer 1984, Volume 4, Number 1, pp. 97–108.

[18] Chiechi, Carolyn P., Atkinson, Robert E., Jr., and Galston, Marian, "Impact of the 1986 Tax Reform Act on Exempt Organizations," *Journal of Taxation*, June 1987, pp. 344–351.

[19] Requests for these tabulations should be sent to the Director, Statistics of Income Division, TR:S, Internal Revenue Service, 1111 Constitution Avenue, N.W., Washington, DC 20224.

[20] Most returns filed in 1977 were for taxpayers who died in 1976, when a return had to be filed by the executor of an estate if the value of the gross estate at time of death exceeded $60,000. Estimates for 1985 were for decedents with gross estate of $300,000 or greater. Most returns filed in 1985 were for decedents who died the previous year when the filing requirement was $325,000. A small number of returns filed in 1985 were for decedents who died in 1983 when the filing requirement was $275,000. Thus, a small number of returns filed in 1985 for decedents with less than $300,000 of gross estate are not included in estimates for that year.

[21] Marley, Marcia, and Wolff, Edward N., "Long-term Trends in U.S Wealth Inequality: Methodological Issues and Results," paper presented at the National Bureau of Economic Research Conference on Research on Income and Wealth, March 1987.

[22] See Bentz, Mary F., "Estate Tax Returns, 1983," *Statistics of Income Bulletin*, Fall 1984, Volume 4, Number 2, pp. 1–12.

[23] In addition, a U.S. estate tax return (Form 706 NA) must be filed by the personal representative of a nonresident alien's estate if the value of the decedent's gross estate located in the United States exceeded $60,000 at the date of death. A nonresident alien decedent is an individual whose domicile at the time of death was not within the United States and who was not a U.S. citizen. Returns were filed on behalf of 169 nonresident aliens who died in 1982 whose estates exceeded $60,000. For more detail, see Sutton, Bill, and Hobbs, James, "U.S. Estate Tax Returns of Nonresident Aliens, 1983" *Statistics of Income Compendium of Studies of International Income and Taxes, 1979–1983*, Washington, DC, 1985, pp. 437–442.

[24] See Scheuren, Fritz, *Statistics of Income—1962, Personal Wealth Estimated from Estate Tax Returns*. This report includes detailed explanations of personal wealth terminology, as well as of the statistical technique (the "estate multiplier") used to derive estimates of personal wealth of certain segments of the living population based on estate tax return data. Other separate reports were also published on this topic. See Crossed, Charles, *Statistics of Income—1969, Personal Wealth Estimated from Estate Tax Returns* and Gilmour, Keith, *Statistics of Income—1972, Personal Wealth Estimated from Estate Tax Returns*.

[25] See Gilmour, Keith, and Schwartz, Marvin, "Changes in the Composition and Concentration of Personal Wealth in the United States," *1983 Proceedings of the American Statistical Association, Section on Survey Research Methods*, and Schwartz, Marvin, "Trends in

Personal Wealth, 1976–1981," *Statistics of Income Bulletin*, Summer 1983, Volume 3, Number 1, pp. 1–26. These two articles present an analysis of the 1976 and preliminary 1981 personal wealth data.

[26] McCubbin, Janet, and Scheuren, Fritz, "Piecing Together Personal Wealth Distributions," *1987 Proceedings of the American Statistical Association, Section on Survey Research Methods*. Also available in *Statistics of Income and Related Administrative Record Research: 1986–1987*, U.S. Department of the Treasury, Internal Revenue Service, 1987.

[27] Schwartz, Marvin, "Preliminary Estimates of Personal Wealth, 1982: Composition of Assets," *Statistics of Income Bulletin*, Winter 1984–85, Volume 4, Number 3, pp. 1–18. For additional information, see also Schwartz, Marvin, "Trends in Personal Wealth, 1976–1981," *Statistics of Income Bulletin*, Summer 1983, Volume 3, Number 1, pp. 1–26.

[28] Schwartz, Marvin, "Further Estimates of Personal Wealth in the United States Using the Estate Multiplier Technique," *1987 Proceedings of the American Statistical Association, Section on Survey Research Methods*. Also available in *Statistics of Income and Related Administrative Research: 1986–1987*, U.S. Department of the Treasury, Internal Revenue Service, 1987.

[29] More detailed results of the personal wealth estimates for 1982 based on estate tax returns classified by year of death and filed in 1982–1984 will be published in the fall of 1989 in the *Statistics of Income Compendium on Wealth and Wealth-Related Studies*. The one-volume compendium will be composed chiefly of articles published in the *Statistics of Income Bulletin* and in Proceedings of the American Statistical Association.

[30] McCubbin, Janet, "Improving Wealth Estimates Derived From Estate Tax Data," *1987 Proceedings of the American Statistical Association, Section on Survey Research Methods*. Also available in *Statistics of Income and Related Administrative Record Research; 1986–1987*, U.S. Department of the Treasury, Internal Revenue Service, 1987.

[31] Data on wealth have recently become available from the 1983 Survey of Consumer Finances. This study was jointly sponsored by the Board of Governors of the Federal Reserve System and six other Federal agencies (including the Internal Revenue Service). For further information, see Avery, Robert B., Elliehausen, Gregory E., Canner, Glenn B., and Gustafson, Thomas A., "Survey of Consumer Finances, 1983," *Federal Reserve Bulletin*, September 1984, pp. 679–692; and December 1984, pp. 857–868. See also McCubbin, Janet, and Scheuren, Fritz, "Piecing Together Personal Wealth Distributions," op. cit., 1987, where issues of comparability are covered.

[32] For a description of the plans for the creation and future use of a linked intergenerational estate tax return archive, see Bentz, Mary, "The Intergenerational Wealth Study: Prospects for Data Analysis and Methodological Research," *Multi-National Tax Modelling Symposium Proceedings*, Revenue Canada Taxation, 1985.

[33] Lampman, Robert J., *The Share of Top Wealthholders in National Wealth*, 1922–56, Princeton University Press, 1962; and Mendershausen, Horst, "The Pattern of Estate Tax Wealth," Volume III, *A Study of Savings in the United States*, ed. Raymond D. Goldsmith, Princeton University Press, 1956.

[34] Medve, Kathy, "Estate Tax Returns Revisited, 1916–31," *Statistics of Income Bulletin*, Spring 1987, Volume 6, Number 4, pp. 51–58, and "The Intergenerational Wealth Study: Preliminary Findings and Future Plans," *1987 Proceedings of the American Statistical Association, Section on Survey Research Methods*. Also available in *Statistics of Income and Related Administrative Record Research: 1986–1987*, U.S. Department of the Treasury, Internal Revenue Service, 1987.

[35] Steuerle, C. Eugene, "The Relationship Between Realized Income and Wealth," *Statistics of Income Bulletin*, Spring 1983, Volume 2, Number 4, pp. 29–34.

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[37] Estep, Gary J., "Fiduciary Income Tax Returns, 1982," *Statistics of Income Bulletin*, Spring 1985, Volume 4, Number 4, pp. 39–59.

[38] Scheuren, Frederick, "Historical Perspectives on IRS Wealth Estimates With Prospectives for Improvements," paper presented at the May 2, 1975, National Bureau of Economic Research Workshop on Estate Multiplier Estimates, May 2, 1975.

[39] Caldwell, Steven, and Diamond, Theodore, "Income Differentials in Mortality: Preliminary Results Based on IRS-SSA Linked Data," *Statistical Uses of Administrative Records: Recent Research and Present Prospects*, U.S. Department of Treasury, Internal Revenue Service, July 1984; pp. 539–547.

[40] Heeringa, Steven G., and Curtin, Richard T., "Household Income and Wealth: Sample Design and Estimation for the 1983 Survey of Consumer Finances," *1987*

Proceedings of the American Statistical Association, Social Statistics Section. Also available in *Statistics of Income and Related Administrative Record Research: 1986–1987*, U.S. Department of the Treasury, Internal Revenue Service, 1987.

[41] See footnote 19.

[42] For more detail on excise taxes reported, see U.S. Department of the Treasury, Internal Revenue Service, *Annual Report, Commissioner and Chief Counsel, Internal Revenue Service*, for each fiscal year, 1981–1985.

[43] Adjustments amounted to $6.0 billion since the Crude Oil Windfall Profit Tax Act was enacted on March 1, 1980. These adjustments were corrections to the windfall profit tax liability for over- and under-withholding in previous quarters and corrections to the tax liability because the net income limitation (limits the windfall profit to 90 percent of the net income per barrel of oil).

[44] For more detail on the oil volume, removal value, adjustments, type of oil, tax liability, data sources and limitations, see Chung, Edward, "Crude Oil Windfall Profit Tax, 1985", *Statistics of Income Bulletin*, Fall 1986, Volume 6, Number 2, pp. 88–89. Additional quarterly statistics on the windfall profit tax were shown in each issue of the *Statistics of Income Bulletin*, beginning with the Fall 1981 issue and ending with the Fall 1986 issue. Annual totals will continue to be published in the *Statistics of Income Bulletin.* Data for 1986 will be published in the Spring 1988 issue.

[45] For more detail, see Belal, Rashida, "Environmental Taxes, 1981–1985", *Statistics of Income Bulletin*, Spring 1987, Volume 6, Number 4, pp. 31–42.

[46] U.S. Senate, *Report of the Committee of Finance on S.51*, Report 99–73, May 23, 1985.

[47] See footnote 19.

EXHIBIT 1.—Programs for Selected Domestic Special Studies: Current and Planned Studies

Project	Sample size and scope of study	Frequency and content
	Part I - TAX-EXEMPT ORGANIZATIONS STUDIES	
Private Foundations	The sample for 1985 is approximately 1,800 returns selected from an estimated population of 30,000. The sample will increase in stages to about 5,000 returns for 1989 selected from an estimated population of about 36,000.	This study is to be conducted annually and includes tabulations of various data from the balance sheet and income statement. The last complete study was for 1983. The next study, for 1985, should be completed by the end of 1988.
Charitable and Split-Interest Trusts	The sample size for 1989 is expected to be approximately 6,000 returns selected from a population estimated at approximately 35,000 for both types of trusts.	This is a periodic study to be done at least every 3 years. The next study, planned for Tax Year 1989, will include primarily balance sheet and income statement information.
Nonprofit Charitable Organizations and "Other" Tax-Exempt Organizations (filing Form 990)	The stratified sample for 1985 will be approximately 5,500 returns selected from an estimated population of approximately 100,000. The sample will be increased to about 8,000 for 1987. For 1988 the sample will be expanded to about 35,000 returns and will represent all section 501(c) organizations (estimated at about 280,000 returns).	This study is to be conducted annually beginning with Tax Year 1985 data. It includes tabulations of balance sheets and and income statements for only those organizations classified as tax-exempt under section 501(c)(3) of the Internal Revenue Code. However, for Tax Year 1988, the study will be expanded to include all 501(c) organizations. The next study, for 1985, should be completed in the spring of 1989.
Exempt Organizations' Unrelated Business Income	The sample size will be approximately 5,000 returns selected from a population estimated at 27,000.	This is planned as an annual study. The first study, for Tax Year 1987, will be published in 1989 and will include tabulations of exempt organizations' unrelated business income and deductions. Plans are to link this file with the Form 990 file of organizations tax-exempt under section 501(c).

EXHIBIT 1.—Programs for Selected Domestic Special Studies: Current and Planned Studies (Continued)

Project	Sample size and scope of study	Frequency and content
	Part I - TAX-EXEMPT ORGANIZATIONS STUDIES (Continued)	
Private Foundation Grant-Administrative Expenses	The sample will include approximately 800 private foundation returns for Tax Year 1985 selected from a population of about 30,000 returns.	This is a one-time study mandated by Congress in the Tax Reform Act of 1984 to assess the impact of current provisions of the Internal Revenue Code. Results will be provided to the Office of Tax Analysis for its report to Congress in 1990.
Farmers' Cooperatives	The sample will include all of the approximately 6,000 exempt and nonexempt farmers' cooperative returns.	This is a periodic study planned for every 3 years. The next farmers' cooperative study is planned for 1992. The last complete study was for Tax Year 1977; results of the 1977 study will be published in the SOI Exempt Organization Compendium in the fall, 1988.
Tax-Exempt Private Activity Bonds	The sample will include all of the approximately 7,000 information returns for private activity bond issues filed for 1986. The population is expected to increase in 1987 when information on public-purpose bonds will be required for the first time.	This is an annual study providing information on industrial development bonds, private exempt entity bonds, student loan bonds, and qualified mortgage bonds, by industry, type of property financed, size of face amount, and State. Starting in 1987, information on public-purpose bonds will also be available. The next study of private activity bonds, for Tax Year 1986, will be completed in the spring, 1988.

EXHIBIT 1.—Programs for Selected Domestic Special Studies: Current and Planned Studies (Continued)

Project	Sample size and scope of study	Frequency and content
	Part II - ESTATE TAX AND WEALTH STUDIES	
Estate Tax	The 1989 estate study will include a sample of approximately 18,000 estate returns selected over a 3-year period. The sample for 1986 will be approximately 4,500 returns selected from an estimated population of 62,000; the sample for 1987 will be about 9,500 returns selected from an estimated population of 35,000 returns; and for 1988, a sample of 3,500 returns will be selected from an estimated population of about 35,000 returns.	Basic data from estate tax returns are produced annually by year in which returns are filed. This report includes tabulations of gross estate and its composition, deductions, and tax, as well as information on age, sex, and marital status of decedents. Other statistics will be available on a year-of-death basis (approximately every 3 years). The most recent estate tax data available are for returns filed in 1985. Final data for returns filed in 1986 will be available in the summer, 1988.
Personal Wealth Estimates	This study is a by-product of the estate study. The sample for the 1982 study includes estate tax returns of decedents with year of death 1982 filed in 1982–1984. The sample is augmented with returns filed in 1982–1984 for decedents with gross estates of $5 million or more and decedents under 45 years of age regardless of year of death.	This is a periodic study done every 3 or 4 years. It includes estimates of personal wealth based on estate tax return data, using the "estate multiplier" technique and both the filing year and year-of-death estate data bases. The most recent data available are based on returns filed in 1983. Final personal wealth estimates based on individuals who died in 1982 will be available in the spring, 1988.

EXHIBIT 1.—Programs for Selected Domestic Special Studies: Current and Planned Studies (Continued)

Project	Sample size and scope of study	Frequency and content
	Part II - ESTATE TAX AND WEALTH STUDIES (Continued)	
Intergenerational Wealth Transfers	The sample includes all estate tax returns filed between 1916 and 1945. For the post-1945 studies, the sample will be based on an artificial filing threshold.	This is a one-time study focusing on the changes in the concentration of wealth and on the intergenerational transfer of wealth, as well as on the history of the estate tax. Asset composition, demographic information, and an analysis of the beneficiaries of the estates will be emphasized. Selected information about wealth concentration from the first phase of this study (1916–31) was published in the Spring 1987 issue of the *Statistics of Income Bulletin*. Results of the next phase (1932–45) are planned for publication in 1989.
Estate Collation	The sample includes estate returns with year of death 1982 filed in 1982 or 1983 with gross estate of $1 million or more.	This periodic study provides a means of examining the relationship between personal income and wealth. Information from the estate tax return is associated with income tax return data. Realized rates of return are produced based on correlating information from the estate return with data from income tax returns. The most recent study was for 1982 decedents. The next study is planned for 1989 decedents.
Fiduciary Income Tax	The sample for the 1989 study of fiduciary income tax returns will be approximately 1,000 returns.	This study is periodic, covering data on estate and trust income, deductions, and taxes. The last complete study was for Tax Year 1982. The next study is planned for 1989, to coincide with the 1989 estate study.

Statistics of Income Domestic Special Studies

EXHIBIT 1.—Programs for Selected Domestic Special Studies: Current and Planned Studies (Continued)

Project	Sample size and scope of study	Frequency and content
	Part III - EXCISE TAX STUDIES	
Gift Tax	The sample for the 1989 study of gift taxes will be approximately 3,000 returns.	This study is a periodic study covering data on the types of gifts, deductions, and taxes. The last complete study was for 1965. The next study is planned for 1989, to coincide with the 1989 estate study.
Windfall Profit Tax	The sample for Filing Year 1985 was approximately 75 returns per quarter, consisting of all returns with a tax liability of $1 million or more and a 10-percent sample of all other returns.	Detailed information is published annually on numbers of barrels of oil, removal value, adjusted base value, and the tax, by type and oil "tier" for first purchasers of oil. The last complete study was for oil removed in 1985. The next complete study, for oil removed in 1986, will be available in the spring, 1988.
Environmental Excise Tax	The sample for Filing Year 1985 included all environmental tax forms filed, or approximately 400 each quarter.	This study is published annually and summarizes environmental excise tax data from the quarter ended June 1981, the first quarter the tax was in effect, to the present. It includes data on environmental taxes by source and by type of substance. The most recent study was for 1985. Another study is planned for taxes beginning with 1987 as authorized by the Superfund Amendments and Reauthorization Act of 1986. The next complete study, for Filing Year 1987 returns, will be available in the winter, 1988.

Statistics of Income Studies of Individual Income and Taxes

By Michael J. Coleman*

This is the third in a series of articles on broad areas of the Statistics of Income (SOI) program [1]. Since there has been an individual income tax return SOI program almost since the inception of the modern income tax, it is appropriate here to review this program in the context of the evolution of the income tax. In this context, examples are provided of statistical data trends which reflect the response of the taxpaying public over the years to changes in the tax law, from 1913 to the landmark tax reform legislation of 1986.

The organizational focus and thread of continuity of this article is the regular annual SOI individual income tax return program which is presented first and which receives the greatest emphasis. This is followed by brief discussions of related programs and special studies that are by-products of the regular program, including microdata public-use tax models, the Taxpayer Usage Study (TPUS), and the Sales of Capital Assets Studies [2]. Discussions of each address historical developments, definitions, and the data themselves; currently available information and services; and some future plans. The concluding section briefly introduces a number of the lesser individual income tax return statistical studies.

ANNUAL SOI PROGRAM

Income and tax statistics from individual income tax returns have been published annually by the Internal Revenue Service (IRS) beginning with the report for Tax Year 1916 (which also included some data for 1913–1915). Authority for the production and publication of SOI was initially provided for by the Revenue Act of 1916 and has been renewed since then through successive amendments to the tax laws [3]. Especially in recent years, the content of the program has been largely determined by the Office of Tax Analysis in the Office of the Secretary of the Treasury, for use in tax policy research and in estimating future tax revenues. The needs of other researchers are often satisfied on a cost-reimbursable basis.

Scope of the Program

Since they were initially published, the scope of the basic SOI programs and reports has varied considerably in terms of the detail provided in the tables and the classifications of data presented. As can be seen from Exhibit 1, the SOI report for Tax Year 1916 summarized all individual income tax information in just seven tables. Areas addressed were income by source, occupation, tax by type, sex of taxpayer, and marital status (then called "conjugal condition"), with classifications by size of statutory "net income" and by State [4].

During the early years of the SOI reports, the individual income tax tabulations continued to remain few in number and were relatively simple. Data presented were controlled largely by the relatively small number of data items available for the statistics (the tax law and the resultant tax forms were relatively simple by today's standards) and by lack of modern data processing technology and equipment. Until the late 1920's, the individual income statistics particularly emphasized the tax, the size of income producing the tax, and the State where the returns were filed. In fact, a major portion of each report was devoted to State data. Some 30 years later, the SOI report for 1946 had increased to fourteen basic tables, largely through the introduction of crosstabulations. These, too, were relatively uncomplicated compared to today. New data added along the way covered such items as number of exemptions, tax payments, more detailed types of income, and types of itemized deductions. All of these increases reflected the growing complexity of the tax law and of the resultant tax forms. New classifiers, including size of specific types of income, were incrementally added over these years.

In large part, these changes reflected changes in SOI users. Besides continuing to meet the needs of Treasury tax policymakers and revenue estimators, SOI attempted to meet the growing needs of numerous Congressional, Federal, State and private economic research agencies. As a result, SOI gradually developed into a document containing basic economic data, in addition to the traditional more tax-oriented data. The latter continued to be necessary, especially as the tax code grew in scope and complexity. As this occurred, the tax return itself began to contain more desirable data for economic and statistical analyses.

Computer processing introduced in the mid-1950's enabled more sophisticated tables to be produced and, by 1979, the tables included in SOI had grown in number and complexity in order to meet customer needs. Added detail, for instance, was presented on the number of returns filed, for sources of income, on marital status, and on nontaxable returns. There was more information for types of dependents, types of tax computation, and for the several tax credits. New classifiers included taxpayers age 65 and over and marginal tax rates, and alternative definitions of total

*Prepared with significant contributions from Kenneth Rice, David Paris, and Brenda Harrison of the Individual Statistics Branch.

income were introduced to facilitate analysis [5]. However, data classified by State disappeared after Tax Year 1982 because of the need to reduce the size of the SOI sample of returns used for the statistics [6]. Nevertheless, by Tax Year 1985, there were 30 basic and special tables and information presented on 218 items from the tax returns [7].

Notwithstanding the changes over time in the character and content of the SOI reports, seven data items have nearly always been published. They include: number of returns, each major source of income, a "gross" income, a total of deductions, a net or taxable income, personal exemptions, and the Federal income tax liability. Exhibit 2 shows some of these data yearly from 1913, including preliminary data for Tax Year 1986 [8].

As Exhibit 2 shows, salaries and wages have always been the largest single source of income, especially since the extension of the income tax to most of the U.S. population in the early 1940's. Business profits, dividends, and taxable interest have comprised the other three major income sources. Trends over the years for each of these sources as well as for the total or "gross" amount used for the statistics are affected not only by economic factors, but by changes in the tax law and in the tax forms, and also by decisions made when processing the data. All of these factors can complicate time series analyses.

Considering only the years for which "adjusted gross income" (AGI) was the total or "gross" amount used for SOI, i.e., for tax years after 1943, salaries and wages reached a record high of 84.5 percent in 1982. The sum of the four principal income sources reached a record high (98.5 percent) and a record low (93.8 percent), both within the 5-year period ending with 1986. The latter reflected the substantial increase in yet another source of income, capital gains, in 1986 [9].

Over this more than 40-year period, the proportion of AGI attributable to dividends gradually declined, although dividends never exceeded 3.4 percent of the total. In contrast, taxable interest income gradually increased. Dollar-wise, interest surpassed dividends for the first time in 1967, so that by 1986 interest income was 2.6 times larger than dividend income. While taxable interest was less than 1 percent of AGI until the mid-1950's, it increased thereafter to around 8 percent for the recent years of high interest rates. For the fourth major income source, business profits (from sole proprietorships, including farms; partnerships; and, since the mid-1960's, "S" Corporations), the data show a long steady decline from over 17 percent after the end of World War II to around 3 percent for the first half of the 1980's.

In general, increased demands for additional revenues to finance World War I, World War II, and the Korean conflict caused rapid and numerous changes in the tax law. The most far-reaching revisions occurred in the early 1940's; however, prior to (and long before) 1940, many other important tax law changes occurred. Among them were the introduction of the credit for dependents and the deduction for charitable contributions (1917) and adoption of preferential tax rates on long-term capital gains and introduction of a gross income filing requirement (1921). In 1939, for the first time, all the revenue laws still in effect up to that time were consolidated into a single statute which became known as the Internal Revenue Code of 1939.

A brief summary of major tax law changes affecting individual income tax returns beginning in 1943, is provided in Figure A. In the early 1940's, revisions to the law occurred when the individual income tax base was broadened to cover most of the working population. Then, during the many years for which the Internal Revenue Code of 1954 was in effect, there were numerous tax law changes affecting individuals which, in addition to having revenue objectives, reflected a concern with social objectives and economic incentives as well.

The first half of the decade of the 1980's has witnessed a continuation of this trend. A series of tax cuts was introduced by the Economic Recovery Tax Act of 1981, the overall thrust of which was to lessen the individual income tax burden. Still more dramatic tax law changes, with similar objectives, have been introduced by the Tax Reform Act of 1986 (encompassed in the new Internal Revenue Code of 1986). The impact of this Act will be reflected in SOI programs starting with Tax Year 1986.

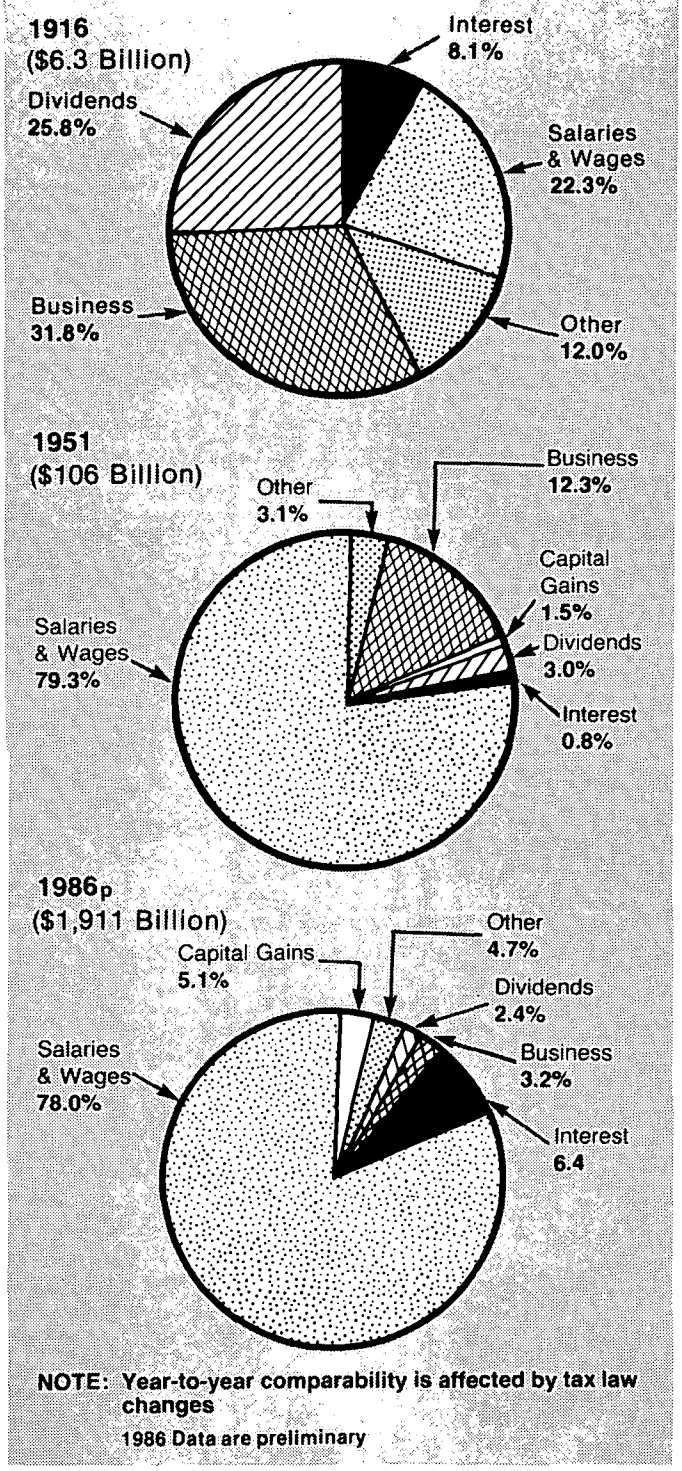
Population Coverage of Individual Income Tax Returns

Figure B graphically displays the growth in the number of returns filed for 1913 through 1986. The number of returns filed prior to 1940 ranged from approximately 300,000 to 7,000,000. However, with the introduction of lower income filing requirements for 1940, the number of returns filed doubled to more than 14.7 million. It took 33 years, from 1913 to 1946, to reach 50 million. Some 40 years later, for 1986, the number of returns filed had increased to 103.3 million. It is projected that the number of individual filers for 1987 will be about 104 million [10].

The percentage of the total U.S population represented on individual income tax returns is illustrated in Figure C. This percentage increased quite dramatically over time. For instance, for 1918, approximately 10 percent of the population was represented by a taxpayer or a dependent on an individual income tax return. The percentage remained relatively low until the expansion in the coverage of individuals having to file tax returns that occurred in the early 1940's. By 1946, more than 87 percent of the population

Figure A

Major Sources of Individual Income, Tax Years 1916, 1951 and 1986



was covered. In the 1950's, the percentage grew still further, then seemed to stabilize at about the same level as Tax Year 1986—at approximately 95 percent of the population, in part, reflecting tax law changes designed to exempt certain low-income recipients from income taxation. It is because of this widespread representation of the U.S population on individual tax returns that the idea of using tax records has surfaced as a possible viable alternative to the traditional ways of conducting the decennial population census [11].

Future Plans

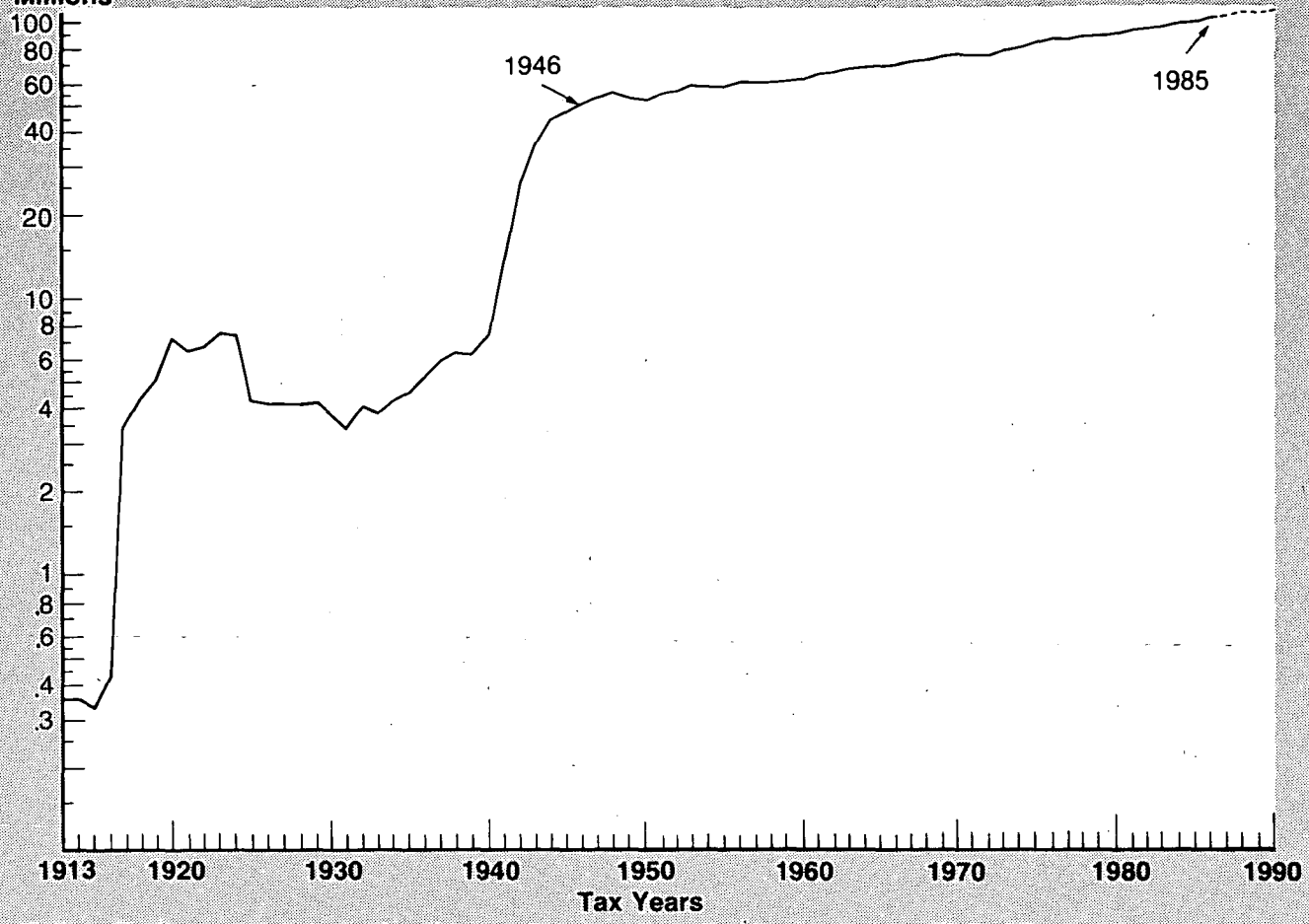
The SOI individual income tax return program, almost from the beginning, has been based on samples of returns. Samples and sampling have been modified over the years to reflect changes in design, selection procedures, and resources, as well as changing program objectives. In recent years, the sample size has alternated between 80,000 returns for even-numbered tax years and 120,000 for odd-numbered years.

Current plans are to further redesign the sample. As part of the redesign, the present system of alternating the sample size between odd- and even-numbered tax years will be dropped. As a result, the future sample size will grow from a base of approximately 120,000 returns. The major focus of the redesign, however, is to provide for the inclusion in the sample of all returns filed by family members and of a panel of returns representing the same taxpayers from year to year. The impetus for introducing the family concept is that for 1987, for the first time, social security numbers (SSN's) for dependents age 5 or older will be required on tax returns. Plans are to "construct" families, as part of the SOI program, by linking returns from all family members who file, whether jointly or separately, and then combining and categorizing all of their income [12]. The planning for this sample redesign is already underway, and implementation will be phased in over 3 years, beginning with Tax Year 1988.

The present kinds of SOI data, based on the type of probability sample now used, are expected to continue. In addition, special tabulations may be produced from the panel. This longitudinal feature of the SOI sample may gradually increase the total sample size over time as panel members change income and other characteristics and as more returns meet the criteria for inclusion in the panel, so that eventually most tabulations will be based on panel returns. An advantage of this longitudinal design is that it will reduce the sampling variability of year-to-year estimates of change. It will also improve the estimates derived from subsamples of the SOI sample that focus on special groups of taxpayers, e.g., those reporting sales of capital assets, or those with income earned abroad or with a foreign tax credit.

Figure B

Growth in Number of Individual Income Tax Returns, Tax Years 1913-1990



1946 — The first year that the number of returns filed passed the 50 million level at over 52.8 million.
1985 — The first year that the number of returns filed passed the 100 million level at over 101.2 million.
1987-1990 — Projected number of returns
NOTE: For 1913-1927, includes individual income tax returns with income (loss returns are excluded) and return of estates and trusts with taxable income; for 1928-1937, includes all individual income tax returns and estates and trusts with taxable income. Starting 1938, represents all individual income tax returns; 1986 is preliminary.

The *Statistics of Income—1985, Individual Income Tax Returns* report includes tables based on a new total income concept (in addition to the traditional AGI, the tax return concept), which includes all income reported on the tax return, before subtraction of adjustments, exemptions, or deductions (except for expenses incurred in the process of earning the income) [13]. The components of total income are limited to items that are available for all Tax Years from 1979 through 1986, thus providing a basis for comparison that is relatively free of the effects of the tax law changes that occurred during this period. Of course, data on AGI will also be included. The SOI report for 1986 will include statistics based on this new measure and present a comparison in current and constant dollars as well.

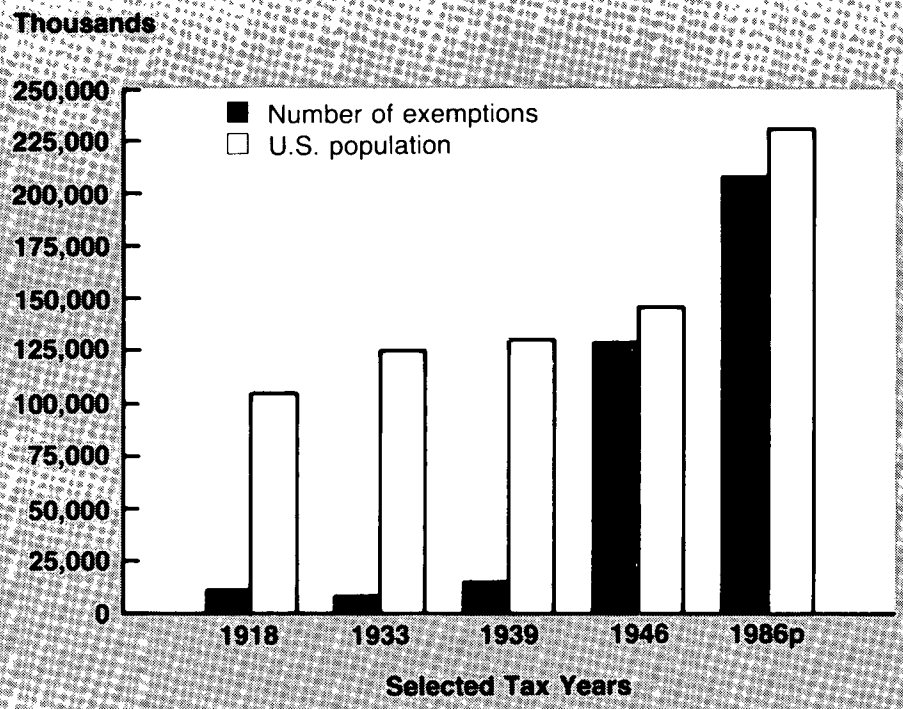
Beginning with Tax Year 1987, a second new income definition will be introduced which will include all income reported on the 1987 tax forms, whether taxed or not. This concept expands on the earlier effort and will cover all of the new income items brought in by the major tax legislation of the 1980's, namely social security benefits, unemployment compensation, and tax-exempt interest on State and local Government obligations. The Tax Year 1987 SOI report will include data based on each of the two new concepts, as well as on AGI.

TAX MODEL

The Tax Model is an abridged version of the individual SOI data file and is available on magnetic tape. For recent years, it contains all the records (except for any excluded to avoid disclosure of information about a particular taxpayer) contained in the SOI file, but includes a reduced number of

Figure C

Number of Exemptions (Other Than Age and Blindness) Claimed on Individual Tax Returns vs. U.S. Population, Selected Tax Years, 1913-1986



1918 — About 10% of the population covered by tax returns
1933 — Because of the Great Depression the percentage dropped to approximately 7%
1939 — Population covered by returns grows to slightly more than the 1918 level
1946 — Broadening of the tax base caused the percentage to increase dramatically to almost 87%
1986 — Approximately 95% of the population is now covered
P — Preliminary

items [14]. The 1985 Tax Model provides 40 statistical codes to facilitate classifications of the data and 160 data items for each record. These 160 items cover the basic data reported on the individual income tax return. In this abridged form, the entire Tax Model for a given tax year can be stored on disk, rather than on the multiple tape reels which are required for the entire SOI individual file.

The Brookings Institution was instrumental in developing the first Tax Model in the early 1960's. Since then, it has obtained a file for almost every year and has published numerous reports on tax-related issues, based in large part on research conducted using these files [15].

Currently, the Tax Model is produced in three forms to accommodate three classes of users:

- An "in-house" file used to meet requests for special tabulations;
- A State Tax Model File for State Tax Administrators; and
- A Public-Use Individual Tax Model File.

Each of these files is described below [16].

In-house File.—The In-house File is used to produce tabulations, generally, in the case of users outside the Department of Treasury, on a cost-reimbursable basis. This File was created to service the many special requests received annually. Because each tabulation is tailored to a particular user's needs, special computer programs are written to access the File for each distinct user request. In

1985 and 1986, there were a flurry of special requests from the Congress and the Office of the Tax Analysis for tabulations in connection with various aspects of the Tax Reform Act of 1986.

State Tax Model.—The second form of the Tax Model is the State Tax Model File. This File is a subset of the In-house Tax Model mentioned above, containing all sampled returns in that File from the requesting State. Because the File contains taxpayer identifying data such as SSN, it is made available for tax administration purposes only and can be requested only by State tax administration agencies. Any such request must first be cleared by an IRS disclosure official.

The State Tax Model File is distinct from the State extracts from the IRS Master File system which most State tax administration agencies receive under the Federal State Exchange Program [17]. These latter files do not contain the level of detail contained in the State Tax Model: 200 data items are present on the State Tax Model File, while only 125 are contained in the Master File system. Another difference in the files relates to usability. The tax return data contained in the State Tax Model have been subjected to extensive statistical editing and testing. In contrast, the editing and testing of data for tax administration purposes is more selective in its approach and objectives.

Since the Tax Reform Act of 1986, the Statistics of Income Division has received numerous requests for State data suitable for analyzing the revenue impact of various provisions of the Act. The State Tax Model has been especially useful for this purpose. As an example of some of the other uses made of the file by States, the State of Washington purchased 2 years of data to analyze whether or not to institute a State income tax; Texas also did the same thing with the 1984 State Tax Model. As another example, Virginia used the data to analyze making changes in its State tax code, including whether to use its tax system to fund state elections.

The State Tax Model File is designed with a view toward user convenience. It is contained on one computer tape; no files need to be merged. Moreover, it is a stratified sample.

Public-Use Tax Model.—The last form of the Tax Model is the Public-Use Tax Model File. This is a version of the In-house File modified to remove taxpayer identifiers and to otherwise protect the confidentiality of individual taxpayers included in the File. This is the version available to research organizations, universities, and others in the general public.

The Public-Use Tax Model has been purchased by relatively few organizations, approximately eight to ten users per year. However, it is the stature of these users and the work they have done with it, that has contributed to its reputation. Frequent users have included The Brookings Institution, as mentioned previously; the Congressional Budget Office; the National Bureau of Economic Research; and the Survey Research Center of the University of Michigan.

Congress created the Congressional Budget Office (CBO) in 1974 to analyze and forecast Federal budgets as an alternative to those submitted by the Executive Branch. Over the years, CBO has used the Public-Use Tax Model as an important input to this process, especially in its projections of future income tax revenues due to tax reform [18].

The University of Michigan has used the Public-Use Tax Models for 1979 through 1984 to create an individual panel file. This panel consists of a random sample selected from an unstratified population of individual returns based on SSN ending digits. In lieu of the SSN's, coded numbers are provided by the Statistics of Income Division to enable panel returns to be associated from year to year. All returns with these same SSN endings are selected annually, and they are then imbedded in the Public-Use Tax Model. Originally, there were about 46,000 returns in the panel sample, but since 1983 this number has been reduced to about 20,000 for odd-numbered years (i.e., Tax Years 1983 and 1985) and 10,000 for even-numbered years (i.e., Tax Years 1984 and 1986).

Future Plans

In order to meet the continuing need for additional public use data, a new and larger file is now planned. This file, which will be produced every other year, consists of a sample of over 300,000 returns selected from the Master File system. (Returns selected for the regular SOI sample are included in this number.) The sample will include all data items from the Master File system that are ordinarily used for SOI. Most of the additional, manual, data editing and perfecting for statistical purposes will not apply to this increased sample. However, the data will be tested by computer for statistical use and adjustments made to the data when necessary.

This sample is large enough to support detailed estimates by State. As such, it will be the first time since Tax Year 1982 that reliable State data in sufficient detail will be available from an SOI sample. Previously, the regular SOI sample was designed to provide State estimates as part of the regular individual SOI program.

Current plans call for two methods of release. First, files for each State will be offered to State tax authorities on a cost-reimbursable basis in the same fashion as the State Tax Model. Second, special tabulations will be produced, also on a reimbursable basis. Moreover, plans call for exploring

the possibility of making certain data available on diskettes for use on personal computers.

TAXPAYER USAGE STUDY (TPUS)

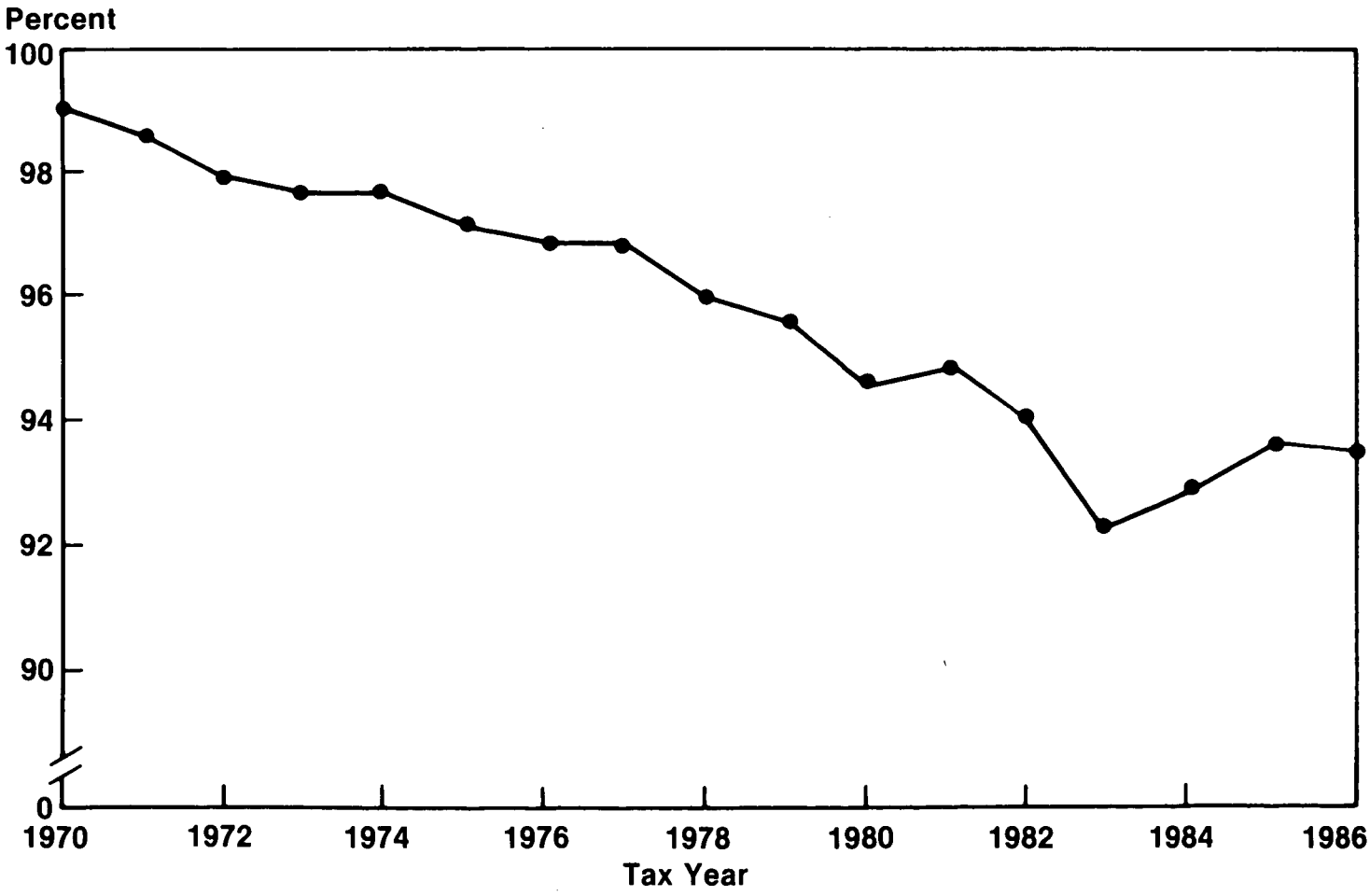
The Taxpayer Usage Study (TPUS) provides statistics on the use taxpayers make of the individual income tax return forms, 1040, 1040A, and 1040EZ, and associated schedules, as well as early information on selected general characteristics of the individual taxpayer population for a given year. This Study, which has been conducted annually since 1969, and previously from time-to-time (starting in the mid-1950's), provides a means of obtaining first indications of trends which would not otherwise be discernible until data became available later in the year from the larger, more complete, SOI samples.

The 1986 TPUS statistics were based on a continual daily random sampling of returns as they were received in the 10 IRS service center mailrooms between January 2 and May 1, 1987. A similar sampling method and similar time period coverage were used in previous TPUS studies since the 1960's, making possible year-to-year comparisons of TPUS data. Currently, TPUS data are published annually in the Summer issue of the *Statistics of Income Bulletin* in the year in which the returns are filed and processed at the service centers [19]. Largely for IRS internal use, weekly statistical summaries are also produced during the January-to-April period.

As is apparent from Figure D, the percentage of individual taxpayers filing returns by the April 15 deadline appears to have declined somewhat in recent years. This decline is

Figure D.

Percentage of Individual Income Tax Returns Filed as of April 15, Tax Years 1970 – 1986



mainly due to the growing number of taxpayers who are taking advantage of the automatic 4-month extension of time in which to file.

The number of data items included in TPUS has grown steadily since its inception, mostly in response to a growing need for early individual income tax return information by tax analysts and tax administrators to assess the effectiveness of new tax laws and tax forms.

TPUS serves its primary purpose of providing early indications of trends in SOI data fairly well. This is evidenced by Figure E which compares TPUS data to both preliminary and final SOI data for Tax Year 1985.

In contrast to TPUS, there are also preliminary SOI data which are based on the regular SOI sample. Returns for the preliminary statistics are sampled through the end of September and results are projected to represent the full year. These data are compiled by the end of the calendar year, months before the final estimates for a tax year become available. Historically, by the end of September approximately 95 percent of the returns to be included in the full SOI sample have been processed. Preliminary data are published in the Winter issue of the *Bulletin* [20].

Therefore, SOI provides data at three distinct stages during its processing cycle. In May, the first characteristics of the tax filing population are available from TPUS. Then, in the winter the more comprehensive preliminary estimates are released on income, deductions, tax, and tax credits by size of AGI. The complete SOI data, based on the full sample, are not generally available until approximately 5 months after release of the preliminary results.

Future Plans

The major focus of changes in the near future for the TPUS program involves the production of improved estimates for the earlier weeks in the filing period. For the Tax Year 1987 program, the sampling rate will be increased to bring in an additional early sample of 10,000 returns (the total sample size for 1986 was about 19,000) for the period January 1 through March 15, 1988 (i.e., an additional 1,000 returns per IRS service center). This should increase the reliability of the early estimates during the period when they are needed most by IRS tax administrators.

The need for reliable early estimates is especially evident for Tax Year 1987, the first complete year under the 1986 Tax Reform Act, and there will be considerable interest in taxpayer reactions to the new forms, computations, and reporting requirements. For this reason, the TPUS weekly reports were expanded to include most of the new tax reform items, as well as to reflect how well taxpayers are complying with new requirements, such as the reporting of dependents' SSN's. Long-range plans involve a feasibility study on integrating TPUS with SOI processing. The object would be to create a data base in each service center which could produce SOI and TPUS-type data beginning early in each filing year.

SALES OF CAPITAL ASSETS STUDIES

Studies on sales of capital assets by individuals are conducted on a periodic basis. Heretofore, studies have focused on the sales transactions reported on Schedule D (the form used to compute capital gains and losses) and on the supplementary schedules for providing transaction data on sales of residences (Form 2119) and personal and business depreciable property (Form 4797), and for the computation of installment sales income (Form 6252).

For the more recent years' studies, the data were estimated from a subsample of the basic SOI sample. This subsample was subjected to intensive special editing to capture the detailed information required regarding the sales of capital assets transactions (which are often reported in a nonuniform manner) and to classify the assets by type.

The first comprehensive study on sales of capital assets was conducted using Tax Year 1936 tax returns [21]. This was followed by studies for 1959, 1962, 1973, 1977 and 1981 [22]. Figure F provides selected data for these years. The four most recent studies present detailed data on gross

Figure E.—Taxpayer Usage Study and Preliminary and Final Statistics of Income Estimates: Comparison of Number of Returns and Adjusted Gross Income, Tax Year 1985

[All figures are estimates based on samples—Number of returns are in thousands; amounts are in millions of dollars]

Size of adjusted gross income	Taxpayer Usage Study[1]		Preliminary SOI[2]		Final SOI[3]	
	Number of returns	Amount	Number of returns	Amount	Number of returns	Amount
	(1)	(2)	(3)	(4)	(5)	(6)
All returns, total	95,307	$2,105,393	101,738	$2,321,887	101,660	2,305,952
Under $10,000[4]	31,363	141,531	33,202	134,352	33,241	127,335
$10,000 under $30,000	39,779	731,483	41,983	780,515	41,984	780,798
$30,000 under $50,000	16,892	647,010	18,424	704,340	18,338	700,857
$50,000 under $100,000	6,276	397,192	6,907	441,598	6,892	441,135
$100,000 or more	997	178,176	1,222	261,082	1,205	255,827

[1] Based on returns filed through April of the filing year.
[2] Based on estimates of returns filed through December of the filing year.
[3] Includes returns with no adjusted gross income.

Figure F.—Number of Returns with Sales of Capital Assets, by Type of Asset or Transaction, Selected Tax Years, 1936–1981

[All figures are estimates based on samples]

Type of assets or transaction	1936	1959	1962	1973	1977	1981
All returns with sales of capital assets	465,612	4,901,694	5,807,945	9,049,598[1]	9,857,489[1]	9,709,727[1]
Corporate stock	352,159[2]	1,749,240	2,121,961	2,561,659	2,760,804	3,426,181
U.S. Government obligations	(2)	41,393	93,236	30,193		134,196
State and local Government obligations	(2)	120,799	52,671	67,305	371,140	243,521
Other bonds, notes, and obligations	(2)	107,691	46,425	128,906		126,357
Commodities, including futures contracts	n.a.	17,550	28,624	73,052	101,414	197,285
Capital gain distributions	n.a.	1,030,615	1,609,255	2,983,492	2,555,012[1]	2,299,503[1]
Share of capital gain or loss from estates, trusts, partnerships, and S corporations	n.a.	427,805	417,507	735,105	766,679	1,132,546
Personal residences	n.a.	54,096	51,138	795,237	1,460,678	1,009,772
Prior-year installment sales proceeds	n.a.	307,315	426,101	860,694	572,433	1,421,364

[1] Includes capital gain distributions not required to be reported on Schedule D, the capital gain computation schedule. For 1971 and subsequent years, taxpayers reported distributions (after excluding the nontaxable portion) directly onto the Form 1040 individual income tax return if they had no other capital gains (or losses) to report.
[2] Data for "sales of corporate stock" also include sales of bonds.
n.a. Not available.

sales price, cost and expense of sale, and gross gain or loss for 25 or more different types of property or capital transactions. Other significant classifications included size of AGI (both before and after the capital gains exclusion), size of net gain or loss, and, for certain asset types, the length of time the asset was held prior to sale. In addition, the 1962 and 1973 statistics were classified by State.

As would be expected, corporate stock has been the asset type most frequently reported. It has also been the largest asset type in terms of the dollars of gains (less losses). Total gains (less losses) from the sales of capital assets has grown continually since 1973. However, as shown in Figure G, sales of business property actually accounted for a larger percentage of the dollar totals until 1981. For that year, sale of residences and the sale of corporate stock each accounted for one fourth of the total gross net gain.

Beginning with the 1973 study, efforts were made to develop a panel of taxpayers over a period of time so that longitudinal analyses of the patterns of reporting gains and losses could be made by Treasury policymakers. Using 1973 as the base year, a subsample of returns was designated for the 2 years prior to, and the 2 years subsequent to, 1973, to provide a 5-year panel. This approach was repeated in connection with the 1981 study which covered 1979–1983, but for a smaller number of taxpayers. The tax return records which constitute this panel contain all the income, deduction, and capital transaction detail for Tax Year 1981; but only income (including totals for capital gains and losses) and deduction data are available for 1979, 1980, 1982, and 1983. No SOI tabulations based on the panel data have been published and, currently, there are no plans to do so.

Future Plans

The Sales of Capital Assets Studies will be conducted on a 5-year cycle. The next study, already underway, will be based on Tax Year 1985 returns [25]. A subsample of the returns has been designated for the next panel. Plans are to continue this panel for at least 5 years, thus offering users the capability of tracking these taxpayers through the first years under the Tax Reform Act of 1986.

OTHER SOI STUDIES

This section provides a summary of several of the smaller SOI studies which are based on data from the IRS Master File system. Since many of these studies are done on a cost-reimbursable basis, future plans to repeat them are indefinite.

W-2 Earnings Statement and Related Data

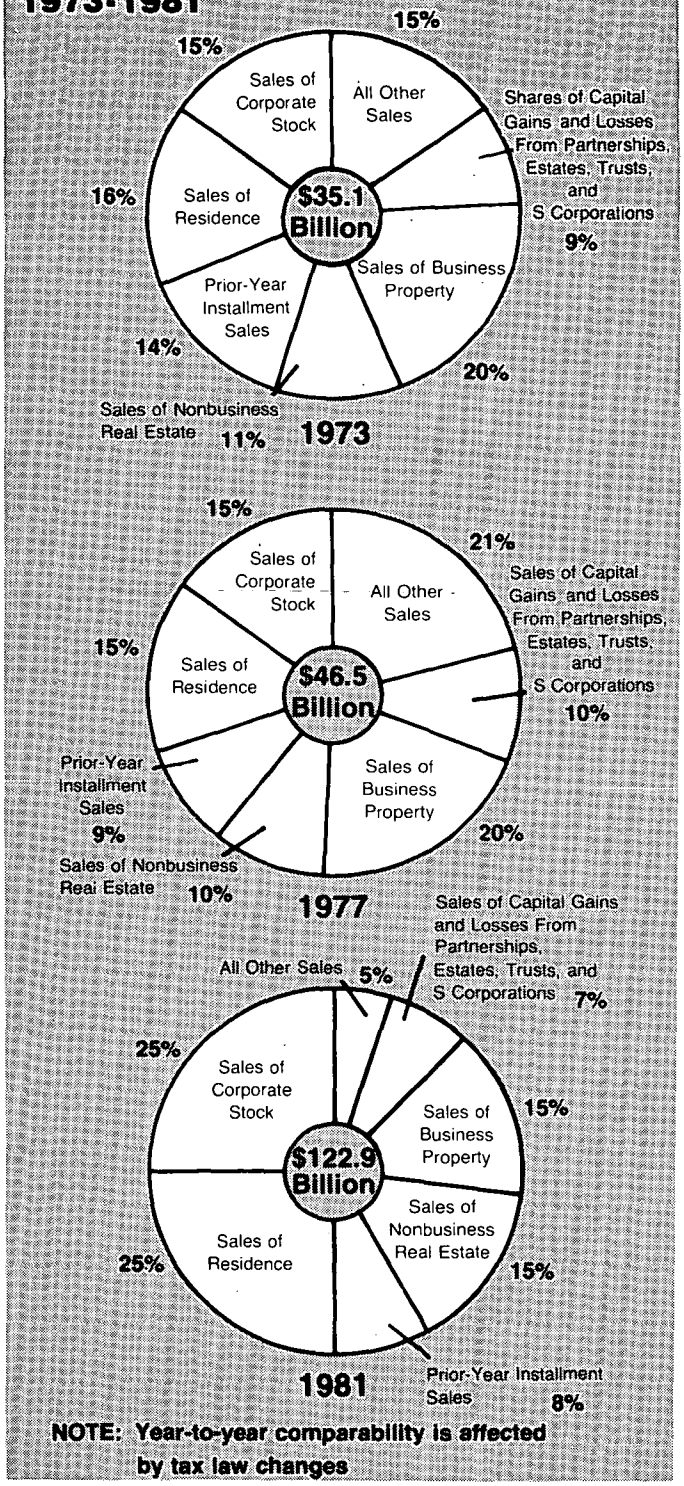
The Form W-2, Wage and Tax Statement (and the Form W-2P, Statement for Recipients of Annuities, Pensions, Retired Pay or IRA Payments) is filed by employers with the Social Security Administration (SSA) and by taxpayers with their individual income tax returns. The most recent statistical studies based on the Form W-2 were conducted for Tax Years 1969, 1974, 1979, and 1983. Other studies are now planned for 1985 and 1987. The purpose of the W-2 Earnings Statement Study is to provide the Office of Tax Analysis and others with:

- information on the income and taxation of two-earner (or two-pension) couples;
- the combined effect of the income tax and the social security (FICA) tax on individual taxpayers; and
- the impact of the tax system on various age groups of individual taxpayers (which first requires a linkage between the W-2 data file and the SSA year-of-birth file).

For the 1979 and 1983 studies, the W-2 Study file has been created by obtaining the Form W-2 and W-2P data from the IRS Master File system, as well as the taxpayers' birth dates from year-of-birth file for all taxpayers whose returns are included in the regular SOI sample. The project is now undertaken for odd-numbered tax years. Data are

Figure G

Gross Gains Less Losses From Sales of Capital Assets, by Type of Asset or Transaction, Selected Tax Years 1973-1981



made available to the Office of Tax Analysis in the form of a microdata tape file, and to the general public in the form of tables published in the *Statistics of Income Bulletin* [23].

Mortality Study

The Mortality Study is reimbursable, sponsored by the National Cancer Institute (NCI) to determine whether occupational data from individual income tax returns can be used to establish differential mortality rates for various occupations. Data used for the study include the occupation-coded data file of tax returns used for the regular 1979 SOI program (described below), the corresponding SOI file for sole proprietorships, the SSA year-of-birth file, and the National Death Index (from the National Center for Health Statistics) which verifies the fact of death and contains the death certificate number. Still to be added are cause of death, and the death certificate occupation/industry from death certificates obtained from State Governments.

The current project involves coding deaths in 1979–1984 of taxpayers who filed returns for Tax Year 1979. A major technical problem has been identifying "true" matches to the National Death Index. While an algorithm has been developed by the Statistics of Income Division to assist in distinguishing erroneous matches from true matches, it still may need testing against other algorithms developed by other researchers in the field.

Occupation Coding

For recent years, only one full-scale study of occupation coding has been attempted [24]. This feasibility study involved individual income tax returns (Forms 1040 and 1040A) included in the 1979 SOI sample. The methodology used was to transcribe the occupation title entered by the taxpayer on the tax return and to obtain the industry code from the SSA employer file for use in perfecting the taxpayer's entry. In order to match the tax returns with the employer file, the tax returns were first linked to the corresponding Forms W-2 (using the taxpayer's SSN). The employer identification number of the taxpayer's employer reported on the W-2 was then recorded and used to access the employer file. A computerized occupation-coding dictionary was then created which contained the "standard occupational classification" codes corresponding to the combinations of occupation titles and industry codes actually found on the sampled returns [25].

Efforts since 1985 have been directed mainly at perfecting the computerized dictionary and developing an imputation scheme for returns with missing occupation titles or industry codes. Using any revised methodology, plans call for creating a new file for 1979, and then comparing the results to data from the 1980 Census. A public use file of occupation-coded 1979 Form W-2 data (without the corresponding industry codes from SSA) will be made available, and occupation-coding projects accepted on a reimburs-

able basis for a number of possible sponsors, including the Department of Defense in connection with its studies of the career advancement of former members of the Armed Forces. In addition, occupation reported on tax returns for subsequent years will be reviewed for a small number of taxpayers included in the 1979 SOI sample to determine how often occupations change over time.

Plans for the future hinge on whether there is sufficient support within IRS or in the Office of Tax Analysis for a larger-scale project. If there is, an occupation question may be considered for the Form 1040EZ filed by certain single taxpayers with no dependents (presently occupational information is requested only on Forms 1040 and 1040A), so that an occupation code can be transcribed during administrative processing for a pre-determined sample of tax returns.

In addition, with the increasing number of returns filed electronically by private tax practitioners, a method will have to be found to capture the occupation entry on these returns. In addition, industry codes from the IRS Master File system may be used in lieu of those from SSA.

Taxpayer Migration Data

The taxpayer migration study is probably one of the largest panel studies ever undertaken, since it uses a "100 percent sample." It is not an IRS study, strictly speaking, but it does involve data files that are provided by the IRS to the Bureau of the Census, as allowed by the Internal Revenue Code for certain statistical purposes. Quite simply, what Census does is to match every IRS record for individual income tax returns filed from January through September of a given year to the previous year's record. The Census Bureau uses tax return records for, among other purposes, making intercensal population and income estimates and to provide county and minor civil division level data. (The latter was used until recently by the Department of the Treasury for the former Federal Revenue Sharing program). Tabulations are also produced for the Statistics of Income Division. These tabulation are available to the public on a reimbursable basis.

The matching of tax return records is in part an operational necessity. While the Census Bureau has elaborate programs to derive county and minor civil division data from street and city addresses, the system is not completely reliable in many geographic "border" areas. Furthermore, taxpayers frequently use a business or post office box address on their returns. A question that appeared on the tax return from time to time through 1980, about the exact governmental unit in which a taxpayer lived, was formerly used to help perfect the address. For more recent years, Census has had to code the records as best it can. To help increase accuracy, Census now compares the street and city address on each tax return record to that used in the previous year. Only if the address has changed is an attempt made to generate a new geographic location code.

Among the series of data which Census creates from these files are "migration flow data"—matrices which show from where to where the population is shifting; and "county migration data," which show the "in's" and "out's" for each county, i.e., how many taxpayers entered and left the county within a given period of time, how many exemptions they claimed, and, for some years, the amount of income for in-migrants, out-migrants, and non-migrants.

Obviously, such statistics are of great interest to Government planners at the local level who want to know what is happening to their tax base and what can be expected to happen in the way of demand for services. Local retailers also find these statistics to be of great value. Most of the people who request the data want them for only a few counties, or for just one State.

As it turns out, the average income of migrants is considerably less than that of non-migrants, at least for the year immediately preceding migration. For example, comparing matched Tax Year 1979 to Tax Year 1981 data, the average 1979 AGI of those taxpayers who were about to leave their county of residence was $14,227, or 82 percent of the average income of the taxpayers who were remaining in their county of residence. At the end of this 2-year period, the income of the migrants had risen to an average of $17,935; this represented 85 percent of the income of the non-migrants. In other words, migration appears to have had a small but noticeable positive effect on income; actually, since some of the second-year income may have been earned at the former place of residence, and since it frequently had been reduced on the tax return by the deduction for moving expenses, following these returns for 1 more year might show that the average incomes of the migrants moved even closer to those of the non-migrants.

Department of Defense (DOD) Salary Study

The Department of Defense (DOD) Salary Study is the result of a public law which requires that Department to perform an evaluation of the military pay structure at least once every 4 years. Part of this study entails following the earnings of persons who leave the Armed Forces—"separatees" as they are called—to learn what the "opportunity costs" are for persons who remain in the Armed Forces.

The sample of separatees is chosen by DOD to represent a wide range of length-of-service, rank, age, military occupation, and year-of-separation groupings. Once selected for the sample, the individual remains in it for the duration of

the study; however, new separatees are sampled each year. DOD provides IRS with the SSN's of the separatees along with codes indicating their DOD characteristics, e.g., length-of-service and rank. The Statistics of Income Division then obtains the total salaries and wages reported on Form W-2 records by the employers of these taxpayers. Using Forms W-2 rather than income tax returns as the source of wage data permits information to be obtained separately on the former members of the Armed Forces as well as their spouses.

Because of taxpayer rights of privacy, tax return-identifiable data cannot, of course, be released to DOD. All SSN's are, therefore, removed from the data before they are released. Furthermore, steps are taken to be sure that DOD has supplied at least three individuals with any given combinations of DOD characteristics, so that DOD will not be able to match back to the SSN's using the characteristics data.

One of the limitations of this panel is missing data. There are no indicators on the Form W-2 file which would indicate whether a person for whom no data are available is self-employed, unemployed, retired, or deceased. Therefore, there is no way to determine whether the lack of data was the result of a processing error, e.g., incorrect transcription of the SSN. At present, the only alternative is to omit these individuals from the analysis.

In spite of these limitations, DOD has reached some interesting conclusions from comparing the incomes of separatees to those of the population as a whole, as well as to those of individuals who remained in the Armed Forces. For example, it appears that a short career in the Armed Forces—up to 4 years for enlisted men, up to 8 years for officers—is quite beneficial to future earning power. Individuals who leave the Armed Forces within those periods earn more in civilian life than do their counterparts who never served. However, after about 12 years of service, there is definitely no competitive edge, and after 16 years, separatees tend to earn less than both those who never served and those who remain in the Armed Forces.

Not surprisingly, the post-service earnings patterns differed considerably for persons in different military occupations. For example, physicians and dentists did extremely well, no matter when they left the Armed Forces. Persons in aviation-related jobs did very well if they left early, but not nearly as well if they stayed on in the Armed Forces for any length of time before they left. Based on such findings, DOD came up with recommendations for bonuses and incentive payments specific to each military occupation.

NOTES AND REFERENCES

[1] See also Skelly, Daniel F., and Hobbs, James R., "Statistics of Income Studies of International Income and Taxes," *Statistics of Income Bulletin,* Fall 1986, Volume 6, Number 2, and Skelly, Daniel F., and Kozielec, John A., "Statistics of Income Domestic Special Studies," *Statistics of Income Bulletin,* Fall 1987, Volume 7, Number 2.

[2] Studies based on sole proprietorship schedules attached to individual income tax returns are discussed in the Spring 1988 issue of the *Statistics of Income Bulletin,* in an article on SOI studies of business income and taxes. Studies on individual income earned abroad and on the foreign tax credit claimed by individuals are discussed in the Fall 1986 issue of the *Bulletin*, in an article on SOI studies of international income and taxes. See also, Wolfe, Raymond M., "Sole Proprietorship Returns, 1985" and Paris, David, "Foreign Income and Taxes Reported on U.S. Individual Tax Returns, 1983: An Overview," *Statistics of Income Bulletin,* Summer 1987, Volume 7, Number 1.

[3] Much of the material appearing in this section is borrowed from a previous *Bulletin* article. See Paris, David and Hilgert, Cecelia, "70th Year of Individual Income and Tax Statistics, 1913–1982," *Statistics of Income Bulletin*, Winter 1983–1984, Volume 3, Number 3. See also, *Statistics of Income—50th Year, Historical Summary, 1916–1965,* Statistics Division, Internal Revenue Service (unpublished report).

[4] Exhibit 1 is updated from Blacksin, Jack and Plowden, Ray, "Statistics of Income for Individuals: A Historical Perspective," *1981 American Statistical Association Proceedings, Section on Survey Research Methods.*

[5] The latter definitions were introduced mainly to facilitate analysis of data reported on returns of high-income taxpayers by the Office of Tax Analysis in the Office of the Secretary of the Treasury. Results of this analysis are contained in an annual report to Congress that is required under the Revenue Act of 1976. This report is currently published in the annual *Statistics of Income—Individual Income Tax Returns.* Additional analyses, including comparisons with prior years, are published each year in the *Statistics of Income Bulletin*; see, for example, Lerman, Allen H., "High-Income Returns for 1984," *Statistics of Income Bulletin,* Spring 1987, Volume 7, Number 2.

[6] Since Tax Year 1982, a limited amount of data by State has been available from the Master File system. These data are published in the Selected Statistical Series section of the *Statistics of Income Bulletin* (which also includes a short description of why there are some differences between statistics by State based on the SOI sample and statistics by State based on the

administrative data from the Master File system). These data are updated annually in the Fall issue. For future plans to provide data by State, see the discussion below, under "Tax Model."

[7] U.S. Department of the Treasury, Internal Revenue Service, *Statistics of Income—1985, Individual Income Tax Returns.*

[8] For preliminary data for 1986, see Shiley, Martha, and Kalish, Robert, "Individual Income Tax Returns, Preliminary Data, 1986," *Statistics of Income Bulletin,* Winter 1987–1988, Volume 7, Number 3.

[9] *Ibid.*

[10] See Franklin, Corman G., "Projections of Returns to be Filed in Fiscal Years 1988–1995," *Statistics of Income Bulletin,* Fall 1987, Volume 7, Number 2.

[11] The number of exemptions claimed on tax returns gives a count of the number of individuals actually covered by the tax filing system. There are, however, some adjustments that have to be made to the number of exemptions to compensate for over- and undercounting of individuals. Prior to enactment of the Tax Reform Act of 1986, these included: subtraction of the extra exemptions for age and blindness, elimination of duplicate counting of dependents with unearned income, and adjustments to compensate for overcounting of certain deceased taxpayers, dependents with earned income, and dependents of divorced tax return filers. The 1986 Act modified some of the adjustments that were previously required. For more information on comparability of census population counts and counts obtainable from individual income tax returns, see, for example, Alvey, Wendy, and Scheuren, Fritz, "Background for an Administrative Record Census," *1982 Proceedings of the American Statistical Association, Section on Survey Research Methods.*

[12] The shortcomings of the tax return reporting unit and of "taxable" income (in contrast to "economic" income) for use in tax research have long been recognized, especially when estimating the revenue effects of new tax proposals. Starting with the SOI Tax Model file, Office of Tax Analysis economists have attempted to overcome these limitations by combining tax return data into "families" through "statistical" matches (in contrast to "exact" matches) with Bureau of the Census data (that include income data for "households") on the basis of units having similar characteristics. However, this kind of match is imperfect at best. As a result, the Statistics of Income Division has been asked to address some of these shortcomings based on new information reported on the individual income tax return. Efforts will be directed to creating the family, using identifying information on the tax return starting with 1987, which will enable the separate tax returns of family members to be identified and associated for inclusion in future SOI samples. In addition, new data on income reported as a result of 1986 and other recent law changes, e.g., on tax-exempt interest on State and local Government obligations, should enable SOI to compute a measure of income that is closer, conceptually, to "economic" income.

For a discussion of SOI usage of "adjusted gross income" (AGI) in historical perspective and a consideration of alternative economic income concepts, see Hostetter, Susan, "Measuring Income for Developing and Reviewing Individual Income Tax Law Changes: Exploration of Alternative Concepts," *Statistics of Income and Related Administrative Record Research: 1986–1987,* Internal Revenue Service, U.S. Department of the Treasury, 1987. For a discussion of the family income concept that has been used by economists in the Office of Tax Analysis, see Nelson, Susan C., "Family Economic Income and Other Income Concepts Used in Analyzing Tax Reform," *Compendium of Tax Research, 1986,* Office of Tax Analysis, U S. Department of Treasury, 1987. For a broader review of problems in tax modelling for tax reform by a former member of the Office of Tax Analysis, see Bristol, Ralph B., Jr., "Tax Modelling and the Policy Environment of the 1990's," *Multi-National Tax Modelling Symposium Proceedings,* Revenue Canada Taxation, 1985.

[13] *Ibid.*

[14] For a discussion of research undertaken and methods instituted to protect taxpayer confidentiality in the Tax Model, see Strudler, Michael, Oh, H. Lock, and Scheuren, Fritz, "Protection of Taxpayer Confidentiality with Respect to the Tax Model", *1986 Proceedings of the American Statistical Association, Section on Survey Research.* For discussions of special techniques for protecting confidentiality in statistical data derived from administrative records, see also Spruill, Nancy L., "Measures of Confidentiality," *Statistics of Income and Related Administrative Record Research: 1982,* Internal Revenue Service, U. S. Department of the Treasury, 1982, and Spruill, Nancy L., "The Confidentiality and Analytic Usefulness of Masked Business Microdata." *1983 Proceedings of the American Statistical Association, Section on Survey Research Methods.*

[15] For two examples of Brookings Institution publications which relied heavily on the SOI Tax Model File, see Pechman, Joseph A., *Who Paid the Taxes, 1966–1985,* The Brookings Institution, 1985, and *Federal Tax Policy,* 5th Edition, The Brookings Institution, 1987.

[16] Further information about the most recent Public-Use Tax File or State Tax Model File can be obtained by writing to the Director, Statistics of Income Division, TR:S, Internal Revenue Service, 1111 Constitution Avenue, N.W., Washington, DC 20224 and requesting a copy of the "General Description Booklet for the 1985 Individual Tax Model File," or the "General Description Booklet for the 1985 Individual State Tax Model File."

The Public Use Tax Model File (and tabulations based on the In-house File) may be obtained on a cost-reimbursable basis by writing to the Director, Statistics of Income Division, at the address given above. Requests from State tax administration agencies for the State Tax Model File for their own particular State should be addressed to the District Director, Internal Revenue Service, for a district office that serves that State.

[17] For a brief description of the IRS Master File system and the relationship between statistical and administrative processing of tax returns, see Wilson, Robert A., "Statistics of Income: A Byproduct of the U.S. Tax System," *Multi-National Tax Modelling Proceedings,* Revenue Canada Taxation, 1985.

[18] For an example of how the Public-Use Tax Model File was used by the Congressional Budget Office (CBO), see *The Changing Distribution of Federal Taxes: 1975–1990,* Congressional Budget Office, Congress of the United States, 1987. For this study, the CBO used the 1977 and 1984 Public-Use Tax Models, and then regressed the data backward to 1975 and projected it forward to 1990 (encompassing the full effects of the Tax Reform Act of 1986).

[19] See, for example, Weber, Michael E., and Paris, David P., "Individual Income Tax Returns for 1986: Selected Characteristics from the Taxpayer Usage Study," *Statistics of Income Bulletin*, Summer 1987, Volume 7, Number 1.

[20] See, Shiley, Martha, and Kalish, Robert, *op. cit.*

[21] Additional information on the Tax Year 1936 study can be found in *Statistics of Income Supplement Compiled from Income Tax Returns for 1936, Section IV, Capital Gains and Losses,* and in Seltzer, Lawrence H., *The Tax Treatment of Capital Gains and Losses,* National Bureau of Economic Research, 1951. The 1936 study was preceded by more limited studies for Tax Years 1930, 1932, and 1933, using selections of returns that showed sales of stocks and bonds only. All four studies were conducted with assistance from the Works Projects Administration and, in addition, for 1933, from the National Bureau of Economic Research, and all were included in compilations that are part of the unpublished *Source Book of Statistics of Income* for these years.

[22] For additional information on Sales of Capital Assets, see *Supplemental Report, Statistics of Income—1973, Sales of Capital Assets Reported on Individual Income Tax Returns.* See also, Brame, Bertie, and Gilmour, Keith, "Sales of Capital Assets, 1973–1980," *Statistics of Income Bulletin*, Summer 1982, Volume 2, Number 1, and Clark, Bobby, and Paris, David, "Sales of Capital Assets, 1981 and 1982," *Statistics of Income Bulletin,* Winter 1985–86, Volume 5, Number 3.

[23] See, for example, Windheim, Barry, and Crossed, Charles, "Salaries and Wages Reported on Form W-2, by Marital Status and Age, 1983," *Statistics of Income Bulletin,* Winter 1987–1988, Volume 7, Number 3.

[24] To date, the only complete study of occupations based on individual income tax returns was published in the *Statistics of Income* report for Tax Year 1916; there were 36 categories for which data were provided.

[25] The "standard occupational codes" are contained in the *Standard Occupational Classification Manual*, Office of Federal Statistical Policy and Standards, U.S. Department of Commerce, 1980.

Exhibit 1.—Types of Data Published in Individual Statistics of Income Reports for Selected Tax Years, 1916–1985

Subject	Number of tables by selected tax year														
	1916	1921	1926	1931	1936	1941	1946	1951	1956	1961	1966	1971	1976	1981 [1]	1985 [1]
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Total number of tables															
All tables, total	17	22	20	26	26	28	25	19	30	48	89	68	64	36	20
Text tables	10	12	10	14	13	15	11	5	12	19	30	18	15	14	3
Basic tables	7	10	10	12	13	13	14	14	18	28	59	50	49	21	17
Number of basic tables															
Sources of income, total	5	5	7	4	7	8	6	10	5	11	25	15	11	8	8
By size of net income or adjusted gross income[3]	2	3	3	2	4	5	1	3	1	2	5	2	4	5	5
By size or type of income source										2	4	3	1		
By frequency of source							2	4	2	3	6				
By marital status	1		1	1	1	1	1	1	1	2	3	6	3	1	3
By State	1	2	2	1	2	2	2	2	1	2	3	2	2	2	
For age 65 or over											4	2	1	1	1
Deductions, total			1	2	1		3	1	5	4	18	5	10	4	2
By size of net income or adjusted gross income[2]				1			3	1	4	3	3	3	2	1	1
By size or type of deduction									1	1	7				
By marital status											3	2	2	1	1
By State			1	1	1						2		1	1	
For age 65 or over														1	
As percentage of income											3		5		
Exemptions, total							1	1	1	1	4	2	3	4	2
By size of adjusted gross income							1				1			1	1
By marital status									1				1	1	1
By State											1	1	1	1	
By type of exemption											2	1	1	1	
Tax liability, total							2		5	7	7	21	12	6	6
By size of net income or adjusted gross income [2]							2		1		1	6	1	3	1
By type of computation												8	5	1	1
By marginal tax rate									1	7	5	7	6		2
By State											1				1
As percentage of income									3					1	1
By marital status														1	
Tax credits and payments, total				2							1		7	4	1
By size of net income or adjusted gross income[2]				1							1		5	2	1
By size of credit or payment															
By State				1									2	2	
Balance due or overpayment, total					2		1	1			2	3	2	1	
By size of net income or adjusted gross income[2]					2		1	1				1		1	
By size or type of item											2	2	2		
Other classifications, total	2	5	3	4	3	5	1	1	2	5	2	4	4	3	
Occupation	1														
Taxable and nontaxable returns						1			1	1		1	1	1	
Sex of taxpayer	1	2	1	1	1	1									
Returns with no adjusted gross income[2]				2	2	3									
Form 1040A returns										1	1		2		
Presidential campaign checkoff													1		
Historical data		1	1	1			1	1	1	1	1			2[3]	2[3]
County		1	1												
City		1													
Standard metropolitan statistical area										2		3			
Returns with residential energy tax credits														2	

[1] For Tax Years 1981 and 1985 the number of basic tables under each category do not add to the "Basic tables" total becasue of a table redesign that began with Tax Year 1980. Beginning with Tax Year 1980 many tables previously shown separately were combined with others.

[2] "Net income" for 1916 through 1943; "adjusted gross income" thereafter.

[3] Published in the Selected Statistical Series section of the SOI Bulletin and therefore not reflected in the totals above.

Table I.—Number of Returns, Leading Sources of Income, Adjusted Gross Income, and Tax, Tax Years 1913–1986

[For most years, figures are estimates based on samples—number of returns are in thousands; money amounts are in millions of dollars]

Tax Year	Returns			Leading sources of income						Adjusted gross income (less deficit)	Income tax before credits	Total tax liability[5]
	Number	Increase or decrease (–)		Salaries and wages[1]	Sole proprietorships and partnerships[2]	Dividends[3]	Taxable interest[4]	Total				
		Number	Percent					Amount	Percentage of adjusted gross income			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Individuals with income only, and estates and trusts with taxable income											
1913[6]	358	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	N/A	N/A	28	28
1914	358	([7])	([8])	n.a.	n.a.	n.a.	n.a.	n.a.	N/A	N/A	41	41
1915	337	–21	–5.8	n.a.	n.a.	n.a.	n.a.	n.a.	N/A	N/A	68	68
1916	437	100	29.7	1,851	n.a.	2,136	n.a.	n.a.	N/A	N/A	173	173
1917	3,473	3,036	694.7	3,648	3,640	2,849	n.a.	n.a.	N/A	N/A	795	795
1918	4,425	952	27.4	8,267	4,339	2,469	n.a.	n.a.	N/A	N/A	1,128	1,128
1919	5,333	908	20.5	10,756	5,709	2,454	n.a.	n.a.	N/A	N/A	1,270	1,270
1920	7,260	1,927	36.1	15,323	4,922	2,736	n.a.	n.a.	N/A	N/A	1,075	1,075
1921	6,662	–598	–8.2	13,813	3,707	2,477	n.a.	n.a.	N/A	N/A	719	719
1922	6,787	125	1.9	13,694	4,267	2,664	n.a.	n.a.	N/A	N/A	862	861
1923	7,698	911	13.4	14,195	6,399	3,120	n.a.	n.a.	N/A	N/A	882	662
1924	7,370	–328	–4.3	13,618	6,565	3,251	n.a.	n.a.	N/A	N/A	744	704
1925	4,171	–3,199	–43.4	9,742	5,516	3,465	n.a.	n.a.	N/A	N/A	767	735
1926	4,138	–33	–0.8	9,994	5,306	4,012	n.a.	n.a.	N/A	N/A	761	732
1927	4,102	–36	–0.9	10,218	5,043	4,255	1,723	21,239	N/A	N/A	862	831
	Individuals with income or deficit, and estates and trusts with taxable income											
1928	4,144	42	1.0	10,945	5,2237	4,440	n.a.	n.a.	N/A	N/A	1,204	1,164
1929	4,137	–7	–0.2	11,373	5,2827	5,081	n.a.	n.a.	N/A	N/A	1,029	1,002
1930	3,852	–285	–6.9	10,206	3,102	4,632	n.a.	n.a.	N/A	N/A	512	477
1931	3,411	–441	–11.4	8,631	2,016	3,600	n.a.	n.a.	N/A	N/A	288	246
1932	4,084	673	19.7	8,356	1,229	2,189	1,307	13,081	N/A	N/A	402	330
1933	3,892	–192	–4.7	7,565	1,746	1,711	1,106	12,128	N/A	N/A	425	374
1934	4,198	306	7.9	8,681	2,125	2,041	995	13,842	N/A	N/A	511	511
1935	4,670	472	11.2	9,972	2,387	2,288	980	15,627	N/A	N/A.	657	657
1936	5,486	816	17.5	11,718	3,210	3,288	955	19,111	N/A	N/A	1,214	1,214
1937	6,386	900	16.4	14,206	3,359	3,248	856	21,669	N/A	N/A	1,142	1,142
	Individuals with income or deficit											
1938	6,251	–135	–2.1	13,307	3,120	2,212	823	19,462	N/A	N/A	766	766
1939	7,653	1,402	22.4	16,491	3,674	2,544	832	23,541	N/A	N/A	929	929
1940	14,711	7,058	92.2	27,707	5,407	2,999	1,003	37,116	N/A	N/A	1,496	1,496
1941	25,870	11,159	75.9	47,140	8,455	3,299	1,029	59,923	N/A	N/A	3,908	3,908
1942	36,619	10,749	41.6	65,617	12,391	2,833	982	81,823	N/A	N/A	8,927	8,927
1943	43,722	7,103	19.4	82,755	15,717	2,780	886	102,138	N/A	N/A	14,607	31,736
1944	47,111	3,389	7.8	91,125	17,250	3,924		112,299	96.4	116,465	16,225	16,216
1945	49,932	2,821	6.0	91,700	19,003	3,925		114,628	95.5	120,009	17,061	17,050
1946	52,817	2,885	5.8	99,174	23,267	3,674	1,067	127,182	94.9	134,083	16,092	16,076
1947	55,099	2,282	4.3	114,804	23,295	4,295	1,125	143,519	95.8	149,736	18,092	18,076
1948	52,072	–3,027	–5.5	125,881	24,506	4,971	1,293	156,651	95.8	163,516	n.a.	15,442
1949	51,814	–258	–0.5	124,883	21,705	5,246	1,528	153,362	95.5	160,574	n.a.	14,538
1950	53,060	1,246	2.4	139,073	23,429	6,157	1,595	170,254	95.0	179,148	n.a.	18,375
1951	55,447	2,387	4.5	160,482	24,878	6,056	1,702	193,118	95.4	202,337	n.a.	24,439
1952	56,529	1,082	2.0	174,339	24,754	5,860	1,847	208,800	97.0	215,290	27,823	28,020
1953	57,838	1,309	2.3	187,734	24,951	5,828	2,043	220,556	96.4	228,708	29,450	29,657
1954	56,747	–1,091	–1.8	185,953	25,452	7,048	2,370	220,823	96.3	229,221	26,874	26,666
1955	58,250	1,503	2.6	200,712	27,454	7,851	2,584	238,601	96.0	248,530	29,983	30,077
1956	59,197	947	1.6	215,618	30,137	8,606	2,872	257,233	96.1	267,724	33,134	33,265
1957	59,825	628	1.1	228,077	29,698	9,124	3,319	270,218	96.4	280,321	34,816	34,975

Table I.(Continued)—Number of Returns, Leading Sources of Income, Adjusted Gross Income, and Tax, Tax Years 1913–1986

[For most years, figures are estimates based on samples—number of returns are in thousands; money amounts are in millions of dollars]

Tax Year	Returns			Leading sources of income						Adjusted gross income (less deficit)	Income tax before credits	Total tax liability[5]
	Number	Increase or decrease (–)		Salaries and wages[1]	Sole proprietorships and partnerships[2]	Dividends[3]	Taxable interest[4]	Total				
		Number	Percent					Amount	Percentage of adjusted gross income			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1958	59,085	–740	–1.2	227,551	29,906	8,741	3,659	269,857	96.0	281,154	34,755	34,925
1959	60,271	1,186	2.0	247,370	30,994	9,356	4,395	292,115	95.7	305,094	39,092	39,347
1960	61,028	757	1.3	257,918	30,038	9,530	5,057	302,543	95.9	315,466	39,909	40,298
1961	61,499	471	0.8	266,902	31,578	9,890	5,683	314,053	95.2	329,861	42,715	43,066
1962	62,712	1,213	2.0	283,373	33,269	10,640	7,155	334,437	95.9	348,701	45,692	45,790
1963	63,943	1,231	2.0	299,443	33,184	11,452	9,212	353,291	95.8	368,778	49,117	49,216
1964	65,376	1,432	2.2	323,266	35,358	11,917	10,125	380,666	96.0	396,660	47,897	48,185
1965	67,596	2,221	3.4	347,150	38,559	12,961	11,296	409,966	95.5	429,201	50,144	40,632
1966	70,160	2,564	3.8	381,067	42,179	13,998	13,225	450,469	96.2	468,451	56,773	57,627
1967	71,652	1,492	2.1	411,646	43,745	14,202	14,899	484,492	96.0	504,809	63,656	64,524
1968	73,729	2,077	2.9	451,505	45,502	15,222	16,782	529,011	95.4	554,420	72,261	78,419
1969	75,834	2,105	2.9	498,865	47,683	15,740	19,626	581,914	96.4	603,546	79,643	88,524
1970	74,280	–1,554	–2.0	531,884	45,981	15,807	22,021	615,693	97.5	631,693	82,138	85,767
1971	74,576	296	0.4	564,967	47,057	15,671	24,731	652,426	96.9	673,619	85,943	87,469
1972	77,573	2,997	4.0	622,599	51,729	16,794	27,400	718,522	96.3	745,975	94,442	95,949
1973	80,693	3,120	4.0	687,179	52,985	18,734	32,174	791,074	95.6	827,140	109,395	111,175
1974	83,340	2,647	3.3	758,629	57,633	20,888	39,543	876,693	96.8	905,523	125,079	127,003
1975	82,229	–1,111	–1.3	795,399	55,796	21,892	43,434	916,521	96.7	947,785	132,452	127,939
1976	84,670	2,441	3.0	880,999	61,514	24,462	48,511	1,015,486	96.4	1,053,896	153,534	145,749
1977	86,635	1,965	2.3	969,404	65,243	27,020	54,603	1,116,270	96.4	1,158,492	172,112	164,024
1978	89,772	3,137	3.6	1,090,292	74,441	30,206	61,223	1,256,162	96.4	1,302,447	203,804	193,185
1979	92,694	2,922	3.3	1,229,251	73,369	33,483	73,875	1,409,978	96.2	1,465,395	220,100	220,100
1980	93,902	1,208	1.3	1,349,843	63,436	38,761	102,009	1,554,049	95.7	1,613,731	256,294	256,251
1981	95,396	1,494	1.6	1,486,100	44,305	178,098		1,708,503	96.4	1,772,604	293,590	291,127
1982	95,377	19	([8])	1,564,995	50,993	52,142	157,021	1,825,151	98.5	1,852,135	283,932	284,708
1983	96,321	944	1.0	1,644,513	61,872	48,557	153,805	1,908,807	98.3	1,942,590	279,842	282,318
1984	99,439	3,118	3.2	1,807,138	55,403	48,641	176,369	2,087,551	97.6	2,139,904	306,686	312,534
1985	101,660	2,221	2.2	1,928,201	64,241	55,046	182,109	2,229,597	96.7	2,305,951	332,165	338,765
p1986	103,300	1,640	1.6	2,046,135	88,913	63,074	168,202	2,366,324	93.8	2,522,517	378,422	390,796

n.a. — Not available.
N/A — Not applicable.
p — Preliminary.

[1] Includes income from "professions and vocations" for 1916; earned income from partnerships, 1916–1926; wages of the taxpayer and of the spouse and dependent minors from sole proprietorships, 1916–1923, and of the spouse and dependent minors only, 1944–1949. For 1944–1965, excludes small amounts not subject to tax withholding; for 1954–1963, amounts shown are after sick pay exclusion and certain allowable employee expenses.

[2] Includes net gain from sales of certain capital assets and other kinds of property for 1916; and income from sole proprietorships and partnerships for all years except those specified in footnote 1. However, prior to 1930 income was not reduced by deficits reported by loss busineses. Also, starting 1966, includes income from S Corporations.

[3] In general, includes all domestic and foreign dividends starting 1936, except for certain small amounts for 1944–1965; previously, certain foreign dividends were excluded. Includes stock dividends, 1916–1919. The combined total for dividends and interest for 1944–1945 includes partially tax-exempt interest. Amounts for 1954–1986 are after subtraction of dividend exclusion. For 1981, because of a one-time combined interest and dividend exclusion, the amount shown is a combination of interest and dividends after exclusion; before exclusion, dividends alone were $48,161 million. Prior to 1936 and for 1954–1986, includes dividends received through partnerships, estates, and trusts.

[4] In general, prior to 1966, excludes generally small taxable amounts. For 1944–1961, includes partially tax-exempt interest For 1981, because of a one-time combined interest and dividend exclusion, the amount shown is a combination of interest and dividends after exclusion; before exclusion, interest alone was $140,559 million.

[5] In addition to income tax after credits, includes such other taxes as excess profits tax, 1917; defense tax, 1940; victory tax, 1943; self-employment (social security) tax, starting 1951; tax from recomputing prior-year investment credit, starting 1963; income tax surcharge, 1968–1970; minimum tax, 1970–1982; and alternative minimum tax starting 1979. Also, for 1913–1915, includes fines, penalties, additional assessments, and the like, in addition to the tax liability reported on the income tax return.

[6] Tax Year 1913 covered only 10 months, March-December 1913.

[7] Decrease under 500 returns.

[8] Less than 0.05 percent.

NOTE: Year-to-year comparability is affected by tax law changes which are in addition to those reflected in footnotes 1–5; see *Statistics of Income* reports for the appropriate year for further information. Detail may not add to totals because of rounding.

Statistics of Income Studies of Business Income and Taxes

by Dan Rosa and Dorothy Collins*

This article on business income and taxes is the fourth in a series on the Statistics of Income (SOI) program [1]. Previous articles presented the international statistics program, domestic special studies such as those on tax-exempt organizations and estate taxes, and most recently the studies of individual income and taxes. The present article covers the annual corporation, partnership, and sole proprietorship programs and related studies.

The primary users of studies on business income and taxes in the Federal Government have traditionally been and continue to be the Office of Tax Analysis in the Office of the Secretary of the Treasury, the Congressional Joint Committee on Taxation, and the Bureau of Economic Analysis in the Department of Commerce. Since 1980, however, the Small Business Administration has sponsored periodic studies of employment and payroll associated with corporations, partnerships and sole proprietorships.

The SOI programs for three entity types (corporations, partnerships, and sole proprietorships) are commonly referred to as the "business income tax returns" programs, although there are other vehicles for conducting a trade or business such as farmers' cooperatives, tax-exempt organizations that have "unrelated business" activity, and estates and trusts that have sole proprietorship activity [2]. However, most U.S. business activity is covered on corporation income tax returns, Form 1120 series; partnership returns of income, Form 1065; and individual income tax returns, sole proprietorship Schedules C (for nonfarm businesses and professions) and F (for farming businesses), attached to Forms 1040. Figure A shows the number of business returns by industry for 1985. Nonfarm sole proprietorships are the most common business type by far, numbering almost 12 million for 1985, followed by corporations with 3.3 million and then partnerships with 1.7 million [3].

Figure B presents a much different view. In terms of total receipts, corporations account for 90 percent of the total, reporting $8.4 trillion compared to $5.4 billion for nonfarm sole proprietorships and $3.7 billion for partnerships.

CORPORATE STUDIES

Beginning with the Revenue Act of 1916, the tax law has required the publication of annual "facts deemed pertinent and valuable" with respect to the operation of the income tax law. The first Statistics of Income (SOI) report which fulfilled these requirements was published in 1918 and contained data for both corporation and individual income tax returns for 1916 [4]. For corporations, the 1916 SOI also contained information for 1909–1915 obtained from the *Annual Reports of the Commissioner of Internal Revenue.* A separate volume presenting corporate statistics that began with the SOI report for 1934 continues through to the present day [5].

Scope of Corporation Studies

Program content.—For all years, the SOI corporate statistics have, in general, included corporations of all types, that are organized for profit [6]. These data are the only source of financial information about *all* corporations. Other sources include only the large or publicly-held, or those in certain industries.

In the beginning, the data items and classifications used in SOI were extremely limited [7]. Their primary purpose was to measure how the taxpayer responded to both the tax law and tax administration system, so that in addition to industry the emphasis was on geography showing where the returns were being filed. Gradually, requests for additional data from tax policymakers and estimators of future tax revenue and from numerous Congressional, Federal, State, and private economic research agencies, resulted in additional data items and size classifications being introduced.

By 1922, data for the complete income statement were published; balance sheet data appeared starting with 1926 following a change in the tax return form. Total assets, the basic size classifier used for corporation statistics, was introduced for 1931 along with the amounts distributed to stockholders. By 1934, a 251-page report was produced presenting income, deductions, assets, and liabilities cross-classified by major industry and size of total assets. Additional classifiers were introduced for returns with net income and returns "with balance sheets" (inasmuch as not all corporations filed them). The 1934 format was retained through the 1957 publication.

Separate tables were added for "Small Business Corporations" (now called "S Corporations") in the 1958 volume, the first year for this new corporate tax entity which allowed certain closely-held corporations to be taxed through their shareholders. (The tax code subsequently created other new types of corporate tax entities for which separate

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Figure A.—Business Income Tax Returns by Industry, Income Year 1985

[Numbers of returns are in thousands]

Industrial division	Corporations		Partnerships		Nonfarm sole proprietorships	
	Number[1]	Percentage of total	Number	Percentage of total	Number	Percentage of total
	(1)	(2)	(3)	(4)	(5)	(6)
All industries	3,282	100.0%	1,714	100.0%	11,929	100.0%
Agriculture, forestry, and fishing	103	3.1	136	7.9	319[2]	2.7[2]
Mining	41	1.3	62	3.6	176	1.5
Construction	318	9.7	57	3.3	1,454	12.2
Manufacturing	277	8.4	30	1.8	326	2.7
Transportation and public utilities	138	4.2	25	1.5	546	4.6
Wholesale and retail trade	917	28.0	201	11.7	2,289	19.2
Finance, insurance, and real estate	518	15.8	844	49.2	1,014	8.5
Services	939	28.7	341	19.9	5,532	46.4
Nature of business not allocable	24	0.7	18	1.1	272	2.3

[1] Includes parent corporations filing consolidated returns for affiliated groups of companies.

[2] Represents only businesses engaged in agricultural services. For 1982, the most recent year that *Statistics of Income* data are available on farms, there were nearly 2.7 million farm proprietorships.

statistics were produced, most notably Domestic International Sales Corporations, or DISC's, starting with 1972, and Foreign Sales Corporations, or FSC's, starting with 1985. However, compared to S Corporations, these entities were small in number.)

Beginning with 1959, balance sheet data were published that represented *all* corporations (as asset and liability estimates were imputed and included in the statistics for the first time for the small number of corporations that did not file balance sheets with their returns). Clearly defined totals for current assets and liabilities could now be derived for the first time (because of another tax form change) and size of business receipts was introduced as a classifier [8].

"Income subject to tax," which in contrast to net income is the base on which tax was computed, was first included in SOI for 1959 [9]. In addition, the net income per books of account was added for 1963 to facilitate comparison with the net income computed under the Internal Revenue Code.

At various times subjects of particular interest were also included in the statistics, many of them on tax-related computations. Examples of such computations involved depreciation; inventories; foreign tax, investment, and certain other tax credits; and net gain or loss from sales of business assets. Examples of other kinds of statistics included from time to time are returns of "controlled group" members and related to these, consolidated returns filed for "affiliated groups" of corporations.

In most respects, the format and content of the most recent report, The *Statistics of Income for 1985,* is similar to that for 1974. It contains the complete balance sheets and income statements, as well as the tax and tax-related items, including tax and payment credits. The classifiers include industry, total assets, business receipts, and the presence of net income. Separate tables are presented for S Corporations. However, some of the more detailed tax-oriented statistics have been discontinued, and somewhat less industry or size information is now published for certain categories. In part, this reflects changing needs of the principal users of the data.

Almost from the beginning the tax before credits (or more specifically the tax after all credits *except* the foreign tax credit) has been the amount emphasized in the corporate

Figure B.—Total Receipts Reported on Business Income Tax Returns, Income Year 1985

[Money amounts are in billions of dollars]

Industrial division	Corporations		Partnerships		Nonfarm sole proprietorships	
	Amount[1]	Percentage of total	Amount[1]	Percentage of total	Amount	Percentage of total
	(1)	(2)	(3)	(4)	(5)	(6)
All industries	$8,398	100.0%	$367	100.0%	$540	100.0%
Agriculture, forestry, and fishing	70	0.8	9	2.6	12[2]	2.2[2]
Mining	142	1.7	23	6.4	13	2.3
Construction	387	4.6	22	6.1	71	13.1
Manufacturing	2,831	33.7	23	6.3	17	3.1
Transportation and public utilities	772	9.2	12	3.2	26	4.8
Wholesale and retail trade	2,474	29.5	70	19.1	205	38.0
Finance, insurance, and real estate	1,182	14.1	92	25.1	31	5.8
Services	535	6.4	113	30.7	157	29.1
Nature of business not allocable	5	0.1	2	0.5	8	1.5

[1] Total receipts for corporations and partnerships include income from investments, in addition to income from sales and operations.

[2] Represents only businesses engaged in agricultural services. For 1982, the most recent year that *Statistics of Income* data are available on farms, total receipts for farm proprietorships amounted to $99 billion.

statistics because it comes closer to measuring the total worldwide tax burden of U.S. corporations and corresponds to the total worldwide net income reported on the tax return. Looked at this way, tax after credits represents that part of the worldwide tax that is payable to the U.S. Government [10].

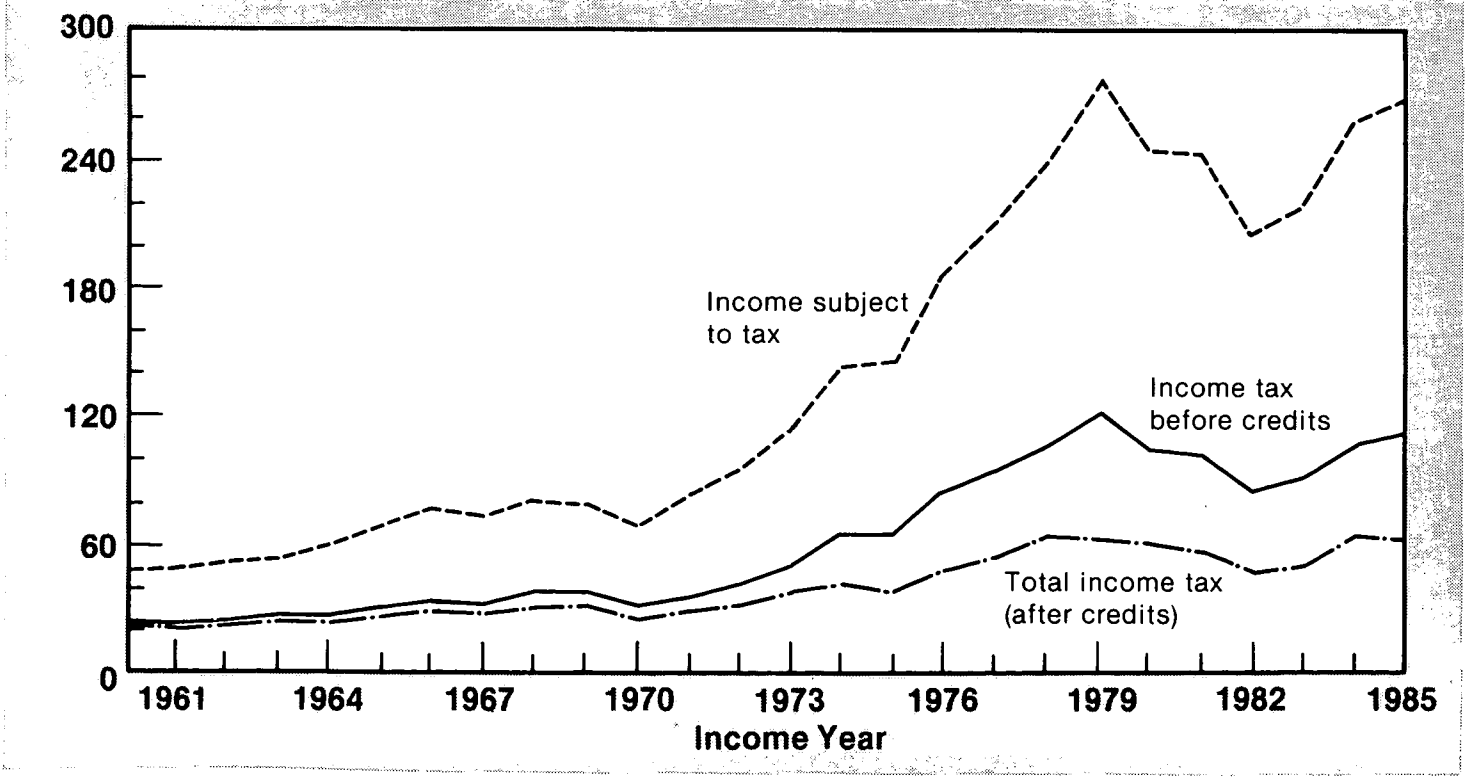
Total income tax before and after credits and the associated income subject to tax are presented for the period 1960–1985 in Figure C. While income tax before credits grew by 410 percent, income tax after credits increased by only 209 percent, from $20.6 billion to $63.7 billion. One reason for this relatively slow growth in the tax after credits is the foreign tax credit, which grew from $1.2 billion for 1960 to $36.8 billion for 1979 [11].

Geographic data were eliminated beginning with the 1970 report [12]. The geographic distributions had become increasingly misleading for economic analyses because they were based strictly on the place of filing or on the mailing address of the corporate headquarters. Often these locations bear little relationship to the place or places where business operations are conducted. This is especially so in the case of the larger corporations. Thus, there is no way of determining from income tax returns alone the amount of income originating in a specific State or the amount of tax payable on that income.

Source Book.—Source Books of unpublished data starting with 1926 have been compiled to preserve the detailed cross-classifications of a maximum number of data items (which are summarized for publication in each annual SOI report). As part of a Work Project during the depression years of the 1930's, extensive permanent public records for 1926–1936, in ink, were prepared for each of these years. From 1937 to the present (except for 1952) the Statistics of Income Division has continued the annual production of the Corporation Source Book [13].

Population Coverage and Item Content.—Beginning with 1959, there have been over one million corporation returns filed for each income year. The total number has grown steadily since World War II. As shown in Figure D, by 1962 there were over three times as many corporation returns as for 1945. In the 20 years after 1962, the number doubled to approximately 3.3 million. Corporations are projected to continue to grow in number; by Income Year 1990 it is estimated that there will be 4.5 million corporate returnsfiled [14]. While these increases provide a measure of economic growth, they also reflect changes in the tax law, and may

Figure C
Corporate Income Subject to Tax, Income Tax Before Credits, and Total Income Tax (After Credits), Income Years 1960 – 1985



also indicate an increasing preference for the corporate form of organization by previously unincorporated businesses [15].

In contrast to the gradual increase in the total number of returns, there has been a wide variation in the number of returns with or without net income over the years, particularly during the period 1916–1944. The depressions of 1921 and the 1930's resulted in more returns without income than with income, so that for 1932, for example, corporations with net income comprised only 18 percent of all those in business.

For 1916–1950 data were extracted for SOI from each return filed. Beginning with 1951, universe estimates were obtained from statistical samples [16]. Over the years the size of the samples has decreased while the population of returns increased, as illustrated in Figure E. (Figure E also shows the "certainty" sample, i.e., returns in the population sampled at the 100 percent rate.) The sample for Income Year 1951 comprised 41.5 percent of the population, or 285,000 of the 687,000 returns filed. For 1985, the sample proportion had decreased to 2.6 percent, or 94,000 returns from a population of over 3.5 million.

Stratification of the 1951 sample was by size of total assets and industry. For 1952–1965, the stratification was by size only—volume of business for 1953–1958 and total assets for 1952 and 1959–1967 with no industry stratification. In the 1960's, the Internal Revenue Service (IRS) began to computerize its manual administrative processing and the SOI sample designation, heretofore a manual operation, was soon also computerized, based on the Master File system which contained accounts for all taxpayers. This new system enabled more efficient, sophisticated, and effective sample designs to be used than under manual sampling. Since the samples could be smaller in size, economies as well as improved data were realized. The first computerized design, for 1968, employed total assets and size of net income or deficit as the major stratifiers.

The use of the employer identification number (EIN), which is permanently and uniquely assigned to each corporation, was also used for the first time to select the 1968 sample [17]. Because a corporation uses the same EIN each year, use of this identifier to select the samples over several years can facilitate selection of returns of the same corporations over time. The advantage here lies in the

Figure D

Number of Active Corporation Income Tax Returns, Income Years 1916 – 1985

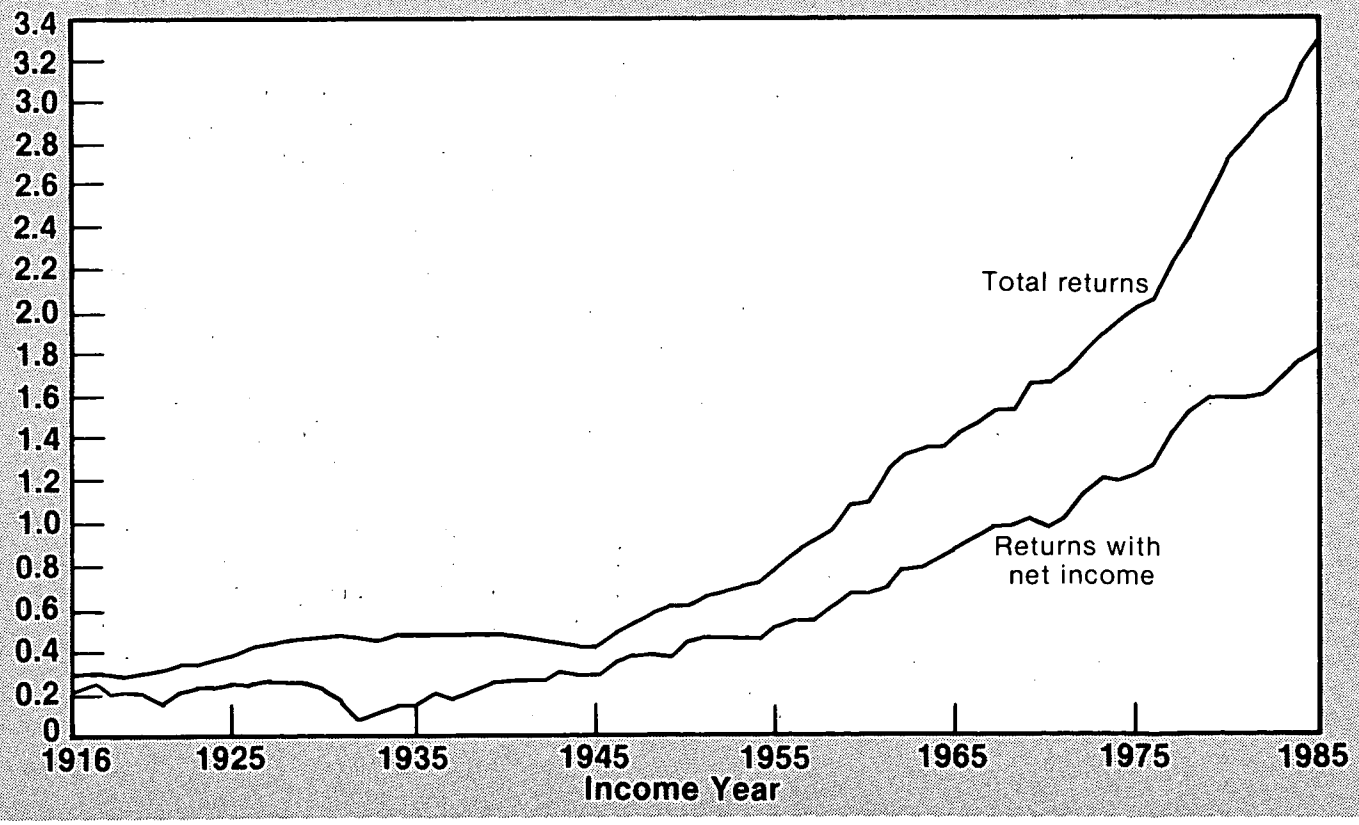
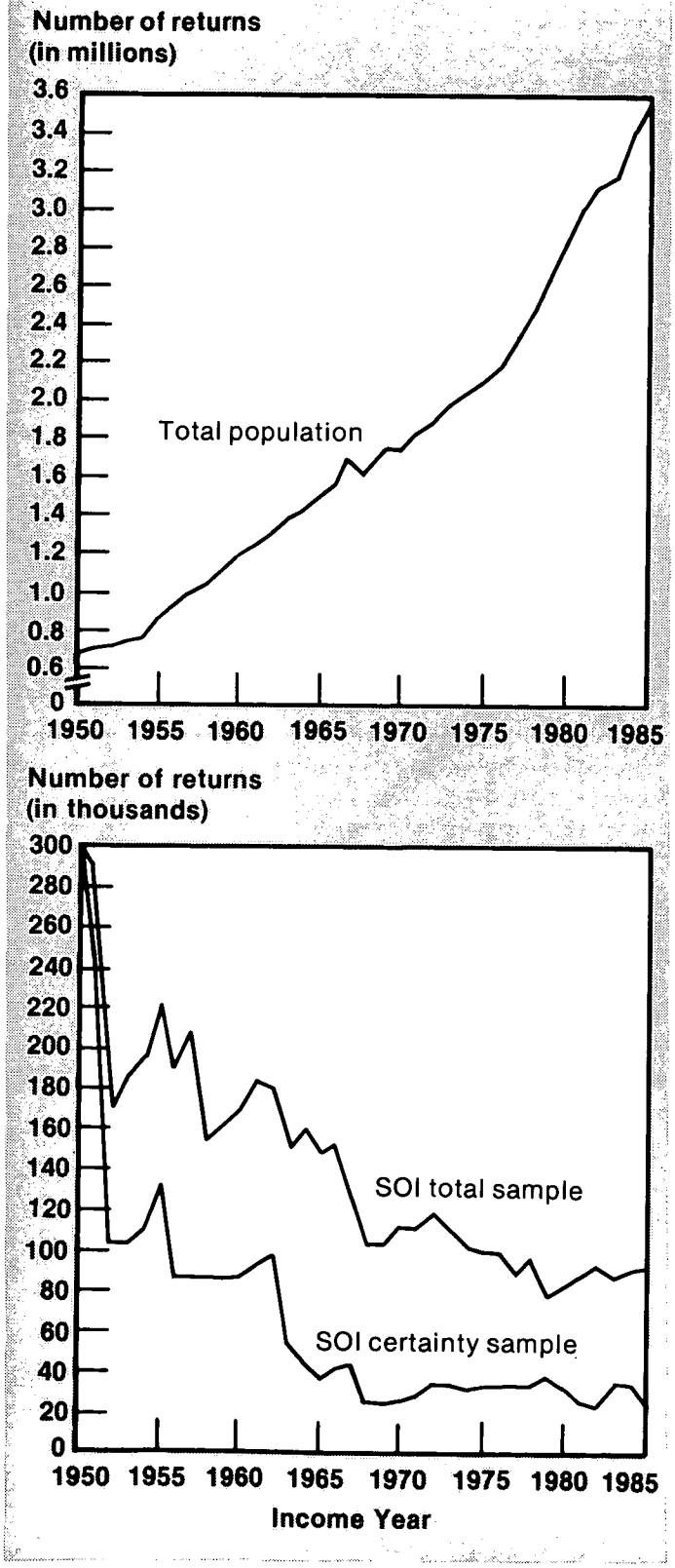


Figure E
Corporation Income Tax Returns: Number in Population, SOI Total Sample, and SOI Certainty Sample, Income Years 1950-1985



resultant reduction of sampling variance for the estimates of year-to-year change. Although the SOI sampling scheme has been refined over the past 20 years, the concepts have remained essentially the same as for 1968.

For Income Year 1980 and subsequent years, a "post-stratification raking ratio estimation" procedure has been introduced to improve the industry statistics [18]. Under this procedure, estimated totals are initially developed by weighting the sample to population control totals obtained from the Master File for the two principal characteristics used in the sample design, i.e., total assets and net income (or deficit). Improved totals are then obtained by further stratifying the achieved sample by industry for each asset/net income sample class. As a result, the SOI weighted estimates published by industry are based on a two-way classification of the sample—by the original sample selection criteria using control totals for asset/net income size combinations and simultaneously by the additional criterion using control totals from the Master File by industry.

Statistical Editing.—The program for 1916 required obtaining only five items from each return and, by 1931, 41 items were abstracted. This number reached 344 by 1980. Seven years later (1987) the number of items more than doubled to 826. This growth is especially significant given the great amount of "statistical editing" that many SOI items require.

Statistical editing involves adjusting certain taxpayer entries based on supplemental information reported elsewhere in the return, usually in schedules that support a reported total [19]. Editing also includes the constructing of certain totals for the statistics that are reported in a format that differs from the official tax form, using information from other schedules including those improvised by the taxpayer. (IRS permits some latitude on how certain information is reported as long as it is correctly reported.)

Editing is designed to help overcome some of the limitations inherent in tax return statistics that are due to nonstandardized reporting. It also helps to achieve certain statistical definitions desired by a user. An example of the former occurs when corporations file balance sheets of their own design instead of using the balance sheet schedule that appears on the tax return form; in this case, the statistical editor must attempt to recast the taxpayer's balance sheet into the official format of the return so that uniform statistics can be produced. An example of the latter is when editors are required to examine "cost of goods sold" schedules for any depreciation reported there in order to augment the depreciation deduction on the return—an objective that is of far greater interest to tax policymakers and other economists than a cost of goods sold figure that may otherwise be correct from an accounting standpoint.

While statistical editing is minimal in producing sole proprietorship and partnership statistics (and, when it is

necessary, can often be accomplished through computerized imputations), it is a major factor in producing corporation income tax return statistics because of the complexity of many of the returns, particularly those of the larger corporations which dominate the statistics.

Industry Classifications.—The tax return instructions request that corporations classify themselves by industry according to their principal business activity, as identified from the list of industry groups and codes contained in the instructions. Principal business activity is that which accounts for the largest percentage of total receipts. This can be a limitation because some companies, particularly the larger ones, are often engaged in multiple business activities or may be included in consolidated returns that include all members of an affiliated group, each of which may engage in different activities. In such cases, the largest percentage of total receipts may be relatively small. Year-to-year changes in the classification of specific corporations can result from mergers and other changes in organization, from filing consolidated returns, as well as from changes in the principal source of receipts.

The first Statistics of Income report (1916) contained data for over 100 industries summarized into 27 major groups (currently there are over 180 industries summarized into 60 major groups). Since 1938, the classification structure for all SOI business income tax returns has been based on the Standard Industrial Classification (SIC) system, currently issued by the Office of Management and Budget. However, the SIC is designed to classify "establishments" rather than companies which may be comprised of one or more establishments [20]. In order to apply the SIC to a legal entity or ownership basis for SOI, appropriate groups have to be combined. The resulting industry groupings that are listed in the corporation income tax return instructions and that are used for SOI are, in general, those that tend to be best represented by the corporate form of organization. Thus, for example, more industry detail is available in the corporation statistics for manufacturing or for finance, insurance, and real estate, than is available in the statistics for sole proprietorships or partnerships [21].

Although the industry definitions used for SOI conform closely to the SIC, particular provisions of the Internal Revenue Code are also taken into account. Thus, for corporations, certain types of investment and insurance companies which are defined in the Code are among the groups for which SOI industry data are provided.

Timing of Corporate Statistics.—A frequent misunderstanding about the corporate statistics concerns their timing. It is not always apparent to users that many corporations report for noncalendar year accounting periods. In fact, these corporations have now become the majority. Figure F shows that for Income Year 1985, only 42 percent filed for the accounting period ended December 1985.

This noncalendar year filing phenomenon is unique among income tax return filers, even among businesses (nearly all sole proprietorships and partnerships use the calendar year). This means that the corporate "income year" covered by SOI data must be uniquely defined. Figure F shows that an income year includes accounting periods ended July of one calendar year through June of the next. The December-ending accounting period is thus at the center of this span of accounting periods. This compromise has been judged to be the best means of relating the totals for all corporations to a specific calendar year. The validity of this compromise is reinforced by the fact that most of the dollar totals (including those for net income) continue to be reported by corporations that file for the December-ending accounting period (see Figure F).

In addition, many corporations, including some of the largest, request extensions of time (up to 6 months) in which to file. The combination of noncalendar year filing and filing extensions means that while returns for the last included accounting period for Income Year 1985 (ended June 1986) were first due to be received by IRS in September 1986, they could be timely filed as late as March 1987, if there were filing extensions. If these corporations were large, the administrative processing of the returns that precedes statistical processing could then also take a considerable amount of time. The SOI sample for a given year cannot be closed out while large corporation returns are unaccounted for because of their predominant effect on the statistics. As a result, the first results for 1985 were only published in the *Statistics of Income Bulletin* for the Spring 1988; the more complete data for 1985 were then published separately, later on [22].

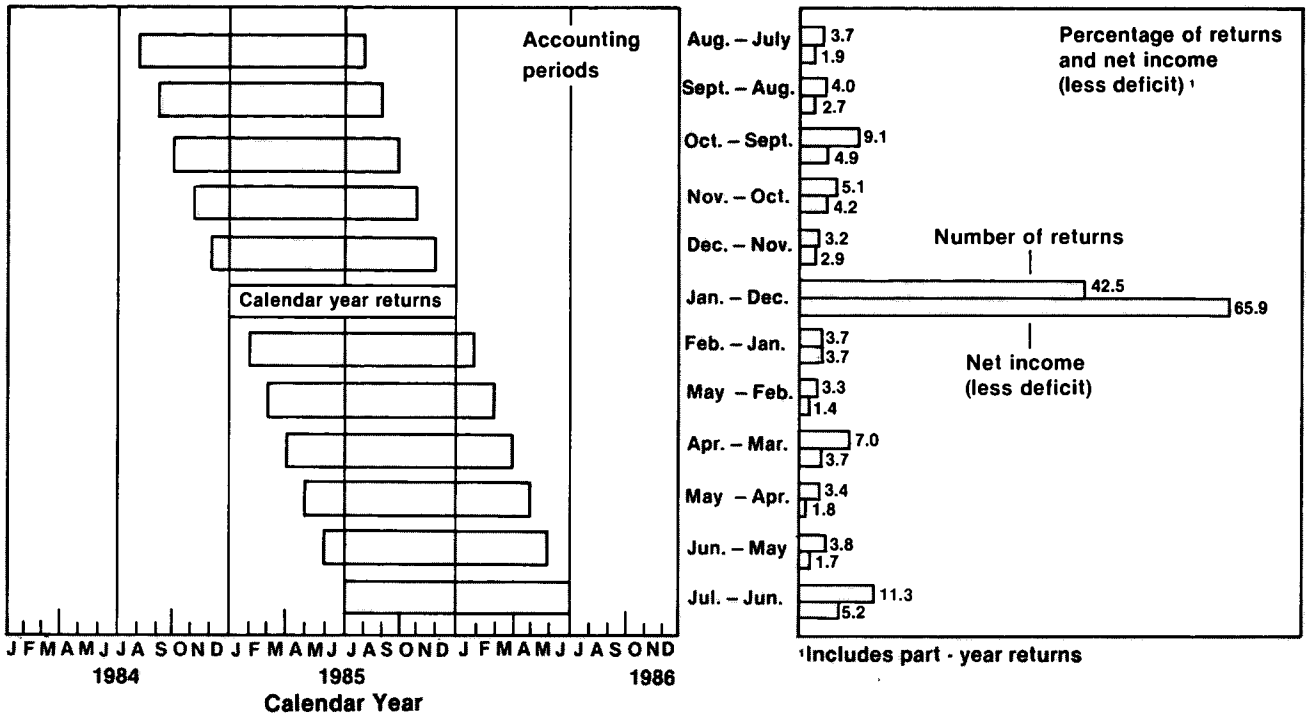
Principal Users of the Data

Much of the previous discussion has focussed on the SOI publications. However, as is true in most Statistics of Income Division studies, the principal product of the corporate program is now the microdata (record-by-record) magnetic tape files provided to the Office of Tax Analysis and to the Congressional Joint Committee on Taxation for use in revenue estimating and tax modeling, rather than the SOI tabulations and publications that these users formerly relied upon.

As permitted by the Internal Revenue Code, the Bureau of Economic Analysis also has access to corporate records because of its role in producing the National Income and Product Accounts [23]. However, it is not routinely provided with a *complete* SOI sample microdata file in the sense that the Office of Tax Analysis and the Joint Committee staff are. Special detailed tabulations or access to the tax return

Figure F

Corporation Income Tax Returns and Net Income (less Deficit) by Accounting Periods, Income Year 1985



records of specific corporations or classes of corporations are usually sufficient to serve its needs.

No public access tax model file exists for corporations mainly to protect the confidentiality of taxpayer information. The very restrictive privacy statutes that prevent disclosing even the fact that a business or individual has filed a tax return require that any corporate data be released cautiously because of the great amount of company data and other information that are available in the public domain [24]. The costs inherent in reviewing statistical tabulations for possible disclosure and in the application of disclosure-avoidance techniques also limit the amount of data that can be published [25]. However, requests for special tabulations can still be produced on a reimbursable basis from the SOI data files provided disclosure can be avoided.

Future Plans

Each year, the item content and coverage of the SOI programs are reviewed with the major users [26]. These reviews always result in changes to a particular program. Long-range planning is difficult because unforeseen changes in the tax law frequently lead to new or revised statistical requirements. Thus, for example, the new tax research needs emanating from the Tax Reform Act of 1986 are currently severely taxing the ability of the SOI statistical system to deliver timely results. These needs are evidenced in the sharp increase in the number of tax return items for which 1987 SOI data have been requested. The challenge to the Statistics of Income Division is to determine users' requirements early enough in the planning process so that they can be reflected in its budgets for the processing years concerned.

The sample size is expected to remain constant at about 90,000 returns through Income Year 1990, unless special funding by users is obtained to meet their needs. For several years, the Bureau of Economic Analysis has requested but not obtained a special appropriation in its budget to fund an increase in the SOI corporate sample size to about 120,000 returns.

A review of the sample design is needed again to determine if its composition is adequate, given the new pressures emanating from the 1986 tax reform. For example, the proportion of the total sample that is comprised of S Corporation returns (Form 1120S) may be changed given their relative significance to users.

Special Studies

Corporation Post-Filing Tax Adjustments.—The statistics in the corporate program, as in most SOI programs, are derived from returns selected after initial administrative processing, but before audit examination and adjustments. In addition, adjustments such as those resulting from amended returns are excluded. Users have long been concerned about the possible effects these adjustments might have on SOI data and in 1986 a pilot effort was undertaken to determine their magnitude and structure [27].

For this purpose, the corporate tax accounts from the Master File system were obtained for the 94,000 corporations in the Income Year 1982 corporate SOI sample (the most recent sample complete at the time). Unlike the SOI statistical file, which only records data from the tax returns as originally filed for the particular year under study, the Master File maintains selected data from the entire population of returns filed, including numerous items used for tax administration purposes. Generally, these data are maintained for 5 years. Included are adjustment transactions resulting from the filing of amended returns, "carrybacks" of "unused" tax-related amounts, and results of IRS audit examination activity.

Preliminary data from this effort indicate that for corporations active in 1982, post-filing adjustments reduced the originally calculated income tax liability by at least $38 billion over the tax period 1978–1983. This reduction, which represents 11 percent of these corporations' original tax liability after credits, arose principally through unused "net operating losses" and unused investment tax credits carried back from subsequent tax years, rather than through audit examination or other compliance activities.

Current plans are to continue this research with the intent of eventually incorporating the resulting new methodology to improve the SOI statistics. Research is now focussed on issues of sample coverage and the validity for statistical purposes of data obtained from the administrative system.

Preliminary Corporate Statistics.—In addition to the comprehensive annual SOI report, preliminary reports were formerly produced in order to provide selected income and tax highlights before the more detailed statistics became available. The separate preliminary reports were discontinued after the 1977 statistics and replaced by more limited data now contained in annual articles published in the Winter or Spring issues of the *Statistics of Income Bulletin* [28].

For Income Years 1956 through 1977, preliminary corporate estimates were scheduled for production in April following the close of the filing period for returns with the accounting periods used for SOI, and were primarily for use by the Bureau of Economic Analysis in updating the estimates of corporate profits published as part of the annual revisions of the National Income and Product Accounts [29, 30]. By 1977, rather than just a by-product of the regular corporate SOI program (as the current and most previous published "preliminary" statistics are and were), these early estimates required so much special processing that they virtually became a separate program that could not be sustained. This special processing included a costly, customized, imputation process to compensate for the significant number of larger corporations whose returns were not yet available for the statistics by the date specified by the Department of Commerce. Shrinking resources, the increasing complexity of the overall corporate SOI program, and later filings by growing numbers of larger-size corporations finally led to the cancellation of this effort.

In order to improve the accuracy and timing of its corporate profit estimates, the Bureau of Economic Analysis has included funds in its annual budget for the last few years that would reimburse the Statistics of Income Division for developing a revised system that could again provide these early estimates. Some research into the development of a "modern" version of the "old" system is being considered in anticipation of the eventual reinstatement of this segment of the SOI program.

International Statistics.—Separate studies of business activity conducted abroad by U.S. corporations and of business activity conducted in the United States by foreign corporations are discussed at length in an article published in the Fall 1986 issue of the *Statistics of Income Bulletin* [31]. These studies, on foreign tax credit, Controlled Foreign Corporations, U.S. possessions corporations, Domestic International Sales Corporations, Foreign Sales Corporations, and international boycott participation, to name the major ones, are undertaken partly in acknowledgment of the increasing significance of foreign operations and of foreign corporations, and partly in response to the need for reports by the Office of Tax Analysis that are mandated by tax law. Typically, these studies include a classification of the data by country.

Secretary's Percentage.—Foreign life insurance companies doing business in the United States must maintain a minimum surplus of assets to cover their U.S. insurance liabilities. That minimum surplus is determined by multiplying their U.S. insurance liabilities by a percentage required by the tax code that is proclaimed annually by the Secretary of the Treasury. This "percentage," based on data reported on Form 1120L, U.S. Life Insurance Company Income Tax Return, has been calculated annually since 1961 by the Statistics of Income Division.

The processing of data necessary to develop this figure takes place between September and February each year

and the results are sent to the Office of Tax Analysis and the IRS Office of the Chief Counsel for review and approval by the end of each February. The Secretary's Percentage is then published in the Federal Register in March. The percentage proclaimed by the Secretary has varied from a low of 13.4 percent for 1961 to a high of 18.9 percent for 1985.

EMPLOYMENT LINK STUDIES

The Statistics of Income Division conducts a series of periodic studies partially funded by the Small Business Administration that add employment and payroll data to the SOI files of corporations, partnerships, and sole proprietorships. Although payroll is a deductible expense on income tax returns, it is often not clearly identified as such, or it is included as a component of some other deductible expense and, in some cases, is actually capitalized and deducted over a period of years as part of the depreciation deduction.

The special study involves tabulating financial data classified by selected industry and size of business receipts, total assets, and employment. Employment and payroll are obtained from computer tape files of data from Form 941, Employer's Quarterly Federal Tax Return, and Form 943, Employer's Annual Tax Return for Agricultural Employees, that IRS regularly provides to the Census Bureau for its use in preparing its *County Business Patterns* report [32]. These employment tax returns are then linked to the business income tax returns in the SOI samples.

Work on the Income Year 1982 studies is complete [33]. Tabulations have been provided to the Small Business Administration, Office of Tax Analysis, and the Joint Committee on Taxation. The next study is scheduled for Income Year 1987, but is dependent on continued funding from the Small Business Administration or some other source. Plans are to publish the results from time to time in the *Statistics of Income Bulletin* [34].

Figure G shows employment classified by type of business entity. As would be expected, 90 percent of all corporations had employees in 1982. Most partnerships and sole proprietorships, on the other hand, were small businesses without employees. Only 13 percent of partnerships and 9 percent of sole proprietorships had at least one employee.

One interesting employment note in the corporate area is that while 835,000 or 38 percent of all corporations had 1–4 employees in 1982, the greatest number of those employed were by corporations having 500 or more employees. Over 32 million people were employed by the 7,613 largest corporations [35].

In the corporate area, a factor which complicates the linking of the files is that the reporting units for income tax returns and employment tax returns are not always the same. It is possible for a consolidated income tax return to be filed for an affiliated group, while separate employment tax returns can be filed for each group member or combination of members. In order to link records for the same reporting unit, it is first necessary to explore these relationships.

To accomplish the linkage, EIN's are transcribed for all parent corporations and their subsidiaries as reported on the Form 851, Affiliations Schedule, filed with consolidated returns included in the corporate SOI sample. Then a match is performed by computer between the Form 851 file and the file of SOI corporate income tax return records. The Form 851 data are then matched to the employment tax return file. At this point, the employment and payroll for the parent and subsidiary are aggregated so that they represent the same reporting unit as the SOI corporation income tax return.

In the partnership area, research is needed in the area of "independent contractors," i.e., those persons who appear to be providing labor to the partnership but are not being treated as employees for employment tax purposes. The analysis performed thus far indicates that many partnerships reporting a "cost of labor" in their income statements are not reporting the presence of employees through the filing of employment tax forms. Therefore, when an expected match is not made between an employment tax return and a partnership return, it is not clear whether the cause is a mismatch which should be corrected by imputation or a problem caused by an "independent contractor" issue.

The sole proprietorship study is heavily dependent on imputation techniques to compensate for the often-missing linking variable, the EIN [36]. Nonfarm sole proprietorship activity is reported on Schedule C of the Form 1040, Individual Income Tax Return, and the identifier most important to IRS on this form is the social security number rather than the EIN. The EIN is requested on Schedule C, but only for sole proprietorships with employees and this identifier is often not reported on the return as originally filed (which is the return used for the statistics). (Farm proprietorships have been excluded from these studies.)

Future plans for this project include analysis of the methods used to impute for missing employment and payroll data and research into alternative imputation methods. This research is documented in a paper presented at the 1988 American Statistical Association meetings [37].

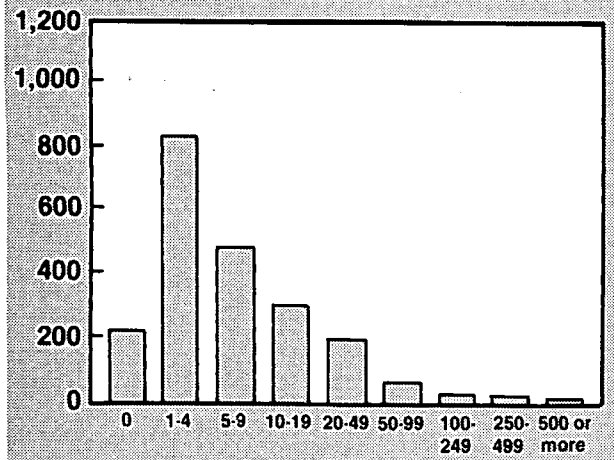
PARTNERSHIP STUDIES

The partnership return of income, Form 1065, is an information return because partnerships are not taxed as

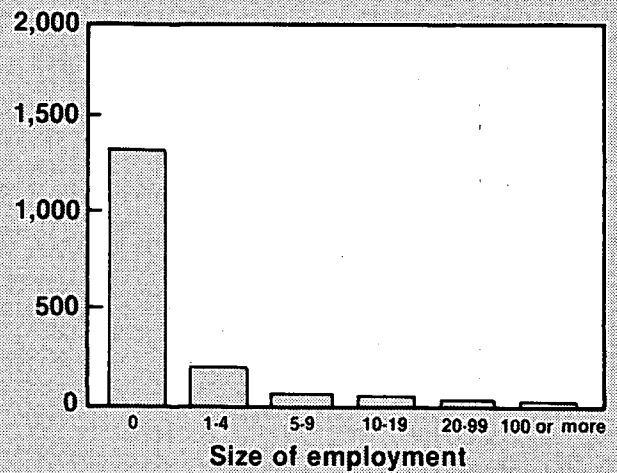
Figure G

Summary of 1982 Employment, by Size of Employment

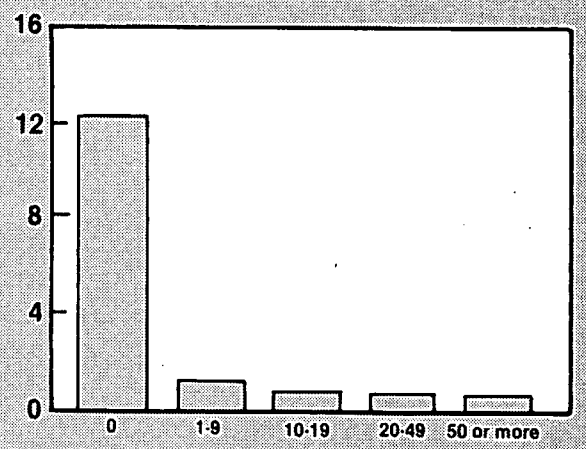
Number of corporations by employment size



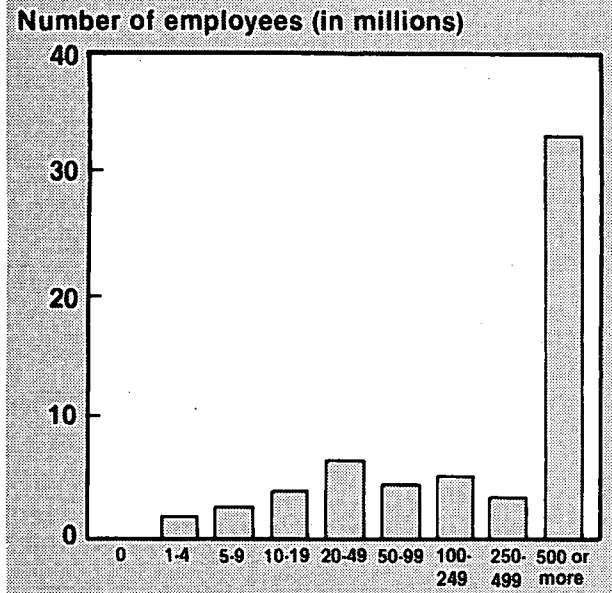
Number of partnerships by employment size



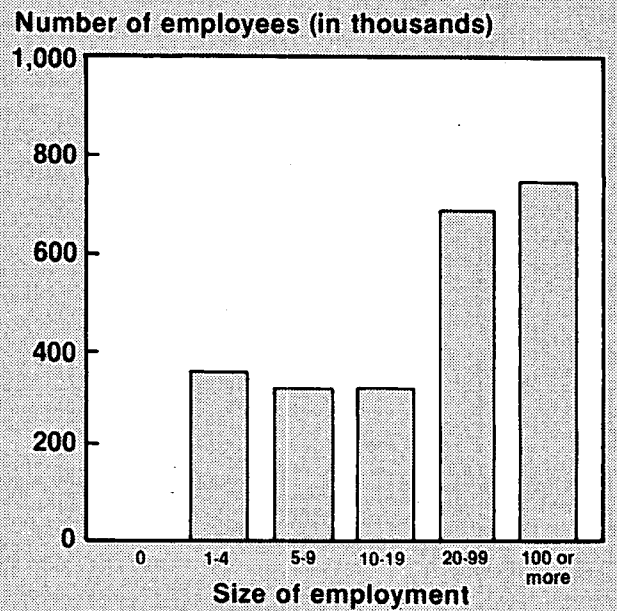
Number of sole proprietorships by employment size



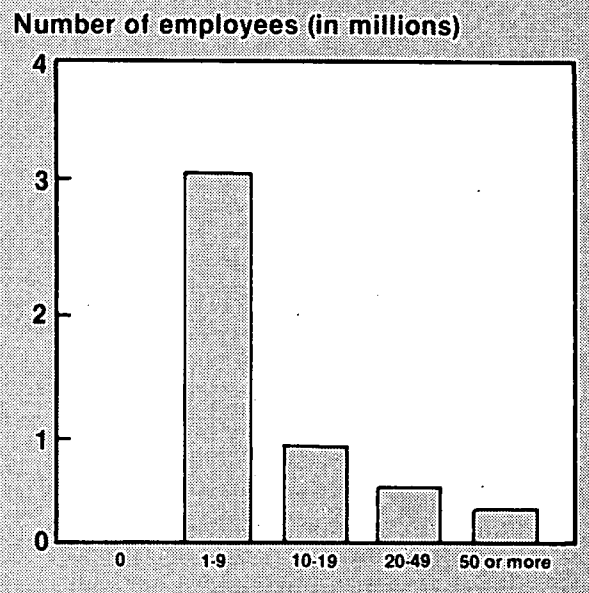
Number of employees by employment size of corporation



Number of employees by employment size of partnership



Number of employees by employment size of sole proprietorship



such. Nevertheless, an annual return is required containing an income statement; balance sheet; and schedules showing the shares of income or losses and other items, such as credits and foreign taxes, either distributed or allocated to partners. The partners are required to report the distributions or allocations from the partnership on their own income tax returns.

Counts of the number of partnerships since 1917 are available from SOI. The individual income tax return statistics also show the number of returns with income or loss from partnerships and the corresponding amounts starting with 1917.

The Statistics of Income Division did not publish financial data from the partnership returns until Income Year 1939, when they were released in a supplemental SOI report [38]. Data for 1945 and 1947 were published as press releases by the Department of the Treasury [39]. A separate SOI report for partnerships was published for Income Year 1953 [40].

Annual partnership statistics were included in the *Statistics of Income—Business Income Tax Returns* series (together with data on sole proprietorships) starting with 1957 until that series was discontinued after 1976 [41]. Thereafter, separate SOI reports on partnerships only, were released for 1977 through 1980 [42]. Because of budget constraints, the separate partnership report was then discontinued, but with the inception of the quarterly *Statistics of Income Bulletin* in 1981, an alternate publication vehicle became available in which to include some limited statistics about partnerships annually, in each Summer issue [43].

The first of a series of so-called SOI partnership compendiums, *Partnership Returns, 1978–82,* was issued in September 1985 and included tables and analyses previously published in the *Bulletin* for Income Years 1978–82, and in the separate SOI reports for Income Years 1978–80 [44]. It also included additional tables plus sections analyzing trends in the data. Future publications are now planned at 5-year intervals.

Scope of Partnership Studies

The 1939 partnership report included data for the complete income statement and on the number of partners, classified by industry. These features were to continue for most partnership programs for the years that followed. Balance sheet data first appeared in the report for 1953 and by the late 1950's had become a biennial feature of the program. Data classifications aside from industry were mainly by size of business receipts (starting with 1945) and by size of total assets (starting with 1958). At various times over these earlier years, detailed data were also provided on such topics as the age of partnerships, depreciation and inventory practices, joint ventures, and on some of the items allocated to partners, e.g., "tax preferences" subject to the "minimum tax" and items reported in connection with the jobs or investment tax credits. Little of this information was published for more than a few years, most of it not more then once.

Currently, the annual program includes the income statement, balance sheet, the number of partners and limited partnerships, and capital gain distributions, by industry. Balance sheet data are not included in the annual *Statistics of Income Bulletin* release, but are published instead in each 5-year partnership compendium [45]. State data and data by size of business receipts are no longer compiled.

As in other areas, the partnership program content has grown in response to the needs of its users. In the early years, generally up to the early 1970's when partnerships were known primarily for their trade or service activities, most economists were interested in analyzing the partnership data along with data on corporations and sole proprietorships in order to obtain a complete picture of U.S. business activity.

As the partnership form of organization became popular as a "tax shelter" vehicle, more detail was added to the program. For example, in the early 1980's, in response to Office of Tax Analysis requests, data began to be collected on limited partnerships and from taxpayer-provided schedules on which data for real estate deductions were reported.

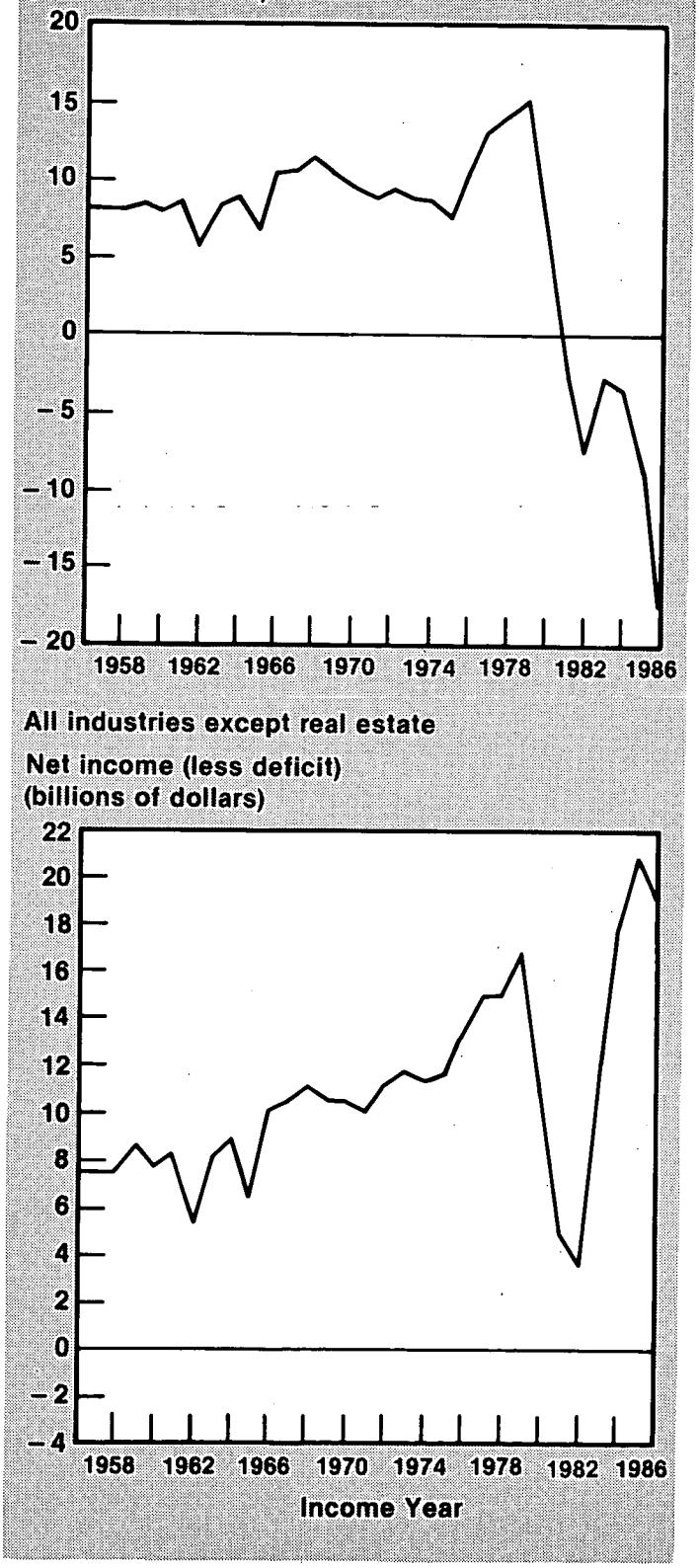
Beginning with 1981 and continuing to the present day, partnerships have reported significant overall losses primarily attributable to tax shelter activity. Most of these losses occurred as a result of real estate operations. In fact, as shown in Figure H, if real estate, which accounts for about one-third of the total number of partnerships, were removed from the statistics, partnership net income (less deficit) would be positive for all years.

Principal Users of the Data

Most of the requests for additional content in the partnership program have come from the Bureau of Economic Analysis and the Office of Tax Analysis. The Congressional Joint Committee on Taxation is the third principal user.

The Bureau of Economic Analysis uses the data for the National Income and Product Accounts. Partnership income is a minor, but not insignificant, input to the overall national accounts as well as to the personal income accounts component. In this connection, the tax return data are the only source of information about unincorporated businesses. It is thus not surprising that the Bureau of Economic Analysis was instrumental in having the Statistics of Income Division produce partnership as well as sole

Figure H
Partnership Net Income (less Deficit), Income Years 1957-1986



proprietorship data each year starting with 1956. Previously, it used SOI data for small corporations as a proxy for the partnership sector, but this proved to be increasingly unsatisfactory. For recent years, the Department of Commerce has also assumed a major role in funding this program.

The Office of Tax Analysis and the Joint Committee are authorized to receive microdata files which they use to model proposed tax law changes and to analyze partnership activity. As with the corporate program, the files provided to the Office of Tax Analysis and Joint Committee contain data which are not published, such as for distributions to partners, depreciation computations, and some limited detail on farm income and deductions. The Bureau of Economic Analysis is not allowed access to the microdata files; instead, it receives detailed tabulations processed to avoid disclosure, which are produced to its own specifications.

Although attempts have been made to construct public use files, confidentiality problems so far have proved too difficult to overcome [46]. As in the case of corporations, requests for special tabulations are produced on a reimbursable basis from the existing data files.

Population Coverage

The earliest partnership studies included data from every partnership return filed. Partnership returns were sampled for the SOI studies beginning with 1953 using a three-tier sampling scheme which continued with minor modifications until 1969. Using this system, partnerships were sampled at one of three rates based on size of business receipts and total income. (Total income was defined as business receipts plus investment income minus cost of sales and operations.)

From 1970 through 1976, the sample was based on combinations of receipts and total assets with the size stratifiers being adjusted periodically. For 1977, industry was included as a stratifier in that partnerships in the real estate industry were sampled at one set of rates and all other industries were sampled at another [47]. This was done because the characteristics of the large real estate component of total partnerships are significantly different from those of other industries. As before, within each of these two major breaks the partnerships were stratified by combinations of receipts and asset size.

The sampling scheme was redesigned for 1981 to improve the sample in several strata which were poorly represented previously, resulting in many additional sample categories. However, returns were still classified by whether the partnership was in real estate or not and, in addition, by the absolute value of net income (or deficit) and total assets.

Figure I shows the population and sample size for Income Years 1956 through 1986. The significant changes in sample size reflect the users' changing levels of interest over time and their ability and desire to help fund the program.

Future Plans

One of the major developments now in the planning stage is tied to a modification to Schedule K, Partners' Shares of Income, Credits, Deductions, etc., of the partnership return. This is the form the partnership uses to summarize its distributions to partners. The tax form change would also require partnerships to summarize their distributions by *type* of partner. This kind of information can currently be obtained from the 30,000 returns in the SOI partnership sample only by abstracting data from over 3 million Schedules K-1 filed for partners. By having this information, the Bureau of Economic Analysis will be able to reduce the double counting in the national accounts that occurs when the partner in a partnership happens to be a corporation. Presently, income to the corporate partner is counted once when it is distributed by the partnership and again when it is reported by the corporation. In addition, the Office of Tax Analysis needs to be able to distinguish between "passive" and "active" partners, an important distinction in the Tax Reform Act of 1986, in order to help evaluate the new provisions [48].

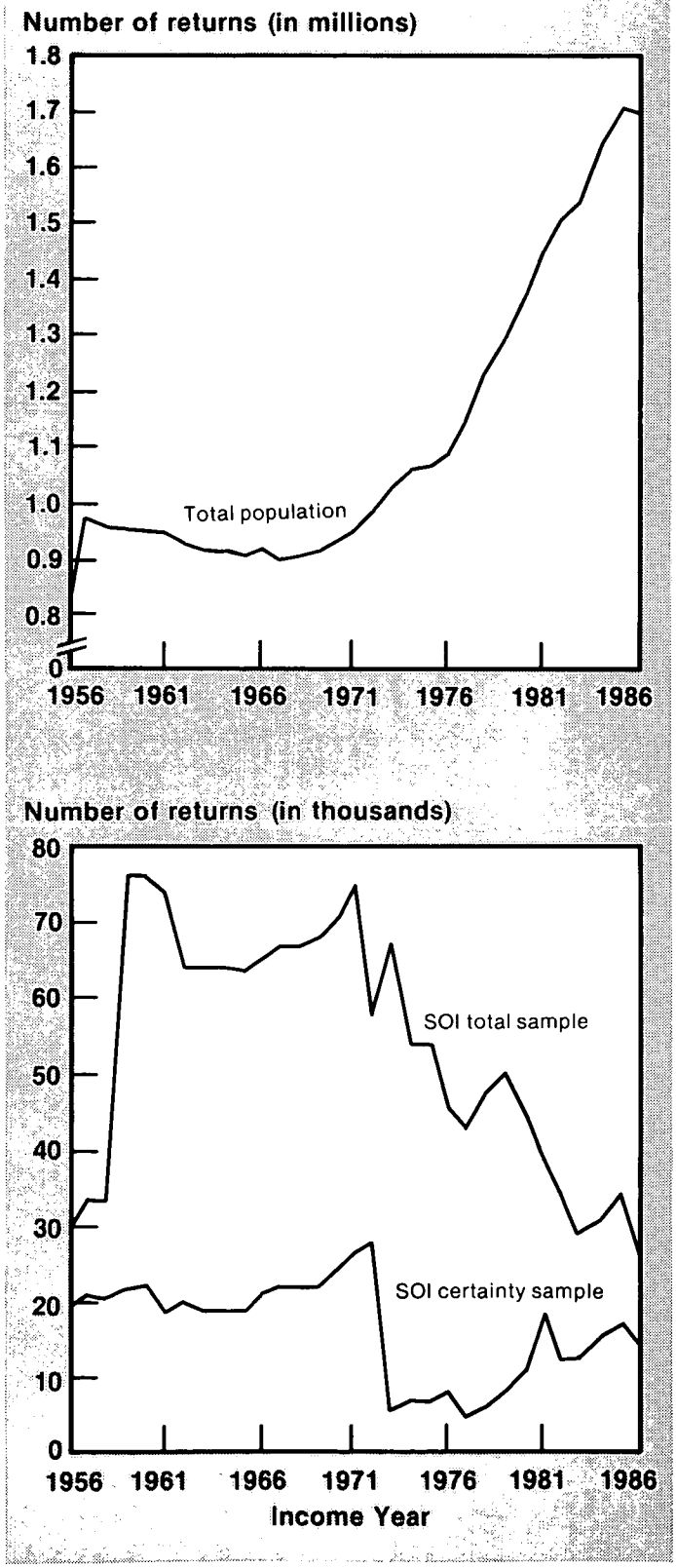
SOLE PROPRIETORSHIP STUDIES

Information about sole proprietorship business activities is reported as part of the individual income tax return, Form 1040. The profit or loss from nonfarm businesses or professions is reported on Schedule C; that from farming, on Schedule F. In addition, for some of the more recent years, Form 4835 has been used to report the profits of farm landlords, many of whom are indirectly engaged in farm operations. Profits from each of these activities are combined with personal income from other sources on Form 1040 in order to compute "adjusted gross income" (AGI). Therefore, sole proprietorship activities are not taxed separately.

SOI data on the total profit or loss from sole proprietorship activities have been published annually as a source of personal income starting with 1917 (profits from farm proprietorships have been published as a separate source only since 1963). Statistics on at least some of the business activities associated with these profits also began with Income Year 1917. They continued annually thereafter through Income Year 1939.

For 1917 and each year for the next 16 years, the sole proprietorship data were published in the single reports that contained SOI data from all tax returns. Then, from 1934 through 1955 (with exceptions for most alternate years after

Figure I
Partnership Returns: Number in Population, SOI Total Sample and SOI Certainty Sample, Income Years 1956-1986



1941 when there were little or no sole proprietorship data), the statistics were published in the SOI report that focused on individual income tax returns [50, 51].

Statistics that excluded farming were compiled for 1956, but they were not published [52]. *Statistics of Income—Business Income Tax Returns,* the new series that began with 1957, concentrated on unincorporated businesses—sole proprietorships and partnerships [53]. This series was discontinued after Income Year 1976, and was replaced by separate reports for each of these two types of business [54].

For budgetary reasons, these reports are no longer published. The last sole proprietorship report was for Income Year 1981. However, sole proprietorship statistics have continued to be produced, although in a much reduced form and with data on farming no longer tabulated on a regular basis. After 1981, just one or two tables on sole proprietorships have been published each year in the Summer issue of the *Statistics of Income Bulletin.*

Scope of Sole Proprietorship Studies

The history of the SOI sole proprietorship program is characterized by several breaks in continuity. Even though the series dates from 1917, the industries and businesses covered, as well as the content of the program, have changed over time. These changes were due primarily to changing user needs, changes in the tax law, introduction of the first SIC system in 1938, processing decisions, as well as budgetary considerations. Sole proprietorship studies predate those on partnerships by many years and have been far more varied in terms of their scope and coverage.

Data for most of the earlier years were confined to the number of businesses with net income and an amount for net income, classified by 19 industry groupings. The 1917 data also included business receipts, but the statistics for that year were limited to returns with net income $2,000 or more. For 1917, there were 252,000 such businesses reported in SOI, with net income that totalled $2.7 billion [55]. Loss business were not tabulated for any of the early years.

This emphasis on businesses "with net income" continued for many years. With exceptions for 1921 through 1925 and then for 1928, the earlier statistics by industry were confined not only to businesses with net income, but to returns that showed a net income from all sources of at least $5,000 [56]. Most individuals were not subject to the income tax and of those who were, many were thus excluded from the sole proprietorship statistics. Business coverage was, therefore, extremely limited. As a result, the industry data published were probably of limited use for most economic analyses. Nevertheless, for the early years of the series they were the only financial data published by the U.S. Government about sole proprietorship businesses, just as they are now.

Starting with 1933, totals by industry were published for businesses reporting a loss. The data also began to be classified by size of business net income or deficit. In addition to profits, data were presented for business receipts and wages paid. Meanwhile, the industry detail gradually increased so that by 1939, information was provided for more than 100 groups.

Throughout the 1930's until 1939, the statistics continued to be limited to businesses reported on returns with net income of $5,000 or more. The expansion in coverage for 1939 to include returns with net income under $5,000 was thus a major improvement. Mainly as a result of this change, the number of sole proprietorships shown in the statistics increased from almost 130,000 for 1938 to nearly 1.1 million for 1939 [57]. The corresponding net income (less deficit) rose from $0.8 billion to nearly $2.5 billion [58]. In addition to business receipts and net income or deficit, data for the cost of goods sold, purchases of merchandise bought for sale, and total business deductions were also included in the 1939 statistics; and another size distribution was added, based on business receipts. This classifier continued to be used until recent times.

During the 1940's and early 1950's, detailed business data were not produced as frequently, fewer industry groupings were used, and no industry detail was provided for loss businesses. On the other hand, there were major improvements in coverage. When the tax code was broadened during the early 1940's to include most of the population (and therefore most of the sole proprietors), the resulting increase in the businesses reported on individual income tax returns was clearly reflected in the statistics. Sole proprietorships grew in number from 2.0 million for 1940 to 5.7 million for 1945 [59]. A further refinement in coverage resulted from enactment of the social security self-employment tax in 1951. When appended to the income tax filing requirements based on gross income, all proprietors with net earnings of $400 or more from self employment had to file individual income tax returns that also included information about their business or professional activities. The filing requirement for self-employment tax purposes increased the stability of the sole proprietorship coverage; while the income tax filing thresholds were to change several times over the years that followed, the low filing threshold for self-employment tax remained the same.

The complete income statement was first tabulated for 1945, by industry division. Only business receipts and profits were then presented separately for more detailed industry groupings. A similar pattern of presentation was resumed starting with 1959, in the *Business Tax Returns* series, and also continues to the present (although currently farm data are excluded). Data for 1986 (the most recent year available) show that there were 12.2 million nonfarm proprietorships distributed over more than 200 industries.

Their net income (less deficit) was $90.4 billion [60]. In comparison, for 1959, there were 5.8 million nonfarm proprietorships, and their net income (less deficit) totalled $18.9 billion [61].

During the 1960's and 1970's, SOI sole proprietorship statistics also explored a variety of special subjects in efforts to meet as many data needs as practicable. Included were depreciation and inventory practices; the cost of depreciable property; information about the investment and jobs tax credits claimed by proprietors; and, in general, the nonbusiness and total income characteristics of proprietors. For several years the income and deductions unique to farming operations were shown and geographic data were featured. As with the partnership statistics, most of these special subjects were not repeated on any regular basis and none of them are included in the current statistics.

Principal users of the data

As in the case of partnerships, the Bureau of Economic Analysis is the principal requester of nonfarm sole proprietorship statistics, for use in the National Income and Product Accounts. The Bureau of Economic Analysis was instrumental in reviving an annual sole proprietorship program starting with 1956 and in expanding both its item and industry coverage. For more recent years, the Department of Commerce has also funded most of the program. Prior to 1956, Commerce used SOI sole proprietorship data for years when they were available and filled in the gaps for the national accounts by using statistics for small corporations as a proxy for extrapolation, as it did for partnerships. Sole proprietorship statistics are also used extensively by the Office of Tax Analysis and the Joint Committee on Taxation. Each utilizes the data in its continuing evaluation of the effects of the tax law on small businesses and their owners.

The Department of Agriculture is the principal user of the statistics on farm proprietorships. For years when SOI data on farming are compiled, it uses them as a check on its own farm income and expense data derived from surveys. Data that show farmers' principal source of receipts by type of farm commodity and on farm deductions are of particular interest.

As with corporations and partnerships, the Office of Tax Analysis and the Joint Committee are authorized to receive the microdata files containing information for each sole proprietorship return in the SOI sample. These files also include data for items not shown in the published statistics. The Bureau of Economic Analysis does not have access to the data files. However, the detailed tabulations it receives are generally sufficient to meet its needs.

Public use files were created for Income Years 1980 and 1983. For 1982 only, a file was created that contains information about farm businesses only. In order to preserve taxpayer confidentiality, all three files exclude business returns with AGI of $200,000 or more and the data included have been "edited" [62]. In addition, steps have been taken so that the sole proprietorship data cannot be linked with other individual tax returns information, such as that contained in the Individual Tax Model file [63]. There are no public use files for more recent years, however, special tabulations can be produced on a reimbursable basis.

Population coverage

Number of Businesses.—In general, the sole proprietorship studies provide data on all unincorporated, single-owner businesses, whether conducted on a full-time or part-time basis, so long as the owner (the sole proprietor) meets the income tax or social security self-employment tax filing requirements. Beyond this though, the population shown in SOI is somewhat imprecise, especially over a period of years. This imprecision in counting the number of businesses is quite apart from the exclusion from the earlier statistics of businesses reporting a loss and those reported on returns with total net income under $5,000.

Often, classification for the statistics depends on how the business income is reported and whether a business schedule is attached as part of the tax return. Also, until 1937, the statistics included the relatively small number of sole proprietorship businesses reported by fiduciary agents of estates and trusts. Starting with 1937, the data have been limited to businesses owned by individuals. More notable is the imprecision caused by changes made in the treatment of multiple businesses with the same owner. These changes also complicate comparisons with the number of business "establishments" published by the Bureau of Labor Statistics and the Bureau of the Census.

In the early years of SOI and currently, all businesses reported by a taxpayer were combined and classified based on the predominant business activity so that, in effect, the industry statistics are actually for sole proprietors (the business owners) rather than for sole proprietorships (the businesses themselves). This simplifies data processing and the discrepancy created is not large. In fact, the relationship between the number of businesses and the number of owners is close, about 1.1 to 1 [64].

In the intervening years, efforts were made to improve the counting of multiple businesses for SOI, so that only multiple businesses with the same business activity (and the same spousal owner, in the case of joint returns) were combined for the statistics. On the other hand, if the income and expenses of an identical business were equally divided between husband and wife on a joint return and separate business schedules filed for each spouse, they were com-

bined for SOI. Moving toward more recent times, businesses were counted however they were reported, although for awhile they were limited to a maximum of three per owner.

The sole proprietorship population is often thought to equal the establishment population, especially for smaller-size firms. However, if ownership of a business establishment changes during a year, the establishment is counted more than once for SOI because each owner files his or her own business schedule to report for different parts of the year. Some establishments can consist of more than one business, e.g., the restaurant facilities in a bowling alley or the chair in a barber shop that is leased out by the owner of the shop. Similarly, in the sense that an establishment has a fixed place of business, some businesses may not be establishments at all, e.g., self-employed taxicab drivers.

Sampling of returns.—Sampling of individual income tax returns, including those with business schedules, started with 1925. For many years, only returns with total net income from all sources under $5,000 were sampled at less than 100 percent [65]. The sampling classes were determined exclusively with reference to the return processing categories used for tax administration. An early SOI report notes that, with the exception of 1928 when the sample of returns with net income under $5,000 was increased so that certain returns including those with business schedules were sampled at 100 percent, the SOI samples were inadequate for purposes of producing sole proprietorship statistics for all businesses [66]. Limitations due to sampling were avoided by limiting the sole proprietorship data for most of the early years to businesses reported on returns with net income of $5,000 or more [67].

For 1943, many new sampling classes were added and other improvements introduced in selecting returns from the various processing categories used for tax administration. Sampling of returns with net income under $20,000 at less than 100 percent had become a necessity because of the sharp increase in returns filed after the income tax was extended to most of the population. This dollar cutoff for the certainty sample was gradually increased as more sophisticated designs were implemented and the size of the overall samples declined substantially.

From 1945 through 1955, the so-called "basic" SOI sample, now based on AGI rather than net income, was augmented for the smaller returns with business schedules in order to produce sole proprietorship statistics by industry [68]. The additional returns were not used for the rest of the individual income tax return statistics, however. Since 1956, the so-called business returns in the sample have been selected at rates that are generally higher than those used for other individual income tax returns. In addition, the same samples have generally been used for all of the individual income tax return statistics, including those for sole proprietorships. A major change for 1966 was the first use of the social security number as the basis of sample selection. Previously, the sample had been selected based on document or taxpayer account numbers.

Beginning with 1968, sample designation was computerized, based on the tax return records processed for the IRS Master File. (Previously, the samples had been manually designated from the IRS tax return categories.) This enabled further improvements to be made in the sample designs which no longer had to be based on the IRS categories. The revised criteria were based on combinations of the larger of AGI and the largest specific source of income, and of business receipts reported by farm and nonfarm proprietors. Until 1973, farm proprietorships were sampled at the same rates as nonfarm proprietorships. Since then, with an exception for 1982, they have been sampled at the same lower rates used for nonbusiness returns.

For 1982, the sample was redesigned and is currently based on the larger of total positive income or total negative income (i.e., total loss) per return, as well as on the size of farm and nonfarm receipts of sole proprietorships. For 1982 only, farm returns were sampled separately at rates somewhat higher than nonbusiness returns in order to accommodate a reimbursable request by the Department of Agriculture for farm industry statistics. Currently, there are over 30 sampling classes.

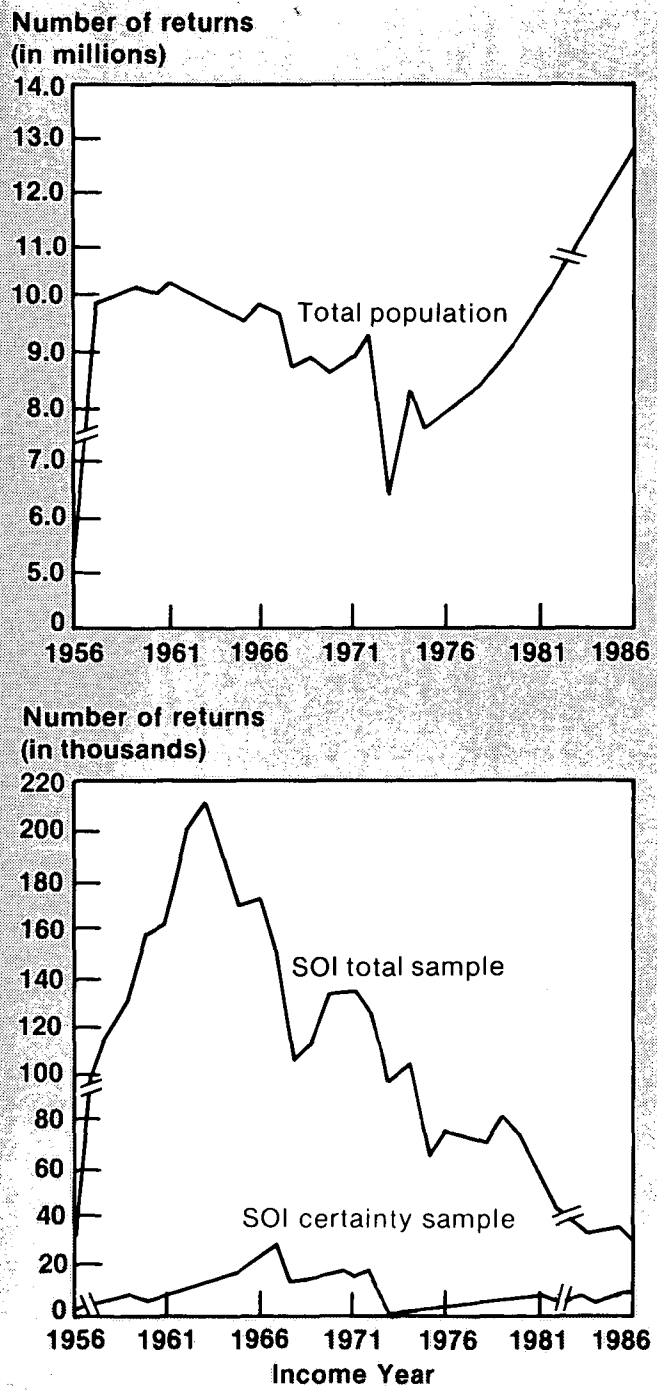
Figure J is a summary for 1956 through 1986 of the total number of individual income tax returns classified as business returns, the total number in the SOI samples, and the number in the samples that were included at the 100-percent rate, i.e., in the certainty sample. For Income Years 1957 through 1980 the data in Figure J are based on the number of individual income tax returns with Schedule C (nonfarm proprietorships) or Schedule F (farm proprietorships). For 1956 and in general since 1981, the data have been based on returns with Schedule C (to reflect the exclusion of farm proprietorships from the statistics).

Future Plans

In response to the increased attention focussed on "tax shelters" and taxpayers' participation in activities designed to yield "passive" losses, information relating to these two areas is being included in the sole proprietorship studies, beginning with Income Year 1987 [69]. Through a series of questions on the return form, the taxpayer is asked to indicate whether the business is a registered tax shelter and whether he or she materially participated in the operation of the business. Responses to these questions are being coded during statistical processing and statistics will be developed based on them.

Figure J

Sole Proprietorship Returns: Number in Population, SOI Total Sample, and SOI Certainty Sample, Income Years 1956-1986



In response to requests from users, information regarding other aspects of taxpayers' businesses is being gathered and will be tabulated. To assist the Bureau of the Census, the number of months the business was in operation during the year and information indicating whether or not the business was operating at the end of the year will be coded and included in the statistical file. In addition, data will also indicate whether expenses for a home office were deducted.

The "three martini lunch," a popular topic among tax reformers, also is being addressed in the sole proprietorship program. Using the expanded reporting requirements in the travel and entertainment area resulting from the Tax Reform Act of 1986, SOI data beginning with Income Year 1987 will contain the total amounts spent, as well as the limited amounts actually deducted.

Topics which have been included in past studies will be continued for future SOI sole proprietorship studies. Information regarding sex of proprietor, accounting and inventory practices, and "at risk" investments in the business, has been requested by various users for their on-going research endeavors and the items supporting this research will continue to be included in the sole proprietorship program [70]. In addition, data on farming may be included from time to time, depending on the availability of funds from the Department of Agriculture.

NOTES AND REFERENCES

[1] See Skelly, Daniel F., and Hobbs, James R., "Statistics of Income Studies of International Income and Taxes," *Statistics of Income Bulletin*, Fall 1986, Volume 6, Number 2; Skelly, Daniel F., and Kozielec, John A., "Statistics of Income Domestic Special Studies," *Statistics of Income Bulletin,* Fall 1987, Volume 7, Number 2; and Coleman, Michael J., "Statistics of Income Studies of Individual Income and Taxes," *Statistics of Income Bulletin,* Winter 1987–1988, Volume 7, Number 3.

[2] See Skelly, Daniel F., and Kozielec, John A., "Statistics of Income Domestic Special Studies," *op. cit.*, Scheuren, Fritz J., *Statistics of Income—1963, Farmers' Cooperative Income Tax Returns,* U.S. Department of Treasury, Internal Revenue Service, 1966, and Estep, Gary J., "Fiduciary Income Tax Returns, 1982," *Statistics of Income Bulletin*, Spring 1985, Volume 4, Number 4.

[3] Unlike the corporation and partnership statistics, those for sole proprietorships currently exclude farm proprietorships. For 1982, the most recent year that *Statistics of Income* data are available on farming, there were nearly 2.7 million farm proprietorships. See

Wolfe, Raymond, "Sole Proprietorship Returns, 1982," *Statistics of Income Bulletin*, Summer 1984, Volume 4, Number 1. See also the discussion on sole proprietorships later on in this article.

[4] Much of the material in this and following sections is taken from the 50-year historical summary contained in *Statistics of Income—1965, Corporation Income Tax Returns,* U.S. Department of the Treasury, Internal Revenue Service, 1968. Prior to enactment of the income tax in 1913, there was a so-called excise tax on the income of corporations (1909–1913).

[5] For the first 18 years, i.e., Income Years 1916 through 1933, only one *Statistics of Income* report was prepared each year. Beginning with the 1934 statistics, a separate report for corporations was instituted. From time to time, supplemental SOI reports for corporations have been issued, particularly on the foreign tax credit and on Controlled Foreign Corporations.

The first separate report was *Statistics of Income for 1934, Part 2*, U.S. Treasury Department, Bureau of Internal Revenue, Washington, DC, 1937. The most recent report is *Statistics of Income—1985, Corporation Income Tax Returns*, U.S. Department of the Treasury, Internal Revenue Service.

[6] The return types included for Income Year 1985, which is the most recent year for which statistics are available, are:

Form 1120 (U.S. Corporation),
Form 1120-A (U.S. Short-Form Corporation),
Form 1120S (U.S. S Corporation),
Form 1120L (U.S. Life Insurance Company),
Form 1120M (U.S. Mutual Insurance Company),
Form 1120F (U.S. Returns of Foreign Corporation),
Form 1120 IC-DISC (Interest-Charge Domestic International Sales Corporation), and
Form 1120-FSC (Foreign Sales Corporation).

[7] These items and classifications consisted of State in which the return was filed, industrial activity, "gross income," total deductions, net income (or deficit), and income tax.

[8] In regard to current assets and liabilities, previously only selected accounts on the tax return balance sheet could be identified as current or long-term.

[9] For a more complete explanation of "income subject to tax," see footnote 8, Table 13, in the Selected Historical Data section of this issue of the *Statistics of Income Bulletin.*

[10] For a discussion of this income tax definitional concept (in the context of individual income tax returns), see the analysis contained in Lerman, Allen H., "High Income Returns for 1984," *Statistics of Income Bulletin,* Spring 1987, Volume 6, Number 4.

[11] See Carson, Chris R., "Corporate Foreign Tax Credit, 1982: A Geographic Focus," *Statistics of Income Bulletin*, Fall 1986, Volume 6, Number 2, and Barlow, Mary, "Foreign Tax Credit by Industry, 1982," *Statistics of Income Bulletin*, Spring 1986, Volume 5, Number 4.

[12] Data classified by State were produced through 1951 and again for 1953. For 1955–1969, in order to emphasize that the data were intended primarily for use by tax administrators, the geographic data were labelled as for Internal Revenue Districts and Regions, rather than States. The geographic statistics needed most for tax administration continue to be tabulated from other Internal Revenue sources and are summarized in the *Annual Reports of the Commissioner and Chief Counsel, Internal Revenue Service.*

[13] A general description is contained in *Source Book of Statistics of Income,* Publication 1053, including ordering information, is available from the Director, Statistics of Income Division TR:S, Internal Revenue Service, 1111 Constitution Avenue, NW, Washington, DC 20224.

[14] U.S. Department of Treasury, Internal Revenue Service, "Number of Returns to be Filed," *Projections,* Document 6149 (Rev. 12–87).

[15] The last study on the growth and "age" of corporations was contained in *Statistics of Income—1959–60, Corporation Income Tax Returns.* This report also compares the 1959 data with the results of related studies published in *Statistics of Income* reports for the mid-1940's.

[16] Much of the material in this discussion of sampling was obtained from Jones, Homer W., and McMahon, Paul B., "Sampling Corporation Income Tax Returns for Statistics of Income, 1951 to Present," *Statistics of Income and Related Administrative Record Research: 1984*, U.S. Department of the Treasury, Internal Revenue Service, 1984.

[17] For a discussion of how this identifying number is used, see Harte, James M., "Some Mathematical and Statistical Aspects of the Transformed Taxpayer Identification Number: A Sample Selection Tool Used at IRS," *Statistics of Income and Related Administrative Record Research: 1986–1987,* U.S. Department of the Treasury, Internal Revenue Service. See also, Jones,

Homer W., and McMahon, Paul B., "Sampling Corporation Income Tax Returns for Statistics of Income, 1951 to Present," *op. cit.*

[18] See Leszcz, Michael R., Oh, H. Lock, and Scheuren, Fritz J., "Modified Raking Estimation in the Corporate SOI Program," *1983 Proceedings of the American Statistical Association, Section on Survey Research Methods,* and Harte, James M., "Post-Stratification Approaches in the Corporation Program," *1982 Proceedings of the American Statistical Association, Section on Survey Research Methods.*

[19] This description of statistical editing was taken from Wilson, Robert A., "Statistics of Income: A Byproduct of the U.S. Tax System," *Multi-National Tax Modelling Symposium Proceedings,* Revenue Canada Taxation, 1985.

[20] For Income Years starting with 1963, the Enterprise Standard Industrial Classification (ESIC), also issued by the Office of Management and Budget (OMB), was used for the corporation Statistics of Income Program. This system was specifically intended as a means of classifying "businesses" rather than "establishments" and was based on groupings of appropriate Standard Industrial Classification (SIC) codes. OMB discontinued the ESIC system when the SIC system was revised in 1987, so that Federal statistical agencies responsible for enterprise data now use their own classification systems. For a brief discussion of "establishments" versus "businesses," see the section on SOI sole proprietorship statistics later on in this article.

[21] The 1972 Standard Industrial Classification (as revised in 1977) and the accompanying 1974 Enterprise Standard Industrial Classification, both issued by the Office of Management and Budget, are presently used as the basis of Statistics of Income industry classifications for corporations, partnerships, and sole proprietorships. However, research is currently underway to determine how best to adapt the revised industry groupings contained in the recently released 1987 Standard Industrial Classification to Statistics of Income. Decisions will be based on knowledge of the economy's changing industry mix, the statistical needs of principal users of the data, the legal forms of organization in which an industry is likely to be best represented, the likelihood that the statistics will be reliable given the present and anticipated size of the SOI samples, and the limited number of industry titles and codes for which space can be devoted in the tax return instructions used for taxpayer self-coding.

[22] See Clark, Allison, "Corporation Income Tax Returns for 1985: An Initial Look," in this issue. (Some data for 1985 were also included earlier, in the historical tables contained in the Winter 1987–1988 issue of the *Statistics of Income Bulletin.*)

[23] For a description of how the Bureau of Economic Analysis uses SOI data for corporations, see U.S. Department of Commerce, Bureau of Economic Analysis, *Corporate Profits: Profits Before Tax, Profits Tax Liability, and Dividends,* Methodology Paper Series MP–2, May 1985.

[24] See Wilson, Oliver, and Smith, William J., "Access to Tax Records for Statistical Purposes," *Statistics of Income and Related Administrative Record Research: 1983,* U.S. Department of the Treasury, Internal Revenue Service.

[25] See Spruill, Nancy L., "The Confidentiality and Analytic Usefulness of Masked Business Microdata," *1983 Proceedings of the American Statistical Association, Section on Survey Research Methods.*

[26] Much of the material in this section was taken from Chapter 4, "Other Corporation Branch Studies," *Basic Operating Plan, Proposed Multi-year Operating Plan, FY 1986–92,* Volume I, Statistics of Income Division, Internal Revenue Service, unpublished report.

[27] Material in this section is abstracted from a draft paper by Nick Greenia, Corporation Statistics Branch, Statistics of Income Division.

[28] See footnote 21.

[29] See footnote 22.

[30] Data for 1956 for sole proprietorships and partnerships excluded agriculture, forestry, and fishing and were contained in a release entitled *Business Indicators—1956–57, Sole Proprietorships, Partnerships, Corporations,* U.S. Department of the Treasury, Internal Revenue Service, April 1958, unpublished.

[31] See Skelly, Daniel F., and Hobbs, James R., "Statistics of Income Studies of International Income and Taxes," *op. cit.*

[32] For this purpose, the Census Bureau subjects the data to additional testing and imputes for missing items by using prior-year data reported by the same taxpayer and current-year data reported by other taxpayers in the same industry and geographic area.

[33] For additional information on the employment linkage studies, see Moglen, Gail, Day, Charles, and Petska, Tom, "Record Linkage and Imputation Strategies in the 1982 Business Employment and Payroll Studies,"

Statistics of Income and Related Administrative Records Research: 1986–1987, U.S. Department of the Treasury, Internal Revenue Service. See also Greenia, Nick, "1979 Sole Proprietorship Employment and Payroll: Processing Methodology," *Record Linkage Techniques—1985*, U.S. Department of the Treasury, Internal Revenue Service.

[34] For the last published article see Greenia, Nick, "Partnership Employment and Payroll," *Statistics of Income Bulletin,* Spring 1984, Volume 3, Number 4.

[35] A limitation of the employment estimate is that employers are required to report the number of employees on the payroll for the week that includes March 12 of each calendar year, which then becomes the basis for the estimate for the year. The dollar payroll estimate, on the other hand, is based on the total amount reported for the entire year.

[36] See Greenia, Nick, "1979 Sole Proprietorship Employment and Payroll: Processing Methodology," *op. cit.*

[37] See Day, Charles, "Imputation of Employment and Payroll as an Alternative to Record Linkage," *1988 Proceedings of the American Statistical Association, Section on Survey Research* Methods (in preparation as of August 1988).

[38] U.S. Department of the Treasury, Bureau of Internal Revenue, *Supplement to Statistics of Income for 1939, Part I, Compiled from Partnership Returns of Income,* 1945.

[39] U.S. Department of the Treasury press releases S-2253 and S-2645, dated February 16, 1950, and April 4, 1951, respectively.

[40] U.S. Department of the Treasury, Internal Revenue Service, *Statistics of Income for 1953, Partnership Returns,* 1957.

[41] This series was originally styled *Statistics of Income—U.S. Business Tax Returns.* Starting with 1965, it was retitled *Statistics of Income—Business Income Tax Returns.* From 1957 through 1972, the series also included summary statistics on corporations.

[42] See U.S. Department of the Treasury, Internal Revenue Service, *Statistics of Income—Partnership Returns,* for these years.

[43] For the most recent article, see Zempel, Alan, "Partnership Returns, 1985," *Statistics of Income Bulletin*, Summer 1987, Volume 7, Number 1.

[44] The first compendium was published as *Statistics of Income—1978–82, Partnership Returns,* U.S. Department of the Treasury, Internal Revenue Service, 1985.

[45] Although balance sheet data are compiled annually, they continue to be incomplete. Currently, not all partnerships are required to file a balance sheet; in other cases, balance sheets are not included with the return as originally filed. No attempt is made to impute the missing data for the statistics. However, because partnerships which are exempt from filing balance sheets are small by definition, and those that fail to file them are thought to be generally small, the amount of data "lost" may not be significant.

[46] See footnote 24.

[47] More specifically, partnerships classified in real estate are divided into eight component industries. Only returns classified in the largest of the eight, real estate operators (except developers) and lessors of buildings, are sampled at the special set of rates.

[48] In general, in contrast to active partners or certain other investors, passive partners or investors do not materially participate in the activity of the business throughout the year. The Tax Reform Act of 1986 limited the amount of partnership and certain other losses that passive partners or investors could deduct.

[49] See *Statistics of Income Compiled from the Returns for 1917,* Bureau of Internal Revenue, U.S. Department of the Treasury, 1919.

[50] From 1934 through 1953, the statistics were included in *Statistics of Income—Part 1,* for each year. This report was retitled *Statistics of Income—Individual Income Tax Returns,* starting with 1954.

[51] Only totals were compiled for sole proprietorships for 1940 and, to a lesser extent, for 1944; there were no industry data.

[52] See footnote 30.

[53] See footnote 41.

[54] The sole proprietorship data for 1977 through 1981 were published in *Statistics of Income—Sole Proprietorship Returns,* for these years. Data for 1979 and 1980 were published in a single combined report.

[55] See footnote 49.

[56] In general, "net income" meant gross income from all sources as defined in the tax law, minus personal

deductions. It was before the deduction for taxpayer exemptions and before credits against income, such as those for dependents and "earned income". In contrast. "adjusted gross income" is gross income from all sources as defined in the tax law, minus certain exclusions and statutory adjustments, depending on the year. It is before subtraction of amounts for personal deductions and exemptions for the taxpayer(s) and his or her dependents.

[57] See *Statistics of Income—Part 1*, for these years.

[58] *Ibid.*

[59] *Ibid.*

[60] See Wolfe, Raymond M., "Sole Proprietorship Returns, 1986," *Statistics of Income Bulletin,* Summer 1988, Volume 8, Number 1 (in preparation as of August 1988).

[61] See *Statistics of Income—1959–60, U.S. Business Tax Returns.*

[62] Additional Information about these files can be obtained by writing to the Director, Statistics of Income Division TR:S, Internal Revenue Service, 1111 Constitution Avenue, NW, Washington, DC 20224.

[63] *Ibid.*

[64] For a discussion of this relationship and its effect on the statistics, see Wolfe, Raymond M., "Methodological Changes in the Statistics of Income Sole Proprietorship Program—Dominant Business Processing," Statistics of Income Division, Internal Revenue Service, an unpublished paper. For a copy of this paper, write to the Director, Statistics of Income Division TR:S, Internal Revenue Service, 1111 Constitution Avenue, NW, Washington, DC 20224.

[65] However, the SOI reports indicate that returns with net income under $5,000 were included in the 100-percent sample class if they showed income characteristics similar to those found on returns with net income of $5,000 or more, such as unusually large amounts of income from certain sources.

[66] The inadequacy of the SOI sample for sole proprietorship purposes is mentioned in *Statistics of Income for 1929.*

[67] The statistics for 1939 covered all sole proprietorships, including those reported on returns with net income under $5,000. The SOI report for that year contains no explanation of how this became possible, since the previous sample design was unchanged and the percentage of returns sampled in the less-than-100 percent class had declined in comparison to the immediately preceding years. However, there were changes made in how the sample data for the late 1930's were weighted and this may be part of the explanation. For 1939, the sole proprietorship sample in the under-$5,000 net income class was weighted to an estimated total number of sole proprietorship returns in this class, apparently for the first time. For 1938, sole proprietorship returns appear to have been weighted to the size class total which also included returns for other than sole proprietorships. (Prior to 1938, a different form of "weighting" was used, based on average amounts computed from sample returns in the under-$5,000 net income sample class).

[68] The sample was similarly augmented for 1944, but no industry data were actually tabulated.

[69] See footnote 48.

[70] The "at risk" rules in the tax code limit the amount of losses that most investors can deduct to the amount they have "at risk", i.e., to the amount they have actually invested.

Statistics of Income: A By-Product of the U.S. Tax System

By Robert A. Wilson*

U.S. Government statistics are the product of a decentralized statistical system that involves over 70 Federal Government organizations, one of which is the Statistics of Income Division of the Internal Revenue Service (IRS) in the Department of the Treasury [1]. Another characteristic of the U.S. system is that statistics are often a by-product of an administrative function and are based on an administrative record. In the case of the Statistics of Income Division, the economic, financial, and tax statistics it produces are a by-product of tax returns that are processed in administering the tax laws. The report series in which the data are released is called Statistics of Income (SOI).

This paper reviews the relationships between processing for tax administration and processing for statistics through about 1985. It begins with a description of some of the SOI programs and their uses. It then reviews IRS and SOI processing and their limitations and some of the improvements in SOI processing now under consideration. These improvements will help the Statistics of Income Division to operate more efficiently and effectively in meeting the needs of its major users and to adjust to the continuing climate of reduced budgets for statistics.

THE STATISTICS OF INCOME PROGRAM

The SOI series came into being after the adoption of the Sixteenth Amendment to the Constitution and the subsequent enactment of the first modern U.S. income tax law, the Revenue Act of 1916. This Act specifically called for the annual publication of statistics. The wording contained in the 1916 Act has been repeated, with practically no change, in each major rewrite of the tax statute since that time. It is currently contained in the Internal Revenue Code of 1986, which is the basis for the present tax law [2].

SOI data from the very beginning (1913) have been used extensively for tax research and for estimating revenue, especially by officials in the Office of the Secretary of the Treasury. At the start, the reports were almost entirely designed to meet these needs. With the growth of research groups both within and outside the Federal Government and with the increased needs of the tax planners and revenue estimators, new types of data soon were also required. At the same time, the tax returns were expanded to reflect the growing number of new provisions of the law, thus providing a ready source of data with which to fulfill these needs.

By the close of World War II, most of the population was subject to the income tax. At about the same time, the economies of using existing administrative files as the source of data for a wide variety of Government statistics had become more and more apparent. Each of these events made the tax return a valuable source of economic as well as tax information. While the tax definitions of data items presented some obstacles, the obstacles were far outweighed by the likelihood that taxpayers' response to the tax return tended to be more accurate than their response to special surveys. Moreover, with experience, users learned how to adjust the tax data for these definitions in order to meet their own particular needs. Meanwhile, SOI processing methods contributed by making some of the adjustments for the major users in the course of "editing" the tax return data for the statistics [3].

The upshot of all these developments was an SOI increasingly different in its orientation from the early SOI. Several multi-purpose reports replaced the single tax-oriented report. While tax data continued to be included (all the more so as the tax law expanded both in scope and in complexity), the emphasis changed to include more general purpose statistics that would assist economists and financial analysts [4].

The main emphasis of the annual statistics has always been individual and corporation income tax return data. Other studies based on other types of returns for which data have been tabulated either annually or periodically are partnerships, estates and gifts, fiduciaries, farmers' cooperatives, private foundations and other tax-exempt organizations, and employee plans. Schedules attached to some of the returns became the subject of separate SOI programs. The sole proprietorship schedules attached to individual income tax returns were a relatively early source of statistics which, when taken together with data from partnership returns, helped shed light on unincorporated business activity.

Another development in the growth of SOI has been the increasing tendency for new provisions of the tax law to require separate reports to Congress by Treasury's Office of Tax Analysis (OTA). These reports have required statistics on such topics as individuals with high income who are nontaxable, capital gains taxation, international boycott

* Coordination and Publications Staff. Reprinted (with minor revisions) from the *Multi-National Tax Modelling Proceedings*, Revenue Canada Taxation, September 1985.

participation, taxation of corporate income from U.S. possessions, and income of citizens working abroad.

Today, information obtained from the SOI program is used extensively throughout the Federal Government for a variety of purposes. Besides OTA and the congressional Joint Committee on Taxation, there is a third major Federal user of SOI, the Bureau of Economic Analysis in the Department of Commerce. Profits data for corporations in the National Income and Product Accounts are benchmarked to the SOI profits obtained from corporation income tax returns, which are then adjusted for conceptual differences and extrapolated to more current years based on more fragmentary data from other sources [5]. Returns of unincorporated businesses, i.e., sole proprietorships and partnerships, are also used for the National Accounts; they constitute the only complete and reliable source of financial statistics for this segment of the economy. Investment income reported on individual income tax returns is also used for the National Accounts.

THE STATISTICS OF INCOME DIVISION

The 1916 Act that first called for the publication of Statistics of Income necessitated the creation of a statistical organization within IRS to carry out this mandate. The present successor to that original organization is the Statistics of Income Division in the National Office in Washington, D.C. The Division is part of the Office of Taxpayer Service and Returns Processing under the Deputy Commissioner (Operations) which is charged with the responsibility for processing tax returns.

The Statistics of Income Division is comprised of a staff mostly of statisticians and economists who work closely with users to determine the content of each program and report, to design the statistical samples used, and to develop processing procedures. Complications arise from the fact that the processing is currently decentralized in as many as eleven different locations throughout the country; hence there is a need for a strong coordinating role by the Statistics of Income Division, including adequate quality controls to assure uniform and accurate processing.

The role of the Division has changed over the years. Until recent times, it had the additional responsibility of producing management statistics to assist IRS in its day-to-day operations. However, SOI has always been the Division's major responsibility.

ADMINISTRATIVE VS. SOI PROCESSING: A BRIEF HISTORY

Within IRS, statistical processing of the tax return data has historically been a separate off-line operation, divorced from the mainline processing of tax returns for administrative purposes. There were reasons that dictated this separation, some of which are still applicable:

- SOI is designed to serve tax policymakers in particular and economists in general. Consequently, it is of little interest to tax administrators (the role of IRS is, above all, tax administration) most of whom are attorneys and accountants whose statistical needs, where they exist, are quite different from those of policymakers.

- As a corollary to the first point, SOI was and continues to be a byproduct of the IRS tax administration system. Therefore, SOI and the processing for it have often been given a lower priority by IRS. In recent years the SOI budget has reflected this, with continued declines in the resources set aside for statistics. As a program administered by IRS, these budget declines might ordinarily have been steeper. However, the fact that needs for Treasury Department tax policymaking had to be considered often served to mitigate the size of the declines.

- Most of the SOI programs are based on samples of returns and for many years these samples were manually designated. This sampling was accomplished most effectively only after administrative processing was completed. Moreover, after the sampled returns were selected, they were sent to a central location, the Statistics of Income Division in Washington, for special processing.

The administrative processing which preceded statistical processing is and has been a decentralized operation. Until the 1950's, all of this processing took place in the more than 50 IRS district offices throughout the United States where taxpayers filed their returns. This processing was in large part manual, assisted, beginning in 1948, by punchcard equipment to service the larger district offices. Area service centers, also with punchcard equipment, were created in the mid-1950's to assist these same larger districts. Administrative processing consisted largely of mathematical verification to assure that returns were "in balance," plus certain other basic checks that included a review of the tax computation [6].

In contrast, statistical processing was conducted in Washington and was limited to returns selected for the SOI samples. Compared to the administrative processing of these returns, it was a lengthier and more complicated procedure. Many more lines on the return forms were utilized and some of the totals reported on these lines had to be edited for the statistics using amounts identified through examination of supporting forms and taxpayer schedules that were included as part of the return.

The advent of automatic data processing (ADP) for tax administration purposes in the early 1960's had a profound

effect on IRS processing and statistical processing was directly affected. Statistical abstracting, editing, and transcription, which after 1955 had begun to be decentralized from Washington to the pre-ADP area service centers, were completely decentralized during the 1960's to the ten ADP regional service centers where returns were now filed by taxpayers and then processed there for administrative purposes under the new system.

However, with a view to relieving regional service centers of all processing not directly related to the administrative processing of returns, a data center (now called a computing center) was later established in Detroit, Michigan. Among its duties was SOI processing, especially the computer programming—to test and tabulate the data. The Data Center also manually resolved the errors uncovered by these tests and, in addition, for many years was responsible for the initial manual abstracting, editing and transcription of data from returns for the corporation and certain other SOI programs.

While statistical processing continued to be an off-line process, under the new ADP system processing was no longer under the control of the Statistics of Income Division. The role of the Division in response to these changes evolved into one of planning, coordinating and overseeing a field operation. This was in addition to its continuing role of meeting with users to identify their data needs and to publish the SOI reports. As a result of the transition, the Statistics of Income Division ceased to have its own manual and computer processing operation and no longer had access to the computer which it had previously shared with the Bureau of the Census. Instead, it became a "paying customer" for the processing services that were provided by other IRS organizational units whose principal functions were return processing in general. The Division developed the data "requirements" (including standards and goals for completion) and, at least in principle, these other organizations determined the best way to carry out and meet these requirements. The loss of control over its own processing operation and the administrative problems that developed under the new system have continued to this day to present challenges to timely, accurate, efficient and economical processing for statistics.

CURRENT IRS ADMINISTRATIVE PROCESSING

The concept of a centralized Master File containing a computerized account for each taxpayer was adopted by the Service in the mid-1950's. Then, in 1959, the concept of regional centers located in each of the Internal Revenue Regions was adopted. These centers were designed as a means of centralizing the processing that had previously taken place in the district offices and area centers, and of introducing computer processing of tax return data to replace a large part of the previously-manual operation. The first regional center was opened in 1961.

Using individual income tax returns as the example, Figures A and B summarize the major steps (also described below) in the administrative processing system as it has now evolved [7]:

- Tax returns are received at the service centers throughout the country where processing begins. Tax examiners in the service centers first check the returns received to be sure they are signed and meet the IRS criteria for a completed return. Returns are sorted by type and accompanying checks compared with the amounts reported. A quick search is made for unallowable deductions and obvious errors and the returns are coded for computer processing.

- Information and tax data comprising nearly all of the information reported on the main part of the return and much of what is included on selected supporting schedules are transcribed for computer processing. This is accomplished by means of direct data entry onto magnetic tape, using key station terminals.

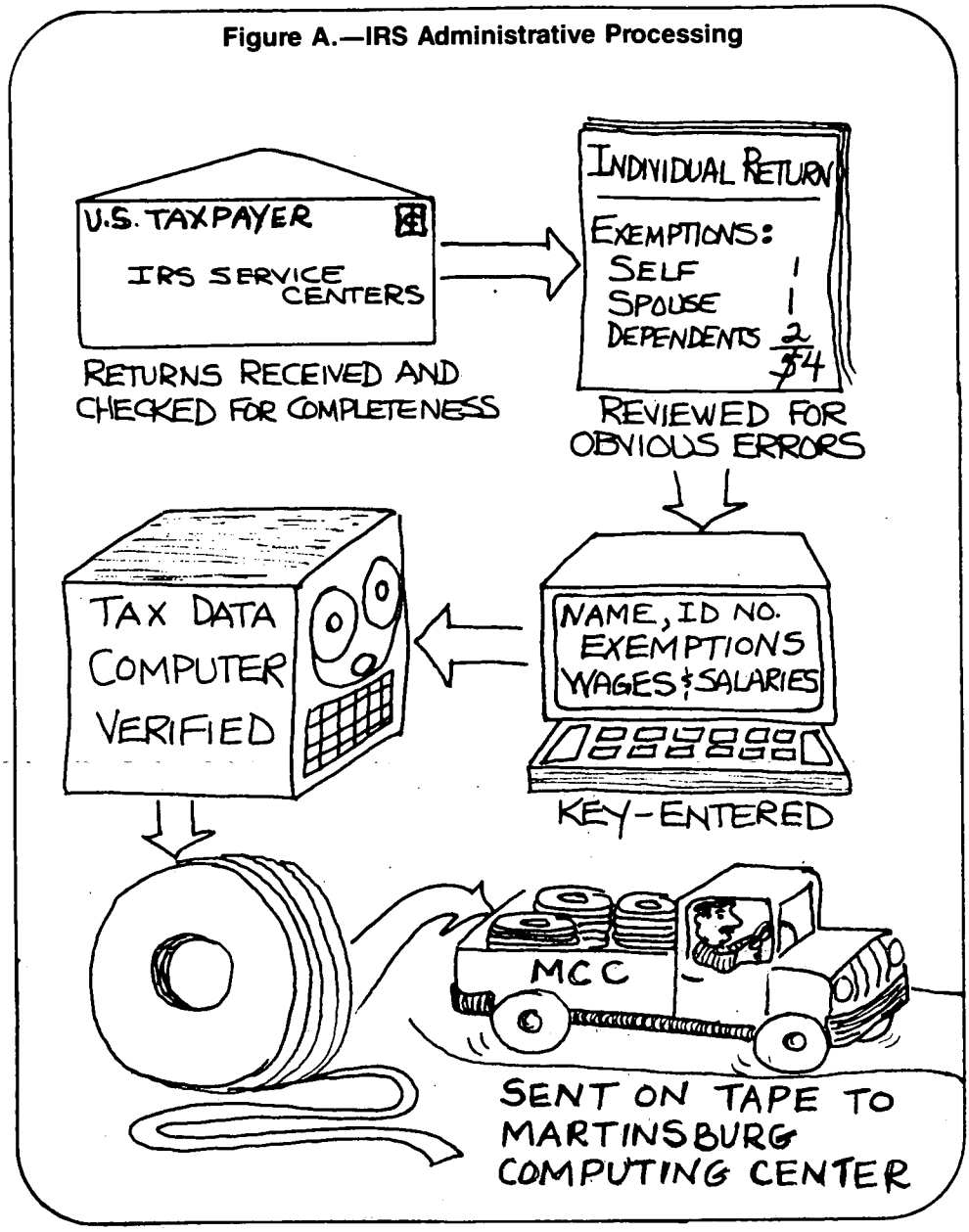
- After verifying the return count per "block," the computer verifies the tax computation used or, if appropriate, computes the tax for the taxpayer [8]. A number of consistency and validity checks are made to the information transcribed in order to identify certain mathematical errors made by taxpayers and mistakes made in the actual data capture process. (However, unless errors have a direct bearing on the tax reported, they may not be corrected. The implications of this on SOI are discussed below.)

- After a block of return records meets the standards for acceptability, the service center transmits it on computer tape to the national computing center in Martinsburg, West Virginia (MCC), for central account posting and "settlement." The function of MCC is to post taxpayer transactions to the so-called Master File. In the process, MCC performs several functions. It analyzes the data from the service centers by making comparisons with the prior year and generates refund and tax deficiency notices; it identifies returns for possible audit examination; and it creates special listings for the centers, one of which identifies the returns for inclusion in the SOI samples.

SOI USE OF THE TAX ADMINISTRATION SYSTEM

SOI began to piggyback directly on the tax administration system soon after the Master File for individuals was developed. The Master File offered a vastly improved sampling frame. Moreover, it could be accessed by com-

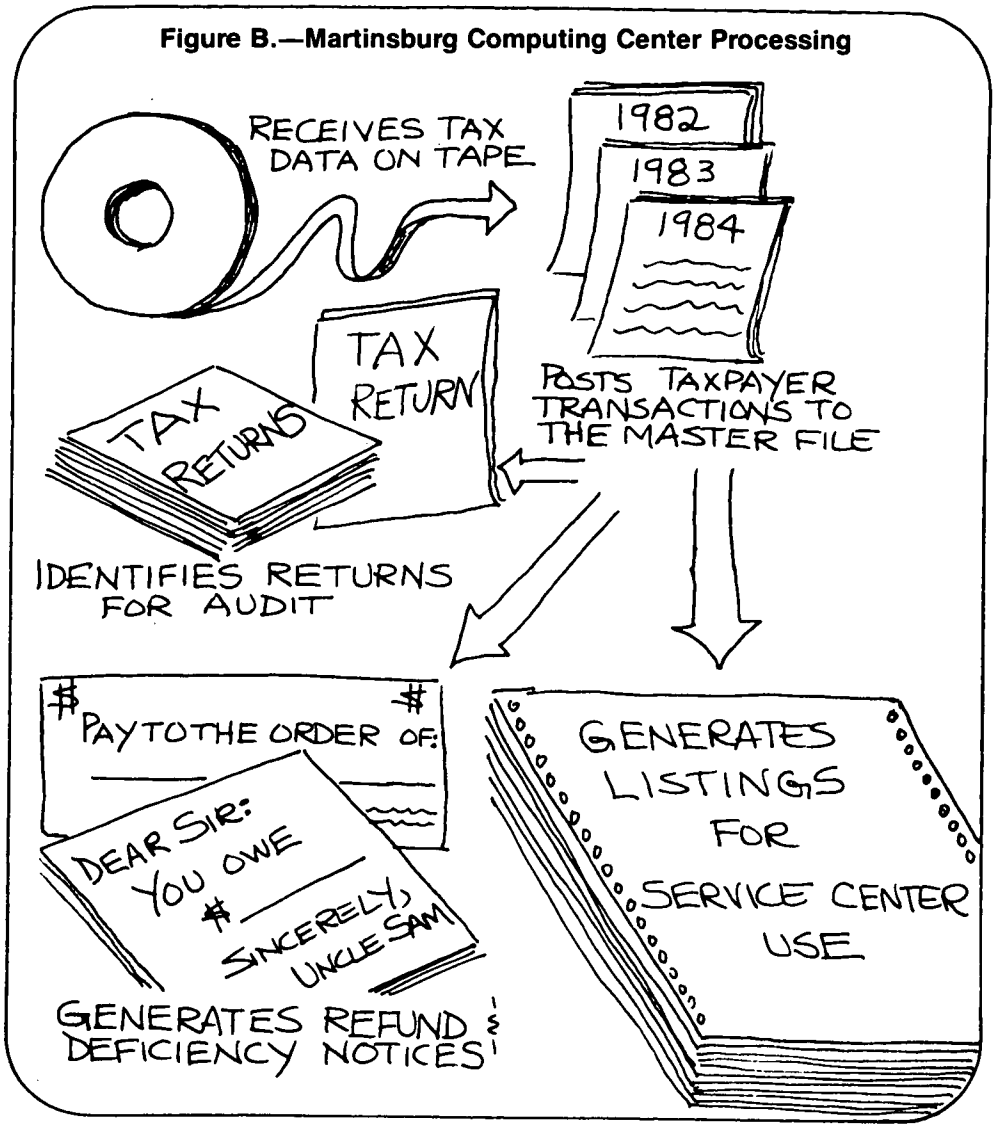
Figure A.—IRS Administrative Processing



puter, enabling more efficient, sophisticated and effective sample designs to be used than under manual sampling. Since, in addition, these samples were usually smaller in size, economies as well as improved data often resulted. Sampling by computer was then gradually extended to the other major SOI programs. Within a few years, nearly all of the SOI samples were designated by computer, using information from the Master File system.

Yet, for many years, little use was made of the actual data captured from the returns for tax administration purposes [9]. As a result, there appeared to be some duplication between the administrative and SOI systems because, for returns in the SOI sample, many of the same data items were processed twice, once for tax administration and once for statistics. However, a number of items were processed differently under the two systems. On the one hand, all data used for SOI were subject to rigorous testing and to statistical editing when necessary. On the other hand, because of the sheer volume of returns processed by IRS some reporting and processing errors were accepted under the administrative system. (The 193.2 million documents processed by the Service in Fiscal Year 1987 were about twice the number processed in Fiscal Year 1962, at the inception of ADP.) To conserve resources, such shortcuts in administrative processing had to be taken whenever possible. Because the two systems served such different purposes, it was not without reason that the SOI Division

Figure B.—Martinsburg Computing Center Processing



was reluctant to use administrative data.

Traditionally the emphasis in administrative processing has been on production. To meet production standards the expectation is that the reporting and processing errors that initially are allowed to "pass" will be caught later on if significant, through computer review. However, since this computer review generally addresses only data items necessary for tax administration (generally the return entries that have a direct bearing on the tax or on the payments reported or refund claimed), errors in other return items that are important for statistics often remain in the system. Although service centers often instituted some sort of verification system of their own design when resources were available, it has only been recently that IRS has begun to institute more of a balance between quantity and quality.

Despite these shortcomings in the adequacy of some of the administrative data for statistical use, efforts were made starting in the mid-1970's to utilize them for the SOI individual income tax return program, but only to a limited extent. Administrative data items that came from the same entries on the return as those required for SOI were manually verified or edited at the same time that additional data needed for the statistics, but not available from the administrative system, were abstracted and edited for SOI. (The principal economy achieved through this process was in not having to retranscribe the administrative data that were accepted for the statistics.) Then, toward the end of processing all of the transcribed data comprising a return record were brought together and tested for internal consistency at the Detroit computing center. Inconsistencies were resolved, either manually or by computer, on the basis of logical relationships among return items inasmuch as the returns were no longer accessible for statistical purposes at this stage.

The SOI system has since been modified. Formerly,

clerical tax examiners verified the administrative data for SOI and corrected or edited them as necessary. Now, all data items from the individual income tax return are "accepted" for the statistics as reported, unless the return fails a computerized check for acceptability which is made in the service centers. Return records failing this check are flagged for the specific item questionable and the return entry to be used for the statistics corrected or subjected to SOI editing while the return is still available.

This same computer-assisted editing process also identifies returns for which additional data need to be obtained for SOI only. This identification is based on the presence of entries in the administrative system for which the taxpayer has to file supplemental or computational information, often in a supporting schedule that is the source of the data needed for SOI. This means that, at least in the case of individual income tax returns, most of the computer checking for consistency is decentralized from the Detroit computing center to the service centers which are where the returns are processed, both for administrative and statistical purposes. It also means that some of the additional editing of the return totals that was formerly accomplished by recourse to supplemental data in supporting schedules may no longer be possible because the need for certain adjustments formerly made in the manual edit process cannot always be determined by computer [10].

For the sole proprietorship and partnership programs, a more comprehensive manual statistical edit, often involving many more items than are available from the Master File system, especially for farm data, is now being considered for certain future years. This special editing may coincide with the Agricultural and Economic Censuses for 1992, 1997, and so on. Special requests for data may be accommodated in a like manner. At the present time, the corporation program is the only major SOI program in which administrative data have not yet been used.

At least in the case of individuals, little appears to have been lost by the inclusion of administrative data, with no noticeable breaks in the historical time series apparent. This change in the approach to return editing would probably have been necessitated in any case by outside events; with the decline in statistical budgets throughout the Federal Government in recent years, more economical and efficient methods of obtaining data have become a necessity. At the same time, the drive to reduce respondent reporting burdens has also been made applicable to tax returns. As a result, some of the return form schedules used to facilitate SOI editing may no longer be required. Changes in the mode of taxpayer filing can also be expected to make changes in statistical processing, particularly in the data editing. This will result, for example, from the filing by computer of certain tax returns by paid tax preparers.

PRESENT STATUS OF SOI PROCESSING

How does SOI fit into the current IRS processing scheme? Figures C and D pick up where Figure B leaves off in showing the connection between the administrative and SOI systems. Figure E shows this relationship in more detail.

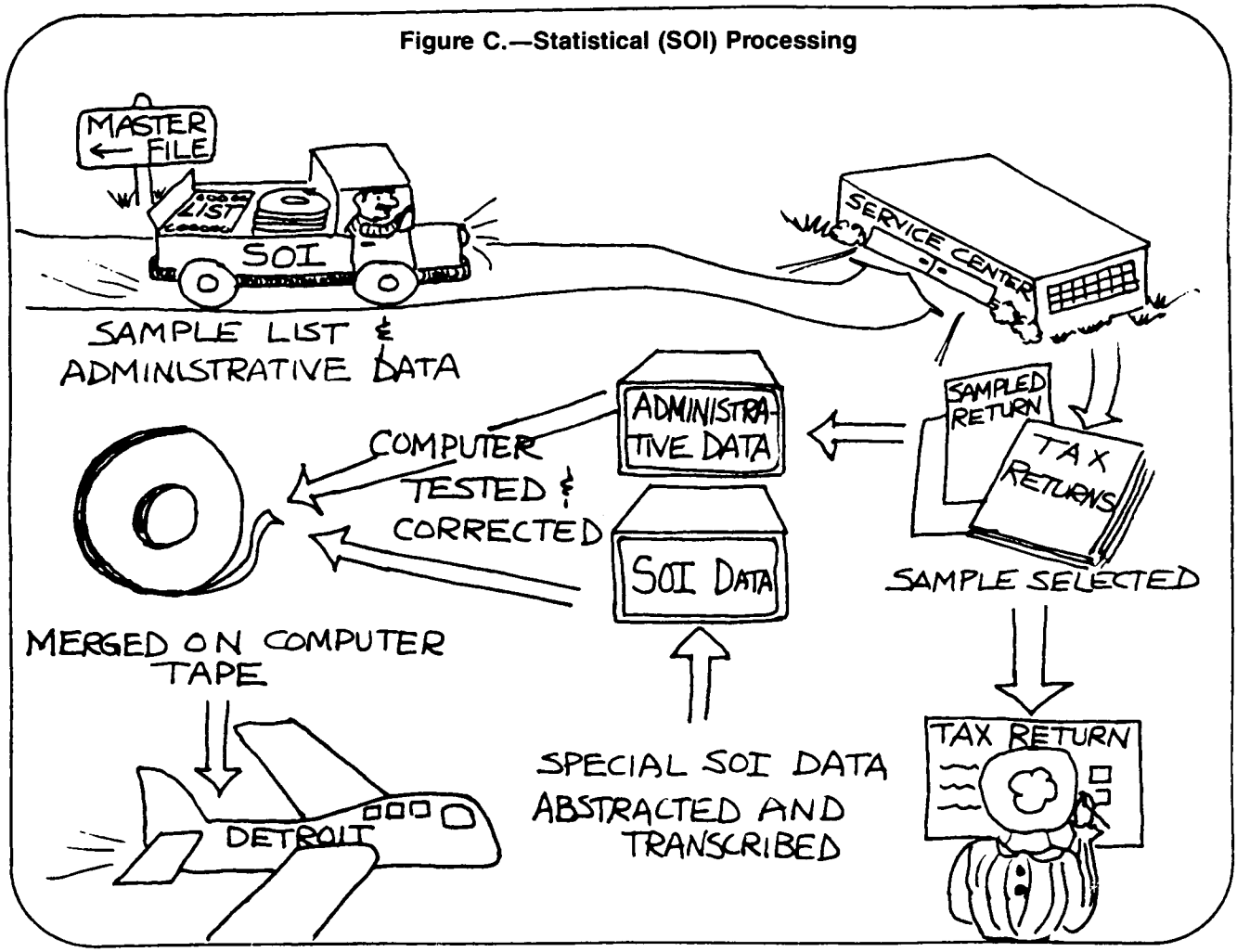
Magnetic tape extracts containing the identification of sampled returns are sent by MCC to each of the service centers where returns for SOI are selected from the files. The sampled returns in some cases may be processed for the statistics in the same service center in which taxpayers file them. Increasingly though, they are shipped to another service center or to the computing center in Detroit for processing. The exact locations chosen are dependent on prior-year experience, e.g., familiarity with the SOI programs and their processing requirements, the efficiency of a center's SOI operation and the quality of its work, and the priority it assigns the program and its ability to meet deadlines.

As already mentioned, SOI programs increasingly utilize data captured during administrative processing, and only the data not available from the administrative processing system are obtained directly from the returns. The latter data are either transcribed directly or are entered onto intermediate "edit sheets" for transcription at the service centers or Detroit computing center. The two sets of data are then merged.

Computer testing is now in two stages. In the first stage, the administrative data are checked to assure that, at least to start with, they can be reconciled with what is reported on the return. It is at this stage that most of the errors left uncorrected during administrative processing are caught. Then, after the complete record (including the additional data obtained solely for SOI) is on tape, it is sent to the Detroit center for the second stage of testing.

It is during this second testing stage that illogical relationships and internal inconsistencies are identified. Misreported or missing information may be imputed by the Detroit center, either manually or by computer (and the Statistics of Income Division sometimes has to make the final decision on how to deal with specific returns). In the case of errors, the output, in the form of hardcopy error registers or information listings, is sent by mail to the originating service center where it is associated with the actual returns. Return information is then used to help correct the SOI records by annotating the error or information registers. This is a "back and forth" process between service centers and the Detroit center until the file is considered error-free. After the second round of corrections is made by the service centers, any remaining errors are corrected at the Detroit center, without recourse to the returns, in order to save time. Having arrived at this point in

Figure C.—Statistical (SOI) Processing



processing, the files are tested for duplicates and other characteristics including those used to evaluate the completeness of the total sample. Weighting factors are then produced.

In addition to tabulations, either for publication or to satisfy special user needs, analytical tables are generated to assist in reviewing the aggregated data. Most of this review takes place in the Statistics of Income Division and takes into account how the data were processed as well as whether or not they are reasonable in light of prior-year data, changes in tax law and data from other statistical series. Disclosure in tables is dealt with mostly by computerized routines. Table programming is now done, not only at the Detroit computing center, but in the Statistics of Income Division or by outside contractors.

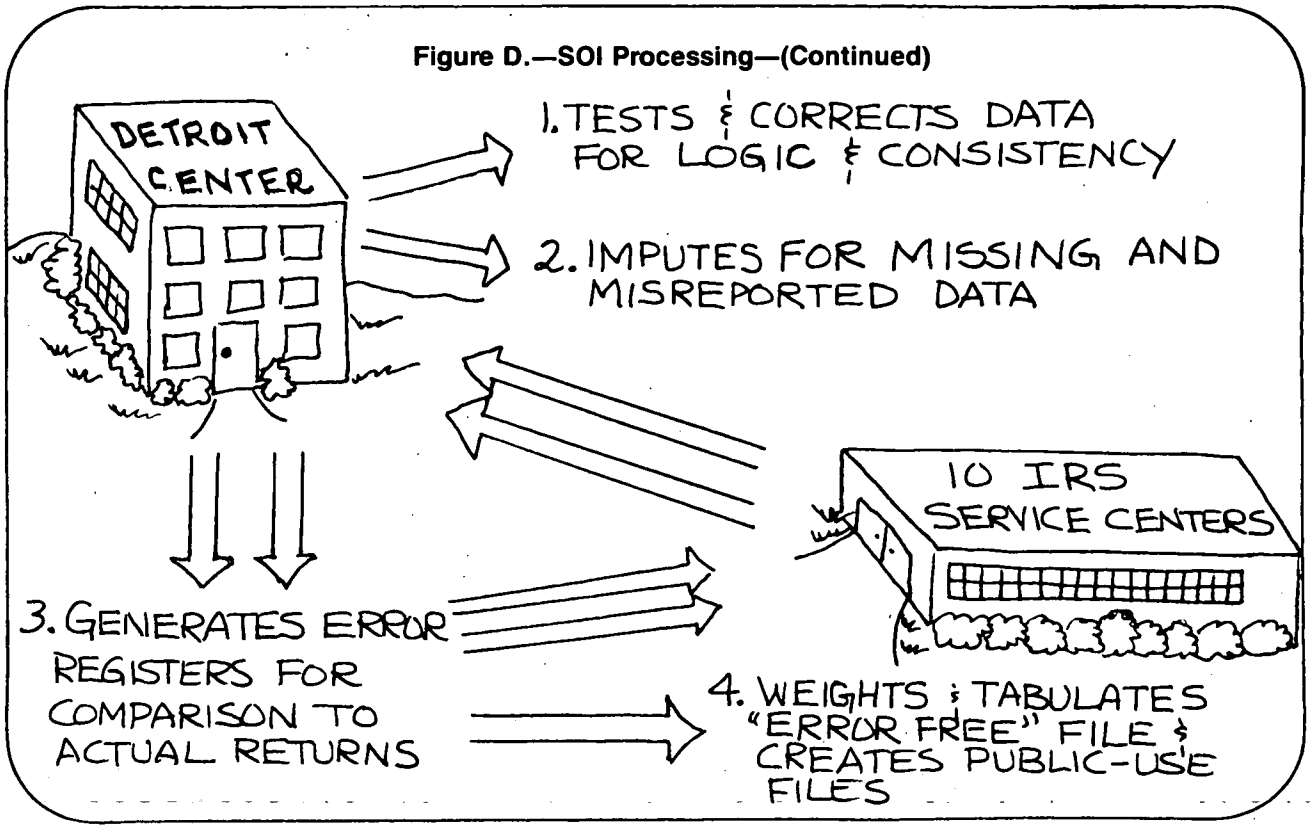
CURRENT PROBLEMS AND FUTURE PLANS

Even as SOI becomes more of a "natural" by-product of the administrative system there are a number of problems that need to be addressed. Some of them are described below [11].

In this period of continuing budget constraints, limited resources pose significant problems for SOI. The present SOI system has developed into one that utilizes whatever resources are available and thus it still relies heavily on manual processing. It does not take advantage of the interactive capabilities of computer systems because they have not been available. To help counter the cost of manual processing, the Statistics of Income Division has been attempting to adopt more sophisticated processing techniques, such as using specialized samples or using longitudinal files to assist in error resolution. However, this cannot always be done, in part because computer programming resources are not always available.

Because processing occurs at so many locations, there is much shipping of documents and data tapes. The monitoring of these shipments is time consuming. Significant delays in processing result from late, missing, or misrouted shipments. Timely project completion as well as the security of tax return information has sometimes been jeopardized by the controlling and shipping process. Moreover, these delays mean that the returns are not always available when needed for IRS compliance activities. Competition for re-

Figure D.—SOI Processing—(Continued)



turns is aggravated by the length of time it takes for error resolution. Service centers must sometimes hold returns until the Detroit computing center has processed two error resolution cycles. The competition sometimes necessitates photocopying. Most frequently, the competition is for the larger returns which are sampled for SOI at the 100-percent rate.

Control of the sample is also complicated by the process used to merge administrative and SOI data. When data obtained through the tax administration system are incorporated into a project, they are included in the same return record that is used for sample control. When this record is matched with the separate record containing the additional data obtained for SOI, problems can arise if there are transcription errors in the return identifiers used to effect the match. When data from the administrative system are not used in a project, sample control is entirely manual. In the absence of a computerized audit trail, there is always the additional problem of returns getting lost at some stage in processing.

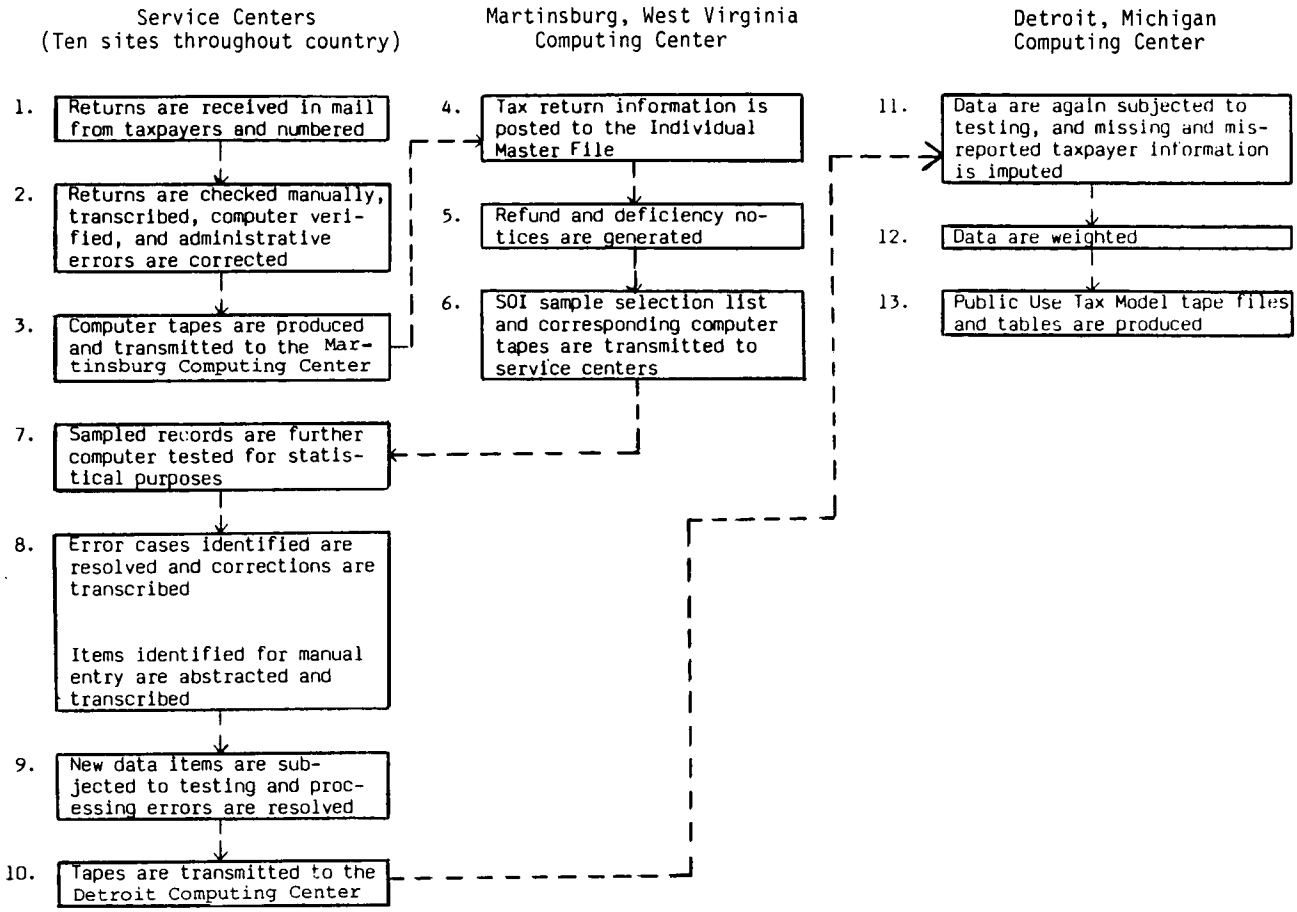
Although the basic SOI process is the one already described, there are many variations from project to project, especially in computer processing. There are two major projects—corporations and individuals—for which processing is complex and for which large computer files are necessary. The numerous smaller projects are forced to compete with these two major ones for available mainframe computer resources. As a result, many of the smaller projects have had to be assigned a lower priority and, therefore, are not always produced on as timely a basis.

The Statistics of Income Division is taking steps to deal with these and other problems that will improve SOI data and how they are produced. A mini/micro computer system in the service centers and in the Statistics of Income Division is being installed for processing smaller SOI projects [12]. This system will enable the Division to have more of a voice in setting priorities for the statistical operation in the service centers. It will also increase its ability to monitor the costs and timeliness of its products more effectively. The increased SOI processing at the service centers expected as a result will free up program development resources and computer time at the Detroit center for use on the two larger projects. It should also permit the release of SOI returns to compliance activities sooner.

Most of the savings expected through this system will be achieved by centralizing transcription and by combining data editing and testing into a single operation. As a result, the need for edit sheets and error registers will be eliminated. Since a sample return will be controlled only once, at the point it is processed, controlling costs will also be reduced.

Shipping of paper documents will also be curtailed, thus reducing time delays. While most of the processing is now

Figure E.—SOI Data Source and Processing at Various Locations (Individual Income Tax Returns)



being decentralized from the Detroit computing center to the service centers, not all of the service centers will be involved. When a center chosen is other than the one in which the returns were filed, the distance over which documents have to be shipped will be one of the factors taken into consideration in making the selection. With shipping reduced to an optimal level, security problems caused by loss of tax return data will also be reduced.

Under the new system, it will become possible for the first time to accumulate totals from the SOI returns processed and to screen the returns with particular characteristics at any point in time. This will make it easier to detect problem areas noticeable only from aggregated data at an early enough stage so that remedial action can be taken before the complete tabulations are run.

Sample monitoring should be improved and it will become possible to determine the number of missing returns at any time during processing. The earlier that missing returns can be identified, the better the chances are that they can be located before the sample has to be closed out.

The modern design of SOI processing systems for virtually all programs will incorporate some form of administrative data usage. With the recent redesign of the corporation SOI program to include use of administrative data for the first time, all major SOI programs will share the advantages of data abstracting by electronic means. This improvement from manual abstracting to electronic retrieval has changed the nature of SOI processing, which was once considered too complex to be connected with administrative processing, but which will now use this system as the starting point. With the marriage of SOI and administrative data, manual processing operations which previously were the costliest to perform will be dramatically reduced. Use of administrative data will reduce the amount of manual editing done, as well as the need for much of the transcribing and verifying of data.

In the case of corporations, the savings may not be as

dramatic as in other SOI programs because, unlike individuals, manual editing is expected to continue to be a major factor, especially for the larger returns where taxpayer reporting is more complicated and less standardized. While the administrative data will be checked by computer in any case before they are accepted (by the process already described for individuals) and changed when they are inconsistent with SOI definitions, in the future this may be done only for subsamples (in the case of the smaller corporation returns) so that imputation factors can be developed for the rest of the returns of similar size. A related cost-saving innovation may be the use of improved imputation techniques for erroneous or missing data [13].

In regard to quality, steps are being taken to ensure that every statistical study has a formal quality assurance program which provides for a review at each stage in processing. Because of the observed lapses in the quality of data during administrative processing, the Statistics of Income Division has also taken the initiative, in conjunction with other areas of the Service, to undertake an independent review of the quality of the administrative data transcribed from individual income tax returns. If the Division's recommendations are adopted, both IRS and SOI will stand to benefit.

Many other recent initiatives for streamlining SOI processing are ongoing or in developmental stages. A goal is to integrate SOI more fully into the administrative processing stream as that system is revised so that statistics can become more of an on-line IRS operation.

If SOI is to serve tax policymakers in a more responsive manner and on broader issues, it will be necessary to build a data base from as many sources as possible. One approach being explored is through use of statistical matching with information from other sources. Another is to establish exchange agreements with other Federal agencies with regard to information furnished to them by the IRS under special provisions of the tax code (to the extent possible, given these agencies' own confidentiality rules).

If these efforts are successful, the new agreements would provide that IRS be able to receive back a copy of the information it furnishes which would also include any corrections, modifications, or enhancements; or the addition of any other information prepared by the other agency for inclusion in, or for use with, the IRS data. Even without the assistance of other agencies, much can be done to expand the SOI data base through linkages of records within IRS. For example, efforts are currently underway to relate estate tax returns to the returns of heirs for a specified number of years.

Considerable research is, of course, necessary to develop or perfect methods of overcoming the many known difficulties that would be encountered in trying to expand the data base. For example, techniques would have to be developed for linking employees with the employer, taxpaying entity, "establishment," pension plan and payroll entity, all of which may have different definitions. Such linkages would encompass all types of employers—corporations, sole proprietorships and partnerships. A start in this direction has been the linkages made between business income tax returns and related employment tax returns, between partnerships and partners, and between certain small corporations and stockholders. In another research area, "panels" of data, representing returns of the same taxpayers over several-years time, are also being developed. These will enable the revenue estimators to make more accurate adjustments for the effects of "carrybacks" [14].

CONCLUSION

The 1980's has been a period of major changes in SOI processing methods. The emphasis during this time has been on finding ways to reduce costs and speed up processing.

There are obvious ways to streamline a program, such as cutting samples, projects and publications, but these are only part of the solution. Methodological and processing changes must continue to keep pace or even lead the way. The decisions to use administrative data, to adopt computerized testing of data while returns are still present, and to make more use of prior-year data in perfecting data for the current year are examples of the kinds of steps that are really needed. Some of these steps might have been introduced earlier, had the incentive to revise the SOI processing system been present. The budget reductions of recent years have provided that incentive.

While samples may be redesigned and better methods found to estimate totals, partly to help offset the reductions in samples necessitated in recent years, further reductions in the size of samples will now seriously compromise the reliability of the data. Therefore, future savings will have to come from continued efforts to develop more efficient methods of data processing. These efforts will enable the Statistics of Income Division to meet the needs for more statistical data that are expected over the next few years, while releasing the regular SOI reports and studies on a more timely basis. They should also enable the Division to devote resources to new areas of research and to satisfy the needs of its major users, while at the same time helping it adjust to any further budget reductions.

NOTES AND REFERENCES

[1] See *The Federal Statistical System, 1980 to 1985*, Committee on Government Operations, U.S. House of Representatives, 1984, a report prepared for the

Congressional Research Service, Library of Congress, by the Baseline Data Corporation.

[2] See section 6103(a), Internal Revenue Code of 1986.

[3] Statistical editing involves adjusting certain taxpayer entries based on supplemental information reported elsewhere in the return, usually in schedules that support a reported total. Editing also includes the constructing of certain totals for the statistics that are reported in a format that differs from the official tax form, using information from the taxpayer's improvised schedules. (The Internal Revenue Service permits some latitude on how certain information is reported as long as it is correctly reported).

Editing is designed to help overcome some of the limitations inherent in tax return statistics that are due to nonstandardized reporting. It also helps to achieve certain statistical definitions desired by a user. An example of the former occurs when corporations file balance sheets of their own design instead of using the balance sheet schedule that appears on the return form; in this case, the statistical editor must attempt to recast the taxpayer's balance sheet into the official format of the return so that uniform statistics can be produced. An example of the latter is when editors are required to examine cost of goods sold schedules for any depreciation reported there in order to augment the depreciation deduction on the return—an objective that is of far greater interest to tax policymakers and national income economists than a cost of goods sold figure that may otherwise be correct from an accounting standpoint.

While statistical editing is minimal in producing individual income tax return statistics (and, when it is necessary, can often be accomplished through computerized imputations), it is a major factor in producing corporation income tax return statistics because of the complexity of many of the returns, particularly those of the larger corporations which dominate the statistics. The need for editing accounts for a large part of SOI processing costs.

[4] For a more detailed history of SOI, see U.S. Internal Revenue Service, Statistics Division, *Statistics of Income, 50th year, 1916–1965, Historical Summary; Individuals, Corporations, Partnerships*, 1965, unpublished. A more concise history is contained in U.S. Internal Revenue Service, Statistics of Income Division, *Statistics of Income Programs, 70th Anniversary Celebration, 1913–1983*, 1983, unpublished. For a history of the individual income tax return statistical program, see Paris, David and Hilgert, Cecelia, "70th Year of Individual Income and Tax Statistics, 1913–1982," *Statistics of Income Bulletin*, Winter 1983–84, Volume 3, Number 3. Other articles in this 75th anniversary commemorative issue should also be consulted.

[5] The adjustments necessary to conform corporate profits reported in Statistics of Income (SOI) with the coverage and definition of corporate profits in the National Income and Products Accounts (NIPA) are described in detail in U.S. Department of Commerce, Bureau of Economic Analysis, *Corporate Profits: Profits Before Tax, Profits Tax Liability, and Dividends*, 1985, Methodology Paper Series MP–2.

In brief, SOI data become available about 3 years after the income year to which they relate and this determines the approach used in preparing the NIPA estimates. Each July, the existing estimates for a year for which SOI data are newly available are replaced with estimates based on SOI. The major adjustments to SOI corporate profits data can be summarized as follows:

a. An allowance is added for the underreporting of corporate income disclosable by Internal Revenue Service (IRS) audit examination.

b. IRS deductions that are not elements of costs of current production are added back, e.g., depletion, amounts "expensed" currently that are in excess of depreciation for mining exploration and development costs and for "intangible drilling costs"; State and local profits tax accruals; and bad debt allowances in excess of actual losses.

c. Elements of costs of current production that are not IRS current deductions, are subtracted, specifically the costs of trading or issuing corporate securities.

d. Elements of domestic income from current production that are not IRS "income" are added, e.g., income of Federal Reserve Banks and other U.S. sponsored credit agencies; savings and loan association profits (SOI data for this industry are not used because of discontinuities in the treatment of bad debts); and income from credit unions (which are tax-exempt). (Note that SOI profits include tax-exempt interest on State and local Government obligations which is reported on the tax return and which is added to taxable net income for the profit statistics.)

e. Elements of IRS income that are not domestic income from current production are excluded, e.g., gain or loss from most sales of property; intercor-

porate dividends received from domestic corporations; and income or equities in foreign corporations and branches.

[6] U.S. Department of the Treasury, Internal Revenue Service, *Annual Report of the Commissioner of Internal Revenue*, various fiscal years, 1945–1960.

[7] Based on U.S. Internal Revenue Service, Returns Processing and Accounting Division, "Overview of Returns Processing in IRS Service Centers," 1984, unpublished.

[8] Returns in each service center are assembled and numbered in groups of 100 returns within each of the return processing categories used in administrative processing. Each grouping of returns is known as a "block."

[9] Initial plans to integate statistical processing into an enlarged administrative processing system in the so-called "System of the 70's" were never implemented because of budget constraints which prevented the Internal Revenue Service from acquiring the new computer system called for in the plan. Budget restrictions were further compounded by concerns in the U.S. Congress about the privacy of taxpayer information under the new system proposed.

[10] For example, without manually examining the individual income tax return, it is not possible to determine if the taxpayer has reported commission income as an item of miscellaneous income under "other income," instead of in salaries and wages (as the tax return instructions request). Formerly, during manual SOI processing, when commissions were identified by statistical editors on the return lines in support of total "other income", they were transferred to salaries and wages. Because the return entries in support of total "other income" are not transcribed for administrative processing, the most that can now be done under computer-assisted editing is to identify the returns with "other income" for manual review. However, because of the large number of returns with "other income" and the need to reduce costs, only those returns with a large amount reported for "other income" are now reviewed.

[11] For additional information about future plans, see, for example, Statistics of Income Division, U.S. Internal Revenue Service. (1985) *Proposed Multi-year Operating Plan, Statistics of Income Division, FY 1986–92*, Volume I, Basic Operating Plan, 1986, unpublished.

[12] The setting for this new system is described in U.S. Internal Revenue Service, Statistics of Income Division, "Information Systems Requirements Analysis Report: Statistics of Income Distributed Processing System," 1984, unpublished.

[13] For example, see Hinkins, Susan, "Matrix Sampling and the Effects of Using Hot Deck Imputation," *1986 Proceedings of the American Statistical Association, Section on Survey Research Methods.*

[14] The need for adjustments for carrybacks is discussed in the article by Ralph B. Bristol, Jr., "Tax Modelling and the Policy Environment of the 1990's", also contained in this issue of the *Statistics of Income Bulletin.*

Tax Modelling and the Policy Environment of the 1990's

By Ralph B. Bristol, Jr.*

Questions posed by policymakers to their staffs obey a form of Parkinson's Law: However great the ability of the staff to provide answers, the questions will always go just a little bit farther. In seeking to predict the kinds of questions policymakers will ask, therefore, we have only to predict the ability of staff to answer questions, and then add 10 percent. This paper will examine some half-dozen areas of such supply and demand for information, and attempt some predictions. It will focus primarily on the demands of policymakers and the shortcomings of our existing models and data sources, leaving for subsequent papers the task of predicting just how we will change our systems to meet these new demands and overcome these shortcomings. The six areas to be discussed are: 1. longitudinality—changing from a focus on annual data to a longer time perspective; 2. timeliness—shorter deadlines for data availability; 3. different units of analysis—families or households rather than just tax returns; 4. on-line data accessibility; 5. matching or linking tax records to different data sources; and 6. public access and privacy/disclosure problems.

LONGITUDINALITY

Tax policies almost always refer to a particular time unit, namely a year. The specific demarcation may change—fiscal years are permitted, and quite common for corporations—but almost all legislation refers to a specific 12-month accounting period. The exceptions to this have generally consisted of providing for "carryovers" which derive from limits placed on tax provisions. Thus, when a ceiling was placed on the amount of long-term capital losses which could be deducted from ordinary income, a "carryover" was provided so that any excess losses over the limit could be claimed in subsequent years. Similarly, limits on the amount of charitable contributions which can be deducted from taxable income in any given year are combined with an allowance for carryovers to future years. In the case of business "net operating losses" (NOL's), both carryovers and carrybacks are provided for.

In recent years there have been more and more tax provisions which involve a further widening of the tax-period horizon. "Once-in-a-lifetime" limits were introduced for the exclusion of (some) capital gains resulting from the sale of a personal residence. When energy credits were introduced in 1978, a cumulative ceiling was provided for. Gift taxes come into force only after a lifetime exclusion has been exhausted. Many tax credits involve longitudinality: non-refundable ones may permit any unused credit to be carried forward to another year. Finally, income averaging itself, first introduced in 1964, explicitly bases tax calculations on a multi-year period, although the restrictions are such that this provision of law has never been used by more than a tiny minority of taxpayers.

It seems clear that the future will see more and more tax provisions involving longitudinality. One-time only and cumulative-limit provisions seem popular with legislators—such limits appear to reduce revenue losses and prevent tax abuses. Clearly, then, if we are to be in a position to provide policy advice and revenue estimates, we must have longitudinal information—observations on identical tax units over a period of time longer than just the traditional 12 months.

At the same time that tax legislation has been lengthening the relevant time period for observations, developments in the field of economics have also been calling for a change in focus. Not that this has happened overnight—the basic theoretical work by Ando-Modigliani and Friedman was done in the 1950's—but the lack of empirical knowledge has made it possible to ignore those advances until fairly recently. Today, it is unmistakable that either a taxpayer's stage in his life-cycle, or his permanent income is a much more relevant measure of his economic power, his economic well-being, than the mere flow of his receipts (or accruals) over any particular 12-month period.

There are strong life-cycle effects on the "tax life" of an individual. When young, an individual appears in the tax system only as an exemption for his parents. Even when he enters the labor force, exemption levels and filing requirements may keep him off the tax rolls. Then for a while he may enjoy a tax "double exemption" status, claiming his own exemption while his parents also continue to do so. Later in life, home ownership and the acquisition of consumer durables through credit purchases introduce an individual to new areas of the tax code. Finally, retirement with taxable pensions, nontaxable social security benefits, and the drawing-down of assets make the taxpayer a member of yet another special-interest group of taxpayers.

Future tax changes may make longitudinality more important or less important. If we move toward flat-rate taxes,

* Reprinted from the *Multi-National Tax Modelling Proceedings*, Revenue Canada Taxation, September 1985, with the permission of the author. Dr. Bristol currently teaches at the University of New Hampshire. He was a senior staff economist in the Office of Tax Analysis, U.S. Department of the Treasury, at the time this article was written.

longitudinality will be much less important. Highly progressive rates place a harsh penalty on incomes which fluctuate from year to year—lowered tax rates in "bad" years do not offset the high rates paid in "good" years, so the average effective tax rate over time is higher than if the same total income had been received "smoothly" throughout the period. If we move closer to a proportional tax, this penalty on varying incomes will diminish, but will it still be important? Our knowledge of just how people's incomes fluctuate over time is still quite rudimentary, so we just do not know the magnitude of this effect.

On the other hand, if future tax changes are in the direction of consumption-based taxes or value-added taxes, longitudinal data will become critically important. Indeed, it is the personal opinion of the author, that the United States will never implement a consumption tax, merely because of the difficulties in achieving equity across age groups. Specifically, the typical economic unit consumes less that it earns *before* retirement, and then spends more than it earns *after* retirement. It would be politically disastrous to say to people of middle-age or older, "All right, now that you've paid income tax all your life, from now on, instead of taxing your *income* (which is going down), we'll tax your *spending* (which is staying up)!" Well, regardless of whether everyone agrees with this political forecast, one can see the importance of having longitudinal observations when analyzing fundamental tax policy issues such as whether income or consumption is the appropriate base for taxation.

Even apart from future tax policy changes, we need longitudinal data for analyzing our *present* tax system. For example, consider the taxation of capital gains. We really do not know much about the distribution of realizations over time for identical units. It seems to me that the policy implications are quite different if, on the one hand, most people realize gains at only a few points in their lives (e.g., selling a home or a business, or cashing in assets post-retirement) or if, on the other hand, they typically realize gains every single year (e.g., stock market speculators). The empirical answer is, of course, that some taxpayers fall in first category, and others in the second. Their relative magnitudes, however, are unknown, and no amount of data analysis of single-shot, one-year tax returns can shed any light on this matter. Thus, whether to analyze existing tax systems or to be ready to analyze future tax systems, it is imperative that we acquire more longitudinal information on taxpayers.

TIMELINESS

Policymakers are never satisfied with the responsiveness of our data systems. They resent being presented with outdated data. At this season, the closing months of Calendar Year 1985, they begin asking us questions concerning the impact of tax policies which became effective January 1st. After all, they reason, the policies have been in effect for almost three-quarters of a year, so "what's happenin', baby?" First, we have to tell them that we do not have the slightest idea of what is happening in 1985, then we have to break the news to them, as gently as possible, that we do not even have any (microdata) information on Calendar Year 1984! Such staff responses are generally met with incredulity by policymakers newly arrived in the Government. We must carefully explain to them the time-sequence of events.

In the United States, individuals must file by April 15th. However, for anyone requesting it, there is an automatic four-month extension period, running until August 15th. (As an aside, which returns do you think request that extension, low-income returns with simple, 1040A schedules? Or are they more likely to be complicated returns, filled out by CPA's, attorneys and other tax practitioners, replete with extra schedules and "accompanying documentation"?) Once all the returns—some 100 million of them—come into the IRS Service Centers, what should be done with them? That is, what activities should be given the highest priority? Not surprisingly, statistical analysis is "low on the totem pole". The highest priority is given to money—both coming in and going out. After all, the cost of a one-day delay in handling a $100 million can be measured very precisely—at 12-percent interest, it amounts to over $30,000. Not surprisingly, Service Center directors are encouraged and exhorted (not to say bullied) to get those checks out of the envelopes and into the banks. Of almost equal importance is the matter of refunds (I would remind you that over 70 million returns show an overpayment of tax which means that the filers are entitled to refunds). When taxpayers file returns to get their money back from the Government, they tend to be impatient. Thus, again not surprisingly, Service Center directors are given deadlines for "clearing their books"—getting refund checks out to taxpayers before the complaining letters start coming in.

So where does this leave Statistics? Just where it always is, an orphan. Unfortunately, the informal but effective motto of the Internal Revenue Service (IRS) is: "Our job is to collect *taxes*, not tax statistics!" The collection of data for what is often referred to as "purely statistical purposes" is regarded as an unnecessary cost, a burden imposed on the normal and ordinary activities of the taxcollecting system. Thus, only after the money has been collected and the refund checks mailed, will administrators consider diverting some of their resources to what is viewed as the sterile and unproductive task of what I call "policy statistics." (To be sure, some statistics are kept and treasured by the revenue processing system itself. These tend to be production statistics such as number of returns processed, amount of dollars received, number of refund checks written, and number of overtime hours expended. These

statistics are seen as "helping us do our job." Statistics for tax policy are not viewed in such a kindly light.)

The statistics generated by the revenue processing system tend not to be very useful for policy analysis. Dollars of revenue, dollars of refunds, and number of returns are of some interest, of course, but policy analysis is more likely to focus on such matters as why the tax was paid, what the underlying income was, just which tax provisions (or tax schedules) applied, and so forth. To obtain this information usually requires a second handling of the returns. (As an aside, many people seem to think that once a return is mailed to the IRS, it automatically becomes part of some gigantic data bank, immediately accessible to any tax analyst [or snoop] with a computer terminal).

In actuality, of course, every single bit of information must be key-punched by hand before it can be used for any purpose at all. (Optical readers are changing this). Furthermore, information in this raw form cannot be used without further processing. The taxpayer may have put numbers on the wrong line or he may have made a mistake in arithmetic. To "clean up" the data, returns must go through a rather elaborate process of data editing, verification, and consistency checking. Only after all this has been done, are the data finally in a form suitable for analysis.

In the United States, the Internal Revenue Service's preliminary or "early cut-off" Statistics of Income (SOI) for individuals represents returns processed by the end of September. These become available to policymakers by early December, while the "final" statistics take another six months. Incidentally, when we say "final", we do not mean that further corrections are unneeded; we just mean that no new returns will be added to the sample and no new information will be added to the return data. Further data improvement must come from information internal to the return itself.

All this, naturally, can be explained to a policymaker (if you are lucky enough to have one willing to listen), but after you have gone through such an elaborate explanation, what is his response likely to be?

"Yes, yes. But can't you do something to speed things up a little?"

UNIT OF ANALYSIS

The traditional unit of analysis for tax policy studies is, not surprisingly, the tax return. This is our basic data source—it requires practically no estimation or imputation, it changes appropriately when the tax law changes, and its definitions conform to the terms used in legislation. Unfortunately, it is accurate to state that this is *never* the true focus of interest. Consider matters of equity or tax burden. Identifying "low-income" groups on the basis of tax return information is quite misleading. First there is the question of whether the income reported is that of an individual, a couple, or a large family. Nor is family size the only problem. For example, consider the bottom income group in the 1981 U.S. Statistics of Income, those 18 million returns with Adjusted Gross Income (AGI) under $5,000. These surely appear to be below anyone's "poverty line." Yet closer analysis (using information not available on the tax returns themselves) discloses the fact that 40 percent of these returns are filled out by taxpayers under the age of 20! Undoubtedly some of these returns represent taxpayers mired in poverty, but there can be little doubt that the majority of these teenagers are not true "economic units" whose welfare should be of concern, but rather are a subset of some *other* economic unit (family) whose income and economic status may be very different from what appears on that teenager's tax return.

Even if our concern is not with equity but rather with economic behavior and efficiency, what we want to examine is not tax returns, but some other unit. The appropriate or relevant unit must be defined in terms of some kind of *behavior.* Census and survey workers have of necessity developed many alternative concepts which prove useful in different situations: households, families, spending units, dwelling units. What these definitions have in common is some notion of *sharing* or *pooling*: individuals will pool their incomes or their spending or perhaps merely their housing bills. Which of these economic units is most appropriate depends upon the particular policy analysis we are conducting.

Attempting to combine, or perhaps I should say re-align, these 100 million returns into something like 90 million "families" or "households" turns out to be quite a problem. Apart from a mailing address, there is usually nothing on a return which provides an indication (in computer terminology, a "pointer") as to which other return or returns this individual should be combined with. The most common household will be represented by a joint return, filled out by husband and wife, with perhaps other dependents, usually their children. In addition to these "standard" family members, there may be additional income earners (or consumption spenders) who may themselves be tax return filers, or they may be non-filers, or they may be non-filers who don't show up at all (except perhaps as claimed dependents) on tax records. Examples of such income earners are children with part-time jobs whose income is below the filing requirement, and elderly people (usually relatives) living in the home who may appear on the tax rolls because their income is tax-exempt (social security recipients are the most common example).

In an attempt to overcome these data shortcomings, the Treasury Department's Office of Tax Analysis has devel-

oped its Merge Model. This represents a combination of 50,000 sample households interviewed in the Census Bureau's Current Population Survey (CPS) and 80,000 sample tax returns developed as the Statistics of Income Tax Model [TM]. From the 1981 Model, for example, we first extrapolated the 1981 SOI to 1983 levels, using a special algorithm which has been developed at the Treasury Department. Twenty-eight targets are picked, involving distributions across income classes; numbers of returns; and dollar amounts of different types of income, such as wages, interest, rents, etc. The returns in the sample are then reweighted so that they add up, in the aggregate, to the pre-specified targets. This is done in such a way that the change in the individual weights is minimized.

Next, we align the CPS and SOI files; this involves assuring that the two files have the same number of units filing tax returns and the same number of units reporting each type of income. We apply a tax-calculator to the CPS and then adjust the resulting discrepancies. For example, almost everyone reporting rental income on the CPS reports positive net rental income, whereas tax filers in the SOI were twice as likely to report negative rental income as positive income.

Once the two files are calibrated so that they appear to be representing the same population, they are merged. This is done through the use of a special transportation algorithm. This uses a penalty function consisting of ten variables such as family size, wage income, property income and home ownership. The algorithm links together families who are as "alike" as possible. Weights frequently have to be split in this process, and the result is a merge file of some 200,000 records.

The shortcomings of the Merge Model are obvious: it is a "soft" or "statistical" match, and we cannot be certain that the family units and tax returns are, in fact, correctly matched. The two samples are not very well aligned: the CPS has many low-income units but not many high-income ones, while the SOI is exactly the opposite, excluding entirely units with income below a certain level ("nonfilers"), and being quite rich in high-income returns. (In the 1981 merge, 300 "returns" in the highest income class of the CPS had to be matched or linked with 33,714 such returns in the SOI. At the other end of the income distribution, 4,277 low-income SOI records had to be matched with 17,647 CPS records.)

ON-LINE ACCESSIBILITY

There is an increasing demand for on-line accessibility of data by policymakers. In part a product of the computer age and a result of the rapid multiplication of desk-top terminals, this demand represents a combination of Section 2, above (shorter deadlines) and Section 6, below (access).

Simulation models have boomed in popularity since the development of computers, and nowhere has this been clearer than in the area of fiscal policy analysis. Macroeconomic models were first in the field, as computers made it possible to manipulate first handfuls, then dozens, and now hundreds of econometric equations. The ability to "play God" and answer "What if?" questions is irresistible and, nowadays, widespread.

Following close on the heels of the macro-models, came the micro- or cross-section models. While less demanding in terms of mathematical and econometric complexity, these are much more demanding in terms of computational power and in terms of data. When you are simulating the behavior of individual economic units, whether business firms or personal taxpayers (I shall be referring primarily to the latter), you need a huge number of them (to take account of the random variability of their behavior). It was not until the early 1960's that such models of taxpayers were used by the U.S. Treasury, and then the sample sizes were of the order of 10,000 returns. One computer simulation might take several hours of clock time. Tax analysts today have difficulty imagining what it was like to examine proposed tax programs in the absence of simulations by what is now succinctly known as the Tax Model. (Incidentally, we now work with sample sizes of about 75,000, and simulation runs require less than 15 minutes of computer time. Clock time is another story, which I will not go into.)

To date, these Tax Model simulations have been the exclusive property of the computer people, the "high priests" of the operation. They have the ability, and the responsibility, of translating tax policy questions into "simulateable" tax policies. By this I mean that they must not only convert things into a language that the computer can understand, but must also filter out inconsistent policies and be alert to all of the sophisticated and easily overlooked intricate interactions of the tax code (e.g., Does this new provision change any taxpayers from itemizers (of deductions) to non-itemizers? How does it affect the "minimum tax" or the "alternative minimum tax?" Does it affect any taxpayer's "excess investment interest?" How does it change if a taxpayer is income-averaging?) Computer languages are getting increasingly user-friendly, but the same cannot be said of tax laws and regulations!

A modern tax policymaker, with a computer terminal sitting on his desk, wants to be able to make Tax Model runs himself. He is not going to be terribly patient about listening to qualifications and caveats about what the model is and is not designed to do. He wants an answer! In developing our tax models, we must take into account not only the shortcomings of our statistical data, but also the problems posed by this new generation of computer operators.

In some cases, the demand for on-line accessibility means displaying specific, identifiable tax returns (e.g.,

what sort of taxes has Chrysler paid over the last five years? what is the loss carryover position of the top five steel companies?). From a staff point of view, such demands raise nightmares in terms of privacy problems (e.g., does this finance minister realize how explosive this information might be?), in terms of data management problems (e.g., our corporate file may be sorted by years, not by company name), in terms of data comparability (e.g., how do you warn a user that, because of a merger, this year's data are not comparable with those of previous years?), in terms of timeliness (e.g., this company's fiscal year is such that it will not even have to file for another six months), and in terms of completeness (e.g., the company did not even fill out that particular schedule).

The availability of tax statistics to what might be termed "non-tax statisticians" highlights all of the weaknesses and problems of our tax statistics—the dirty little secrets like missing returns, taxpayer errors, incorrect edits, and faulty imputations. Tax policymakers (at least in the United States) are political appointees whose background is invariably devoid of statistical training. Once on the job, their time is very limited, and it just is not realistic to expect them to become educated and sophisticated concerning tax statistics. Historically, such considerations led to the development of the "permanent civil service" structure. This was all well and good in an earlier, perhaps more gracious, age, but it is not clear that mandarins and on-line, real-time computers can coexist. We (as mandarins) may deplore some of the things policymakers do with our data, but we have got to realize that they are going to grab the numbers, and it is yet another challenge, another set of demands, we must bear in mind in developing our models and our data systems.

LINKING AND MATCHING RECORDS

Perhaps the first question we should ask about linking or matching records is, why do it at all? The answer is that the instrument we are working with—the tax return—lacks certain information that we need. We lack some information merely because of missing responses or missing returns, but my focus here is not on that kind of omission, but rather the complete absence of some (non-tax) information from returns. Tax returns, after all, concern taxes, and information which does not directly affect an individual's tax liability will generally be omitted from the return, beyond a bare minimum of identifying material essential to processing the return. There is tremendous pressure in the United States for even greater shortening of the tax form: both the Paperwork Reduction Act of 1980 and the general concern with Government intrusion on privacy mean that tax returns in the future are liable to contain less, not more, information than they do today. In brief, it will get worse before it gets better.

What other information do we need, beyond what is included in the tax return? We have already discussed, in Sections 1 and 3 above, the need for longitudinal information and information on different analysis units. In general, any "new" tax proposals will, almost without exception, involve new variables, ones we have not been observing on tax returns. In order that we be able to discuss and analyze such proposals, we must be prepared ahead of time.

How can we obtain additional information on taxpayers? For one thing, we cannot approach them directly, say by conducting sample survey interviews, because in the United States that is legally considered to be in the nature of a tax audit. Because we possess certain identifying information on each taxpayer (most notably his social security number, name, and address), we can learn certain things from other (governmental) sources. For example, in the United States, thanks to the cooperation of the Social Security Administration, we have been able to append to our Tax Model sample information on each taxpayer's (and spouse's) age, sex, and social security benefit status. This has proved invaluable to us, but it does involve overcoming some reluctance on the part of the Social Security Administration. After all, it is not their mission to provide statistics on taxpayers, and they have severe obligations to protect the privacy of social security participants. (We have been able to obtain their cooperation, because [a] we have been able to demonstrate that the information available from such a matched file is useful for administering the Social Security Act itself, and [b] we have developed very careful security provisions for the data, ensuring they will be used for policy analysis, not for tax law enforcement).

Most of the information we seek is demographic or economic, and if you stop and think, IRS and the Social Security Administration are just about the only agencies which obtain this information on individuals (as opposed to aggregated data). The one clear exception is the Census Bureau, but this agency has its own unique rules and regulations concerning disclosure of data and does not appear to be a promising source. Other Government agencies might be sources for information on such variables as unemployment compensation, fringe benefits, retirement plans (both costs and benefits), and various vital statistics, but we have not yet attempted matching for any of these.

The alternatives to exact matches are "statistical" or "soft" matches. These involve linking our data base with another data base, usually a survey conducted for some other purpose. We can thus take its observations on the variables we care about, and use them to impute values to our sample of tax returns. To take an example, suppose we wanted to include on our file information on the number of hours worked, and suppose we had available a labor-force survey with this variable for a sample representing the same

population as our tax file. One extreme (and undesirable) procedure would be to calculate the *average* number of hours worked for everyone in the labor force survey and "impute" or assign that average value to every one of our taxpayers. Thinking about such a procedure reminds us that micro-models, by definition, are *not* just interested in averages or other measures of central tendency, but rather are interested in the full dispersion and heterogeneity of individuals. We can obviously do better in this instance than merely imputing the average value. If we have information on age of taxpayers, for example, we know that the very young and the very old probably should have zero hours assigned to them. We would probably want to assign working hours only to returns which reported non-zero wage income, and so forth. In fact, what we would want to do is take *all* the observed variables common to both the survey and our tax file, and use these variables to "pair off" or match the two sets of units and thus make the most appropriate assignments.

This entire area of matching files is a fairly new and somewhat controversial field. Some people feel that such linking is not worthwhile, that you cannot "get something for nothing." The necessary assumptions as to just what is independent of what, and just what is correlated with what, are a little tricky and sometimes obscure. Very little work has been done validating match procedures, primarily because of the difficulties involved in defining a "good" or "successful" match.

The Treasury Department, on a biennial basis, matches its Statistics of Income sample with the Current Population Survey sample, as described above in the section on unit of analysis. This is done by using a very sophisticated transportation algorithm developed for the Office of Tax Analysis. Is it successful? All we can say is that it seems to give reasonable results, that it gives useful results, and that there are no apparent flaws in the procedure. I wish I could be a little stronger in its defense, but we simply do not yet know enough about validation.

To summarize, because we will need more and more information about taxpayers in the future, and because we will not be allowed to burden them with the questions necessary to elicit this information, we will have to turn to other cross-section information sources. Unless we are willing to give up the richness of micro-models, the only way we can synthesize information from multiple sources is by some technique of matching or linking units. We are doing a lot of this now, but we will have to do even more in the future, and we do not yet know enough about it.

PUBLIC ACCESS AND DISCLOSURE

Individual tax returns have generally been protected from public scrutiny in the United States. Strict procedures now govern the handling of returns and of any computer tapes containing tax return information. Even if specific identifiers (name, address, social security number) are removed, the return is still considered to be confidential. As long as the only public release of tax statistics was the published Statistics of Income series, there were few problems of disclosure. Certain standards had to be met, such as the "Rule of 3," meaning that no cell could be published for data above the state level if there were not at least three returns in the cell. Because most of the statistics were so aggregated, however, disclosure issues were seldom a problem.

With the development of microeconomic modelling, however, new problems arose. As long as computers could not handle more than a few hundred variables, the sort of crude cross-tabulations available in the SOI volumes were adequate. Once researchers could handle thousands of records, the pressures grew for the release of "scrubbed" or "sanitized" tax return (microdata) information. The distribution of taxpayers across variables, rather than just their average or typical values, became of interest to analysts outside the Government as well as inside. How could the interests of these researchers be reconciled with the need for confidentiality of individual returns?

The practical compromise that has been made is that, as long as a sample SOI return has a high enough weight, that is, there are a lot of such returns in the country, there is no problem in releasing tax return data as long as specific identifiers have been removed. The implicit assumption is that even if you study such a return, there are enough other returns in the population just like that one that it would be impossible to make a positive identification. The problem arises with low-weight sample returns. Specifically, all returns above a particular income level (typically $200,000, but varying by year) are sampled at a 100-percent rate, i.e., if an individual has a high enough income, you can be sure his return is included in the sample. This creates the possibility of "hunting" for a specific return.

Considering all the information on tax returns such as types of income and types of deductions, it would seem feasible to conduct such a hunt. It should be noted that disclosure implies not just the fact that information from a tax return is made public, but also whether or not a person even filed a tax return. In fact, a few years ago, a newspaperman claimed to have made some positive identifications of individuals on the basis of the publicly-released SOI. (There is some doubt as to whether he actually succeeded.) The SOI Division has been conducting a number of research studies in this area.

One study focused on the feasibility of identifying an individual's tax return on the basis of publicly-available information. Some business publications publish the sala-

ries and bonuses of top corporation executives—could this be used to spot such individuals? It turns out that deferred compensation, stock options, and other forms of income manipulation (mostly motivated, it might be noted, by the-desire for tax avoidance) introduce so much "noise" into the translation of compensation into taxable income, that it is almost impossible to recognize individuals on the basis of their tax returns.

The study also used other publicly-available information in its tests, such as court-ordered alimony and child-support payments, and real estate tax bills. Again, the complexity of the tax returns filed by high-income individuals tended to obscure much of the information (e.g., itemized deductions for real estate taxes would typically cover multiple holdings). However, there did seem to be a chance of positive identification using this information.

How, then, can information be made available in public-use files which is sufficiently detailed to be of use to researchers, yet still not permit invasions of privacy? Several measures have been proposed and utilized. Some information is just completely erased, such as taxpayer's name, address, and social security number. Some data fields (that is, variables) may be rounded. Thus, if particular income sources and itemized deductions are rounded to the nearest thousand dollars, this will make it much harder to identify individuals, but may still provide rich enough detail for researchers. Another technique is that of "collapsing cells:" all returns in a particular cell (i.e., sharing certain characteristic), are added together and each one is then assigned the *average* value of everyone in that cell. This approach is not popular with researchers because it destroys just the variablity which micro-models seek to exploit. A variant of this is the "moving average" approach in which the collapsed cell changes for each individual. Thus, for no individual is the correct value shown, but the correct overall average and most of the variability are retained. Finally, individual values may be obscured by adding random noise with an expected value of zero, thus again obscuring the individual's value, but keeping the correct overall average and as much variability as desired. All of these techniques raise the possibility of creating internal inconsistencies within the return, that is, components of income may no longer add up to total income, and itemized deductions may not equal the sum of the parts.

Research in this area is being actively pursued by the Internal Revenue Service as well as by other agencies which create public use files (e.g., the Commerce Department and the Department of Health and Human Services). The task is rather difficult, because it is like trying to develop an "unbreakable" cryptographic code: there is no way you can "prove" it is invulnerable. All you can do is show that various techniques of breaking it do not work, but there is no way of proving that there does not exist some other, as yet unheard of, technique that will do the job. This rather unsatisfying conclusion is the best we can hope for in the area of guaranteeing confidentiality.

To repeat what was said before, we can, if we wish, assure against disclosure, but only by locking up all the returns and not creating any public use files at all. However, unless you subscribe to the belief that all wisdom resides in the Government, it is vital to get these data out to interested researchers. The appeal of micro-econometric modelling and cross section studies is the richness of detail, the scope of variability across thousands of economic units. For better or worse, taxes are a vital part of our economic lives, and it is important that we learn more about just what they do to us and to our economy. We must not degrade our data bases any more than absolutely necessary to protect taxpayer privacy.

In the final analysis, the important factor is public confidence. As long as the Government promises people it will protect their tax returns from disclosure as it did in 1974 and 1976, by enacting the Privacy and the Tax Reform Acts, respectively, it must keep that promise. Even though 1984 (the calendar year, that is, is now behind us, there remains a very real fear of "big brother" type abuse of large computerized data banks, and the IRS is high on the list of the most feared governmental institutions. However, we should note that the honesty and resistance of IRS in standing up to political pressures and keeping tax returns inviolable was one of the few bright spots in Watergate.

Selected Historical Data

Selected Historical Data (Continued)

NOTICE

The data on the following pages are the latest and most accurate available at time of publication. However, they are subject to continuous revision as more information becomes available. Data labeled as preliminary should be used with caution.

Table 1.—Individual Income Tax Returns: Selected Income and Tax Items for Selected Tax Years, 1970–1986

[All figures are estimates based on samples—money amounts are in thousands of dollars]

Item	1970	1975	1980	1984	1985	p1986
	(1)	(2)	(3)	(4)	(5)	(6)
All returns	**74,279,831**	**82,229,332**	**93,902,469**	**99,438,708**	**101,660,287**	**103,299,601**
Form 1040 returns	74,279,831	54,527,726	57,122,592	64,533,502	67,006,425	68,885,007
Form 1040A returns	N/A	27,701,606	36,779,877	18,431,641	18,124,702	17,705,607
Form 1040EZ returns	N/A	N/A	N/A	16,473,565	16,529,160	16,708,987
Adjusted gross income (AGI)	**631,692,540**	**947,784,873**	**1,613,731,497**[1]	**2,139,904,356**[1]	**2,305,951,483**[1]	**2,522,516,770**[1]
Salaries and wages:						
Number of returns	66,965,659	73,520,046	83,802,109	85,925,617	87,198,001	88,587,358
Amount	531,883,892	795,399,462	1,349,842,802	1,807,137,587	1,928,200,978	2,046,135,285
Interest received:						
Number of returns	32,630,355	40,378,240	49,019,575	62,059,703	64,526,434	65,489,838
Amount	22,021,267	43,433,554	102,009,444	176,369,305	182,109,194	168,202,347
Dividends after exclusion:						
Number of returns	7,729,939	8,853,491	10,738,982	14,259,407	15,527,579	16,751,892
Amount	15,806,924	21,892,126	38,761,253	48,640,734	55,046,351	63,073,757
Business or profession net income less loss:						
Number of returns	6,159,985	7,242,542	8,881,119	11,237,218	11,900,341	12,431,364
Amount	30,554,201	39,421,478	55,129,154	70,766,610	78,772,577	90,367,239
Net capital gain less loss:						
Number of returns	7,962,663	7,574,823	9,970,921	12,558,688	11,125,595	12,936,506
Amount	9,006,683	14,071,893	30,029,074	54,519,368	67,694,001	135,005,278
Pensions and annuities in AGI:						
Number of returns	3,249,558	5,088,937	7,373,704	11,551,051	13,133,295	14,849,501
Amount	7,878,808	20,886,871	43,339,736	80,447,934	95,096,003	108,502,091
Rents and royalties net income less loss:						
Number of returns	6,557,498	7,143,812	8,208,132	9,100,525	9,970,604	9,620,244
Amount	3,232,817	5,202,078	4,105,381	−9,482,800	−12,963,727	−13,023,962
Partnerships and S Corporations:						
Number of returns	n.a.	n.a.	n.a.	5,203,592	5,487,671	5,641,537
Amount	12,637,912	12,811,091	10,099,346	−2,268,204	−2,526,591	5,453,558
Farm net income less loss:						
Number of returns	3,026,530	2,755,041	2,608,430	2,694,420	2,620,861	2,532,815
Amount	2,788,713	3,563,325	−1,792,466	−13,095,506	−12,005,483	−6,907,476
Total statutory adjustments:						
Number of returns	6,370,552	9,024,255	13,148,919	37,025,796	37,763,418	38,231,054
Amount	7,665,251	15,101,999	28,614,061	89,745,075	95,082,299	99,246,133
Individual Retirement Arrangements:						
Number of returns	N/A	1,211,794	2,564,421	15,232,856	16,205,846	15,714,041
Amount	N/A	1,436,443	3,430,894	35,374,424	38,211,574	38,255,838
Self-employed retirement (Keogh):						
Number of returns	591,655	595,892	568,936	648,958	675,822	772,476
Amount	847,692	1,603,788	2,007,666	4,072,409	5,181,993	6,178,104
Married couple who both work:						
Number of returns	N/A	N/A	N/A	24,126,180	24,835,278	25,858,054
Amount	N/A	N/A	N/A	22,407,621	24,614,983	26,915,348
Exemptions:						
Number of exemptions	204,126,402	212,202,596	227,925,098	240,886,327	244,180,202	246,596,408
Number, age 65 or over	8,904,331	9,937,208	11,847,168	15,890,548	16,748,810	17,580,998
Total deductions:						
Number of returns	73,862,448	81,585,541	88,491,251	94,855,579	96,848,626	98,525,016
Amount	120,549,755	233,181,778	346,000,155	499,585,197[2]	554,733,523[2]	611,416,045[2]
Itemized deductions:						
Number of returns	35,430,047	26,074,061	28,950,282	38,203,092	39,848,184	40,838,502
Total[3]	88,178,487	122,260,601	218,028,139	358,876,015	405,023,525	446,542,466
Medical and dental expense	10,585,749	11,422,312	14,972,082	21,450,276	22,926,214	25,062,523
Taxes paid	32,014,673	44,141,289	69,404,275	115,245,288	128,084,618	144,704,846
Interest paid	23,929,477	38,885,282	91,187,006	158,176,338	180,094,578	194,451,076
Contributions	12,892,732	15,393,331	25,809,608	42,119,812	47,962,848	54,454,472
Taxable income:						
Number of returns	59,593,598[4]	65,852,602	88,104,696	94,178,183	96,124,046	97,742,435
Amount	401,154,285	595,492,866	1,279,985,360	1,701,365,731	1,820,740,833	1,976,811,955
Income tax before credits:						
Number of returns	59,596,755	65,854,734	76,135,819	84,440,481	85,994,216	86,975,883
Amount	84,156,695	132,452,044	256,294,315	306,686,024	332,165,333	378,422,425
Total tax credits[5]	**369,610**	**8,069,846**	**7,215,839**	**9,263,308**	**10,248,044**	**7,654,631**
Child care credit	N/A	N/A	956,439	2,648,834	3,127,702	3,493,653
Credit for the elderly and disabled	167,656	128,968	134,993	107,002	108,642	174,003
Residential energy credit	N/A	N/A	562,141	645,093	811,675	N/A
Foreign tax credit	169,623	381,985	1,341,675	738,014	782,561	1,342,687
Investment credit	30,554	1,593,150	3,288,415	(6)	(6)	(6)
General business credit	N/A	N/A	N/A	4,183,101[6]	4,791,132[6]	1,035,205[6]
Income tax after credits	**83,787,323**	**124,382,197**	**249,078,475**	**297,422,715**	**321,917,289**	**370,932,395**
Total income tax:[7]						
Number of returns	59,317,371	61,490,737	73,906,244	81,639,509	82,846,420	84,324,468
Amount	83,909,311	124,526,297	250,341,440	301,923,057	325,710,254	377,050,937

See notes following Table 20.

Table 2—Individual Income and Tax by State, Tax Year 1986

[Money amounts are in thousands of dollars, except as indicated]

State	Number of returns	Number of exemptions[1]	Adjusted gross income (AGI)	Salaries and wages		Dividends after exclusion	
				Number of returns	Amount	Number of returns	Amount
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
United States, total[2]	**103,633,570**	**246,191,989**	**2,472,559,803**	**87,807,445**	**2,012,988,154**	**16,582,775**	**58,806,712**
Alabama	1,537,065	3,847,654	32,055,361	1,346,009	26,967,941	157,958	465,657
Alaska	230,883	534,843	6,496,459	201,311	5,855,266	58,557	76,054
Arizona	1,394,726	3,419,376	32,189,015	1,160,153	25,675,242	229,414	966,657
Arkansas	882,648	2,253,714	16,573,801	736,162	13,506,122	80,403	254,923
California	12,025,076	29,059,066	311,810,079	10,179,884	252,813,311	1,817,039	7,041,542
Colorado	1,431,107	3,307,373	34,123,277	1,221,838	28,642,676	255,654	707,693
Connecticut	1,592,585	3,470,065	47,914,355	1,362,992	38,330,784	349,358	1,386,237
Delaware	291,371	667,690	7,284,979	251,466	5,852,093	57,489	247,326
District of Columbia	325,256	660,561	8,277,611	279,821	6,231,360	47,337	278,076
Florida	5,300,996	12,412,785	123,771,406	4,212,686	86,085,972	1,002,261	5,447,144
Georgia	2,547,529	6,029,447	58,644,369	2,280,245	50,354,128	285,223	904,099
Hawaii	485,014	1,096,934	10,959,168	417,709	8,871,259	78,527	217,571
Idaho	365,805	981,909	6,976,504	300,963	5,766,423	50,961	136,644
Illinois	4,956,836	11,829,956	123,481,338	4,189,258	100,849,865	904,886	3,100,433
Indiana	2,308,198	5,590,219	51,454,068	1,961,212	42,754,720	315,385	825,160
Iowa	1,151,875	2,869,924	23,098,819	902,165	17,969,664	196,679	475,834
Kansas	1,029,405	2,535,614	23,141,841	848,072	18,674,353	169,596	459,759
Kentucky	1,382,471	3,383,047	27,961,310	1,166,565	22,904,413	152,702	523,210
Louisiana	1,606,074	4,147,948	32,810,721	1,382,750	27,518,645	173,817	558,088
Maine	512,336	1,189,180	10,633,419	438,252	8,327,608	74,779	279,172
Maryland	2,126,981	4,782,964	57,492,048	1,857,677	47,453,346	355,106	1,159,130
Massachusetts	2,801,179	6,022,344	74,561,622	2,408,927	59,830,878	508,025	1,901,212
Michigan	3,887,234	9,069,063	97,548,841	3,320,352	82,183,789	771,279	2,023,279
Minnesota	1,824,501	4,324,929	43,701,683	1,530,659	35,841,273	347,167	882,821
Mississippi	917,726	2,419,071	16,395,149	807,397	13,942,359	77,061	209,433
Missouri	2,125,569	5,079,879	48,181,438	1,775,934	38,874,763	344,268	1,137,566
Montana	331,153	820,597	5,745,837	259,399	4,607,327	58,740	151,340
Nebraska	668,844	1,653,023	13,552,160	539,548	10,727,060	109,686	267,720
Nevada	467,586	1,047,854	11,211,642	404,794	8,888,757	58,121	237,640
New Hampshire	504,826	1,129,373	13,079,734	441,042	10,413,220	83,920	306,350
New Jersey	3,809,056	8,733,854	108,177,409	3,289,813	88,361,136	796,579	2,590,356
New Mexico	594,610	1,507,536	11,588,975	507,897	9,647,864	79,086	237,964
New York	7,659,120	17,714,051	209,807,910	6,482,306	164,379,474	1,465,839	6,194,835
North Carolina	2,710,326	6,297,773	57,576,908	2,407,469	47,803,806	328,362	1,316,960
North Dakota	273,194	686,712	5,176,279	211,485	3,883,579	38,106	71,681
Ohio	4,579,516	10,787,793	105,307,256	3,891,705	87,381,936	764,663	2,512,694
Oklahoma	1,243,715	3,120,105	26,126,269	1,021,124	21,432,814	143,848	442,444
Oregon	1,139,392	2,734,830	24,358,381	926,394	19,196,582	184,956	624,276
Pennsylvania	5,142,034	11,883,176	116,983,029	4,265,919	93,268,723	931,099	3,176,718
Rhode Island	447,240	986,093	10,444,079	386,773	8,272,943	70,880	247,082
South Carolina	1,346,996	3,239,597	27,774,612	1,203,904	23,231,645	141,363	465,851
South Dakota	284,907	719,113	4,811,621	220,880	3,719,515	44,573	97,055
Tennessee	1,967,923	4,700,375	41,071,250	1,721,866	34,740,998	200,896	704,314
Texas	6,641,788	16,693,551	152,811,524	5,734,433	129,943,391	789,428	2,973,502
Utah	598,429	1,686,920	13,264,172	515,721	11,171,640	77,118	221,472
Vermont	237,156	542,870	5,072,812	201,814	3,994,882	44,123	167,792
Virginia	2,583,679	5,877,163	65,737,990	2,268,296	54,426,286	415,159	1,395,255
Washington	1,947,149	4,566,312	46,153,240	1,625,903	37,346,541	330,263	966,823
West Virginia	663,519	1,657,788	13,552,665	554,976	11,058,758	84,660	254,940
Wisconsin	2,034,831	4,817,360	44,928,005	1,719,146	37,284,719	350,245	985,668
Wyoming	195,820	494,959	4,272,634	166,732	3,626,691	31,367	99,754
Other areas[3]	520,315	1,107,656	6,434,729	297,647	12,099,614	98,764	431,506

Table 2. (Continued)—Individual Income and Tax by State, Tax Year 1986

[Money amounts are in thousands of dollars, except as indicated]

State	Interest		Unemployment Compensation in AGI		Itemized deductions		
	Number of returns	Amount	Number of returns	Amount	Number of returns	Total deductions	Average amount (whole) dollars)
	(8)	(9)	(10)	(11)	(12)	(13)	(14)
United States, total[2]	**65,158,038**	**167,137,870**	**4,971,846**	**7,011,890**	**40,639,456**	**448,694,962**	**11,041**
Alabama	781,959	1,643,153	83,920	73,874	547,379	4,997,741	9,130
Alaska	147,006	264,928	28,891	66,605	89,844	1,171,272	13,037
Arizona	849,024	2,605,656	45,332	49,207	635,917	7,051,260	11,088
Arkansas	461,444	1,294,034	43,142	48,012	263,788	2,434,579	9,229
California	7,412,186	21,639,047	603,323	822,812	5,258,264	74,070,718	14,087
Colorado	960,314	2,228,536	62,477	97,874	671,251	7,589,251	11,306
Connecticut	1,184,309	2,854,343	79,174	99,487	638,673	7,930,874	12,418
Delaware	180,200	385,870	14,536	26,033	116,821	1,195,983	10,238
District of Columbia	163,093	420,899	6,544	11,350	130,803	1,695,558	12,963
Florida	3,153,630	12,384,370	110,530	146,765	1,822,042	20,660,926	11,339
Georgia	1,272,215	2,871,629	103,437	89,746	954,319	10,589,127	11,096
Hawaii	358,642	690,703	17,107	24,777	200,457	2,234,375	11,146
Idaho	229,816	596,408	26,107	36,613	145,765	1,376,295	9,442
Illinois	3,334,214	8,838,159	238,605	396,122	1,904,175	19,404,541	10,191
Indiana	1,448,373	3,253,387	105,101	108,466	795,410	6,988,793	8,786
Iowa	845,001	2,414,250	53,462	70,892	437,035	3,761,853	8,608
Kansas	687,804	1,960,446	48,211	68,410	426,914	4,124,040	9,660
Kentucky	759,490	1,826,338	76,115	79,154	481,724	4,165,544	8,647
Louisiana	867,320	2,216,838	99,640	192,189	522,627	5,200,762	9,951
Maine	333,096	637,784	22,863	24,497	167,105	1,506,181	9,013
Maryland	1,384,767	2,966,091	71,815	102,483	1,028,374	12,207,897	11,871
Massachusetts	2,054,162	4,467,205	142,803	231,949	1,147,145	12,666,575	11,042
Michigan	2,614,822	5,340,793	312,491	417,860	1,776,484	16,938,129	9,535
Minnesota	1,328,622	3,015,101	97,256	182,353	866,237	9,178,651	10,596
Mississippi	399,304	979,986	37,493	39,370	261,814	2,423,805	9,258
Missouri	1,343,363	3,646,277	98,110	100,191	774,971	7,242,414	9,345
Montana	224,408	621,114	17,146	22,746	116,154	1,114,924	9,599
Nebraska	465,973	1,278,785	22,348	23,294	226,996	2,154,589	9,492
Nevada	256,011	805,903	24,613	31,864	168,013	1,983,480	11,806
New Hampshire	356,885	751,150	18,463	19,564	174,056	1,798,123	10,331
New Jersey	2,611,157	6,231,320	171,878	295,540	1,573,856	18,669,576	11,862
New Mexico	326,553	816,866	19,664	26,276	200,283	1,942,825	9,700
New York	5,298,715	14,244,503	317,747	494,199	3,674,359	45,939,826	12,503
North Carolina	1,458,578	2,925,537	119,786	99,445	1,011,017	9,786,413	9,680
North Dakota	194,710	541,652	13,199	21,711	76,352	666,325	8,727
Ohio	2,970,830	6,488,978	246,047	365,617	1,676,441	16,240,764	9,688
Oklahoma	712,540	2,059,291	56,809	82,730	491,260	5,193,924	10,573
Oregon	752,475	1,952,294	79,976	112,446	495,003	4,849,558	9,797
Pennsylvania	3,537,843	7,736,439	346,716	558,049	1,813,083	16,865,989	9,302
Rhode Island	299,269	658,864	30,168	39,212	164,228	1,638,675	9,978
South Carolina	674,431	1,354,838	51,275	42,918	512,208	4,997,353	9,756
South Dakota	189,333	533,684	6,693	6,478	70,700	592,561	8,381
Tennessee	1,016,828	2,335,788	82,190	73,766	550,236	5,372,242	9,764
Texas	3,558,488	11,238,670	257,940	459,753	2,124,256	24,661,542	11,609
Utah	391,434	700,744	29,475	45,261	286,443	3,139,368	10,960
Vermont	160,029	329,993	10,053	11,154	84,537	827,177	9,785
Virginia	1,551,683	3,417,854	80,527	76,355	1,076,357	12,204,453	11,339
Washington	1,304,446	3,330,132	124,117	189,085	754,259	7,698,174	10,206
West Virginia	399,594	835,300	45,046	69,799	180,111	1,539,876	8,550
Wisconsin	1,508,191	3,174,511	153,211	206,254	877,845	8,231,537	9,377
Wyoming	130,067	326,598	12,833	20,569	68,472	626,001	9,142
Other areas[3]	253,391	1,004,831	5,441	10,714	127,593	1,152,543	9,033

Table 2 (Continued)—Individual Income and Tax by State, Tax Year 1986

[Money amounts are in thousands of dollars, except as indicated]

State	Tax liability			Earned income credit			
	Total tax		Average tax (whole dollars)	Number of returns	Total	In excess of tax liability	
	Number of returns	Amount				Number of returns	Amount
	(15)	(16)	(17)	(18)	(19)	(20)	(21)
United States, total[2]	**87,249,754**	**380,561,579**	**4,362**	**6,428,594**	**2,081,288**	**4,798,776**	**1,539,383**
Alabama	1,252,656	4,421,503	3,530	168,623	56,041	130,143	42,528
Alaska	200,388	1,088,004	5,429	8,458	2,476	5,676	1,595
Arizona	1,176,984	4,599,719	3,908	87,332	28,321	66,395	21,586
Arkansas	714,523	2,205,280	3,086	95,831	31,553	70,457	22,867
California	10,107,230	47,689,905	4,718	833,769	276,762	671,225	221,766
Colorado	1,225,989	5,073,718	4,138	68,832	22,047	49,119	15,598
Connecticut	1,406,387	8,735,570	6,211	36,974	11,452	25,895	8,070
Delaware	251,192	1,111,557	4,425	15,741	5,006	11,553	3,682
District of Columbia	275,330	1,398,386	5,079	25,311	8,244	20,155	6,569
Florida	4,442,667	20,901,193	4,705	360,801	117,867	264,730	85,540
Georgia	2,131,940	8,596,520	4,032	220,789	72,460	167,703	54,422
Hawaii	413,710	1,517,040	3,667	17,780	5,332	11,673	3,496
Idaho	301,839	900,570	2,984	27,118	8,725	18,820	5,911
Illinois	4,168,172	20,193,692	4,845	265,298	85,162	204,111	65,285
Indiana	1,919,661	7,595,220	3,957	126,067	40,479	91,756	29,210
Iowa	959,964	3,229,279	3,364	56,065	17,513	36,852	11,134
Kansas	873,306	3,492,057	3,999	49,752	15,654	34,145	10,601
Kentucky	1,136,929	3,932,907	3,459	119,612	38,929	83,863	26,705
Louisiana	1,270,955	4,776,941	3,759	202,052	65,617	159,353	51,091
Maine	433,975	1,488,984	3,431	28,167	8,938	19,059	5,920
Maryland	1,850,643	8,709,935	4,706	94,841	30,106	69,754	22,061
Massachusetts	2,470,823	12,382,608	5,012	77,830	24,581	54,636	17,226
Michigan	3,284,233	14,920,589	4,543	159,952	50,568	117,464	36,731
Minnesota	1,565,900	6,308,508	4,029	69,033	21,480	45,325	13,477
Mississippi	706,696	2,100,578	2,972	155,269	51,735	125,909	41,092
Missouri	1,788,018	7,378,231	4,126	130,340	41,865	92,812	29,348
Montana	263,888	785,293	2,976	24,339	7,716	16,775	5,102
Nebraska	561,032	1,954,594	3,484	34,580	10,815	23,103	6,946
Nevada	399,866	1,855,190	4,640	23,421	7,459	17,174	5,461
New Hampshire	442,442	2,190,189	4,950	14,355	4,439	9,361	2,884
New Jersey	3,361,488	18,336,028	5,455	153,628	49,002	113,280	36,508
New Mexico	472,113	1,560,823	3,306	62,505	19,841	48,913	15,343
New York	6,633,319	34,044,488	5,132	439,923	142,984	329,548	106,212
North Carolina	2,264,416	7,932,772	3,503	212,369	67,953	151,290	48,212
North Dakota	228,549	744,188	3,256	15,581	4,818	9,695	2,861
Ohio	3,866,646	15,332,075	3,965	222,212	70,326	161,577	50,623
Oklahoma	1,019,651	3,738,325	3,666	99,787	32,862	71,893	23,057
Oregon	951,485	3,325,425	3,495	63,956	20,574	46,237	14,614
Pennsylvania	4,339,329	17,701,095	4,079	237,378	74,847	168,091	52,677
Rhode Island	385,784	1,579,594	4,095	19,048	6,060	13,972	4,424
South Carolina	1,108,678	3,650,940	3,293	124,819	40,994	94,261	30,688
South Dakota	228,808	678,663	2,966	20,351	6,360	13,210	3,872
Tennessee	1,619,886	6,072,049	3,748	178,018	58,182	132,559	42,487
Texas	5,461,504	25,078,319	4,592	578,350	189,736	443,861	144,508
Utah	494,064	1,632,674	3,305	31,379	9,910	22,638	7,062
Vermont	204,489	728,142	3,561	11,193	3,463	7,157	2,156
Virginia	2,228,026	9,851,527	4,422	126,421	40,421	89,803	28,708
Washington	1,659,563	7,012,270	4,225	85,475	27,040	62,145	19,377
West Virginia	549,907	1,845,691	3,356	53,188	16,886	38,129	12,086
Wisconsin	1,712,228	6,168,435	3,603	82,146	25,710	56,545	17,179
Wyoming	162,741	658,837	4,048	11,079	3,515	7,823	2,438
Other areas[3]	299,742	1,355,459	4,522	1,456	462	1,153	387

See notes following Table 20.

Table 3.—Number of Individual Returns, Income, Tax, and Average Tax, By Size of Income, Tax Years 1983–1986

[All figures are estimates based on samples—money amounts are in thousands of dollars except as indicated]

Size of adjusted gross income	Number of returns for—		Adjusted gross income (AGI)		Taxable income	
	1983	1984	1983	1984[1]	1983	1984
	(1)	(2)	(3)	(4)	(5)	(6)
Total	**96,321,310**	**99,438,708**	**1,942,589,865**	**2,139,904,356**	**1,544,872,497**	**1,701,365,731**
Less than $1,000[2,3]	3,415,113	3,329,148	-25,592,802	-31,984,443	75,549	63,799
$1,000 under $3,000	7,253,408	6,883,760	14,428,816	13,732,880	6,757,833	6,504,129
$3,000 under $5,000	7,167,924	7,030,537	28,679,137	28,151,199	17,374,119	17,251,761
$5,000 under $7,000	6,734,360	6,584,434	40,321,353	39,617,706	26,472,290	26,095,663
$7,000 under $9,000	6,879,931	6,792,931	55,039,361	54,388,545	39,153,168	38,888,493
$9,000 under $11,000	6,205,165	6,051,873	61,927,394	60,390,249	46,314,016	45,303,739
$11,000 under $13,000	5,724,798	5,877,979	68,522,507	70,439,379	52,529,347	54,708,664
$13,000 under $15,000	5,161,674	5,202,547	72,217,107	72,660,372	57,062,111	57,397,788
$15,000 under $17,000	4,593,795	4,893,833	73,350,227	78,195,614	58,956,588	62,489,602
$17,000 under $19,000	4,291,218	4,561,541	77,093,374	82,012,673	62,209,794	66,307,248
$19,000 under $22,000	5,617,176	5,645,759	115,071,603	115,466,828	93,320,322	93,889,175
$22,000 under $25,000	5,115,957	5,198,716	120,238,524	122,123,861	97,650,110	93,375,159
$25,000 under $30,000	7,357,487	7,635,404	201,763,983	209,274,643	163,111,031	168,006,165
$30,000 under $35,000	6,011,290	6,020,636	194,666,035	195,263,778	156,601,086	155,819,230
$35,000 under $40,000	4,409,645	5,054,470	164,664,066	188,944,011	131,804,272	149,423,027
$40,000 under $50,000	5,147,782	5,963,041	228,225,122	264,922,227	181,289,066	210,324,094
$50,000 under $75,000	3,591,188	4,657,702	211,838,450	275,046,849	166,095,719	214,921,141
$75,000 under $100,000	822,840	1,049,444	70,011,841	89,289,787	54,345,021	69,194,901
$100,000 under $150,000	469,391	581,498	56,206,333	69,273,546	43,403,109	53,604,014
$150,000 under $200,000	152,560	179,695	26,170,484	30,767,972	20,312,767	23,865,523
$200,000 under $300,000	108,379	132,306	26,016,239	31,729,787	20,642,936	24,405,339
$300,000 under $500,000	53,960	67,405	20,144,746	25,780,158	15,959,347	19,789,383
$500,000 under $1,000,000	25,469	29,215	17,173,250	19,729,296	13,706,293	15,798,723
$1,000,000 or more	10,800	14,834	24,358,715	34,687,437	19,726,601	27,938,970

Size of adjusted gross income	Total income tax[4]		Percentage of returns showing no total income tax		Returns showing total income tax			
					Average tax (whole dollars)		Tax as percentage of AGI	
	1983	1984	1983	1984	1983	1984	1983	1984
	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Total	**274,181,323**	**301,923,057**	**19.0**	**17.9**	**3,514**	**3,698**	**14.5**	**14.4**
Less than $1,000[2,3]	127,789	419,790	99.7	99.2	13,249[4]	16,783[4]	—	—
$1,000 under $3,000	51,414	44,652	93.4	93.8	108	104	5.7	5.4
$3,000 under $5,000	409,533	430,167	42.0	40.8	99	103	2.4	2.5
$5,000 under $7,000	1,310,055	1,233,034	33.7	33.7	293	282	4.9	4.7
$7,000 under $9,000	2,603,057	2,483,282	21.2	21.3	480	465	6.0	5.8
$9,000 under $11,000	3,888,167	3,617,920	8.3	8.2	684	651	6.8	6.5
$11,000 under $13,000	5,012,113	5,013,506	4.2	5.2	914	899	7.6	7.5
$13,000 under $15,000	6,066,527	5,831,903	2.7	3.6	1,208	1,163	8.6	8.3
$15,000 under $17,000	6,809,411	6,785,324	2.4	2.0	1,518	1,415	9.5	8.9
$17,000 under $19,000	7,664,811	7,775,189	1.6	1.8	1,816	1,736	10.1	9.7
$19,000 under $22,000	12,163,958	11,677,768	1.2	1.5	2,192	2,100	10.7	10.3
$22,000 under $25,000	13,595,791	13,237,769	1.3	1.0	2,692	2,573	11.5	11.0
$25,000 under $30,000	24,354,551	23,793,004	.8	1.2	3,338	3,152	12.2	11.5
$30,000 under $35,000	25,156,554	23,926,881	.6	.7	4,208	4,004	13.0	12.3
$35,000 under $40,000	22,673,889	24,678,348	.8	.5	5,182	4,907	13.9	13.1
$40,000 under $50,000	34,798,186	38,675,241	.4	.3	6,787	6,504	15.3	14.6
$50,000 under $75,000	38,352,897	47,355,174	.4	.4	10,725	10,211	18.2	17.3
$75,000 under $100,000	15,392,973	18,759,377	.3	.4	18,770	17,944	22.1	21.1
$100,000 under $150,000	14,351,743	17,117,874	.4	.2	30,690	29,502	25.6	24.8
$150,000 under $200,000	7,662,455	8,644,645	.3	.2	50,365	48,205	29.4	28.2
$200,000 under $300,000	8,488,945	10,013,524	.2	.2	78,513	75,844	32.7	31.6
$300,000 under $500,000	7,124,258	8,761,557	.2	.2	132,313	130,272	35.4	34.1
$500,000 under $1,000,000	6,463,482	7,526,585	.2	.2	254,228	258,255	37.7	38.2
$1,000,000 or more	9,658,764	14,120,545	.3	.2	896,655	954,091	39.8	40.8

See notes following Table 20.

Table 3. (Continued)—Number of Individual Returns, Income, Tax, and Average Tax, By Size of Income, Tax Years 1983–1986

[All figures are estimates based on samples—money amounts are in thousands of dollars, except as indicated]

Size of adjusted gross income	Number of returns for —		Adjusted gross income (AGI)		Taxable income	
	1985	p1986	1985[1]	p1986[1]	r1985	p1986
	(1)	(2)	(3)	(4)	(5)	(6)
Total	**101,660,287**	**103,299,601**	**2,305,951,483**	**2,522,516,770**	**1,820,740,833**	**1,976,811,955**
Less than $1,000[2,3]	3,292,007	2,988,314	−36,740,956	−31,691,676	6,856	3,157
$1,000 under $3,000	6,771,487	6,947,866	13,581,245	14,072,326	5,947,953	6,092,873
$3,000 under $5,000	6,685,481	6,904,868	26,769,868	27,833,806	16,049,013	16,318,741
$5,000 under $7,000	6,570,968	6,480,298	39,356,896	38,969,981	25,680,025	24,634,678
$7,000 under $9,000	6,664,279	6,202,854	53,477,888	49,604,378	37,544,431	33,766,924
$9,000 under $11,000	6,235,044	6,165,734	62,125,340	61,414,973	46,036,142	44,047,681
$11,000 under $13,000	5,582,921	5,548,379	66,863,381	66,513,394	51,016,092	49,611,859
$13,000 under $15,000	5,386,772	5,303,387	75,352,290	74,088,939	58,884,575	57,158,044
$15,000 under $17,000	4,895,393	4,771,498	78,225,269	76,278,777	61,708,177	59,726,583
$17,000 under $19,000	4,542,598	4,513,805	81,675,266	81,217,307	65,462,334	64,575,441
$19,000 under $22,000	6,089,064	6,098,876	124,506,145	125,031,917	100,462,536	99,384,345
$22,000 under $25,000	5,051,210	5,209,825	118,539,622	122,220,314	95,256,056	98,353,626
$25,000 under $30,000	7,457,947	7,546,056	204,399,150	207,521,896	164,077,078	165,342,856
$30,000 under $35,000	6,451,040	11,535,409	209,135,063	r399,681,247	320,091,716	r315,275,596
$35,000 under $40,000	5,184,620		193,807,899			
$40,000 under $50,000	6,701,544	7,515,514	297,914,321	334,720,916	233,646,097	261,481,959
$50,000 under $75,000	5,628,639	6,472,320	333,710,362	384,276,545	259,467,072	297,565,471
$75,000 under $100,000	1,263,409	1,543,398	107,424,625	131,616,441	82,293,087	100,413,647
$100,000 under $150,000	706,248	1,152,431	84,315,947	152,495,909	90,834,865	117,868,659
$150,000 under $200,000	203,109		34,884,492			
$200,000 under $300,000	152,523	306,148	36,457,244	87,234,337	52,919,889	68,410,763
$300,000 under $500,000	85,565		32,529,032			
$500,000 under $1,000,000	41,107	56,746	27,541,427	37,140,292	21,269,595	30,526,547
$1,000,000 or more	17,312	35,875	40,099,667	82,274,749	32,087,247	66,252,503

Size of adjusted gross income	Total income tax[4]		Percentage of returns showing no total income tax		Returns showing total income tax			
					Average tax (whole dollars)		Tax as percentage of AGI	
	1985	p1986	1985	p1986	1985	p1986	1985	p1986
	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Total	**325,710,254**	**377,050,937**	**18.5**	**18.4**	**3,931**	**4,471**	**14.4**	**r15.2**
Less than $1,000[2,3]	185,922	211,733	99.7	99.5	16,964	15,137	—	—
$1,000 under $3,000	41,698	59,322	94.4	94.0	111	142	5.4	r7.1
$3,000 under $5,000	347,878	326,125	48.2	52.0	100	98	2.4	r2.3
$5,000 under $7,000	1,193,043	1,041,027	33.9	35.1	275	248	4.6r	r4.1
$7,000 under $9,000	2,259,763	1,962,638	26.3	r29.0	460	445	5.7	r5.5
$9,000 under $11,000	r3,480,779	3,221,722	11.8	13.3	633	603	6.3	r6.0
$11,000 under $13,000	4,548,843	4,333,337	5.9	6.3	865	833	7.2	r6.9
$13,000 under $15,000	5,789,495	5,466,711	3.9	3.9	1,119	1,073	8.0	r7.7
$15,000 under $17,000	6,534,361	6,334,407	2.9	2.4	1,375	1,361	8.6	r8.5
$17,000 under $19,000	7,482,062	7,303,995	2.3	1.6	1,686	1,645	9.4	r9.1
$19,000 under $22,000	12,203,165	11,990,139	2.0	1.2	2,044	1,991	10.0	r9.7
$22,000 under $25,000	r12,275,305	12,687,967	1.6	0.8	2,469	2,454	10.5	r10.5
$25,000 under $30,000	r22,916,849	22,808,328	1.0	0.6	3,103	3,042	11.3	r11.1
$30,000 under $35,000	25,080,332	48,781,218	.8	0.5	3,919	4,249	12.1	r12.3
$35,000 under $40,000	24,713,424		.8		4,803		12.8	
$40,000 under $50,000	41,501,665	46,057,420	.4	0.1	6,215	6,136	14.0	13.8
$50,000 under $75,000	56,064,781	62,873,790	.2	0.2	9,984	9,732	16.8	16.4
$75,000 under $100,000	21,794,656	26,231,288	.3	0.2	17,297	17,029	20.3	r20.0
$100,000 under $150,000	19,895,978	38,542,715	.4	0.2	28,296	33,495	23.7	25.3
$150,000 under $200,000	9,760,959		.1		48,128		28.0	
$200,000 under $300,000	11,362,146	28,726,392	.2	0.2	74,658	94,001	31.2	r33.0
$300,000 under $500,000	10,670,832		.2		124,947		32.9	
$500,000 under $1,000,000	9,878,188	14,396,794	.2	0.1	240,714	254,001	35.9	38.8
$1,000,000 or more	15,728,128	33,693,869	.3	0.1	910,931	940,434	39.3	41.0

See notes following Table 20.

Table 4.—Reconciliation of Adjusted Gross Income (AGI) and Personal Income Used in the National Income and Product Accounts (NIPA), Selected Years, 1970–1985

[All figures are estimates—money amounts are in billions of dollars]

Income and adjustment items	1970	1975	1980	1983	1984	1985
	(1)	(2)	(3)	(4)	(5)	(6)
1. Personal income (per NIPA)	**831.8**	**1,313.4**	**2,258.5**	**2,838.6**	**3,108.7**	**3,327.0**
2. Portion of personal income not included in AGI	**181.2**	**350.5**	**608.5**	**887.2**	**936.2**	**1,015.4**
Transfer payments (except taxable military pay and taxable Government pensions)	79.3	176.9	290.3	388.5	373.9	400.3
Other labor income (except fees)	31.9	65.0	136.5	171.7	180.0	189.1
Imputed income	25.5	33.4	45.1	54.4	49.4	59.1
Investment income received by nonprofit institutions or retained by fiduciaries	7.7	11.2	21.7	28.7	31.6	35.9
Investment income retained by life insurance carriers and noninsured pension funds[1]	12.5	23.5	59.9	86.8	98.4	106.3
Differences in accounting treatment (NIPA vs. IRS)	8.5	16.0	14.1	50.6	79.8	89.0
Other excluded or exempt income	15.8	24.4	41.0	106.5	123.0	135.7
3. Portion of AGI not included in personal income	**47.7**	**85.1**	**157.8**	**224.9**	**252.7**	**300.0**
Personal contributions for social insurance	27.9	50.4	88.6	120.1	132.7	148.9
Net capital gain from sales of property	8.9	14.2	29.7	50.6	56.2	68.4
Taxable private pensions	6.3	13.1	28.3	49.4	58.4	72.9
S Corporation income (taxed through shareholders)	1.7	2.1	.7	2.0	6.2	7.9
Other taxable income	2.9	5.4	10.5	2.9	−.8	1.9
4. Total net adjustment for conceptual differences (line 2 minus line 3)	**133.5**	**265.4**	**450.7**	**662.3**	**683.5**	**715.4**
5. Estimated total AGI (per NIPA) (line 1 minus line 4)	**698.3**	**1,048.0**	**1,807.9**	**2,176.3**	**2,425.2**	**2,611.6**
6. Adjusted gross income (AGI) (SOI)	**631.7**	**947.8**	**1,613.7**	**1,942.6**	**2,139.9**	**p2,321.9[2]**
7. Estimated difference in AGI (NIPA vs. SOI) (line 5 minus line 6)[3]	**66.6**	**100.2**	**194.1**	**233.7**	**285.3**	**289.7**

See notes following Table 20.

Table 5.—Personal Income and Total Adjusted Gross Income Based on Individual Income Tax Returns per National Income and Product Accounts (NIPA), Tax Years 1947–1986

[All figures are estimates—money amounts are in billions of dollars]

Tax year	Personal income (per NIPA)[1]	Total adjusted gross income (AGI) (per NIPA)[1]	Difference	
			Amount	Percentage of personal income
	(1)	(2)	(3)	(4)
1947	190.2	170.6	19.6	10.3
1948	209.2	184.6	24.6	11.8
1949	206.4	181.7	24.7	12.0
1950	228.1	201.4	26.7	11.7
1951	256.5	228.8	27.7	10.8
1952	273.8	241.8	32.0	11.7
1953	290.5	257.1	33.4	11.5
1954	293.0	256.4	36.6	12.5
1955	314.2	277.1	37.1	11.8
1956	337.2	297.9	39.3	11.7
1957	356.3	310.7	45.6	12.8
1958	367.1	316.0	51.1	13.9
1959	390.7	338.7	52.0	13.3
1960	409.4	352.5	56.9	13.9
1961	426.0	365.8	60.2	14.1
1962	453.2	387.8	65.4	14.4
1963	476.3	408.7	67.6	14.2
1964	510.2	442.0	68.2	13.4
1965	552.0	479.4	72.6	13.2
1966	600.8	520.0	80.8	13.4
1967	644.5	555.4	89.1	13.8
1968	707.2	610.0	97.2	13.7
1969	772.9	663.4	109.5	14.2
1970	831.8	698.3	133.5	16.0
1971	894.0	745.6	148.4	16.6
1972	981.6	824.7	156.9	16.0
1973	1,101.7	926.0	175.7	15.9
1974	1,210.1	1,004.0	206.1	17.0
1975	1,313.4	1,048.0	265.4	20.2
1976	1,451.4	1,166.7	284.7	19.6
1977	1,607.5	1,297.0	310.5	19.3
1978	1,812.4	1,466.9	345.5	19.1
1979	2,034.0	1,647.3	386.7	19.0
1980	2,258.5	1,807.9	450.6	20.0
1981	2,520.9	1,990.0	530.9	21.1
1982	2,670.8	2,059.4	611.4	22.9
1983	2,838.6	2,176.3	662.3	23.3
1984	3,108.7	2,425.2	683.5	22.0
p1985	3,327.0	2,611.6	715.4	21.5
p1986	3,534.3	n.a.	n.a.	n.a.

See notes following Table 20.

Table 6.—Total Adjusted Gross Income Estimated from National Income and Product Accounts (NIPA) and Adjusted Gross Income Reported on Individual Income Tax Returns per SOI, Tax Years 1947–1986

[All figures are estimates—money amounts are in billions of dollars]

Tax year	Adjusted gross income (AGI)		Difference	
	Total (per NIPA)[1]	Reported on tax returns (per SOI)	Amount	Percentage of total
	(1)	(2)	(3)	(4)
1947	170.6	149.7	20.9	12.3
1948	184.6	163.6	21.0	11.4
1949	181.7	160.6	21.1	11.6
1950	201.4	179.1	22.3	11.1
1951	228.8	202.4	26.4	11.5
1952	241.8	215.3	26.5	11.0
1953	257.1	228.7	28.4	11.0
1954	256.4	229.2	27.2	10.6
1955	277.1	248.5	28.6	10.3
1956	279.9	267.8	30.1	10.1
1957	310.7	280.4	30.3	9.8
1958	316.0	281.2	34.8	11.0
1959	338.7	305.1	33.6	9.9
1960	352.5	315.5	37.0	10.5
1961	365.8	329.9	35.9	9.8
1962	387.8	348.7	39.1	10.1
1963	408.7	368.8	39.9	9.8
1964	442.0	396.7	45.3	10.2
1965	479.4	429.2	50.2	10.5
1966	520.0	468.5	51.5	9.9
1967	555.4	504.8	50.6	9.1
1968	610.0	554.4	55.6	9.1
1969	663.4	603.5	59.9	9.0
1970	698.3	631.7	66.6	9.5
1971	745.6	673.6	72.0	9.7
1972	824.7	746.0	78.7	9.5
1973	926.0	827.1	98.9	10.7
1974	1,004.0	905.5	98.5	9.8
1975	1,048.0	947.8	100.2	9.6
1976	1,166.7	1,053.9	112.8	9.7
1977	1,297.0	1,158.5	138.5	10.7
1978	1,466.9	1,302.4	164.5	11.2
1979	1,647.3	1,465.4	181.9	11.0
1980	1,807.9	1,613.7	194.2	10.7
1981	1,990.0	1,772.6	217.4	10.9
1982	2,059.4	1,852.1	207.3	10.1
1983	2,176.3	1,942.6	233.7	10.7
1984	2,425.2	2,139.9	r285.3	11.8
1985	p2,611.6	2,306.0	[2]	[2]
p1986	3,534.3	2,522.5	[2]	[2]

See notes following Table 20.

Table 7.—Standard, Itemized, and Total Deductions Reported on Individual Income Tax Returns, Tax Years 1944–1986

[All figures are estimates based on samples—number of returns are in millions; money amounts are in billions of dollars]

Tax Year	Total number of returns	Standard deduction[1]		Itemized deductions		Total deductions	
		Number of returns[2]	Amount	Number of returns[2]	Amount[3]	Amount	Percentage of adjusted gross income (AGI)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1944	47.1	38.7	8.0	8.4	4.8	12.8	11.0
1945	49.9	41.5	8.1	8.5	5.5	13.6	11.3
1946	52.8	44.1	8.9	8.8	6.3	15.2	11.3
1947	55.1	44.7	9.8	10.4	7.8	17.6	11.8
1948	52.1	43.2	11.5	8.8	7.9	19.4	11.9
1949	51.8	42.1	11.1	9.7	8.8	19.9	12.4
1950	53.1	42.7	12.0	10.3	9.9	21.9	12.2
1951	55.4	43.9	13.3	11.6	11.9	25.2	12.5
1952	56.5	43.7	13.7	12.8	13.6	27.3	12.7
1953	57.8	43.4	14.2	14.4	15.6	29.8	13.0
1954	56.7	41.0	13.3	15.7	17.4	30.7	13.4
1955	58.3	41.4	13.6	16.9	20.0	33.6	13.5
1956	59.2	40.7	13.8	18.5	22.6	36.4	13.6
1957	59.8	39.7	13.8	20.2	25.7	39.5	14.1
1958	59.1	38.3	13.2	20.8	27.5	40.7	14.5
1959	60.3	37.8	13.4	22.5	32.0	45.4	14.9
1960	61.0	36.9	13.1	24.1	35.3	48.4	15.3
1961	61.5	36.2	12.9	25.3	38.4	51.3	15.6
1962	62.7	36.3	13.1	26.5	41.7	54.8	15.7
1963	63.9	35.8	13.1	28.2	46.1	59.2	16.1
1964	65.4	38.5	20.2	26.9	46.8	67.0	16.9
1965	67.6	39.7	20.6	27.9	50.7	71.4	16.6
1966	70.2	41.6	21.8	28.6	54.6	76.4	16.3
1967	71.7	41.9	22.1	29.8	59.6	81.7	16.2
1968	73.7	41.7	22.1	32.0	69.2	91.3	16.4
1969	75.8	40.9	21.6	34.9	80.2	101.8	16.8
1970	74.3	38.8	32.4	35.4	88.2	120.5	19.0
1971	74.6	43.9	48.1	30.7	91.9	139.9	20.7
1972	77.6	50.6	69.8	27.0	96.7	166.4	22.2
1973	80.7	52.6	73.6	28.0	107.0	180.6	21.8
1974	83.3	53.8	76.1	29.6	119.4	195.5	21.6
1975	82.2	56.1	100.9	26.1	122.3	r233.2	23.5
1976	84.7	58.7	113.8	26.0	133.9	247.6	23.5
1977	86.6	63.7	137.7	22.9	138.5	276.2	23.8
1978	89.8	64.0	139.8	25.8	164.4	r304.3	23.4
1979	92.7	66.2	148.8	26.5	184.2	333.0	22.7
1980	93.9	65.0	146.0	29.0	218.0	r346.0	22.6
1981	95.4	63.8	144.7	31.6	256.4	401.2	22.6
1982	95.3	61.9	140.2	33.4	284.5	425.2[4]	22.9
1983	96.3	61.1	138.5	35.2	309.6	448.7[4]	23.1
1984	99.4	61.2	139.5	38.2	358.9	499.6[4]	23.3
1985	101.7	61.8	145.0	39.8	405.0	554.7[4]	23.9
p1986	103.3	62.5	151.5	40.8	446.5	611.4[4]	r23.9

See notes following Table 20.

Table 8.—Personal Income Per National Income and Product Accounts (NIPA) and Taxable Income, and Individual Income Tax Per SOI, Tax Years 1947–1986

[All figures are estimates—money amounts are in billions of dollars]

Tax year	Personal income (per NIPA)[1]	Taxable income (per SOI)[2]		Total income tax (per SOI)[3]		
		Amount	As a percentage of personal income	Total	As a percentage of—	
					Personal income	Taxable income
	(1)	(2)	(3)	(4)	(5)	(6)
1947	190.2	75.4	39.6	18.1	9.5	24.0
1948	209.2	74.8	35.8	15.4	7.4	20.6
1949	206.4	71.7	34.7	14.5	7.0	20.2
1950	228.1	84.3	37.0	18.4	8.1	21.8
1951	256.5	99.2	38.7	24.2	9.4	25.9
1952	273.8	107.2	39.2	27.8	10.2	25.9
1953	290.5	114.3	39.3	29.4	10.1	25.7
1954	293.0	115.3	39.4	26.7	9.1	23.2
1955	314.2	128.0	40.7	29.6	9.4	23.1
1956	337.2	141.5	42.0	32.7	9.7	23.1
1957	356.3	149.4	41.9	34.4	9.7	23.0
1958	367.1	149.3	40.7	34.3	9.3	23.0
1959	390.7	166.5	42.6	38.6	9.9	23.2
1960	409.4	171.6	41.9	39.5	9.6	23.0
1961	426.0	181.8	42.7	42.2	9.9	23.2
1962	453.2	195.3	43.1	44.9	9.9	23.0
1963	476.3	209.1	43.9	48.2	10.1	23.1
1964	510.2	229.9	45.1	47.2	9.3	20.5
1965	552.0	255.1	46.2	49.6	9.0	19.4
1966	600.8	286.3	47.7	56.1	9.3	19.6
1967	644.5	315.1	48.9	63.0	9.8	20.0
1968	707.2	352.8	49.9	76.7	10.8	21.7
1969	772.9	388.8	50.3	86.6	11.2	22.3
1970	831.8	401.2	48.2	83.9	10.1	20.9
1971	894.0	414.0	46.3	85.4	9.6	20.6
1972	981.6	447.6	45.6	93.6	9.5	20.9
1973	1,101.7	511.9	46.5	108.1	9.8	21.1
1974	1,210.1	573.6	47.4	123.6	10.2	21.5
1975	1,313.4	595.5	45.3	124.5	9.5	20.9
1976	1,451.4	674.9	46.5	141.8	9.8	21.0
1977	1,607.5	733.8	45.6	159.8	9.9	21.8
1978	1,812.4	846.4	46.7	188.2	10.4	22.2
1979	2,034.0	926.6	45.6	214.5	10.5	23.2
1980	2,258.5	1,045.2	46.3	250.3	11.1	24.0
1981	2,520.9	1,170.1	46.4	284.1	11.3	24.3
1982	2,670.8	1,231.9	46.1	277.6	10.4	22.6
1983	2,838.6	1,300.2	45.8	274.2	9.7	21.1
1984	3,108.7	1,447.0	46.5	301.9	9.7	20.9
1985	3,327.0	1,550.5r	46.6	325.7	9.8	21.0
p1986	3,534.3	1,694.0	[4]	377.1	[4]	22.2

See notes following Table 20.

Table 9.—Number of Individual Income Tax Returns, by Type of Tax Settlement, Tax Years 1944–1986

[All figures are estimates based on samples—number of returns are in millions].

Tax year	Total number of returns	Returns with—		No overpayments or tax due at time of filing[1]
		Tax due at time of filing[1]	Overpayments[1]	
	(1)	(2)	(3)	(4)
1944	47.1	22.6	22.9	1.6
1945	49.9	14.5	33.5	1.9
1946	52.8	13.6	34.4	4.8
1947	55.1	15.3	33.0	6.7
1948	52.1	8.1	38.4	5.6
1949	51.8	13.8	30.2	7.9
1950	53.1	14.3	32.0	6.8
1951	55.4	18.6	31.0	.8
1952	56.5	19.3	32.1	5.1
1953	57.8	19.0	32.7	6.2
1954	56.7	16.6	35.2	5.0
1955	58.3	18.7	35.4	4.2
1956	59.2	19.4	36.1	3.7
1957	59.8	18.6	37.6	3.6
1958	59.1	18.1	37.4	3.6
1959	60.3	19.1	38.4	2.8
1960	61.0	18.1	39.4	3.5
1961	61.5	18.6	40.0	2.9
1962	62.7	18.7	40.9	3.1
1963	63.9	19.3	41.4	3.3
1964	65.4	22.5	39.3	3.5
1965	67.6	20.0	44.3	3.2
1966	70.2	17.8	49.4	3.0
1967	71.7	17.5	51.2	3.0
1968	73.7	20.3	50.6	2.8
1969	75.8	17.9	54.9	3.0
1970	74.3	16.5	55.3	2.5
1971	74.6	17.0	55.3	2.4
1972	77.6	11.9	63.3	2.3
1973	80.7	14.2	64.2	2.2
1974	83.3	15.4	65.8	2.1
1975	82.2	15.8	63.8	2.6
1976	84.7	16.9	65.0	2.8
1977	86.6	17.8	66.0	2.8
1978	89.8	21.6	65.5	2.7
1979	92.7	18.8	71.4	2.4
1980	93.9	21.8	69.9	2.3
1981	95.4	23.0	70.0	2.4
1982	95.3	20.3	72.4	2.6
1983	96.3	18.5	75.0	r2.9
1984	99.4	21.2	75.6	2.7
1985	101.7	21.2	77.4	r3.0
p1986	103.3	21.4	r78.5	r3.4

See notes following Table 20.

Table 10.—Nonfarm Sole Proprietorship Returns: Selected Income and Deduction Items for Selected Income Years, 1970–1986

[All figures are estimates based on samples—money amounts are in thousands of dollars]

Item	1970	1975	1980	1984	1985	1986
	(1)	(2)	(3)	(4)	(5)	(6)
Number of returns, total	**5,769,741**	**7,221,346**	**8,931,712**	**11,262,390**	**11,928,573**	**12,393,700**
Number with net income	n.a.	n.a.	n.a.	8,002,865	8,640,701	9,247,806
Inventory, end of year	**11,060,775**	**15,578,040**	**21,996,236**	**23,232,929**	**24,969,895**	**24,476,892**
Business receipts, total	**198,582,172**	**273,954,741**	**411,205,713**	**516,036,944**	**540,045,430**	**559,384,259**
Income from sales and operations	n.a.	272,342,560	407,169,299	507,234,292	528,675,271	r548,293,173
Total deductions	**168,044,746**	**234,318,288**	**356,258,495**	**445,270,334**	**461,272,852**	**468,960,496**
Cost of sales and operations	109,148,811	146,261,435	209,889,809	229,905,960	232,294,132	232,134,760
Purchases	88,585,913	117,722,352	168,301,517	n.a.	n.a.	n.a.
Cost of labor	7,704,285	8,791,083	10,922,221	13,008,803	14,504,201	17,317,871
Materials and supplies	6,216,057	9,090,638	12,909,222	n.a.	n.a.	n.a.
Commissions	1,274,016	2,225,830	3,333,345	n.a.	n.a.	5,461,118
Net salaries and wages	15,107,047	20,227,859	26,560,821	34,686,204	38,265,691	38,691,599
Car and truck expenses	n.a.	n.a.	13,378,289	17,523,807	17,044,421	16,380,826
Rent paid	4,636,528	6,676,314	9,636,290	14,278,260	15,258,690	15,653,599
Repairs	2,444,607	3,044,175	5,031,573	n.a.	n.a.	n.a.
Taxes paid	3,775,502	5,423,961	7,672,459	n.a.	n.a.	n.a.
Utilities	n.a.	n.a.	4,790,337	n.a.	n.a.	12,644,624
Insurance	2,309,608	3,503,812	6,003,126	n.a.	n.a.	10,783,481
Interest paid	1,784,276	3,390,845	7,190,257	11,025,276	11,913,982	11,504,437
Depreciation	5,451,525	7,958,143	13,952,703	23,900,034	26,291,389	26,418,043
Pension and profit sharing plans	72,741	125,296	141,463	258,070	311,323	638,262
Net income (less deficit)	**30,537,426**	**39,636,453r**	**54,947,219**	**70,766,610**	**78,772,578**	**90,423,763**
Net income	33,735,732	45,624,890	68,010,051	89,849,570	98,775,563	110,496,952
Deficit	3,198,306	5,988,437	13,062,832	19,082,960	20,002,986	20,073,189

See notes following Table 20.

Table 11.—Partnership Returns: Balance Sheet Items and Selected Income Statement for Selected Income Years, 1970–1986

[All figures are estimates based on samples—money amounts are in thousands of dollars]

Item	1970	1975	1980	1984	1985	1986
	(1)	(2)	(3)	(4)	(5)	(6)
Total number of active partnerships	**936,133**	**1,073,094**	**1,379,654**	**1,643,581**	**1,713,603**	**1,702,952**
Number with net income	639,795	661,134	774,173	844,738	875,846	850,884
Number with balance sheets	555,741	783,271	1,194,236	1,201,320	1,227,498	1,202,737
Number of partners	**3,697,818**	**4,950,634**	**8,419,899**	**12,426,721**	**13,244,824**	**15,301,345**
Total assets[1]	**116,752,751**	**235,468,301**	**597,503,923**	**1,030,848,519**	**1,269,434,302**	**1,403,750,213**
Depreciable assets (net)	n.a.	113,124,969	239,139,823	581,643,219	695,878,822	779,936,070
Inventories, end of year	n.a.	11,985,431	33,218,272	39,446,014	27,279,234	27,463,816
Land	n.a.	36,731,958	70,241,248	122,036,819	152,179,314	179,141,689
Total liabilities[1]	**n.a.**	**193,875,629**	**488,734,023**	**1,030,848,464**	**1,269,434,367**	**1,403,750,220**
Accounts payable	n.a.	12,302,055	33,899,048	32,780,197	40,871,755	43,621,862
Short-term debt[2]	n.a.	22,709,476	48,001,839	68,625,844	102,760,363	92,456,724
Long-term debt[3]	n.a.	136,296,764	178,044,406	322,327,016	93,319,855	429,195,599
Nonrecourse loans	n.a.	n.a.	118,910,380	260,167,109	327,558,208	365,044,180
Partners' capital accounts	**n.a.**	**41,592,672**	**108,769,900**	**1,754,754,922**	**200,212,653**	**228,022,656**
Total receipts[4]	**93,348,080**	**148,417,529**	**291,998,115**	**375,192,511**	**367,117,316**	**397,302,544**
Business receipts	90,208,834	142,505,781	271,108,832	318,342,380	302,733,374	327,428,647
Interest received	942,304	2,477,173	10,869,323	16,651,205	20,558,966	21,715,994
Total deductions[4]	**83,557,684**	**140,679,959**	**283,749,460**	**378,692,535**	**376,000,991**	**r414,673,405**
Cost of sales and operations	46,040,874	64,672,843	113,885,668	180,857,822	146,315,315	164,167,707
Purchases	31,820,581	42,608,734	70,439,607	100,358,781	91,925,923	100,010,383
Cost of labor	4,146,927	4,585,836	7,015,547	7,826,231	8,845,106	9,789,253
Salaries and wages[4]	8,129,233	12,489,039	22,336,337	28,522,626	33,884,204	36,304,654
Taxes paid	3,159,258	5,770,918	9,553,145	6,673,186	7,745,756	7,866,233
Interest paid[4]	4,470,206	12,097,100	28,362,385	25,437,588	28,674,933	29,452,297
Depreciation[4,5]	4,578,820	10,108,834	21,576,189	46,939,395	53,650,790	r59,847,381
Net income (less deficit)	**9,790,396**	**7,737,570**	**8,248,655**	**−3,500,024**	**−8,883,674**	**−17,370,860**
Net income	14,419,124	22,431,931	45,061,756	69,696,922	77,044,693	80,214,873
Deficit	4,628,728	14,694,361	36,813,100	73,196,946	85,928,367	97,585,733

See notes following Table 20.

Table 12.—Number of Business Income Tax Returns, by Size of Business, for Selected Years 1970–1986

[All figures are estimates based on samples—number of businesses are in thousands]

Size of business	Number of businesses for—					
	1970	1975	1980	1984	1985	1986
	(1)	(2)	(3)	(4)	(5)	(6)
CORPORATIONS						
Receipt size[1]						
Under $25,000[2]	451.9	468.9	557.0	686.1	710.8	n.a.
$25,000 under $50,000	170.7	186.4	207.7	212.5	236.6	n.a.
$50,000 under $100,000	219.8	260.7	322.7	338.7	330.2	n.a.
$100,000 under $250,000	516.9	673.9	558.4	615.2	620.5	n.a.
$250,000 under $500,000			367.3	468.4	489.2	n.a.
$500,000 under $1,000,000	141.1	184.2	279.8	344.8	352.4	n.a.
$1,000,000 or more	165.0	249.5	417.7	505.0	537.6	n.a.
Asset size						
Under $100,000[3]	961.0	1,177.7	1,514.6	1,773.7	1,833.5	n.a.
$100,000 under $1 million	599.1	704.6	968.9	1,119.8	1,152.5	n.a.
$1 million under $10 million	87.0	116.4	191.8	232.9	245.4	n.a.
$10 million under $25 million	9.8	12.2	16.6	20.8	20.9	n.a.
$25 million under $50 million	3.9	5.6	7.8	10.1	10.4	n.a.
$50 million under $100 million	2.1	3.1	4.8	6.0	6.2	n.a.
$100 million under $250 million	1.4	2.1	3.2	3.8	4.4	n.a.
$250 million and over	1.2	1.9	2.9	3.7	4.1	n.a.
PARTNERSHIPS						
Receipt size[1]						
Under $25,000[2]	501.7	549.7	638.0	r820.4[4]	840.1[4]	836.6[4]
$25,000 under $50,000	125.2	141.0	181.8	r197.3	195.5	182.9
$50,000 under $100,000	119.6	133.7	183.6	r200.5	199.5	204.5
$100,000 under $200,000	97.2	114.0	155.2	r162.8	190.1	184.0
$200,000 under $500,000	65.2	90.6	135.6	r149.9	165.5	165.1
$500,000 under $1,000,000	17.0	25.5	48.1	r60.6	66.9	69.1
$1,000,000 or more	10.3	18.6	37.4	r52.1	56.0	60.7
Asset size[5]						
Under $25,000[3]	635.7	611.0	541.9	773.8	794.1	774.9
$25,000 under $50,000	80.8	105.9	156.3	118.6	132.7	142.4
$50,000 under $1,000,000	73.5	106.8	180.2	170.5	165.8	140.4
$100,000 under $200,000	74.7	116.0	219.1	208.5	210.9	214.4
$200,000 - $500,000	33.8	56.9	117.9	129.0	142.8	147.4
$500,000 - $1,000,000	19.3	35.3	72.1	93.8	100.0	99.8
$1,000,000 or more	18.3	41.2	92.2	149.4	167.2	183.3
NONFARM SOLE PROPRIETORSHIPS						
Receipt size						
$2,500[2]	1,894.3	2,299.9	2,783.1	2,988.9	3,067.5	3,178,358
$2,500 under $5,000	815.1	959.4	1,158.6	1,324.4	1,444.6	1,495,149
$5,000 under $10,000	891.5	1,041.7	1,262.9	1,482.4	1,633.6	1,666,017
$10,000 under $25,000	1,137.4	1,325.7	1,711.8	2,036.4	2,104.6	2,175,296
$25,000 under $50,000	746.4	849.5	1,079.1	1,261.3	1,393.9	1,466,623
$50,000 under $100,000	562.0	644.5	835.6	1,061.3	1,094.1	1,138,276
$100,000 under $200,000	297.4	380.9	795.8	984.4	1,060.2	1,140,888
$200,000 under $500,000	122.3	209.2				
$500,000 under $1,000,000	20.8	35.3	73.9	r86.4	89.3	95,412
$1,000,000 or more	6.6	13.5	29.2	36.8	40.7	37,671

See notes following Table 20.

Table 13.—Corporation Income Tax Returns: Balance Sheet, Income Statement, and Tax Items for Selected Income Years, 1970–1985

[All figures are estimates based on samples—money amounts are in thousands of dollars]

Items	1970	1975	1980	1983	1984	1985
	(1)	(2)	(3)	(4)	(5)	(6)
Number of returns, total	**1,665,477**	**2,023,647**	**2,710,538**	**2,999,071**	**3,170,743**	**3,277,219**
Number with net income	1,008,337	1,226,208	1,596,632	1,676,288	1,777,770	1,820,120
Consolidated returns[1,2]	19,871	38,307	57,890	73,645	80,256	79,598
S Corporation returns[2,3]	257,475	358,413	545,389	648,267	701,339	724,749
DISC returns[2,4]	N/A	6,431	8,665	9,898	12,480	1,383
FSC returns[2,5]	N/A	N/A	N/A	N/A	N/A	2,341
Total assets	**2,634,706,564**	**4,286,556,273**	**7,617,238,403**	**10,201,084,144**	**11,106,701,948**	**12,773,093,888**
Cash	176,924,573	290,426,439	528,914,747	590,386,817	595,773,262	683,204,264
Notes and accounts receivable	614,667,367	1,051,542,806	1,984,601,790	2,677,367,962	2,896,980,896	3,317,635,191
Less: Allowance for bad debts	20,030,327	31,032,998	50,057,307	51,162,613	54,341,671	61,580,335
Inventories	190,401,642	317,718,545	534,806,547	599,445,162	664,243,060	714,722,928
Investments in Government obligations	196,625,390	316,131,699	472,059,737	685,146,228	725,695,801	916,550,098
Other current assets	73,058,482	145,101,716	310,177,160	433,594,597	513,743,712	629,136,396
Loans to stockholders	4,774,082	9,355,636	29,873,250	47,836,294	58,430,009	56,761,232
Mortgage and real estate loans	327,593,354	548,054,483	894,323,489	982,415,018	1,126,962,114	1,258,672,577
Other investments	401,389,022	626,266,074	1,213,986,210	1,798,295,351	1,972,830,815	2,413,551,474
Depreciable assets	868,908,018	1,276,564,500	2,107,027,914	2,730,371,698	2,913,301,626	3,174,193,649
Less: Accumulated depreciation	334,646,086	483,798,526	767,841,763	1,024,756,282	1,116,171,771	1,232,072,530
Depletable assets	18,517,264	38,511,396	71,901,490	107,958,232	114,808,431	112,339,389
Less: Accumulated depletion	6,774,796	14,501,561	19,569,556	32,682,172	36,340,299	37,203,920
Land	46,626,157	66,819,206	92,931,935	119,350,378	128,269,064	141,448,357
Intangible assets (amortizable)	12,818,168	12,823,183	45,480,694	87,852,590	117,467,829	145,290,625
Less: Accumulated amortization	5,984,184	4,491,990	18,393,037	25,062,592	36,190,604	42,505,240
Other assets	69,838,438	121,065,665	187,015,106	474,727,482	521,126,077	582,949,738
Total liabilities	**2,634,706,564**	**4,286,556,273**	**7,617,238,403**	**10,201,084,144**	**11,106,701,948**	**12,773,093,888**
Accounts payable	148,812,597	263,417,584	542,172,368	671,495,438	741,372,874	891,571,443
Mortgages, notes, and bonds payable in less than 1 year	170,884,261	272,123,551	504,802,288	759,536,076	866,546,604	1,001,337,795
Other current liabilities	892,218,397	1,577,425,991	2,706,796,360	3,513,512,199	3,760,174,725	4,234,983,432
Loans from stockholders	24,573,814	38,143,936	85,718,510	131,025,956	145,250,514	174,317,253
Mortgages, notes, and bonds payable in 1 year or more	362,700,303	586,703,526	986,663,932	1,323,209,421	1,494,350,573	1,699,272,481
Other liabilities	283,106,029	451,676,880	846,696,691	1,156,873,507	1,214,879,371	1,467,912,913
Capital stock	201,213,719	251,715,862	417,153,783	787,278,549	839,344,197	920,182,882
Paid-in or capital surplus	196,642,421	298,534,854	532,039,407	873,620,667	1,066,288,359	1,420,996,805
Retained earnings, appropriated	16,657,051	29,955,676	41,461,644	52,538,370	51,100,507	54,074,364
Retained earnings, unappropriated	349,225,750	537,631,026	1,027,902,049	1,221,793,087	1,256,771,201	1,311,512,589
Less: Cost of treasury stock	11,327,778	20,772,613	74,168,627	289,799,122	329,376,924	403,068,064
Total receipts	**1,750,776,503**	**3,198,627,860**	**6,361,284,012**	**7,135,494,059**	**r7,860,711,226[6]**	**8,398,278,426[6]**
Business receipts	1,620,886,576	2,961,729,640	5,731,616,337	6,334,602,711	6,948,481,893	7,369,538,953
Interest on State and local Government obligations	3,775,917	6,711,606	12,620,876	16,667,263	16,613,501	20,164,514
Other interest	67,794,508	136,587,304	354,243,674	496,648,009[7]	r566,537,974[7]	617,622,425[7]
Dividends received from domestic corporations	5,238,421	8,818,282	18,654,800	19,696,776	21,185,391	16,967,379
Dividends received from foreign corporations	3,466,515	5,467,726	14,563,353	13,892,070	15,373,474	20,770,361
Rents	13,938,502	21,765,130	41,371,141	69,580,411	75,834,113	89,700,937
Royalties	2,586,387	5,167,141	12,450,250	13,876,095	14,535,929	15,237,421
Net short-term capital gain reduced by net long-term capital loss	190,439	301,601	2,013,510	5,048,854	3,233,999[6]	7,032,062[6]
Net long-term capital gain reduced by net short-term capital loss	5,481,580	8,364,523	24,910,957	33,924,549	38,518,792	53,771,685
Net gain, noncapital assets	5,315,562	7,757,287	20,117,615	26,134,711	26,506,096	33,537,842
Other receipts	22,102,096	35,957,620	128,721,498	105,422,613	133,948,728	153,934,848

Table 13.(Continued)—Corporation Income Tax Returns: Balance Sheet, Income Statement, and Tax Items for Selected Income Years, 1970–1985

[All figures are estimates based on samples—money amounts are in thousands of dollars]

Items	1970	1975	1980	1983	1984	1985
	(1)	(2)	(3)	(4)	(5)	(6)
Total deductions	**1,682,778,847**	**3,052,674,597**	**6,125,365,155**	**6,945,457,358**	**7,628,772,066**	**8,158,144,126**
Cost of sales and operations	1,146,263,273	2,129,928,467	4,204,905,905	4,308,238,989	4,692,505,746	4,894,254,081
Compensation of officers	32,846,381	57,832,552	108,973,751	141,193,212	157,028,565	170,737,540
Repairs	13,986,819	23,422,171	42,407,967	74,652,495	76,367,591	81,495,784
Bad debts	6,479,814	13,781,147	18,769,771	30,543,184	33,803,267	43,333,588
Rent paid on business property	23,842,355	40,769,829	71,990,832	104,717,965	119,476,469	134,661,335
Taxes paid	49,523,243	81,530,302	163,003,622	173,420,116	191,748,629	200,977,161
Interest paid	62,055,010	129,307,921	344,612,542	475,060,444	535,814,101	568,645,475
Contributions or gifts	797,029	1,202,130	2,358,554	3,626,605	4,057,112	4,471,736
Amortization	745,005	717,398	1,374,658	4,309,952	5,170,089	6,133,737
Depreciation	52,941,266	86,295,664	157,345,828	241,491,819	264,882,261	304,380,703
Depletion	5,623,339	5,341,489	8,871,993	7,574,216	8,051,260	7,779,731
Advertising	18,089,097	26,605,786	52,266,004	72,393,870	82,023,440	91,922,667
Pension, profit-sharing, stock bonus, and annuity plans	12,225,912	26,526,129	51,529,310	54,355,062	52,555,188	49,588,712
Employee benefit programs	7,398,283	15,690,563	40,179,104	59,115,141	64,547,638	71,601,577
Net loss, noncapital assets	1,289,305	1,804,079	5,903,104	7,615,697	9,647,008	7,893,175
Other deductions	248,672,716	411,918,970	850,872,216	1,187,148,601	1,331,088,812	1,520,267,133
Total receipts less total deductions	**67,997,656**	**145,953,263**	**235,918,858**	**190,036,702**	**231,939,061**	**240,134,300**
Constructive taxable income from related foreign corporations	1,679,875	3,395,169	15,708,560	14,944,490	17,575,037	20,299,335
Net income (less deficit)	**65,901,614**	**142,636,826**	**239,006,542**	**188,313,928**	**232,900,596**[6]	**240,119,020**[6]
Net income	83,710,924	169,483,336	296,787,201	296,932,146	349,179,415[6]	363,867,384[6]
Deficit	17,809,310	26,846,510	57,780,659	108,618,218	116,278,819[6]	123,748,365[6]
Income subject to tax[8]	**72,374,437**	**146,589,287**	**246,598,486**	**218,686,396**	**257,054,060**	**266,060,609**
Income tax, total	33,293,018[9]	66,144,308	105,142,436	92,218,567	107,968,407	111,340,839
Regular and alternative tax	32,949,937	65,769,822	103,831,172	90,461,858	106,013,271	109,106,358
Tax from recomputing prior-year investment credit	77,832	217,138	867,571	1,175,071	1,382,945	1,497,597
Tax from recomputing prior-year work incentive (WIN) credit	N/A	608	4,873	N/A	N/A	N/A
Additional tax for tax preferences	265,249	156,740	438,820	561,505	544,863	725,878
Foreign tax credit	4,548,986	19,987,724	r24,879,737	19,951,165	21,075,296	24,263,487
U.S. possessions tax credit	N/A	N/A	r1,572,734	r1,966,168	1,978,578	2,450,583
Investment credit	865,954	6,459,746	15,102,812	16,145,173	([10])	([10])
Work incentive (WIN) credit	N/A	5,321	36,483	N/A	N/A	N/A
Jobs credit	N/A	N/A	601,444	449,224	([10])	([10])
Nonconventional source fuel credit	N/A	N/A	2	33,012	69,695	43,267
Alcohol fuel credit	N/A	N/A	4	7,178	([10])	([10])
Research activities credit	N/A	N/A	N/A	1,277,474	1,589,048	1,627,997
Employees stock ownership credit	N/A	N/A	N/A	909,880	([10])	([10])
Orphan drug credit	N/A	N/A	N/A	*236	*105	*204
General business credit	N/A	N/A	N/A	N/A	19,265,475	19,607,097
Distributions to stockholders:						
Cash and property except in own stock	32,012,677	45,224,392	97,378,617	128,298,545	144,871,643	n.a.
Corporation's own stock	1,922,810	2,066,559	3,525,549	4,810,283	5,889,191	n.a.

See notes following Table 20.

Table 14.—Corporation Income Tax Returns: Selected Balance Sheet, Income Statement, and Tax Items by Industrial Division, for Selected Income Years, 1970–1985

[All figures are estimates based on samples—money amounts are in thousands of dollars]

Industrial division and items	1970	1975	1980	1983	1984	1985
	(1)	(2)	(3)	(4)	(5)	(6)
AGRICULTURE, FORESTRY AND FISHING						
Number of returns, total	37,283	56,280	80,883	92,125	98,361	103,156
Number with net income	19,843	33,328	43,827	47,636	r50,037	52,776
Total assets	11,909,403	21,177,941	40,738,977	50,292,891	50,699,926	52,651,197
Net worth	4,012,068	6,844,949	11,460,935	13,559,332	14,310,555	15,406,221
Total receipts	14,277,707	28,118,514	52,089,915	59,208,642	66,645,119	70,491,486
Business receipts	13,591,763	26,624,149	48,850,056	55,114,507	62,093,338	65,419,402
Interest received	69,742	171,732	476,654	r677,378[1]	723,118[1]	775,383[1]
Total deductions	14,209,713	27,369,286	51,418,280	59,386,796	66,436,289	70,559,478
Cost of sales and operations	10,555,539	19,738,447	35,798,332	38,308,491	42,991,472	45,085,526
Interest paid	356,225	797,420	2,184,441	2,866,689	2,952,198	2,758,952
Net income (less deficit)	65,295	746,908	673,158	−196,528	202,522	−74,270
Net income	493,400	1,493,168	2,464,381	2,499,829	2,874,899	2,930,905
Deficit	428,105	746,260	1,791,222	2,696,357	2,672,377	3,005,175
Income tax before credits	113,115[2]	351,059	533,768	430,119	509,081	540,671
Total income tax after credits[2]	107,023[2]	294,584	422,356	313,537	373,115	344,626
Distributions to stockholders except in own stock	65,824	244,524	304,733	172,301	417,177	n.a.
MINING						
Number of returns, total	14,465	14,242	25,576	37,066	40,564	41,426
Number with net income	7,303	8,297	12,698	15,526	18,177	18,031
Total assets	23,972,812	64,505,341	126,947,880	194,417,434	209,036,474	240,815,996
Net worth	13,381,821	32,765,690	54,068,148	85,602,456	94,335,000	104,772,797
Total receipts	17,747,750	65,909,994	176,672,390	132,419,750	123,496,633	142,038,595
Business receipts	16,699,586	63,670,496	167,397,918	122,510,903	111,030,063	126,710,610
Interest received	176,728	522,757	1,301,266	r2,529,873[1]	3,089,562[1]	3,584,890[1]
Total deductions	15,927,348	42,348,765	169,051,624	134,305,739	124,627,966	145,389,514
Cost of sales and operations	9,955,600	30,171,612	116,989,880	85,540,564	74,213,000	87,972,035
Interest paid	388,032	1,166,182	3,440,080	6,763,864	7,077,300	7,789,995
Net income (less deficit)	1,834,315	23,574,833	7,750,561	−1,586,098	−353,185	−2,543,487
Net income	2,399,507	24,347,893	10,133,685	5,929,343	6,991,815	6,166,623
Deficit	565,192	773,060	2,383,124	7,515,441	7,344,999	8,710,110
Income tax before credits	1,031,550[2]	11,361,037	3,947,569	3,203,406	2,381,154	1,810,559
Total income tax after credits[3]	342,928[2]	1,051,138	1,674,566	1,282,044	1,014,361	557,519
Distributions to stockholders except in own stock	1,177,550	1,015,895	4,757,780	2,710,318	3,057,411	n.a.
CONSTRUCTION						
Number of returns, total	138,905	191,219	272,432	283,519	306,906	318,276
Number with net income	82,078	108,852	150,368	150,138	173,351	185,613
Total assets	42,719,792	76,691,947	132,939,026	161,365,795	195,272,738	215,297,771
Net worth	11,819,604	19,029,077	32,826,174	41,540,682	50,338,974	54,687,270
Total receipts	90,610,644	146,955,117	267,205,356	290,798,843	338,575,635	387,232,953
Business receipts	88,945,385	143,412,715	260,387,692	280,896,210	326,752,784	374,590,273
Interest received	219,698	614,583	2,073,650	r2,762,556[1]	3,540,430[1]	3,851,628[1]
Total deductions	89,070,022	144,717,309	262,116,275	288,574,577	335,696,154	382,823,113
Cost of sales and operations	73,434,969	116,845,554	208,064,925	221,189,268	257,057,538	295,803,244
Interest paid	711,496	1,973,244	4,278,502	4,861,075	5,990,178	6,407,652
Net income (less deficit)	1,538,418	2,236,262	5,271,209	2,265,564	2,906,704	4,370,924
Net income	2,548,013	4,514,864	8,911,143	7,990,419	9,147,150	11,053,145
Deficit	1,009,595	2,278,602	3,639,934	5,724,855	6,240,445	6,682,220
Income tax before credits	776,979[2]	1,320,196	2,521,507	1,859,927	1,767,756	2,312,846
Total income tax after credits[3]	756,637[2]	1,131,960	1,973,659	r1,393,074	1,296,301	1,662,563
Distributions to stockholders except in own stock	299,204	464,553	793,764	846,579	738,873	n.a.
MANUFACTURING						
Number of returns, total	197,807	217,354	242,550	261,927	272,050	276,545
Number with net income	120,814	136,839	153,640	152,304	162,584	159,778
Total assets	612,912,516	944,581,970	1,709,471,700	2,232,987,922	2,417,631,605	2,644,393,424
Net worth	308,923,293	442,587,674	749,186,774	953,108,742	1,025,028,491	1,099,645,876
Total receipts	722,952,890	1,296,359,650	2,404,323,844	2,552,830,718	2,768,247,655	2,831,062,496
Business receipts	700,090,661	1,258,338,650	2,301,056,550	2,418,344,305	2,608,971,901	2,656,345,750
Interest received	4,748,499	8,691,092	28,315,784	r37,958,034[1]	42,749,996[1]	47,753,626[1]
Total deductions	692,455,462	1,230,689,496	2,290,593,808	2,469,257,725	2,661,153,853	2,733,105,346
Cost of sales and operations	495,879,549	925,111,030	1,707,143,900	1,678,378,729	1,796,313,155	1,797,852,805
Interest paid	12,570,242	22,055,903	54,177,356	73,973,082	85,039,616	90,452,072
Net income (less deficit)	31,846,078	68,406,627	125,667,815	95,330,965	121,215,254	113,758,645
Net income	37,925,489	74,466,554	141,547,510	124,417,490	147,852,003	142,541,119
Deficit	6,079,411	6,059,927	15,879,695	29,086,525	26,636,749	28,782,474
Income tax before credits	16,744,905[2]	32,306,739	59,577,413	50,950,876	58,542,710	56,687,476
Total income tax after credits[3]	13,242,226[2]	21,024,964	r32,726,986	r24,527,921	30,429,379	25,382,459
Distributions to stockholders except in own stock	14,616,282	19,973,061	37,306,509	43,295,901	45,630,537	n.a.

Table 14.(Continued)—Corporation Income Tax Returns: Selected Balance Sheet, Income Statement, and Tax Items by Industrial Division, for Selected Income Years, 1970–1985

[All figures are estimates based on samples—money amounts are in thousands of dollars]

Industrial division and items	1970	1975	1980	1983	1984	1985
	(1)	(2)	(3)	(4)	(5)	(6)
TRANSPORTATION AND PUBLIC UTILITIES						
Number of returns, total	67,398	80,701	111,324	122,567	128,184	138,337
Number with net income	38,204	45,360	62,232	61,588	65,405	69,938
Total assets	287,740,207	443,236,797	758,364,400	998,870,785	1,084,873,718	1,246,426,899
Net worth	121,205,022	176,444,407	290,655,693	394,284,132	423,937,357	490,481,127
Total receipts	135,495,271	243,480,637	523,807,396	657,421,487	725,631,232	772,358,188
Business receipts	131,463,171	234,689,427	507,372,820	627,836,585	693,105,168	733,943,970
Interest received	930,266	1,520,913	5,760,072	r9,491,678[1]	11,250,353[1]	12,310,594[1]
Total deductions	127,931,131	233,409,166	503,954,285	638,194,372	697,240,089	747,836,158
Cost of sales and operations	77,743,359	143,932,463	336,868,172	339,191,696	373,236,459	381,028,354
Interest paid	7,364,200	13,761,062	27,638,591	36,787,550	40,178,514	44,880,858
Net income (less deficit)	7,543,718	10,099,571	20,046,155	19,492,314	28,851,644	25,087,629
Net income	9,471,595	12,088,189	24,917,293	28,040,349	37,897,899	37,880,144
Deficit	1,927,877	1,988,618	4,871,138	8,548,036	9,041,255	12,792,516
Income tax before credits	4,342,334[2]	5,107,158	10,532,722	11,621,625	15,579,597	15,214,129
Total income tax after credits[3]	4,036,650[2]	2,836,470	5,322,655	r5,430,069	8,532,848	8,432,924
Distributions to stockholders except in own stock	5,837,565	8,900,353	17,329,807	24,540,824	27,505,378	n.a.
WHOLESALE AND RETAIL TRADE						
Number of returns, total	518,062	614,632	799,628	851,785	896,524	917,301
Number with net income	339,987	399,668	487,300	492,057	516,750	510,825
Total assets	192,181,800	323,496,726	646,901,005	804,242,963	899,032,645	1,009,965,739
Net worth	77,002,132	122,649,734	222,289,687	265,222,391	289,338,722	286,260,274
Total receipts	522,547,923	969,938,872	1,955,523,778	2,119,444,862	2,307,612,139	2,473,865,453
Business receipts	511,316,883	951,463,550	1,919,347,689	2,071,264,407	2,250,774,641	2,408,174,933
Interest received	1,291,906	3,857,318	10,503,989	r15,049,512[1]	18,406,334[1]	21,633,480[1]
Total deductions	512,910,193	947,511,780	1,919,454,218	2,084,482,953	2,265,843,128	2,440,403,373
Cost of sales and operations	392,391,856	745,299,204	1,538,128,634	1,626,952,423	1,759,718,001	1,869,766,621
Interest paid	4,309,663	8,587,173	25,645,855	27,598,584	33,204,502	38,217,998
Net income (less deficit)	9,671,044	22,489,430	38,309,671	35,292,870	42,010,706	33,126,702
Net income	12,395,411	27,681,721	49,426,500	50,844,081	58,584,558	51,434,500
Deficit	2,724,367	5,192,291	11,116,829	15,551,210	16,573,852	18,307,798
Income tax before credits	4,476,047[2]	8,103,316	13,515,653	12,910,870	15,082,817	16,392,896
Total income tax after credits[3]	4,237,181[2]	7,348,619	r10,564,358	r10,698,145	12,414,978	13,396,555
Distributions to stockholders except in own stock	2,068,501	5,029,897	10,343,087	12,722,120	13,057,047	n.a.
FINANCE, INSURANCE, AND REAL ESTATE						
Number of returns, total	406,235	411,846	493,426	479,656	497,366	518,432
Number with net income	248,586	243,409	273,853	269,267	274,171	285,273
Total assets	1,401,153,520	2,321,965,956	4,022,206,073	5,487,225,439	5,938,984,929	7,029,452,681
Net worth	196,480,448	269,770,527	530,541,317	816,806,465	901,658,317	1,161,968,009
Total receipts	177,321,173	315,795,981	697,460,846	902,822,472	1,033,146,416	1,182,034,309
Business receipts	92,091,887	157,126,715	256,892,475	362,627,365	431,157,290	501,993,840
Interest received	63,694,046	127,040,303	315,146,115	r439,937,980[1]	497,044,327[1]	541,268,193[1]
Total deductions	161,630,060	297,963,817	652,637,787	856,678,689	985,687,308	1,104,572,202
Cost of sales and operations	48,434,362	84,614,209	129,644,330	172,818,057	213,655,427	237,577,803
Interest paid	34,548,509	77,677,659	219,167,684	310,356,963	r347,164,947	363,009,417
Net income (less deficit)	12,214,079	11,663,330	33,122,792	31,714,771	32,677,046	60,670,526
Net income	15,081,939	18,825,003	46,040,390	r60,113,503	66,225,666	90,546,934
Deficit	2,867,860	7,161,673	12,917,599	28,398,732	33,548,620	29,876,408
Income tax before credits	4,404,449[2]	5,558,647	9,680,755	8,540,701	9,619,055	13,598,201
Total income tax after credits[3]	4,150,009[2]	4,673,705	7,699,628	r5,697,444	6,730,460	10,193,877
Distributions to stockholders except in own stock	7,387,211	8,729,977	24,692,146	41,592,101	51,315,346	n.a.
SERVICES						
Number of returns, total	281,218	435,672	671,338	848,394	899,370	939,390
Number with net income	150,525	249,641	408,716	481,888	508,336	529,337
Total assets	61,875,140	90,534,067	178,163,737	269,797,251	307,895,160	330,982,941
Net worth	19,529,062	26,855,374	52,865,513	74,710,659	84,773,772	89,852,365
Total receipts	69,572,626	131,377,364	279,883,187	416,462,427	490,332,811	534,587,609
Business receipts	66,459,515	125,747,462	266,088,619	392,064,594	458,038,533	497,980,990
Interest received	435,070	875,506	3,269,412	r4,880,958[1]	6,277,591[1]	6,561,301[1]
Total deductions	68,384,452	127,996,443	271,792,974	410,486,562	484,990,160	528,685,613
Cost of sales and operations	37,733,747	63,724,869	129,352,692	143,277,759	170,889,613	176,070,808
Interest paid	1,802,802	3,279,438	8,033,612	11,798,141	14,068,343	15,027,259
Net income (less deficit)	1,198,703	3,396,744	8,193,903	6,002,928	5,464,130	5,883,782
Net income	3,384,869	6,025,592	13,246,601	16,959,225	19,373,912	21,124,460
Deficit	2,186,166	2,628,848	5,052,698	10,956,298	13,909,782	15,240,678
Income tax before credits	1,058,264[2]	1,625,093	3,497,265	3,779,735	4,458,267	4,742,347
Total income tax after credits[3]	1,003,130[2]	1,323,637	r2,603,370	r2,680,663	3,175,178	3,343,830
Distributions to stockholders except in own stock	558,452	855,402	1,841,945	2,407,362	3,126,700	n.a.

See notes following Table 20.

Table 15.—Corporation Profits Before Taxes Per National Income and Product Accounts (NIPA) and Per SOI, and Income Subject to Tax per SOI, Income Years, 1960–1985

[All figures are estimates—money amounts are in billion of dollars]

Income Year	Profits before taxes (per NIPA)[1]	Net income (less deficit) (per SOI)	Income subject to tax (per SOI)[2]
	(1)	(2)	(3)
1960	49.9	43.5	47.2
1961	49.8	45.9	47.9
1962	55.1	49.6	51.7
1963	59.8	54.3	54.3
1964	66.7	61 6	60.4
1965	77.4	73.9	70.8
1966	83.3	80.5	77.1
1967	80.1	78.2	74.8
1968	89.1	86.0	81.4
1969	87.2	80.2	81.2
1970	76.0	65.9	72.4
1971	87.3	79.7	83.2
1972	101.5	96.8	95.1
1973	122.2	120.4	115.5
1974	138.9	148.2	144.0
1975	134.8	142.6	146.6
1976	170.3	185.4	183.5
1977	200.4	219.2	212.5
1978	233.5	246.9	239.6
1979	257.2	284.6	279.4
1980	237.1	239.0	246.6
1981	226.5	213.6	241.5
1982	169.6	154.3	205.2
1983	207.6	188.3	218.7
1984	240.0	232.9	257.1
1985	224.8[3]	240.1[3]	266.1[3]

See notes following Table 20.

Table 16.—Gross Internal Revenue Collections: Amount Collected by Quarter and Fiscal Year, 1984–1988

[Money amounts are in millions of dollars]

Quarter and fiscal year	Total	Amount collected by type of return				
		Individual income taxes[1]	Corporation income taxes[2]	Excise taxes[3]	Employment taxes[4]	Estate and gift taxes
	(1)	(2)	(3)	(4)	(5)	(6)
FISCAL YEAR 1984, TOTAL	**680,475**	**362,892**	**74,179**	**38,017**	**199,210**	**6,177**
October 1983 - December 1983	141,849	73,379	16,208	9,654	41,132	1,476
January 1984 - March 1984	164,681	89,316	14,337	8,862	50,545	1,622
April 1984 - June 1984	208,814	114,525	25,990	9,680	57,061	1,558
July 1984 - September 1984	165,131	85,672	17,644	9,822	50,472	1,521
FISCAL YEAR 1985, TOTAL	**742,871**	**396,659**	**77,413**	**37,005**	**225,214**	**6,580**
October 1984 - December 1984	155,919	79,775	17,546	9,732	47,286	1,580
January 1985 - March 1985	176,324	89,325	17,350	8,650	59,352	1,647
April 1985 - June 1985	233,946	136,141	24,843	9,013	62,313	1,636
July 1985 - September 1985	176,682	91,418	17,674	9,610	56,263	1,717
FISCAL YEAR 1986, TOTAL	**782,252**	**r416,965**	**80,442**	**33,672**	**r243,978**	**7,195**
October 1985 - December 1985	167,836	86,608	18,854	9,321	51,354	1,699
January 1986 - March 1986	186,178	97,804	16,243	8,175	62,309	1,647
April 1986- June 1986	240,680	134,129	25,703	8,191	70,687	1,970
July 1986 - September 1986	187,558	r98,424	19,642	7,985	r59,628	1,879
FISCAL YEAR 1987, TOTAL	**886,290**	**465,452**	**102,859**	**33,311**	**277,000**	**7,668**
October 1986 - December 1986	180,580	92,346	22,466	8,281	55,615	1,872
January 1987 - March 1987	209,032	105,483	22,649	7,925	71,156	1,819
April 1987 - June 1987	285,477	164,008	29,748	8,493	81,139	2,089
July 1987 - September 1987	211,201	103,615	27,996	8,612	69,090	1,888
FISCAL YEAR 1988						
October 1987 - December 1987	197,095	97,479	24,828	6,475	66,500	1,813
January 1988 - March 1988	220,447	111,215	22,006	5,304	80,161	1,761

See notes following Table 20.

Table 17.—Internal Revenue Refunds: Amount Refunded By Quarter and Fiscal Year, 1984–1988

[Money amounts are in millions of dollars]

Quarter and fiscal year	Total	Amount refunded by type of return				
		Individual income taxes[1]	Corporation income taxes[2]	Excise taxes[3]	Employment taxes[4]	Estate and gift taxes
	(1)	(2)	(3)	(4)	(5)	(6)
FISCAL YEAR 1984, TOTAL	**85,872**	**64,629**	**17,889**	**657**	**2,486**	**211**
October 1983 - December 1983	7,201	2,064	4,548	195	325	69
January 1984 - March 1984	25,285	19,613	4,850	129	646	47
April 1984 - June 1984	44,859	38,161	5,452	230	968	47
July 1984 - September 1984	8,527	4,790	3,039	103	547	48
FISCAL YEAR 1985, TOTAL	**86,322**	**66,908**	**16,725**	**892**	**1,606**	**191**
October 1984 - December 1984	6,729	2,246	4,177	122	138	46
January 1985 - March 1985	17,664	12,808	4,286	91	439	40
April 1985 - June 1985	52,376	46,370	4,701	556	702	47
July 1985 - September 1985	9,551	5,484	3,561	123	326	57
FISCAL YEAR 1986, TOTAL	**94,424**	**73,078**	**18,297**	**962**	**1,800**	**287**
October 1985 - December 1985	7,948	3,003	4,268	128	488	61
January 1986 - March 1986	25,895	19,950	4,997	320	577	51
April 1986 - June 1986	50,200	44,375	5,058	232	435	100
July 1986 - September 1986	10,381	5,750	3,974	282	300	75
FISCAL YEAR 1987, TOTAL	**96,969**	**73,583**	**19,891**	**1,381**	**1,900**	**214**
October 1986 - December 1986	8,668	3,406	4,789	111	312	50
January 1987 - March 1987	r28,422	r22,198	r5,296	r479	r393	r56
April 1987 - June 1987	r50,063	42,858	5,948	332	r869	57
July 1987 - September 1987	9,816	5,121	3,858	459	326	52
FISCAL YEAR 1988						
October 1987 - December 1987	7,701	3,437	3,727	207	275	55
January 1988 - March 1988	27,245	21,744	5,248	198	553	55

See notes following Table 20.

Table 18.—Classes of Excise Taxes by Selected Fiscal Years, 1970–1987

[Money amounts are in thousands of dollars]

Selected class of tax	Taxes collected by fiscal year					
	1970	1975	1980	1985	1986	1987
	(1)	(2)	(3)	(4)	(5)	(6)
ALCOHOL AND TOBACCO TAXES, TOTAL	**6,840,594**	**7,665,948**	**8,151,184**	**9,881,293**	**10,233,303**	**11,097,677**
Distilled spirits	3,501,538	3,865,162	3,945,377	3,520,697	3,731,368	n.a.
Wine	163,337	177,113	211,538	305,966	415,196	n.a.
Beer	1,081,507	1,308,583	1,547,853	1,571,436	1,500,921	n.a.
Cigarettes	2,036,101	2,261,116	2,402,857	4,448,916	4,566,338	n.a.
Cigars	56,834	51,226	39,500	24,294	30,418	n.a.
MANUFACTURERS EXCISE TAXES, TOTAL	**6,683,061**	**5,516,611**	**6,487,421**	**10,020,574**	**9,927,742**	**10,221,574**
Gasoline and lubricating oil	3,517,586	4,071,465	4,326,549	9,062,630	8,857,380	9,163,790
Tires, tubes and tread rubber[1]	614,795	697,660	682,624	242,923	285,728	296,408
Motor vehicles, bodies, parts[2]	1,753,327	662,556	1,088,696	N/A	N/A	N/A
Recreational products	53,427	84,946	136,521	166,666	174,898	186,608
Black Lung taxes	N/A	N/A	251,288	548,356	561,158	574,769
SPECIAL FUELS, AND RETAILERS TAXES, TOTAL[3]	**257,820**	**404,187**	**560,144**	**3,802,608**	**3,783,295**	**3,762,284**
Diesel and special motor fuels	257,712	370,489	512,718	2,430,165	2,613,980	2,659,404
Trucks and buses	N/A	N/A	N/A	1,289,750	1,091,356	1,020,553
MISCELLANEOUS EXCISE TAXES, TOTAL	**2,084,730**	**3,306,077**	**6,359,198**	**11,044,833**	**15,131,146**	**7,255,282**
Telephone and teletype[4]	1,469,562	2,023,744	1,117,834	2,307,607	2,339,153	2,522,062
Air transportation	250,802	850,567	1,748,837	2,589,818	2,707,534	2,913,249
Highway use tax	135,086	207,663	263,272	456,143	566,675	556,006
Foreign insurance	8,614	19,458	74,630	73,494	139,720	115,133
Exempt organization net investment income	N/A	63,828	65,280	136,153	217,191	218,102
Crude oil windfall profit	N/A	N/A	3,051,719	5,073,159	8,866,967	14,910
Environmental taxes (Superfund)[5]	N/A	N/A	N/A	272,957	68,538	407,167

Selected class of tax	Fiscal year quarter ending					
	Dec. 1986	Mar. 1987	June 1987	Sept. 1987	Dec. 1987	Mar. 1988
	(7)	(8)	(9)	(10)	(11)	(12)
ALCOHOL AND TOBACCO TAXES, TOTAL	**1,394,412**	**1,615,688**	**1,446,495**	**3,191,354**	**2,937,754**	**2,274,408**
Distilled spirits	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Wine	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Beer	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Cigarettes	1,031,001	1,170,327	1,186,882	n.a.	n.a.	n.a.
Cigars	9,063	7,268	13,102	n.a.	n.a.	n.a.
MANUFACTURERS EXCISE TAXES, TOTAL	**2,606,798**	**2,531,445**	**2,480,742**	**2,602,589**	**2,695,686**	**2,602,434**
Gasoline and lubricating oil	2,341,860	r2,270,070	2,222,664	2,329,196	2,415,076	2,317,004
Tires, tubes and tread rubber[1]	76,947	77,586	66,151	75,723	80,819	83,000
Recreational products	43,018	40,224	53,374	49,992	47,944	45,957
Black Lung taxes	144,974	143,564	138,552	147,679	151,849	156,473
SPECIAL FUELS AND RETAILERS TAXES, TOTAL[3]	**915,477**	**937,409**	**882,798**	**1,026,600**	**981,117**	**1,021,290**
Diesel and special motor fuels	672,119	646,030	637,857	703,399	682,194	703,431
Trucks and buses, chassis, bodies, etc.	222,455	271,891	224,059	302,148	277,933	297,710
MISCELLANEOUS EXCISE TAXES, TOTAL	**1,838,554**	**1,367,972**	**2,077,536**	**1,971,226**	**1,789,207**	**2,094,963**
Telephone and teletype[4]	679,150	583,799	679,331	579,782	741,777	379,100
Air transportation	770,929	747,811	r636,949	757,560	783,855	719,181
Highway use tax	59,958	126,163	91,726	278,159	47,251	126,368
Foreign insurance	25,523	34,321	31,321	23,968	25,233	26,802
Exempt organization net investment income	22,318	43,256	121,962	30,567	19,385	32,558
Crude oil windfall profit	223,634	−230,799	250,915	−228,840	−122,710	501,123

See notes following Table 20.

Table 19.—Selected Returns and Forms Filed or to be Filed During Selected Calendar Years, 1970–1988

Type of return or form	Number Filed In Calendar Year —						
	1970	1975	1980	1985	1986	1987	1988 r(Projected)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Individual income	77,281,384	84,026,785	93,196,076	99,704,246	101,925,850	103,462,011	107,333,700
Form 1040	77,143,251	61,450,279	55,360,030	64,010,068	66,359,095	68,545,023	70,852,000
Nonbusiness	68,129,351	51,377,153	43,957,141	49,873,300	51,733,688	53,736,837	55,153,500
Business	9,013,900	10,073,126	11,402,889	14,136,768	14,625,407	14,808,186	15,698,500
Schedule C	6,351,304	7,438,968	8,944,298	11,767,348	12,329,218	12,633,261	13,547,800
Schedule F	2,662,596	2,634,158	2,458,591	2,369,420	2,296,189	2,174,925	2,150,700
Form 1040A	N/A	22,462,776	37,692,282	18,779,084	18,408,426	17,870,312	17,688,000
Form 1040EZ	N/A	N/A	N/A	16,739,767	16,983,394	16,835,390	18,576,200
Other[1]	138,133	113,730	143,764	175,327	201,935	211,286	217,500
Corporation income	1,758,600	2,132,758	2,675,704	3,437,249	3,700,851	3,828,613	3,993,500
Forms 1120, L, and M	1,487,244	1,762,920	2,115,542	2,432,265	2,523,240	2,550,692	2,488,800
Form 1120A	N/A	N/A	N/A	199,665	285,134	300,760	293,500
Form 1120S	248,936	367,219	528,070	736,945	811,987	892,376	1,115,800
Other[2]	1,414	2,619	32,092	68,374	80,490	84,785	95,400
Partnership, Form 1065	991,904	1,132,839	1,401,567	1,755,339	1,831,600	1,824,166	1,836,200
Fiduciary, Forms 1041 and 1041S	1,149,445	1,558,570	1,876,392	2,124,969	2,276,245	2,335,805	2,551,900
Estate Tax, Forms 706 and 706NA	141,156	225,827	147,303	80,768	67,591	57,165	54,100
Gift Tax, Form 709	146,338	273,184	214,789	97,720	101,322	104,095	105,300
Exempt Organization	387,469	403,809	442,607	454,097	488,046	514,947	527,800
Form 990	377,030	346,627	362,632	365,506	375,834	400,332	409,700
Form 990-PF	N/A	29,637	33,137	32,005	40,931	42,227	42,900
Form 990-T	5,046	19,683	23,455	26,181	32,731	33,156	34,900
Forms 990C, 4720, and 5227	5,393	7,862	23,383	30,405	r38,550	39,232	40,300

See notes on following Table 20.

Table 20.—Taxpayers Receiving Assistance, Paid and Unpaid, by Tax Year of Return, 1984–1987

[Some estimates based on samples—all amounts are in thousands]

Type of assistance	Tax Year			
	1984	1985	1986	1987
	(1)	(2)	(3)	(4)
Returns with paid preparer signature:[1]				
All returns	45,220	46,685	48,049	50,899
1040EZ	728	740	655	916
1040A	4,470	4,389	4,135	4,577
1040, total	40,022	41,556	43,259	45,406
1040 Business, total	10,081	10,658	11,087	10,526
Nonfarm	8,288	8,924	9,385	9,004
Farm	1,793	1,734	1,702	1,522
1040 Nonbusiness, total	29,941	30,898	32,172	34,880
With itemized deductions	17,866	18,996	18,732	17,078
Without itemized deductions	12,075	11,902	12,627	17,802
Assistance provided by IRS:[2]				
Telephone inquiries	41,904	r37,863	r34,655	38,521
Recorded telephone information	8,307	7,850	r10,892	13,405
Office walk-ins, information	8,144	8,114	r7,090	7,408
Written inquiries	160	241	r169	166
Special programs:				
Community classes and seminars (taxpayers assisted)	400	374	r903	950
Volunteer Income Tax Assistance (VITA) (returns prepared)	295	302	r337	385
Tax Counseling for the Elderly (returns prepared)	199	333	r331	375

See notes on following page.

Notes to Selected Historical Data Tables

General notations

N/A - Not applicable

n.a. - Not available

p - Preliminary

r - Revised

* - See Appendix, General Description of Statistics of Income Sample Procedures and Data Limitations.

Table I

[1] Includes unemployment compensation starting with 1979 and certain social security income starting with 1984.

[2] Includes total itemized deductions before subtraction of zero bracket amount, and charitable contributions, and zero bracket amount on non-itemized deduction returns.

[3] Includes deductions not shown separately below.

[4] Includes surcharge of $2,018,078,000.

[5] Includes credits not shown separately below.

[6] Investment credit was included in the more-inclusive general business tax credit beginning with 1984.

[7] Includes income tax after credits and the additional tax for tax preferences, i.e., "minimum tax" (applicable for 1970–1982) and "alternative minimum tax" (applicable after 1979).

SOURCE: *Statistics of Income—Individual Income Tax Returns,* appropriate years. Data are subject to sampling error. Tax law and tax form changes affect the year-to-year comparability of the data. See the specific Statistics of Income reports for a description of sampling error and of the changes mentioned above.

Table 2

[1] Includes exemptions for age and blindness.

[2] Totals in Table 2 do not agree with Tables 1 and 3 because they were obtained from a different source. For purposes of Table 2:

a. Number of returns by State include, in addition to Forms 1040, 1040A and 1040EZ filed by U.S. citizens and residents, Forms 1040NR filed by nonresident aliens, as well as self-employment tax returns used in Puerto Rico and certain U.S. territories and possessions.

b. "Total tax" liability includes total income tax plus tax from recomputing prior-year investment credit, tax applicable to Individual Retirement Arrangements (IRA's), self-employment tax, social security tax on tip income, and certain other income-related taxes. Total tax is before reduction by earned income credit (see also footnote (c), below).

c. Earned income credit, available to certain low-income workers, could result in a refund (1) if there was no "total tax" (as defined in footnote 2(b), above), in which case the full amount was refundable, or (2) if the credit exceeded "total tax," in which case the excess was refundable. The difference between columns 19 and 21 is the refundable portion.

Total tax (column 16) minus earned income credit (column 21) is the amount most comparable to total tax in Tables 1 and 3. The total tax which results from this subtraction differs from Tables 1 and 3 because it includes additional taxes (see footnote 2(b), above) and because earned income credit used to offset tax (column 21) also includes amounts offset against these additional taxes.

[3] Includes, for example, returns filed from Army Post Office and Fleet Post Office addresses by service men and women stationed overseas; returns filed by other U.S. citizens abroad; and returns filed by residents of Puerto Rico with income from sources outside Puerto Rico or with income earned as U.S. Government employees.

NOTE: This table presents aggregates of all returns filed and processed through the Individual Master File (IMF) system during Calendar Year 1987. Data have not been edited for Statistics of Income purposes.

SOURCE: Internal Revenue Service, Tax Processing Systems Division, IMF Returns Systems Branch.

Table 3

[1] Social security income was included in adjusted gross income starting with Tax Year 1984.

[2] Includes returns with adjusted gross deficit.

[3] In addition to low income taxpayers, size class (and others) includes taxpayers with "tax preferences," not

reflected in AGI or taxable income, which are subject to the "alternative minimum tax" (included in "total income tax").

[4] Includes income tax after credits and the additional tax for tax preferences, i.e., the "alternative minimum tax" (see footnote 3).

SOURCE: *Statistics of Income—Individual Income Tax Returns,* appropriate years. Data are subject to sampling error. Tax law and tax form changes affect the year-to-year comparability of the data. See the specific Statistics of Income reports for a description of sampling error and of the changes mentioned above.

Table 4

[1] Imputed interest received by persons from life insurance carriers and private non-insured pension plans.

[2] Reconciliation is based on preliminary SOI data for AGI. For the revised AGI for 1985, see Table 1.

[3] Represents income of low-income individuals not required to file individual income tax returns, unreported income, and statistical errors or omissions.

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, The National Income and Product Accounts of the United States, 1929–82: Statistical Tables, 1986; for years after 1982, *Survey of Current Business,* various issues. Statistics of Income data are subject to sampling error; tax law and tax form changes affect the year-to-year comparability of the data. See the specific Statistics of Income reports for a description of sampling error and of the changes mentioned above.

Table 5

[1] See Table 4 for an explanation of the differences between personal income and AGI.

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, The National Income and Product Accounts of the United States, 1929–82: Statistical Tables, 1986; for years after 1982, *Survey of Current Business,* various issues. Statistics of Income data are subject tosampling error; tax law and tax form changes affect the year-to-year comparability of the data. See the specific Statistics of Income reports for a description of sampling error and of the changes mentioned above.

Table 6

[1] See Table 4 for an explanation of the differences between personal income and AGI.

[2] Not computed because preliminary estimates in columns 1 and 2 are not completely comparable.

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, The National Income and Product Accounts of the United States, 1929–82: Statistical Tables, 1986; for years after 1982, *Survey of Current Business,* various issues; and *Statistics of Income—Individual Income Tax Returns,* appropriate years. Statistics of Income data are subject to sampling error; tax law and tax form changes affect the year-to-year comparability of the data. See the specific Statistics of Income reports for a description of sampling error and of the changes mentioned above.

Table 7

[1] Amount of standard deduction for 1944–1957 estimated by Joseph A. Pechman, The Brookings Institution, on the basis of the distribution of the number of tax returns by income classes and marital status in *Statistics of Income—Individual Income Tax Returns,* and for 1958–1986 obtained directly from Statistics of Income tabulations for these years. Represents zero bracket amount for 1977–1986.

[2] Returns with standard deduction, 1955–1986, include a small number with no adjusted gross income and no deductions. For 1944–1954, returns with no adjusted gross income are included in the number of returns with itemized deductions.

[3] For 1977–1986, itemized deductions are before subtraction of "zero bracket amount."

[4] Sum of standard and itemized deduction returns and amounts, plus charitable deduction reported on standard deduction returns for Tax Years 1982–1986.

SOURCE: Except as indicated in footnote 1, *Statistics of Income—Individual Income Tax Returns,* and unpublished tables, appropriate years. Data are subject to sampling error. Tax law and form changes affect the year-to-year comparability of the data. See the specific Statistics of Income reports for a description of sampling error and of changes mentioned above.

Table 8

[1] See Table 4 for an explanation of the differences between personal income and AGI.

[2] Taxable income excludes "zero bracket amount" for 1977–1986.

[3] For the definition of total income tax, see footnote 7, Table 1.

[4] Percentage not computed because preliminary SOI data for taxable income and tax may not be altogether comparable with Department of Commerce estimate for personal income.

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, The National Income and Product Accounts of the United States, 1929–82: Statistical Tables, 1986; for years after 1982, *Survey of Current Business,* various issues; and *Statistics of Income—Individual Income Tax Returns,* appropiate years. Statistics of Income data are subject to sampling errors; tax law and tax form changes affect the year-to-year comparability of the data. See the specific Statistics of Income reports for a description of sampling error and of the changes mentioned above.

Table 9

[1] Excludes returns with refundable crude oil windfall profit tax overpayment only, starting with 1980.

SOURCE: *Statistics of Income—Individual Income Tax Returns,* and unpublished tables, appropriate years. Data are subject to sampling error. Tax law and tax form changes affect the year-to-year comparability of the data. See the specific Statistics of Income reports for a description of sampling error and of the changes mentioned above.

Table 10

SOURCE: *Statistics of Income—Sole Proprietorship Returns,* appropriate years, and *SOI Bulletin,* Summer issues. Data are subject to sampling error. Tax law and tax form changes affect the year-to-year comparability of the data. See the specific Statistics of Income reports for a description of sampling error and of the changes mentioned above.

Table 11

[1] Total assets, total liabilities and partners' capital account are somewhat understated because not all partnership returns included a complete balance sheet.

[2] Short-term debt is the abbreviated title given to mortgages, notes and bonds payable in less than 1 year.

[3] Long-term debt is the abbreviated title given to mortgages, notes and bonds payable in 1 year or more. In addition, for Tax Year 1975, long-term debt included nonrecourse loans.

[4] See footnote 4, Table 12, for changes in the comparability of the statistics for receipts and deductions after 1980. Also, statistics for interest received are combined with dividends beginning with 1982.

[5] After 1980, represents the more all-inclusive amounts reported in depreciation computation schedules rather than the amounts reported as the depreciation deduction (plus depreciation identified in cost of sales and operations schedules).

SOURCE: *Statistics of Income—Partnership Returns,* appropriate years, and *SOI Bulletin,* Summer issues. Data are subject to sampling error. Tax law and tax form changes affect the year-to-year comparability of the data. See the specific Statistics of Income reports for a description of sampling error and of the changes mentioned above.

Table 12

[1] Size classes are based on business receipts, i.e., gross amounts from sales and operations, for industries except those in finance, insurance and real estate. For the latter industries, total receipts, which is the sum of business receipts and investment income, was used. For partnerships, see also footnote 4, below.

[2] Includes returns with no receipts as defined in footnote 1.

[3] Includes corporations with zero assets and liabilities. In addition, for partnerships, includes partnerships without balance sheet information (see also footnote 5, below).

[4] After 1980, "total receipts" in Table 11 includes, in part, only the net income or loss from farming and rentals. Previously, "total receipts" included the gross receipts from farming and rentals and, if rental receipts were the principal source of total receipts, they were treated as "business receipts" for the statistics. To help minimize the break in comparability caused by this change in statistical treatment of farm and rental income, an effort was made starting with 1981 to include rental (though not farm) gross receipts in the receipts used for the size distribution in Table 12. In Table 11, since only the net income or loss from farming and rentals was included starting with 1981, the deductions reported in computing these net incomes are excluded from the deduction statistics. For previous years, these deductions are reflected in the deduction statistics.

[5] Prior to 1979, partnerships that had liquidated were assumed to have zero assets and liabilities, even if their balance sheets showed otherwise, and were included in the "under $25,000" asset size class. Beginning with 1980, balance sheet data reported for liquidated partnerships were tabulated as reported and were included in the appropriate asset size classes.

SOURCE: *Statistics of Income—Corporation Income Tax Returns,* appropriate years, *Statistics of Income—Partner-*

ship Returns, appropriate years, *Statistics of Income—Sole Proprietorship Returns,* appropriate years, and *SOI Bulletin,* Summer issues. Tax law and tax form changes affect the year-to-year comparability of the data. See the appropriate Statistics of Income reports for a description of sampling error and of the changes mentioned above

Table 13

[*] Estimate should be used with caution because of the small number of sample returns on which it is based.

[1] Consolidated returns were filed on an elective basis for affiliated groups of corporations (with exceptions), in general, if 80 percent or more of the stock of the affiliates was owned within the group and a common parent corporation owned at least 80 percent of the stock of at least one of the affiliates.

[2] Included in "Number of returns, total" and "Number with net income."

[3] Generally, small corporations with no more than 35 shareholders (10 prior to 1983), most of them individuals, electing to be taxed at the shareholder level.

[4] Domestic International Sales Corporations (DISC's) were designed to promote U.S. exports. They were taxed through parent corporations, but only when profits were distributed or deemed distributed to them. This system of tax deferral was generally replaced after 1984 with a new system of Foreign Sales Corporations (FSC's); see footnote 5. Tax benefits of DISC's remaining after 1984 were limited and an interest charge for tax deferred amounts imposed on the parent corporations.

[5] Foreign Sales Corporations (FSC's) generally replaced DISC's as a means of promoting U.S. exports (see footnote 4). Under the FSC provisions, a portion of these subsidiaries' "foreign trade income" was exempt from U.S. income tax.

[6] For 1985, net long-term capital gain reduced by net short-term capital loss includes amounts from Forms 1120S filed by S Corporations which are reflected in "Total receipts," but are not included in "Net income (less deficit)." For 1984, net long-term capital gains reported on Forms 1120-S were excluded from both "Total receipts" and "Net income (less deficit)."

[7] Includes dividends reported in combination with interest on Form 1120-S by S Corporations, i.e., certain corporations that elect to be taxed through shareholders (see footnote 3). Based on prior years, when Form 1120-S required each to be reported separately, nearly all of the combined amount represents interest.

[8] For most years, "income subject to tax" (the corporate tax base) exceeds "net income less deficit" chiefly because of the deficits reported on returns without net income. Moreover, it is the sum of the several tax bases applicable over time to different classes of corporations, not all of which were directly related to net income. Income subject to tax thus includes the "taxable income" base used by most companies (and defined as net income minus certain statutory special deductions); a variation of this base in combination with net long-term capital gains in certain situations when the lower capital gains tax applied; the special tax bases applicable to S Corporations and insurance businesses; and the amounts taxable to certain investment companies. Profits of Domestic International Sales Corporations were tax-deferred; most of those of qualifying Foreign Sales Corporations were tax-exempt and those of S Corporations were taxed (with few exceptions) through their individual shareholders, so that the net income of neither is reflected in income subject to tax.

[9] Includes surcharge of $784,437,000.

[10] General business credit includes alcohol fuel, investment, jobs, and employee stock ownership plan (ESOP) credits which were shown separately for previous years.

NOTE: Detail may not add to totals because of rounding.

SOURCE: *Statistics of Income—Corporation Income Tax Returns,* appropriate years. Data are subject to sampling error. Tax law and tax form changes affect the year-to-year comparability of the data. See the appropriate Statistics of Income reports for a description of sampling error and of the changes mentioned above.

Table 14

[1] See footnote 7, Table 13.

[2] See footnote 9, Table 13.

[3] Also includes additional tax for tax preferences ("minimum tax"), tax from recomputing prior-year investment credit and Personal Holding Company tax.

SOURCE: *Statistics of Income—Corporation Income Tax Returns,* appropriate years. Data are subject to sampling error. Tax law and tax form changes affect the year-to-year comparability of the data. See the appropriate Statistics of Income reports for a description of sampling error and of the changes mentioned above.

Table 15

[1] Profits shown are without inventory valuation and capital-consumption adjustment.

[2] See footnote 8, Table 13 for an explanation of "income subject to tax."

[3] Preliminary estimates in columns 2 and 3 are not completely comparable with Department of Commerce preliminary estimate in column 1.

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, The National Income and Product Accounts of the United States, 1929–82: Statistical Tables, 1986; for years after 1982, *Survey of Current Business,* various issues; and *Statistics of Income—Corporation Income Tax Returns,* appropriate years. Statistics of Income data are subject to sampling error; tax law and tax form changes affect the year-to-year comparability of the data. See the specific Statistics of Income reports for a description of sampling error and of the changes mentioned above.

Tables 16 and 17

[1] Individual income tax collected includes that portion which was designated for the presidential election campaign fund by taxpayers on their returns. Also included is the fidiciary income tax collected (from estates and trusts). Fidiciary income tax collected was $8.4 billion in 1987, $4.5 billion in 1986, $4.1 billion in 1985, and $2.9 billion in 1984. Presidential election campaign designations amounted to $33.2 million in 1987, $35.9 million in 1986, and $34.8 million in 1985 and 1984.

[2] Corporation income tax collected includes various taxes applicable to tax-exempt organizations, including the tax on "unrelated business income." Total taxes collected from tax-exempt organizations were $119.9 billion (1987), $30.2 million (1986), $54.9 million (1985), and $50.0 million (1984).

[3] Excise taxes are imposed on selected products, services and activities, such as those on alcohol and tobacco products and the windfall profit tax on domestically-produced crude oil.

[4] Employment taxes include payroll taxes levied on salaries and wages, such as social security, railroad retirement, and unemployment taxes; plus the self-employment tax imposed on "self-employment income."

NOTES: Collections (or refunds) are those made during the time periods indicated, regardless of the year or other period during which the tax liability was incurred (or to which the refund applied). Collections represent the gross amounts before refunds and include amounts paid with the return; prior to filing the return (as applicable, income tax withheld by employers and estimated tax payments); and subsequent to filing the return (chiefly the result of initial return processing or of audit examination and enforcement activities). Collections also include interest and penalties. Refunds result chiefly from tax overpayments determined at time of filing a return. Included are amounts subsequently determined as due the taxpayer as a result of an amended return or a claim for refund (including those produced by "net operating loss" and other carryback adjustments from future taxable years); or as a result of initial return processing or of examination and other activities. Individual income tax refunds are net of offsets under laws which require IRS to act as collection agent for delinquent payments owed various U.S. agencies under specific programs. All refund data include interest paid by IRS. Detail may not add to totals because of rounding.

SOURCE: Internal Revenue Service, Returns Processing and Accounting Division, Accounting Branch.

Table 18

[1] Effective January 1, 1984, taxes on tubes and tread rubber were repealed, and dealers holding taxable tires were assessed a one-time floor stock tax.

[2] Effective January 7, 1983, the excise taxes on parts and accessories for trucks and buses, which are included in this classification, were repealed. Beginning with the quarter ending December 1983, motor vehicles are excluded.

[3] Special fuels, total, includes diesel and special motor fuels which were classified as miscellaneous excise taxes in 1970. Beginning with the quarter ending December 1983, motor vehicles are included.

[4] Effective January 1, 1983, the excise tax increased from 1 percent to 3 percent.

[5] Expired September 30, 1985 (P.L. 96–510); reimposed in January 1987 (P.L. 99–499).

[6] Negative amounts primarily reflect credits and adjustments applied to current period liabilities to correct for the net income limitation and overwithholding in previous periods.

NOTES: For 1970 and 1975, the fiscal year was defined as July of the previous calendar year through June of the year noted. For 1980–1986, the fiscal year was defined as October of the previous calendar year through September of the year noted. Additional detail is published in the *Annual Report of the Commissioner and Chief Counsel, Internal Revenue Service.*

SOURCE: U.S. Department of the Treasury, Internal Revenue Service, Returns Processing and Accounting Division, Revenue and Accounting Branch; and Financial Management Service.

Table 19

[1] Includes Forms 1040C, 1040NR, 1040PR, and 1040SS; excludes amended returns (Form 1040X).

[2] Includes Forms 1120F, 1120 POL, and 1120H; excludes Forms 1120-DISC/FSC and amended returns (Form 1120X).

[3] Includes Form 1041A.

[4] Includes Form 990A.

SOURCE: Internal Revenue Service, Research Division, Projections and Forecasting Group.

Table 20

[1] Estimates of returns with paid assistance for 1985 and earlier years are based on the full-year sample of returns used for Statistics of Income—Individual Income Tax Returns. 1986 and 1987 projections are based on converting 1986 and 1987 Taxpayer Usage Study sample (TPUS) to the equivalent of the Statistics of Income (SOI) sample. This was done because the TPUS sample represents returns filed through April, while the SOI sample represents all individual income tax returns filed in a calendar year. For additional information about the TPUS sample, see the Summer 1987 issue of the SOI Bulletin.

[2] Data on IRS Taxpayer Service Programs are collected on a fiscal-year basis. In general, assistance rendered in a given fiscal year may be related to returns due on April 15th during that fiscal year and are for the tax year ending with the previous December. Therefore, data in Table 21, which are presented on a tax year basis, are actually for a fiscal year, e.g., data shown as for Tax Year 1986 are actually for Fiscal Year 1987. However, data shown as for Tax Year 1986 in previous issues of the *SOI Bulletin* were actually for the first 7 months of Fiscal Year 1987; the revised data represent the entire Fiscal Year 1987.

NOTE: Data on IRS assistance represent taxpayer contacts. Some taxpayers make more than one contact. The number of taxpayers assisted (in contrast to the number of contacts made) is not known.

SOURCE: Data on paid preparers were obtained from Statistics of Income and Taxpayer Usage Study samples. Data on IRS assistance were compiled by the Taxpayer Service Division.

Appendix*

General Description of Statistics of Income Sample Procedures and Data Limitations

This appendix discusses typical sampling procedures used in most Statistics of Income (SOI) programs. Aspects covered briefly include sampling criteria, selection techniques, methods of estimation, and sampling variability. Some of the nonsampling error limitations of the data are also described, as well as the tabular conventions employed.

Additional information on sample design and data limitations for specific SOI studies can be found in the separate SOI reports (see the References at the end of this Appendix). More technical information is available, upon request, by writing to the Director, Statistics of Income Division, Internal Revenue Service, Washington, DC 20224.

SAMPLE CRITERIA AND SELECTION OF RETURNS

Statistics compiled for the SOI studies are generally based on stratified probability samples of income tax returns or other forms filed with the Internal Revenue Service (IRS). The statistics do not reflect any changes made by the taxpayer through an amended return or by the IRS as a result of an audit. As returns are filed and processed for tax purposes, they are assigned to sampling classes (strata) based on criteria such as: industry, presence or absence of a tax form or schedule, accounting period, State from which filed, and various income factors or other measures of economic size (total assets, for example, is used for the corporation and partnership statistics). The samples are selected from each stratum over the appropriate filing periods. Thus, sample selection can continue for a given study for several calendar years, 3 for corporations because of the prevalence of fiscal (noncalendar) year reporting. Because sampling must take place before the population size is known precisely, the rates of sample selection within each stratum are fixed. This means in practice, that both the population and the sample size can differ from that planned. However, these factors do not compromise the validity of the estimates.

The probability of a return being designated depends on its sample class or stratum and may range from a fraction of 1 percent to 100 percent. Considerations in determining the selection probability for each stratum include the number of returns in the stratum, the diversity of returns in the stratum, and interest in the stratum as a separate subject of study. All this is subject to constraints based on the estimated cost or the target size of the total sample for the program.

For most SOI studies, returns are designated by computer from the IRS Master File based on the taxpayer identification number (TIN) which is either the social security number (SSN) or the employer identification number (EIN). A fixed and essentially random number is associated with each possible TIN. If that random number falls into a range of numbers specified for a return's sample stratum, then it is selected and processed for the study. Otherwise it is counted (for estimation purposes) but not selected. In some cases, the TIN is used directly by matching specified digits of it against a predetermined list for the sample stratum. A match is required for designation.

Under either method of selection, the TIN's designed from one year's sample are for the most part selected for the next year's, so that a very high proportion of the returns selected in the current sample are from taxpayers whose previous years' returns were included in earlier samples. This longitudinal character of the sample design improves the estimates of change from 1 year to the next.

METHOD OF ESTIMATION

As noted above, the probability with which a return is selected for inclusion in a sample depends on the sampling rate prescribed for the stratum in which it is classified. Weights are, in general, computed by dividing the count of returns filed for a given stratum by the count of sample returns for that same stratum. "Weights" are used to adjust for the various sampling rates used—the lower the rate, the larger the weight. For some studies, it is possible to improve the estimates by subdividing the original sampling classes into "post-strata," based on additional criteria or refinements of those used in the original stratification. Weights were then computed for these post-strata using additional population counts. The data on each return in a stratum are multiplied by that weight. To produce the tabulated estimates, these weighted data are summed to produce the published statistical totals.

SAMPLING VARIABILITY

The particular sample used in a study is only one of a large number of possible random samples that could have been selected using the same sample design. Estimates derived from the different samples usually vary. The stan-

*Compiled by Bettye Jamerson, Coordination and Publications Staff, under the direction of Robert Wilson, Team Leader. Major contributions were made by Paul McMahon, Corporation Statistics Branch, Operations Section.

dard error of the estimate is a measure of the variation among the estimates from all possible samples and is used to measure the precision with which an estimate from a particular sample approximates the average result of the possible samples. The sample estimate and an estimate of its standard error permit the construction of interval estimates with prescribed confidence that this interval includes the actual population value.

In SOI reports the standard error is not directly presented. Instead, the ratio of the standard error to the estimate itself is presented in decimal form. This ratio is called the coefficient of variation (CV). The user of SOI data may multiply an estimate by its coefficient of variation to recreate the standard error and to construct confidence intervals.

For example, if a sample estimate of 150,000 returns is known to have a coefficient of variation of 0.02, then the following arithmetic procedure would be followed to construct a 68 percent confidence interval estimate:

150,000	(sample estimate)
x 0.02	(coefficient of variation)
= 3,000	(standard error of estimate)

150,000	(sample estimate)
+ or - 3,000	(standard error)
= 147,000-153,000	(68 percent confidence interval)

Based on these data, the interval estimate is from 147 to 153 thousand returns. A conclusion that the average estimate of the number of returns lies within an interval computed in this way would be correct for approximately two-thirds of all possible similarly selected samples. To obtain this interval estimate with 95 percent confidence, the standard error should be multiplied by 2 before adding to and subtracting from the sample estimate. (In this particular case, the resulting interval would be from 144 to 156 thousand returns.)

Generally in the *SOI Bulletin* only conservative upper limit CV's are provided for frequency estimates. These do, however, provide a rough guide to the order of magnitude of the sampling error.

Further details concerning confidence intervals, including the approximation of CV's for combined sample estimates, may be obtained on request by writing the Director, Statistics of Income Division.

NONSAMPLING ERROR CONTROLS AND LIMITATIONS

Although the previous discussion focuses on sampling methods and the limitations of the data caused by sampling error, there are other sources of error that may be significant in evaluating the usefulness of SOI data. These include taxpayer reporting errors, processing errors, and effects of an early cut-off of sampling. More extensive information on nonsampling error is presented in SOI reports, when appropriate.

In transcribing and tabulating the information from the returns or forms selected for the sample, checks are imposed to improve the quality of the resultant estimates. Tax return data may be disaggregated or recombined during statistical "editing" in order both to improve data consistency from return to return and to achieve definitions of the data items that are more in keeping with the needs of major users. In some cases not all of the data are available from the tax return as originally filed. Sometimes the missing data can be obtained through field followup. More often though, they are obtained through imputation methods. As examples, other information in the return or in accompanying schedules may be sufficient to enable an estimate to be made; prior-year data for the same taxpayer may be used for the same purpose; or data from another return for the same year that has similar characteristics may be substituted. Research to improve methods of imputing data that are missing from returns continues to be an ongoing process [1].

Quality of the basic data abstracted from the returns is subjected to a number of quality control steps including 100-percent key verification. The data are then subjected to many tests based on the structure of the tax law and the improbability of various data combinations. Records failing these tests are then subjected to further review and any necessary corrections are made. In addition, the Statistics of Income Division in the National Office conducts an independent reprocessing of a small subsample of statistically-processed returns as a further check [2].

Finally, before publication, all statistics are reviewed for accuracy and reasonableness in light of provisions of the tax laws, taxpayer reporting variations and limitations, economic conditions, comparability with other statistical series, and statistical techniques used in data processing and estimating.

TABULAR CONVENTIONS

Estimates of frequencies and money amounts that are considered unreliable due to the small sample size on which they are based are noted in SOI tables by an asterisk (*) to the left of the data item(s). The presence of an asterisk indicates that the sample rate is less than 100 percent of the population and that there are fewer than 10 sample observations available for estimation purposes.

A dash in place of a frequency or amount indicates that no sample return had that characteristic. In addition, a dash

in place of a coefficient of variation for which there is an estimate indicates that all returns contributing to the estimate were selected at the 100-percent rate.

Whenever a weighted frequency in a data cell is less than 3, the estimate is either combined with other cells or deleted in order to avoid disclosure of information about individual taxpayers or businesses [3]. These combinations and deletions are indicated by a double asterisk (**).

NOTES

[1] See, for example, Hinkins, Susan M., "Matrix Sampling and the Effects of Using Hot Deck Imputation," in *1984 Proceedings: American Statistical Association, Section on Survey Research Methods.* Other research efforts are included in *Statistical Uses of Administrative Records: Recent Research and Present Prospects,* Volume 1, Internal Revenue Service, March 1984.

[2] Quality control activities for all SOI studies will be published in a series of forthcoming reports. These reports will provide detailed information relating to quality in all phases of SOI processing.

[3] For geographic statistics, these same steps are taken when a weighted frequency is less than 10.

REFERENCES

For information about the samples used for specific SOI programs see:

Statistics of Income—1985, Individual Income Tax Returns, 1984, (see especially pages 4-7).

Statistics of Income—1984, Corporation Income Tax Returns (see especially pages 7-12).

Statistics of Income—1978-82, Partnership Returns (see especially pages 237-244).

Statistics of Income—1979-83, Compendium of Studies of International Income and Taxes, Foreign Income and Taxes Reported on U.S. Tax Returns (see information about the samples used at the end of each chapter).

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