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*REPORT TO THE CONGRESS
AND TO THE MAYOR
AND COUNCIL OF THE
DISTRICT OF COLUMBIA*

095028

**Resource Management Can Be
Improved By Greater Use
Of Productivity Techniques**

District of Columbia

*BY THE COMPTROLLER GENERAL
OF THE UNITED STATES*

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APRIL 16, 1975



COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-163762

To the President of the Senate and the
Speaker of the House of Representatives
and the Mayor and Council
of the District of Columbia

D 246
D 286

This is our report on ways to improve resource management
in the District of Columbia by greater use of productivity
techniques. C 50

We made our review pursuant to the Budget and Accounting
Act, 1921 (31 U.S.C. 53), and the Accounting and Auditing Act
of 1950 (31 U.S.C. 67). The report is submitted in accordance
with section 736 of the District of Columbia Self-Government
and Governmental Reorganization Act, approved December 24, 1973
(Public Law 93-198, 87 Stat. 774).

Copies of this report are being sent to the Director,
Office of Management and Budget.

James B. Atchaf

Comptroller General
of the United States

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11/17/73

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ABBREVIATIONS

GAO	General Accounting Office
PMS	Performance Monitoring System

COMPTROLLER GENERAL'S REPORT
TO THE CONGRESS AND TO
THE MAYOR AND COUNCIL OF
THE DISTRICT OF COLUMBIA

D I G E S T

WHY THE REVIEW WAS MADE

GAO wanted to find out whether the District of Columbia government could improve management of its resources (money, people, etc.) by greater use of productivity techniques because the potential for savings in government through increased productivity is enormous.

FINDINGS AND CONCLUSIONS

The District government had about 49,000 positions and managed a budget of about \$1 billion in fiscal year 1974. (See pp. 1 and 2.)

Because the District faces a scarcity of money to do its job, it must find ways to make the best possible use of its resources.

The District could use a system to measure productivity to help it do a better job and possibly save a lot of money in delivering services to its residents.

Comparing an organization's productivity, over time, with certain goals will help managers identify where improvements are needed.

This report demonstrates the usefulness of techniques that can help the District. Although GAO selected one unit of the District government to demonstrate their usefulness, the techniques can be applied in many other governmental units. GAO's work is not intended to point a finger at the unit being used for demonstration purposes.

RESOURCE MANAGEMENT CAN BE
IMPROVED BY GREATER USE
OF PRODUCTIVITY TECHNIQUES
District of Columbia

GAO looked at the productivity of the Tax Audit and Liability Division, Department of Finance and Revenue. The Division's performance in helping to collect taxes is critical in getting needed revenues for the city.

In fiscal year 1972 the Division employed about 80 people, the budget for tax administration was about \$2.3 million, and the Division's effort contributed \$5.1 million to the city's income. (See pp. 2 and 3.)

The Division had readily available input and output data needed for productivity measurement--such as number and type of returns audited, audit revenue generated, salary costs, and audit man-hours consumed--covering fiscal years 1968-72. (See app. III.)

Some examples of information obtainable from applying productivity techniques were:

--In 1968 the Division performed 7,681 individual income tax audits requiring 12,196 hours. In 1972, 11,322 such audits were made requiring 31,086 hours. (See app. III.) Thus, 1972 labor productivity was 40 percent lower than that of 1968. (See pp. 7 and 8.)

--In 1971 the Division applied 7,321 more hours to perform individual income tax audits than in 1970. For each dollar of labor expended this way in 1971, the Division realized \$5.41. By contrast, in

1971 the Division applied 134 fewer hours to audit corporation returns than in 1970. But, for each dollar of labor expended this way in 1971, the Division realized \$20.99. (See p. 11.)

GAO did not intend to look into the reasons for productivity changes but merely to show that productivity techniques can provide data to managers for problem identification. (See p. 7.)

Productivity measurement would be meaningless if it consisted only of gathering statistics and adding up the results. The important question is, what is done with the figures after they are gathered?

The manager needs to ask, how did productivity increases occur? If the causes are identified, perhaps further increases can be brought about. For declines, the manager needs to identify the causes and see whether something can be done to reverse the trend.

Thus, although productivity measurement can be a real help in keeping costs down and in improving efficiency, it is not the measurement that does it, it is what the manager does with the measurements.

To illustrate, in the examples shown above, the following types of questions need to be addressed:

Labor productivity for individual returns declined 40 percent between 1968 and 1972. Are we doing a better job per return and it's just taking us longer? Have the tax laws become more complex, making it more difficult to complete each audit? Do we need more or better training? Have administrative bottlenecks developed which waste time?

The manpower increase between 1970 and 1971 went to individual returns but the best payback is in corporation returns. How do we plan our "mix" of returns to be audited? Do we have enough or do we need more experienced auditors to handle the more complex corporation returns? What would happen to the voluntary compliance rate if we cut back on auditing less productive type returns?

When answers to such questions are in hand, the manager can consider what changes, if any, he wants to make to produce the best return for the resources invested.

The techniques demonstrated in the Tax Audit and Liability Division can be used throughout the city government where data exists or can be developed for use in a productivity measurement system. In fact, since early 1973 the District has been developing a system to monitor performance. So far it has identified 240 measures in 16 agencies, including the Department of Finance and Revenue.

The District expects a reporting system for these agencies to be operational by July 1, 1975, and monitoring to begin sometime in fiscal year 1976. (See p. 30.)

The District's monitoring system and the GAO techniques used in this report are similar since they both include

- establishing the measures to be used,
- defining productivity, and
- collecting the essential data elements for analyses.

But GAO believes that such a system also needs to provide for continuing analyses to plot productivity trends and to determine effects of one measure on another so that productivity can be increased and performance improved, as appropriate.

The techniques demonstrated here are not unique to the District and can be useful to other local governments in trying to overcome the problem of great needs and limited resources.

RECOMMENDATION

The Mayor should require the District government to incorporate in its Performance Monitoring System techniques for continuing analyses to plot performance trends and to determine effects of one measure on another so that productivity can be increased and performance improved, as appropriate. (See p. 33.)

AGENCY ACTIONS AND UNRESOLVED ISSUES

The Mayor welcomed GAO's suggestions for increasing the usefulness of the District's Performance Monitoring System. He pointed out that, although the specifics of the techniques used in developing GAO's illustrations differ from those in the District's new system, he felt that GAO's input would be extremely useful in assisting the District in serving its people. (See app. I.)

MATTERS FOR CONSIDERATION BY THE CONGRESS

This report provides information on District's effort and need to develop useful measures to increase productivity. The Joint Economic Committee of the Congress in its August 4, 1977 report recommended that the District government be used as a laboratory for developing such measures.

This report contains no recommendations requiring legislative action.

CHAPTER 1

INTRODUCTION

In August 1972 a study group comprising representatives of the Civil Service Commission, GAO, and the Office of Management and Budget completed a study of selected Federal agencies that demonstrated the need for measuring manpower productivity for many Federal Government activities. The study group concluded that valid productivity measurements could be developed if products or services could be measured consistently over a period of time. The study group also recognized the need for productivity measures at the State and local levels to provide detailed knowledge of the efficiency of government operations.

In a report on measuring and enhancing productivity issued in August 1972, the Joint Economic Committee of Congress suggested that the District government be used to test productivity measures covering common functions of State and local governments. If such an effort succeeded, productivity measures could be extended to cover as many as 10 million State and local government employees.

Congressional interest in the District's finances and operations and the concern of local governments for additional revenues to pay for public services prompted us to study the applicability of productivity and effectiveness measurement analysis techniques in the District to help improve resource management.

The District faces a chronic scarcity of resources because the costs of meeting its program commitments exceed the projected growth in revenues.

To call attention to the District's fiscal outlook and to discuss ways of improving public services in the face of limited revenue growth, in November 1972 the District government conducted an Executive Seminar on Policy Formulation and Resource Management for its cabinet officials.

Seminar participants considered productivity improvement as perhaps the only viable means of "squeezing the most out of whatever resources we have." In fiscal year 1974,

the District government had about 49,000 positions funded from appropriated and grant funds and managed a budget of about \$1 billion. Sources of funds included Federal payments and grants of about \$416 million, tax revenues of about \$597 million, and other revenues of about \$13 million.

In April 1973 the District's Office of Budget and Financial Management began developing a Performance Monitoring System (PMS) to help management develop meaningful production goals and adjust programs to achieve them. The system is to help insure that required statistical data is provided for use in managing city resources and accomplishing city objectives. Performance goals and measures are being developed for selected programs. (See ch. 4.)

The District of Columbia Self-Government and Governmental Reorganization Act (Public Law 93-198, Dec. 24, 1973) requires the District to include as part of its annual budget request to the Congress a performance report, covering as many programs as practicable, comparing actual performance to goals for the last completed fiscal year. The act also requires the District to present as many qualitative or quantitative measures of program effectiveness as possible. The District's PMS effort should help it meet this requirement.

Our study involved an approach for using selected productivity and effectiveness measures to improve resource use in the District. Our study deals specifically with the Tax Audit and Liability Division of the Department of Finance and Revenue, which administers the tax laws and regulations relating to audit of tax returns. The principles discussed here, however, can apply to other District operations, because quantitative data for measuring productivity is available in a number of District agencies (see app. V) and can be developed for others, such as the Bureau of Eligibility Determination, Department of Human Resources. Also, other local governments can use these principles because they face resource problems similar to those of the District.

In fiscal year 1972 the Tax Audit and Liability Division performed 16,760 audits and assessed \$5,059,937 in additional taxes. Eighty of the 166 authorized positions for tax administration were in the Division. The budget for tax administration totaled \$2,261,700. The Division's effort helps

the Department of Finance and Revenue achieve its principal objectives for tax administration, which are to

"Maximize tax revenues and increase the tax base by increasing the number of returns audited; discovering and converting more taxpayers to the tax rolls; and increasing compliance with filing requirements by reducing the backlog of delinquent business tax filers."

We limited our study to the activities of maximizing revenue and increasing audit coverage, because we believed that this would provide sufficient evidence to demonstrate the usefulness of productivity measurement techniques for improving resource management. Also, data collected after fiscal year 1972 is not essential to demonstrate the usefulness of our techniques.

We computed and used indexes which readily permit comparing various types of data covering a period of time, charting the Division's record of progress, diagnosing problems, forecasting, and evaluating results of management action. Appendix II explains in detail the construction of the indexes. The report also includes charts showing the trends of productivity measures.

In addition to using data from productivity and related effectiveness analyses, the Division, before making decisions concerning resource allocation, should consider other objectives, such as auditing a minimum number of returns in each tax area to help deter potential nonfilers. The Division should also consider possible constraints, such as a lack of available manpower to shift among the various tax areas to obtain effective audit coverage.

This report presents illustrations of ways that managers can use program information to improve resource management. Our findings do not represent detailed analyses of the program in question but are examples of the use of such analyses. Because the validity of the data presented and the selection of program objectives, measures, standards, trends, etc., have not been tested, no firm conclusions about actual performances in the Tax Audit and Liability Division should be drawn.

CHAPTER 2

APPLYING PRODUCTIVITY MEASURES

To help management make informed decisions for applying financial and manpower resources to programs and activities, the District should include in its management system methods for measuring operations' productivity and effectiveness. The District government is developing such methods. (See ch. 4.)

Productivity measures, such as we have used for the Tax Audit and Liability Division, provide a means for ascertaining the efficiency and effectiveness of programs and operations. Standards can be used to measure increases and decreases in labor productivity and the effectiveness in meeting an organization's objectives.

The labor productivity index is computed by dividing the units produced or services provided by an organizational unit (output) by the resources consumed (input) during a specified period. The labor efficiency trend of the producing organization is measured over time by comparing the index of the current period to that of a previous base period.

Effectiveness measures, on the other hand, provide additional information on whether programs are accomplishing their objectives. In the case of the Tax Audit and Liability Division, one effectiveness measure deals with the Division's contribution to the Department's objective of maximizing revenues from audits. The computation of the effectiveness index is similar to that of the productivity index.

We selected fiscal year 1968 as the base year and assumed that it represented 100-percent production by the Division to illustrate how productivity analysis produces data to plot productivity trends. Data for more than 1 year could have been used to develop measurement standards; however, because our objective was to demonstrate the feasibility of techniques, we believe a 1-year base period was sufficient.

The following charts and discussions demonstrate how productivity analyses can help raise questions which could lead to improving resource use. They show (1) the way

manpower was used to audit tax returns, (2) the audit coverage achieved, and (3) trends in the number of man-hours and dollars spent versus revenue derived.

MEASUREMENT ELEMENTS

Chart 2-1 on page 6 shows the measurement elements we used--the total man-hours spent performing the various types of tax audits, audits performed in each tax category, and revenue generated by each type of audit. We used fiscal year 1972 instead of fiscal year 1968 data to show the allocation based upon the latest available data.

The chart shows that, for individual income tax returns, 45.6 percent of available man-hours were used to perform 67.6 percent of the audits to return 22.6 percent of the revenue. For inheritance and estate tax returns, 10.5 percent of available man-hours were used to perform 19.2 percent of the audits to return about 54.4 percent of the revenue.

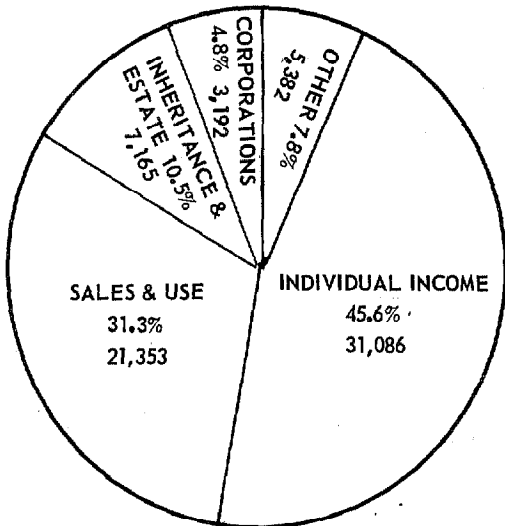
Comparing man-hour expenditures to results helps managers assess the appropriateness of manpower allocation to the tax audit areas. For instance, the 31.3 percent of the man-hours that were used to audit sales and use tax returns generated \$836,000, or about \$39 per man-hour, while the 45.6 percent of the hours that were used to audit individual income tax returns generated about \$1.1 million, or \$37 per man-hour. The charts alone will not give the reasons for these variations. However, the data can be useful in identifying areas for further analysis, thus helping management to effectively use resources.

MEASURING LABOR PRODUCTIVITY

The number of tax returns audited represents the output for our labor productivity analysis of the Division. We selected this measure because this type of output did not change during the 1968-72 period. We have assumed for illustrative purposes that a 1968 audit was virtually the same as a 1972 audit. However, if the nature or scope (quality) of the audit changes significantly, the output measure, to be meaningful for comparison, must be adjusted to reflect the change. If the audit in 1972 had been more comprehensive than the one in 1968 and had possibly taken more time, the

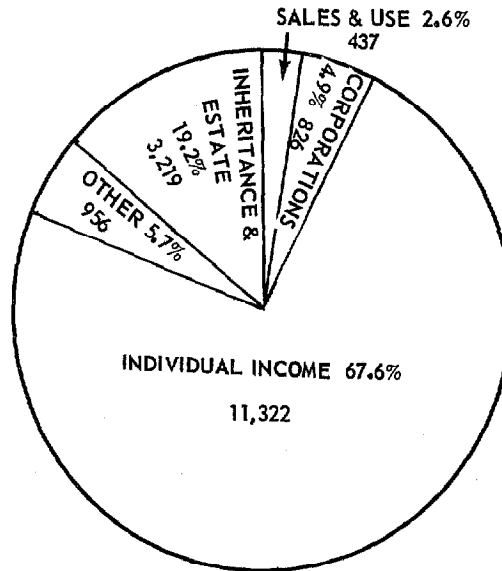
PRODUCT MIX FY 1972

MAN-HOURS

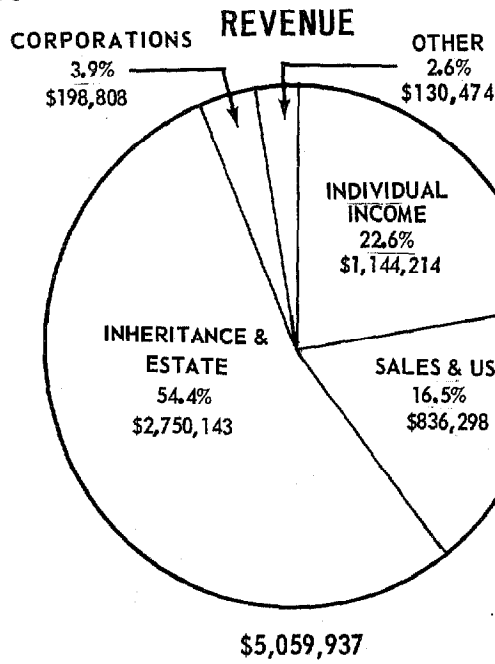


68,178

AUDITS



16,760



difference would have to be calculated and the 1972 output measure increased. Such adjustment would permit a more direct comparison to gauge whether productivity increased or decreased, because it would make the 1972 productivity index comparable to that of the base year.

Wage costs and man-hours consumed can easily be identified and used as input elements. We selected man-hours as the primary element because it is easier to measure than wage costs. If wage costs were the input element, then wage increases would have to be identified and total wage costs reduced for inflation to make the element meaningful for consistent comparison. We have defined "labor productivity" as the ratio of number of audits to man-hours consumed.

Chart 2-2 on page 13 shows labor productivity for the Division's total tax audits and separately for audits of corporation, inheritance and estate, individual income, and sales and use taxes for each of fiscal years 1968 through 1972. Productivity has been fairly steady for the Division's total audits except that 15 percent more audits were performed per man-hour in 1971 than in 1968. However, in 1972 productivity was lower than in 1968. Also, since 1968 inheritance and estate tax audits have steadily increased in productivity. In contrast, in 1972 sales and use tax audits' productivity was substantially lower than in 1968, 1970, and 1971. Individual income and corporation tax audits show the largest productivity drop since 1968; an especially large decrease occurred in 1969. Such information should prompt management to seek the reasons for productivity fluctuations and enable it to take timely corrective action. We did not intend to look into the reasons for productivity fluctuations but rather to demonstrate the usefulness of productivity analyses.

Individual income tax audits

Chart 2-3 on page 14 shows that labor productivity of individual income tax audits has declined about 40 percent from 1968 to 1972. The chart also shows that during that time the number of audited individual tax returns increased almost 50 percent, while the number of man-hours to audit these returns increased more than 150 percent. In other

words, about 2.75 man-hours were spent to audit a return in 1972 compared to 1.59 man-hours in 1968--a net increase of 1.16 man-hours per return. By using the indexes to plot productivity trends, management can identify the productivity changes needing further attention, look into their causes, and take timely corrective action.

Productivity measures could also help the Tax Division meet its objective of increasing audit coverage. The Division has defined "audit coverage" as the percentage of returns audited in relation to the total returns filed in each tax area. We believe audit coverage can be increased by doing such things as (1) increasing the man-hours spent directly auditing and/or (2) increasing each auditor's workload. In either case, the desired productivity increases and their relationship to staff needs can be determined by examining past trends.

To illustrate, if we assume that productivity was the same in 1972 as in 1968 and that audits didn't become more complex, the Division could have used 13,100 fewer man-hours (a salary cost of \$87,000) to obtain the same level of audit coverage for individual income tax returns. The resulting savings in man-hours could have been applied toward increasing audit coverage in other tax areas. Such data should help management to assess whether productivity can be increased with existing personnel or whether more are needed.

EFFECTIVENESS MEASURES

Tax audits also contribute to the Department's objective of maximizing revenue. If labor productivity were increased, revenue would probably also increase, because man-hours and revenue appear to be directly related. This analysis is based on the assumption that management will select audits having a high probability of a reasonable revenue payback. The measures described in the following sections show how management can develop information to help gauge the effectiveness of tax audits in maximizing revenue. Because revenue data is available for each type of tax audit, effectiveness ratios can be developed for each audit area or for all areas combined.

To make our effectiveness comparisons more meaningful, revenues were decreased for inflation. The effects of any tax rate increases since 1968 or changes in the tax base could have been eliminated. This was not done, however, because data was not readily available to permit us to identify that part of the revenue attributable to these factors.

Average revenue dollar return per audit

This effectiveness measure is the ratio of revenue to the number of audits. It should help management measure the results of selecting tax returns to be audited for maximum revenue return. If Division officials wanted to increase revenue by changing the criteria for selecting certain returns, this ratio would be useful in predicting how effective the change might be.

Chart 2-4 on page 15 shows the percentage changes in constant dollar revenue generated in four tax areas covering fiscal years 1969-72 in relation to the base year. The trend lines show whether the audits are improving their effectiveness in maximizing revenue. The chart shows that from 1968 to 1972 the average revenue return per audit for (1) total tax audits increased almost 40 percent, (2) sales and use tax audits increased more than 150 percent, (3) individual income tax audits increased about 50 percent, and (4) corporation tax audits increased about 30 percent.

Such increases indicated overall improvement. However, in some audit areas, such as corporation tax, revenue has fluctuated since 1968; it increased sharply in 1971 and decreased sharply in 1972, although achieving a higher level than in 1968. This type of fluctuation may suggest a need to examine the method of selecting returns to be audited, the number of audits performed, and the quality of the audits. It may also suggest that management should ascertain whether the revenue decline was attributable to increased voluntary taxpayer compliance with tax laws. Answers to such inquiries can be useful to management in deciding where to shift manpower to maximize revenue from tax audits.

Average revenue dollar return per man-hour

The ratio of revenue to man-hours can be used to identify the average dollar return per man-hour. This ratio will help management measure the effectiveness of using manpower to maximize revenue by comparing the revenue return per man-hour for one type of audit with another and by comparing the changes that have occurred from one year to the next.

Chart 2-5 on page 16 shows percentage changes in the average dollar return per man-hour in constant dollar terms (reduced for inflation) for the Division's total tax audits and separately for selected audit areas. Although the man-hour dollar return for the Division's total tax audits has fluctuated, an average of 30 percent more revenue per man-hour was derived in 1972 than in 1968. Part of the increase was caused by higher tax rates and part probably by an improved selection process in some audit areas. The number of returns audited per man-hour was not a factor because it had remained relatively constant.

According to the chart, use of manpower had increased the total tax audit revenue since 1968. However, to obtain a meaningful appraisal of the extent to which the different audits contributed to the increase, management must examine the types of tax audits to determine the relationship of man-hours to revenue for each tax area. For example, the dollar return per man-hour for unincorporated business tax audits was lower in 1972 than it was in 1968; it dropped most sharply in 1969. Revenue from corporation tax audits also dropped sharply in 1972 compared to previous years, and since 1970 individual income tax audit revenue per man-hour has been increasing to where it almost equals the 1968 revenue.

Chart 2-3 on page 14 shows that, although 1972 revenue increased by more than 125 percent over 1968 revenue, man-hours increased by more than 150 percent. Each hour spent auditing individual income tax returns in 1968 derived more constant dollar income per return than in 1972 despite the revenue increase expected from a higher tax rate. In 1968 each man-hour returned \$34.26 and in 1972 each returned \$30.85. Highlighting such relationships may help determine what returns should be selected for audit to maximize revenue.

Ratio of revenue to wage costs

This ratio shows the dollars returned for each dollar spent. It can help management determine how effectively funds for auditors' salaries have been applied in maximizing revenue.

Charts 2-6 and 2-7 on pages 17 and 18 show (1) man-hours consumed, (2) percentage level of audit coverage, and (3) revenue per dollar of salary cost for each of fiscal years 1968-72 for high and low man-hour consumption for selected audited returns. Chart 2-6 shows that the individual income tax dollar returns in 1968, 1969, and 1970 were \$8.17, \$4.76, and \$3.36, respectively. In contrast, the corporation tax dollar returns for the same years were \$21.36, \$20.01, and \$12.81, respectively, with the level of audit coverage decreasing steadily.

The Division used 7,321 more man-hours to perform individual income tax audits and 134 fewer for corporation audits in 1971 than in 1970. The 1971 return per dollar of audit cost for individual income taxes was \$5.41 compared with \$20.99 for corporation taxes. Such data may have prompted management to shift manpower to produce a higher revenue yield or hire more employees to increase the revenue yield while maintaining the desired level of audit coverage.

Chart 2-7 shows that from 1968 through 1971 the alcoholic beverage annual dollar returns were \$0.20 (lost \$0.80), \$1.12 (gained \$0.12), \$0.30 (lost \$0.70), and \$0.13 (lost \$0.87), respectively, for every dollar spent. In 1972, 1,468 additional man-hours were used to return \$0.02 on the dollar. This audit effort cost the District about \$15,000 to generate \$345 in revenue.

Using the data shown in the chart, management can inquire whether the decreasing revenue from audits is the result of increased voluntary taxpayer compliance with tax laws. If this were the case, management could assess whether it would be appropriate to shift man-hours from alcoholic beverage audits to another audit area to maximize revenue while maintaining the desired level of voluntary taxpayer compliance (e.g., by auditing a minimum number of returns regardless of payback).

Other effectiveness measures

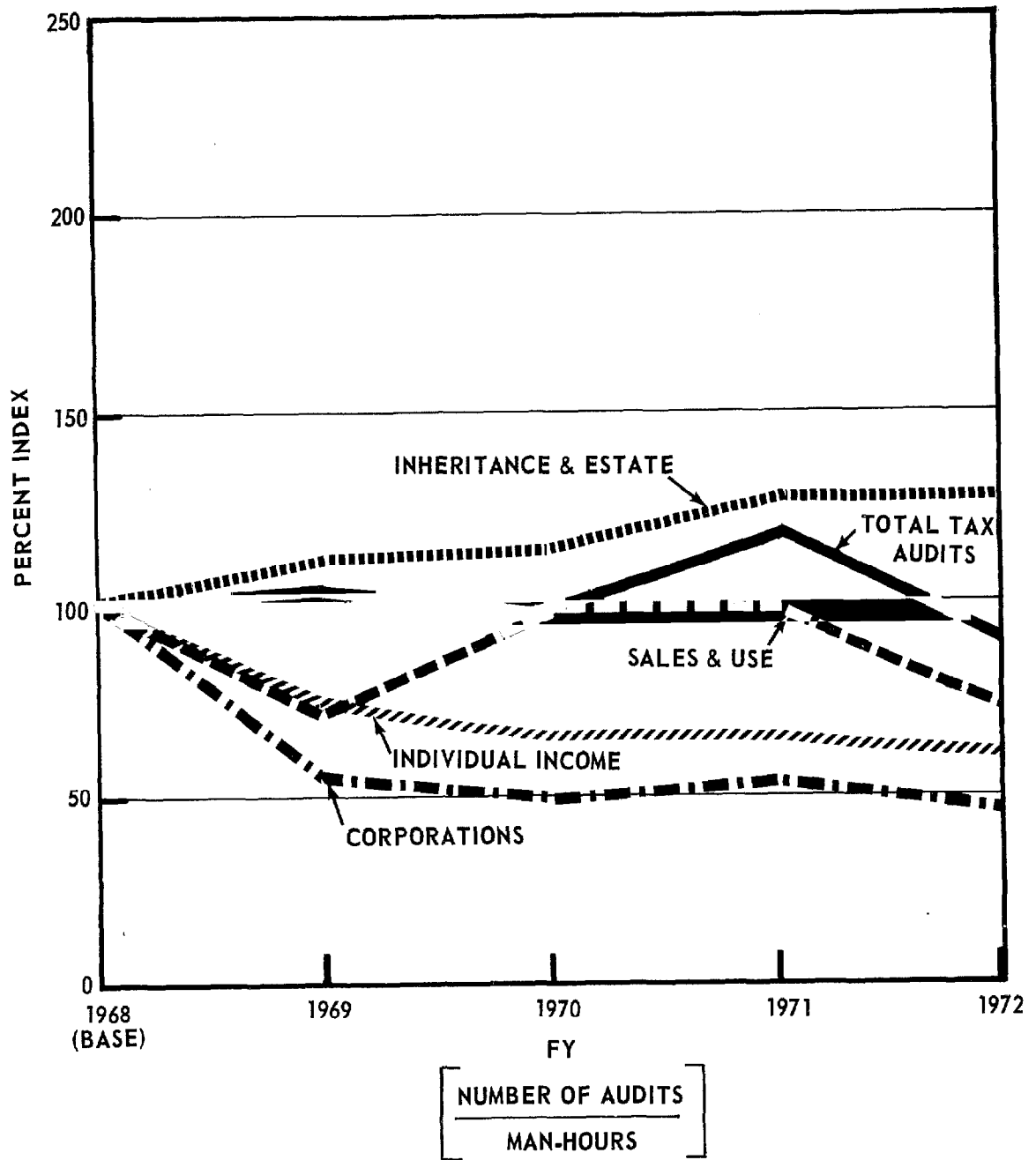
Chart 2-8 on page 19 shows the dollars collected per man-hour from the different types of tax audits for fiscal year 1972. Such data, considered with that previously discussed, could be used to determine the most feasible manpower shifts or additions for improving efficiency and effectiveness while providing appropriate audit coverage and maximizing revenues.

INTERRELATIONSHIP OF PRODUCTIVITY AND EFFECTIVENESS MEASURES

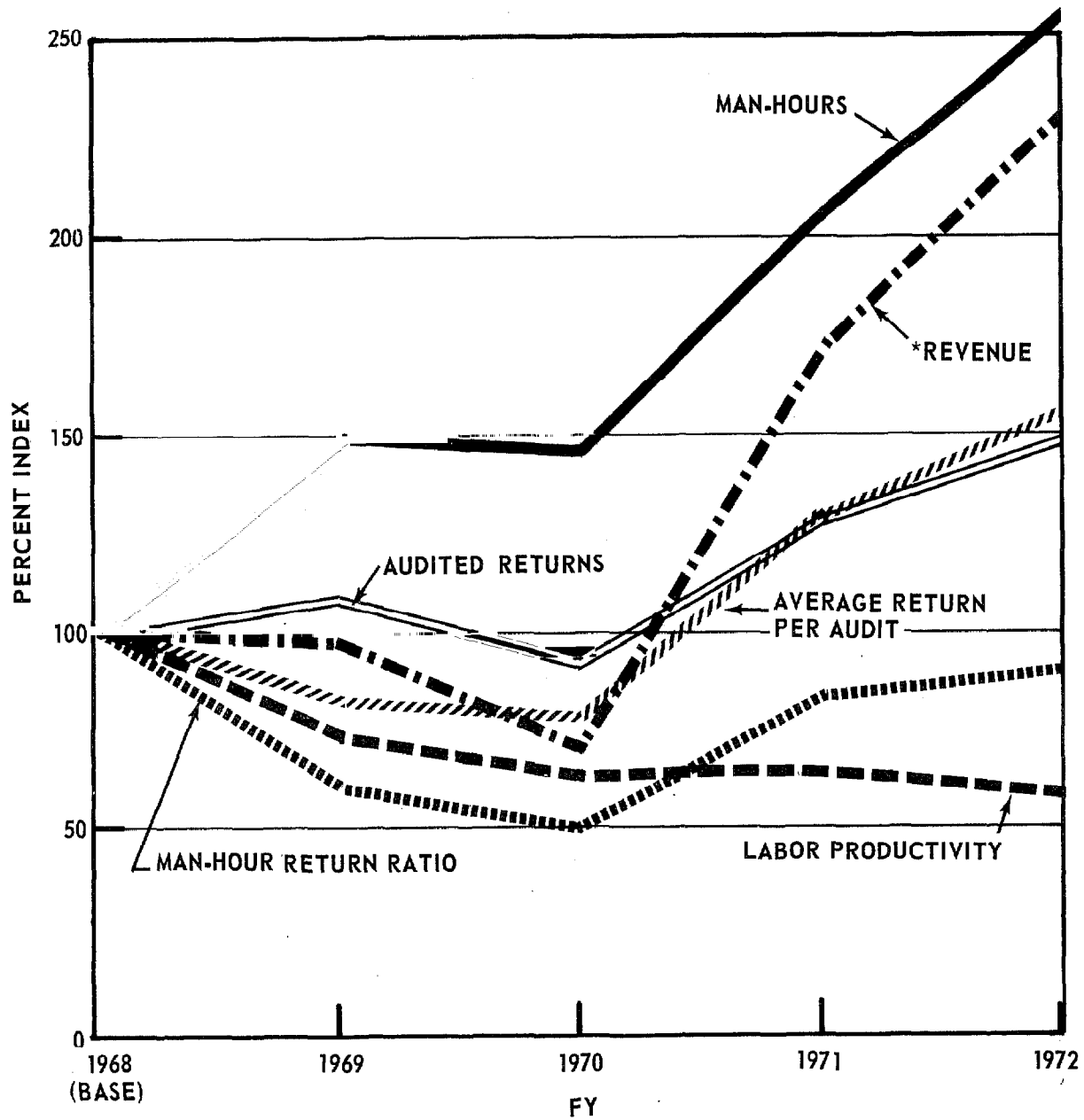
To insure that meaningful judgments will be made, these measures should be analyzed and considered together. For example, if in the Tax Audit and Liability Division only labor productivity (the number of audits performed per man-hour) were improved, the auditors might perform only easy audits that are likely to return less revenue. Therefore, management must also insure that audit effectiveness (revenue generated) does not suffer.

To demonstrate the importance of examining the relationship between productivity and effectiveness measures, we selected the corporation tax audit area. Chart 2-9 on page 20 shows the relationship between the percentages of the average return per man-hour and the percentages of man-hours consumed and revenue generated from fiscal years 1968-72 for corporation tax audits. While the number of man-hours consumed has been fairly steady since 1970, revenue has fluctuated sharply. Chart 2-2 on page 13 shows that labor productivity for corporation tax audits remained relatively constant from 1970 to 1972; therefore, the decrease in revenue from 1971 to 1972 cannot be attributed to a decline in productivity but to a smaller revenue return per man-hour. Productivity and effectiveness measures help highlight these areas for further investigation.

LABOR PRODUCTIVITY

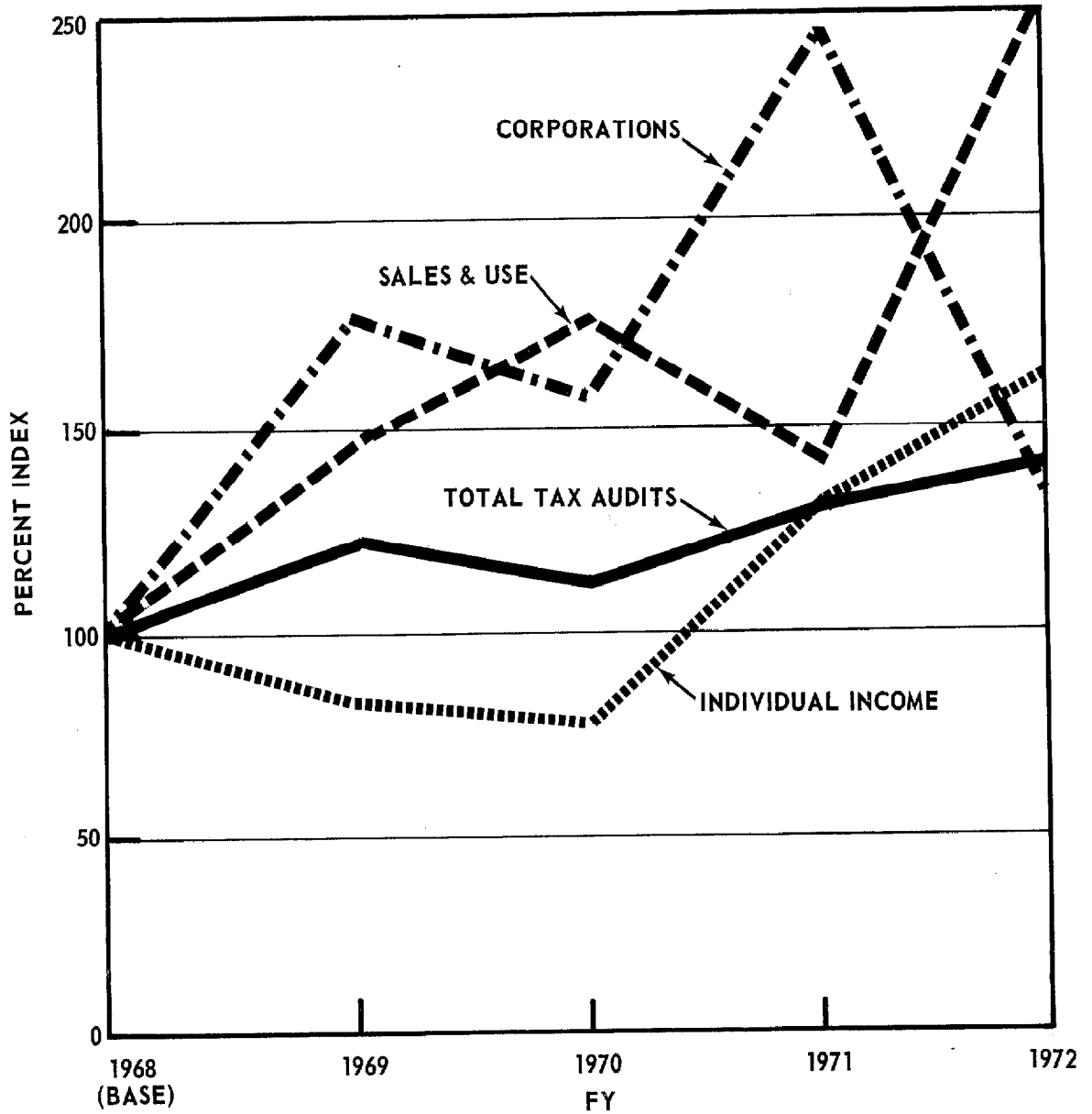


VARIOUS FACTORS AFFECTING INDIVIDUAL INCOME TAX AUDITS



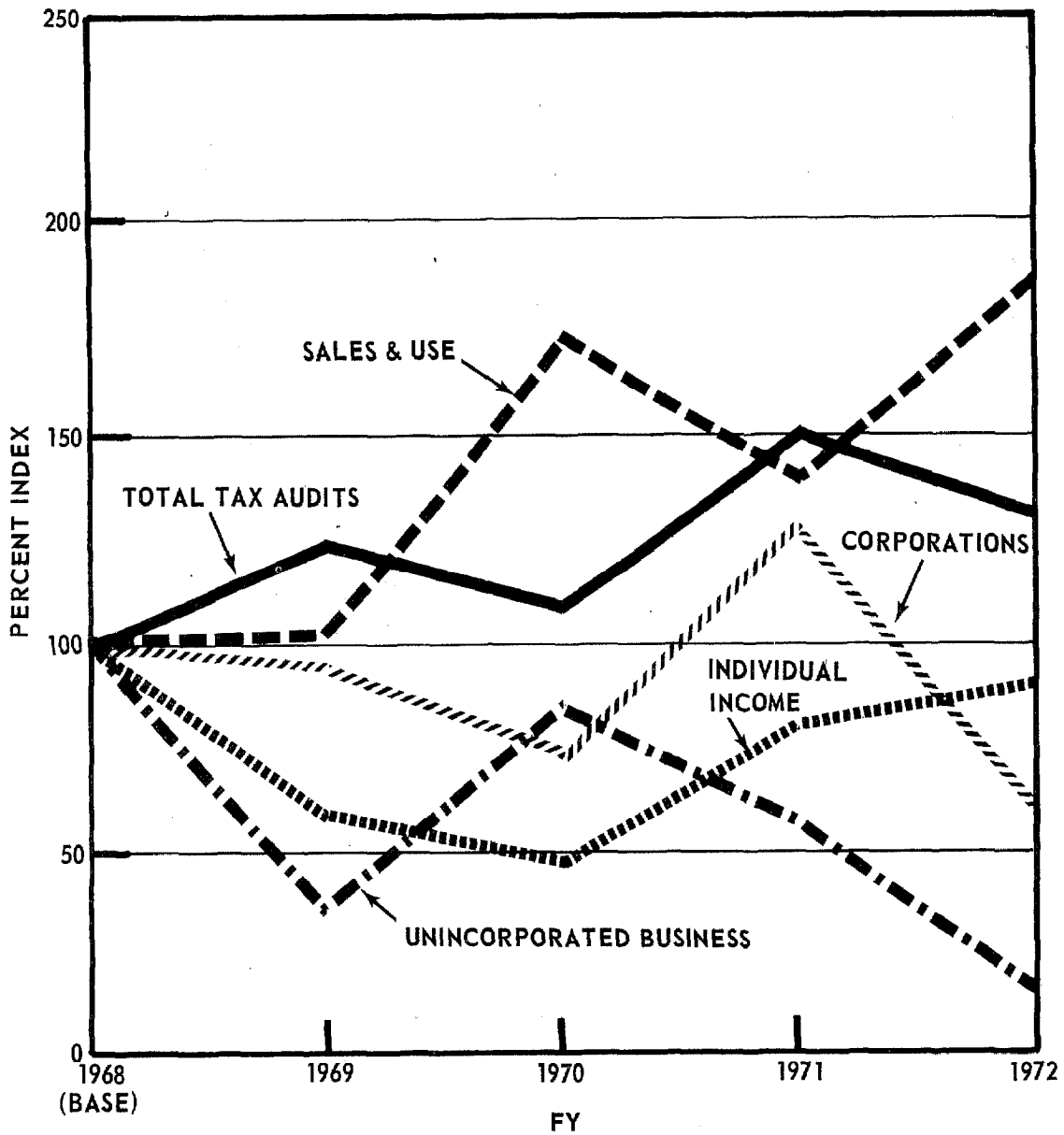
*CONSTANT DOLLARS

AVERAGE RETURN PER AUDIT



CONSTANT DOLLARS $\left[\frac{\text{REVENUE}^}{\text{NUMBER OF AUDITS}} \right]$

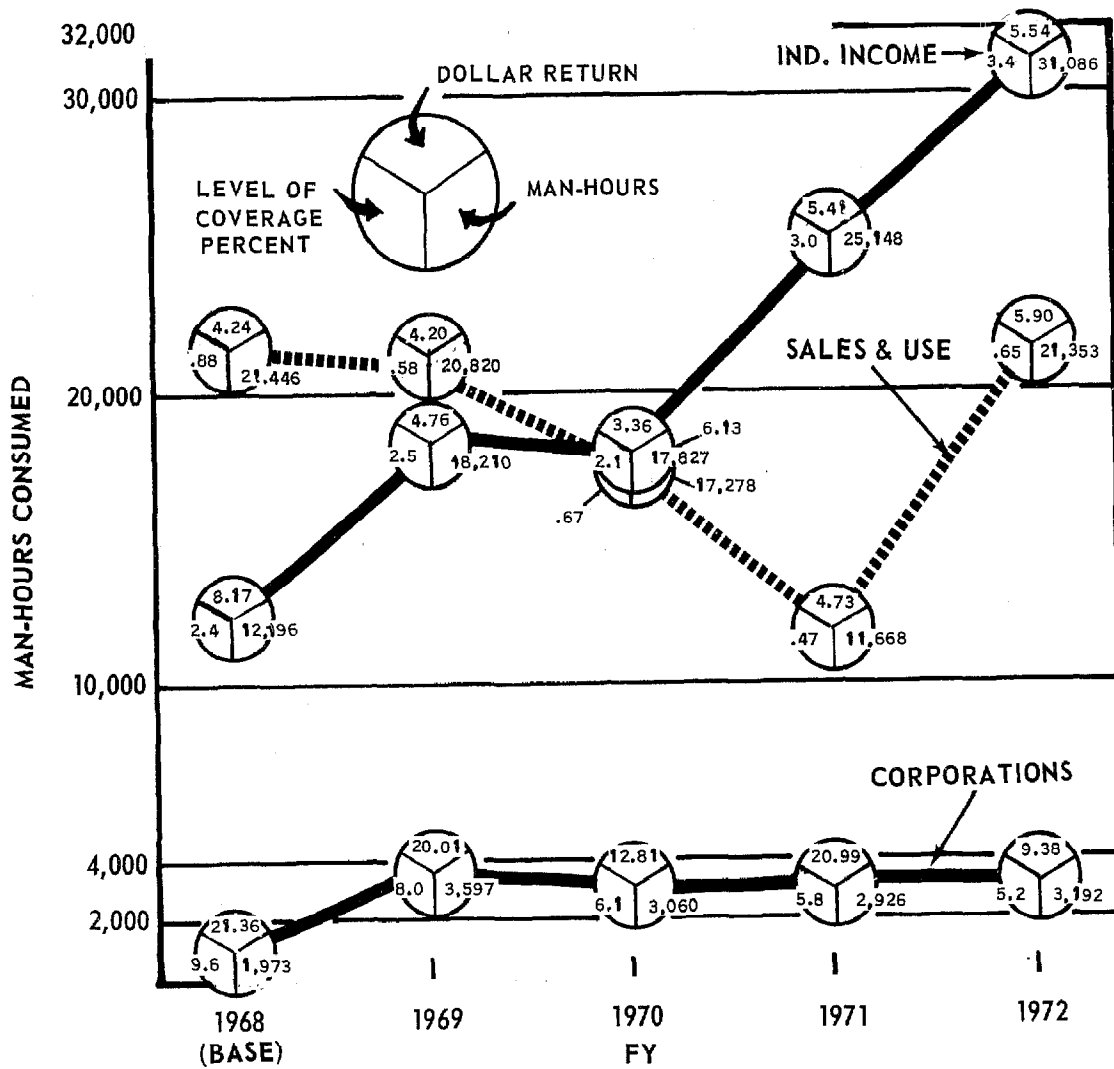
MAN-HOUR RETURN RATIO



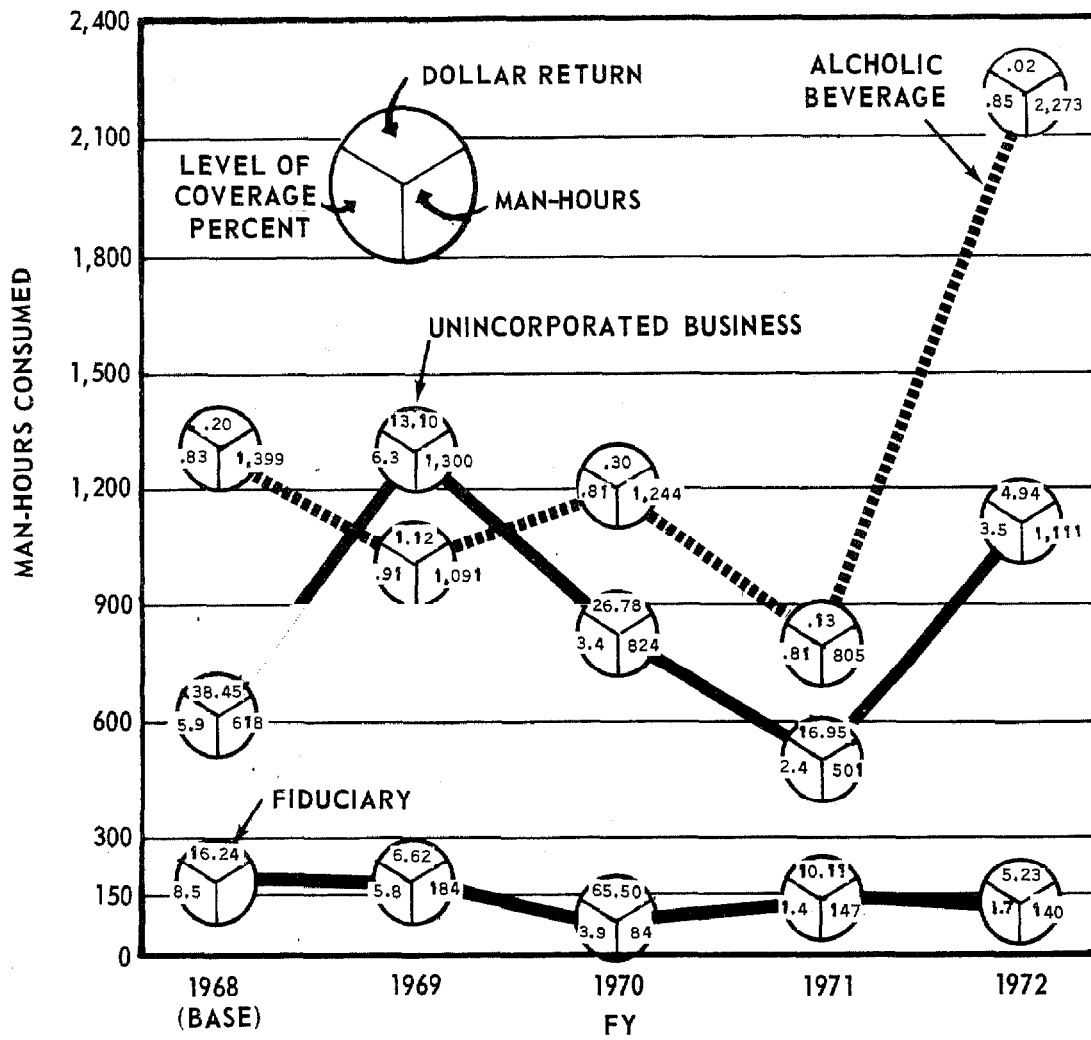
$$\left[\frac{\text{REVENUE}^*}{\text{MAN-HOURS}} \right]$$

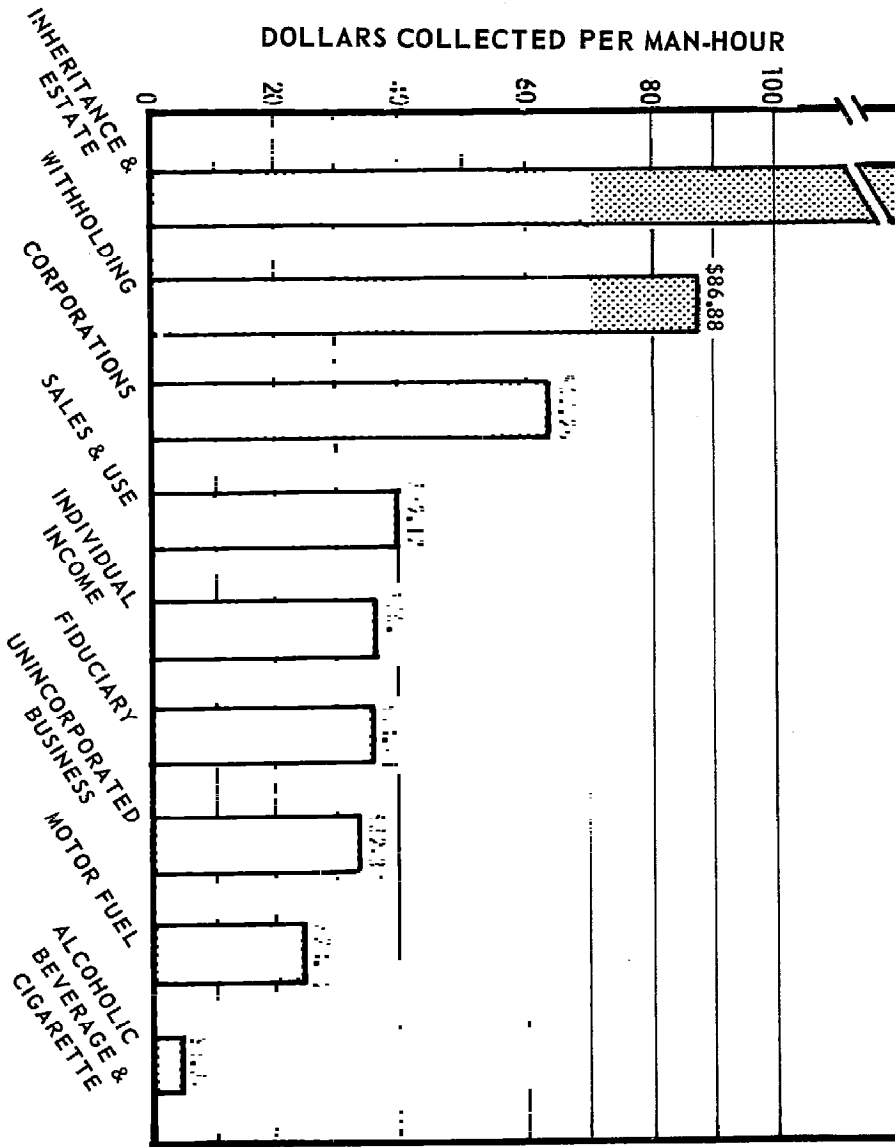
*CONSTANT DOLLARS

REVENUE GENERATED PER DOLLAR OF AUDIT COST (HIGH MAN-HOUR AREAS)

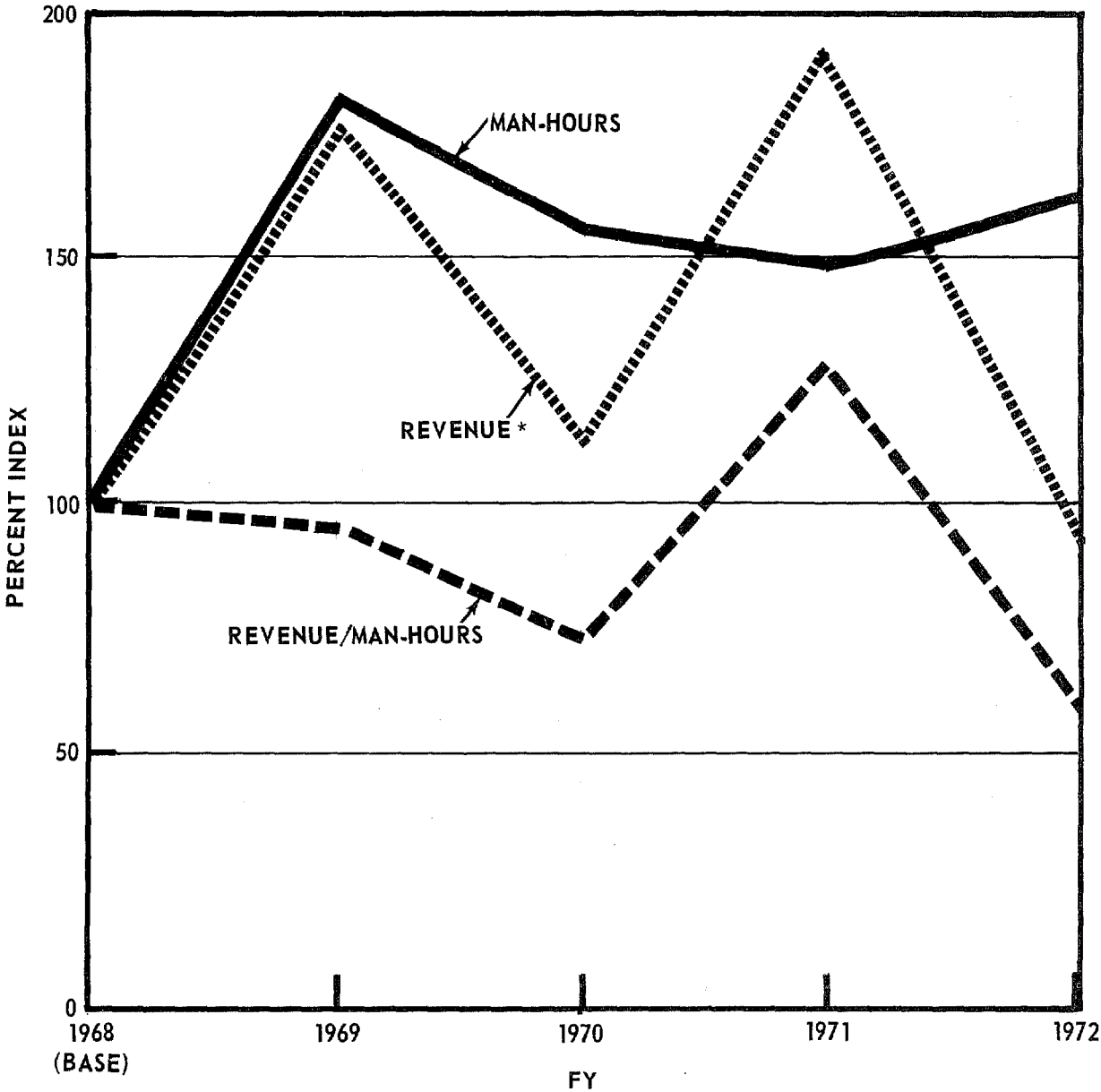


REVENUE GENERATED PER DOLLAR OF AUDIT COST
(LOW MAN-HOUR AREAS)





MAN-HOURS, REVENUE, AND MAN-HOUR RETURN RATIO FOR CORPORATION TAX AUDITS



*REVENUE IS DEFLATED USING THE WHOLESALE PRICE INDEX

CHAPTER 3

EVALUATION OF SALES AND USE TAX AUDITS BASED ON PRODUCTIVITY AND EFFECTIVENESS MEASURES

This chapter describes in more detail our analysis of the sales and use tax audit area to show how analytical techniques can help managers establish reasonable goals and improve resource management. The productivity and effectiveness indexes we used follow.

	<u>Fiscal years</u>				
	<u>1968</u> <u>(Base)</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>
Labor productivity index	100.0	68.8	97.5	98.9	72.2
Average return per audit (note a)	100.0	146.7	174.2	140.3	252.4
Average return per man- hour (note a)	100.0	100.9	169.9	138.8	182.2

^aExpressed in constant dollar terms (reduced for inflation).

The indexes for the average return per audit and the average return per man-hour show that revenue generated has generally increased since 1968 while labor productivity has fluctuated below the 1968 level. Wide annual fluctuations occurred in the number of sales and use tax audits performed during the 5 years, as shown below.

	<u>Fiscal years</u>				
	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>
Audits performed	608	406	478	327	437

The number of audits is but one indicator and will not, by itself, give the manager sufficient information to determine whether objectives are being met. Therefore, we added

two other indicators--audit potential¹ and a standard level of coverage²--to provide the manager with additional needed data.

Charts 3-1 and 3-2 on pages 25 and 26 show how these three elements are combined to measure audit performance against a base period standard. We constructed these charts on the basis of the following observations:

- The large fluctuations in the number of audits from 1968 to 1972 indicate that operating experience and judgment may have been used to determine the number of required audits.
- The productivity and effectiveness indexes on page 21 indicate that labor productivity is subject to wide fluctuations, although the return per audit and the return per man-hour are steadily increasing.
- The universe of returns filed each year, ranging from about 67,000 to 71,000, is relatively constant.
- The establishment of a realistic standard level of coverage would improve the manager's ability to assess whether the Division is meeting its objectives. In establishing standards, managers must consider changes, such as scope of tax audit and tax filing requirements, that would affect audit potential.

Chart 3-1 shows that the Division is not meeting its potential production in relation to the base year. An average of about 69,000 sales and use tax returns were filed annually between 1968 and 1972. Using 1968 as the standard

¹Derived by dividing the audits performed by the labor productivity index for each year. (Example: 437 (1972 audits) divided by 72.2 percent (productivity index) equals 605.)

²Calculated by dividing the 608 returns audited in the base year by 68,870 returns filed. The result is 0.88 percent. The number of returns filed in each subsequent year is then multiplied by this percentage to arrive at the expected level of coverage for that year.

level of coverage (0.88 percent), the Division should make about 600 audits annually. However, the chart shows that (1) after 1968 the Division did not approach this number in any of the next 4 years, (2) additional manpower was needed in 1970 and 1971, when actual production approximated audit potential for the manpower assigned, and (3) manpower had the potential to produce more in 1969 and 1972, when a wide variation existed between actual and potential production.

Chart 3-2 shows the actual revenue generated and potential revenue that might have been generated with the same manpower from 1968 to 1972. Actual revenue was \$381,000 in 1968 and \$391,000 in 1969. However, an additional \$178,000¹ might have been generated in 1969 if manpower productivity could have been maintained at the same level as in 1968. If additional manpower could have been applied to achieve the 0.88-percent standard level of coverage, another \$27,000 might have been generated. Similarly, in 1970, 1971, and 1972, potential revenue increases might have been possible if the 1968 level of audit coverage had been achieved.

Management, by using productivity and effectiveness analysis, can establish realistic tax return audit goals. This could help minimize reliance on operating experience and judgment in selecting the type and number of tax returns to audit and might also increase revenue.

A manager can also make reasonable projections of manpower needs through the analysis described above. For example from 1968 through 1972, between 67,000 and 71,000 returns were filed annually; the average was about 69,000 per year. By applying the 0.88-percent standard level of coverage to the 69,000 figure, 607 audits are expected to be performed each year. The 607 figure is then multiplied by 35 man-hours.² Thus 21,245 man-hours, or about 10 auditors (this excludes consideration for leave, training, etc.) would be required

¹The additional revenue figures were computed by multiplying the average return per audit for each year by the number of audits.

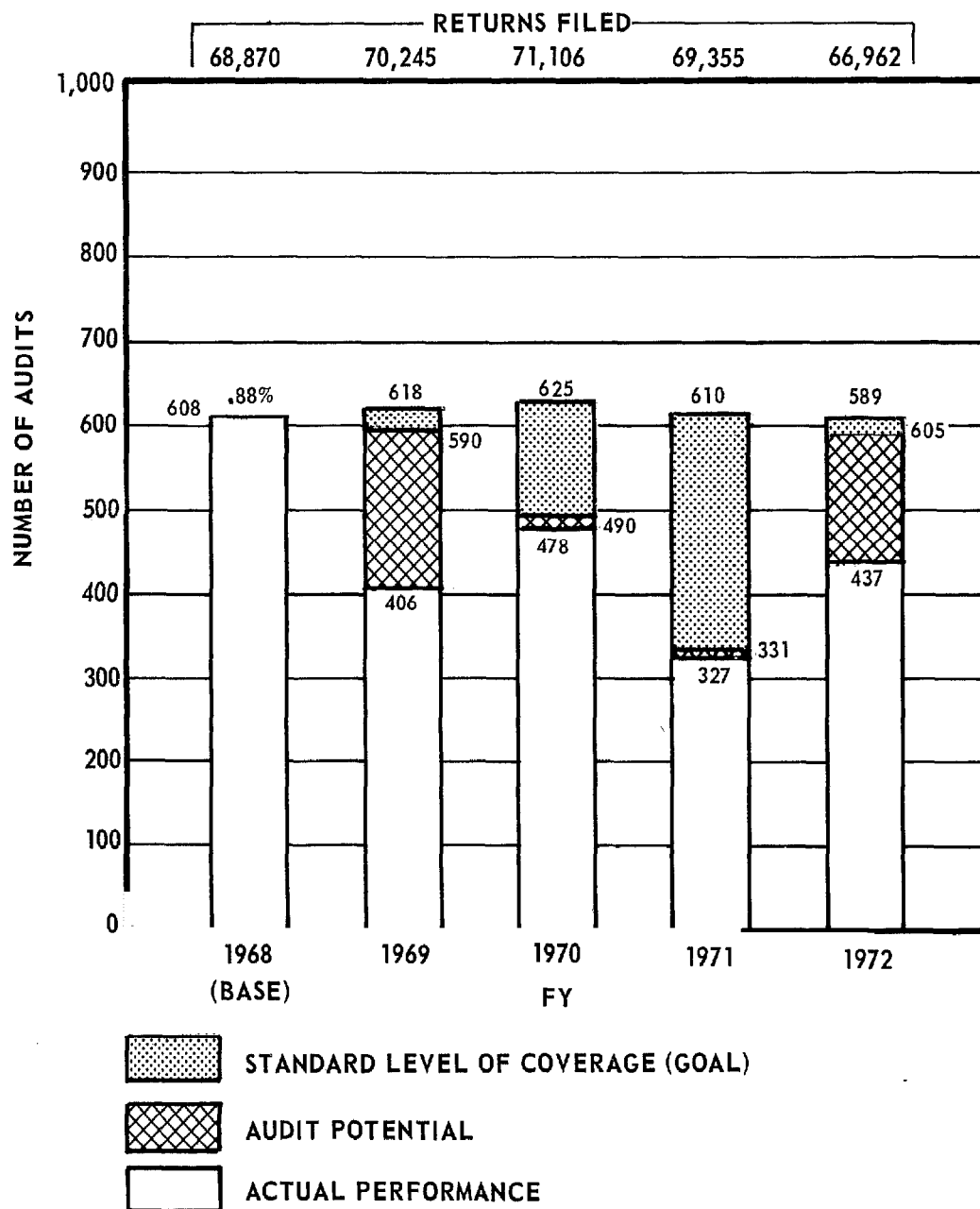
²This was the average time spent on each sales and use tax audit in the base year.

each year to achieve the standard level of coverage. The manager can compare computed man-hours to actual man-hours available before setting goals.

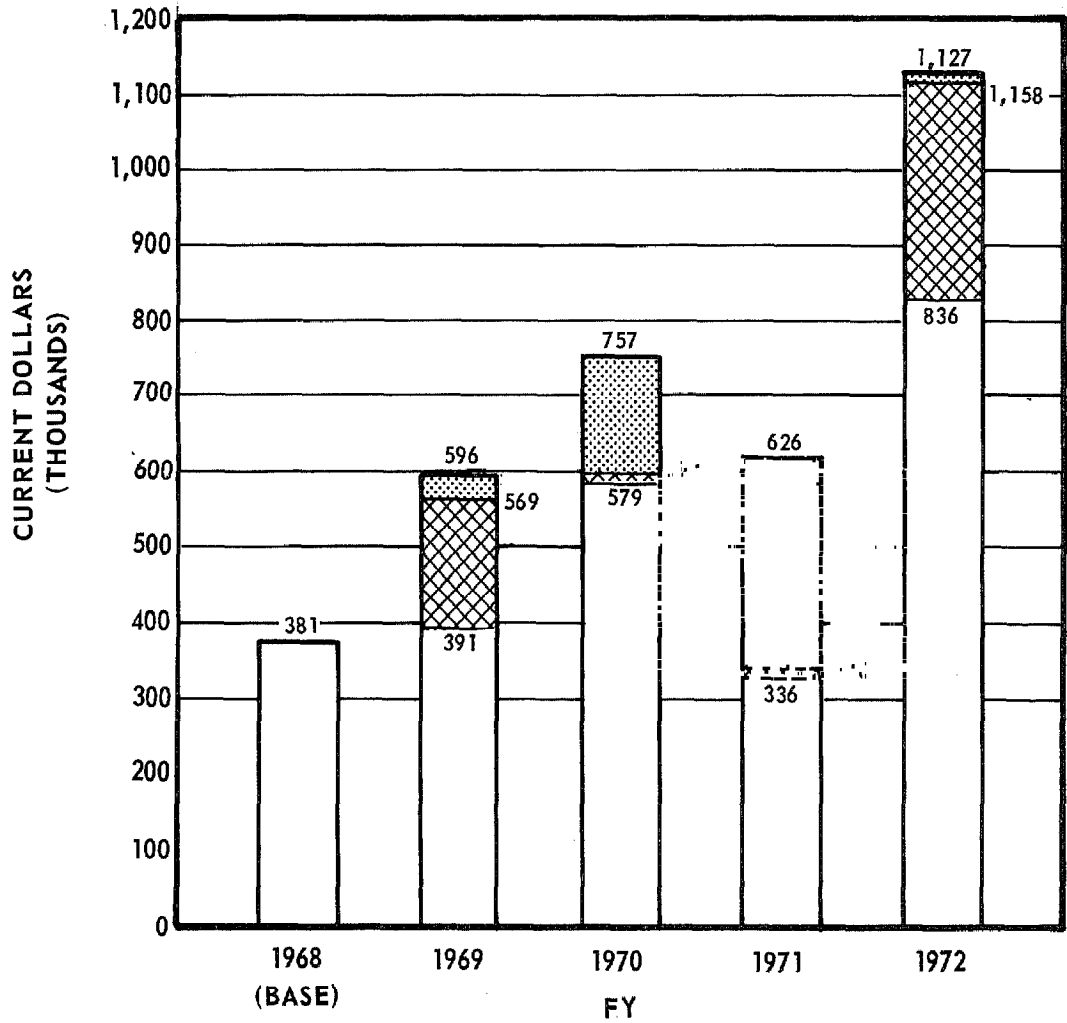
If management wants a 10-percent increase in its level of coverage, the 0.88-percent standard would have to be adjusted to reflect that. A new standard of 0.968 percent¹ would then be applied to the 69,000 average number of returns filed annually and 668 audits would be required to meet the new standard of coverage. About 23,400 man-hours would be required to handle the increased workload. This represents the time of 11 auditors for 1 year, or an increase of 1 auditor to achieve a 10-percent increase in the desired coverage.




¹0.88 percent multiplied by 110 percent.

SALES AND USE TAX AUDITS 5- YEAR AUDIT COMPARISON



**SALES AND USE TAX AUDITS
5-YEAR REVENUE COMPARISON**



-  REVENUE BASED ON GOAL
-  REVENUE BASED ON AUDIT POTENTIAL
-  ACTUAL REVENUE COLLECTED

CHAPTER 4

THE DISTRICT'S EFFORTS TO INSTALL A PERFORMANCE MONITORING SYSTEM

PROPOSAL TO DEVELOP CERTAIN RESOURCE MANAGEMENT IMPROVEMENTS

On September 1, 1972, the Director of the District's Office of Budget and Financial Management issued a report on the financial status of the District government. He stated that the District did not have a comprehensive program to increase employee productivity and that such a program should be thoroughly considered because it could significantly affect city operations.

Subsequently, the Director instituted a plan to develop PMS. Thereafter, meetings were held to familiarize agency heads with the plan and to enlist their aid in establishing efficiency and effectiveness measures. About 240 measures involving 16 agencies have been identified.

The District's PMS was designed as a management system for:

- Reporting to the public on the level, quality, efficiency, and effectiveness of city services.
- Helping to formulate District and agency priorities and budget and revenue proposal justifications.
- Giving program managers, agency heads, and the Mayor a clear statement of performance goals for key programs.
- Spotting problem areas requiring prompt corrective action when performance goals are not being achieved.
- Strengthening the labor relations process with a means for setting productivity targets and monitoring compliance with collective bargaining agreements.
- Building a solid foundation for program evaluation and management accountability, with timely information on progress toward performance goals.

GUIDELINES FOR DEVELOPING A
PERFORMANCE MONITORING SYSTEM

In early 1973 the District began developing PMS as a means of fulfilling a critical need for information on current performance levels in key city programs. PMS consists of three key elements: (1) performance criteria, (2) planned performance targets, and (3) performance progress reports. These elements were not precisely defined but were presented in terms of the types of key management questions that each was intended to answer.

1. Performance criteria

--What is good performance in a given program?

--What factors should be examined to distinguish satisfactory from unsatisfactory performance?

--How can good performance be measured? Are there any important qualitative dimensions of a program that cannot be measured?

2. Planned performance targets

--Within a given resource allotment, what performance levels can be reached?

--How are performance targets scheduled throughout the year?

--How can realistic performance targets be met?

3. Performance progress reports

--During the execution phase, are performance targets being achieved on schedule?

--If not, why not? Should the targets be revised? If targets are being achieved, are they sufficiently challenging?

--What factors impede the achievement of planned program targets? What corrective action can be taken to avoid such delays?

PMS was designated to be part of the District's resource management cycle consisting of planning, budgeting, accounting, and monitoring and evaluation.

After program plans have been formulated and budgets have been approved, the resource management cycle enters the critical execution stage. At this point two important management controls must be in place: (1) a financial plan to relate monthly expenditure levels to budgeted amounts approved for the entire year and (2) a program performance plan to relate monthly performance targets to the objectives approved for the entire year. The District believes that these controls will complete the resource management cycle and will provide managers with cost and performance information to be used in monitoring current service delivery targets and formulating future program plans.

Final development steps

After identifying agencies, programs, and performance criteria and measures, several final steps will be required before PMS can be implemented. Included among the remaining PMS development tasks are:

1. Documenting--A complete profile of all PMS programs, performance measures, and data collection procedures must be developed.
2. Testing--Data collection, processing, and reporting procedures must be tested to detect any problem areas and allow time to correct any weaknesses before PMS is implemented.
3. Training--The reporting phases of PMS provide data on actual program results and productivity. Training courses are planned to help program managers use performance data for day-to-day operational management.
4. Issuing an operational handbook--To insure common understanding of all PMS procedures before implementation begins, an operational handbook or instructional manual will be issued.

The District expects to have an operating reporting system for 16 agencies by July 1, 1975, and will begin to monitor their performance in fiscal year 1976.

The District's first three steps and our approach in implementing PMS are similar; that is, establishing measures (performance criteria), defining productivity (planned performance targets), and collecting data (performance progress reports). However, we also recognize the need for continuing analysis of program data based on standards providing essential information for plotting trends, observing interaction of measures, and estimating realistic targets.

CHAPTER 5

CONCLUSIONS, RECOMMENDATION, AGENCY COMMENTS, AND GAO EVALUATION

CONCLUSIONS

The District's plan to implement PMS is designed to help improve the productivity and effectiveness of ongoing programs. The techniques we discuss can enhance the District's PMS in the following areas.

Establishing goals

Once the current productivity level has been defined, the use of our techniques can help management establish realistic productivity goals, readily identify problems, and enhance productivity.

Budgeting and planning

Productivity and effectiveness data can also help management estimate the personnel and funds required to meet the organization's goals. Management can examine trends indicated by various measurements; realistically estimate needed resources; and more accurately project results, costs, revenues, etc.

The benefits of public services cannot always be calculated directly through productivity and effectiveness measures; however, these measures can help provide improved estimates of the costs of maintaining different kinds of programs and services. (See ch. 3.) These measures can also assist in projecting effects of events such as the introduction of new types of equipment, centralization of operations, or changes in legislation or management.

Monitoring and controlling operations

Productivity and effectiveness measures help improve resource management by requiring a continuity of statistics and measurement data supporting findings on program efficiency and effectiveness. They also show progress toward targets and objectives and can be used to monitor and control this progress.

When quantifiable data can be developed, these techniques can help the District improve resource management. However, this cannot be accomplished unless the users understand the nature, applicability, and limitations of the techniques.

In its report to the Senate Committee on Appropriations concerning the District's fiscal year 1975 budget request, the Subcommittee on Appropriations for the District of Columbia said it was especially interested in the efforts of the Office of Budget and Financial Management to develop a performance measurement system. The Subcommittee said that increased productivity through organizational and management improvements should be a key element in the District's overall program to improve the efficiency and effectiveness of public services. The Subcommittee expects a progress report during the 1976 budget hearings.

The Home Rule Act requires the District to submit annually, with its budget request:

"* * * a program performance report comparing actual performances of as many programs as is practicable for the last completed fiscal year against proposed goals for such programs for such year, and, in addition, presenting as many qualitative or quantitative measures of program effectiveness as possible (including results of statistical sampling or other special analyses) * * *."

The techniques we discuss, including the need for trend analyses, are compatible with the District's effort and will assist it in assessing programs to meet both its needs and the requests of the Senate Subcommittee and the requirements of the Home Rule Act.

As previously illustrated, trend analyses produce data that management can use to identify changes in productivity that need attention. Such data should prompt management to obtain the reasons for the changes and enable it to take timely corrective action to enhance program efficiency and effectiveness. Trend analyses, therefore, should be an integral part of PMS.

District officials informed us that they plan to include trend analyses in PMS; however, because the PMS plan, including operating procedures, has not been completed, we could not determine the extent to which trend analyses will be included.

RECOMMENDATION TO THE MAYOR

We recommend that the Mayor require the District government to incorporate in its PMS techniques for continuing analyses to plot performance trends and to determine effects of one measure on another so that productivity can be increased and performance improved, as appropriate.

AGENCY COMMENTS AND GAO EVALUATION

The Commissioner, by an October 16, 1974, letter, welcomed GAO's interest in helping the District demonstrate how productivity techniques can be used to improve resource management. He stated that, although significant variations existed in the District's productivity concepts, methodology and approaches to demonstrating the practical value of this important technique, he believes that the subject matter of our report will add considerably to the effectiveness of the District's performance monitoring and productivity improvement efforts.

According to the Commissioner, the District had identified 240 performance measures in 16 District agencies and expects to have a fully operative reporting system in these agencies by July 1, 1975. The District will set performance targets for programs and measures in PMS, enabling it to monitor agency performance against the approved targets throughout the 1976 fiscal year and thereafter.

We believe that PMS, if effectively implemented, will assist the District in its efforts to improve resource management.

CHAPTER 6

SCOPE OF REVIEW

We reviewed the Tax Audit and Liability Division of the Department of Finance and Revenue because (1) it produces significant revenues and (2) input and output data was readily available. For 11 tax audit areas, we used the number of returns audited, audit revenue generated, audit man-hours consumed, and man-hour costs covering fiscal years 1968-72. Appendix III lists the tax audit data statistics.

We interviewed officials and reviewed documents of the Department. We gave oral and visual presentations to selected officials. In addition, we reviewed the following documents relating to productivity in the Federal Government:

--"Federal Productivity; Methods, Measurements, Results," 1/

--"Measuring Productivity of Federal Government Organizations," 2/ and

--"Measuring and Enhancing Productivity in the Federal Sector." 3/

The charts were constructed to show only the productivity and effectiveness of professional audit activities, because we did not intend to delve into the reasons for productivity fluctuations; also, a total analysis of the Division would have included administrative and support functions.

1/ Prepared for a joint Office of Management and Budget, Civil Service Commission, and GAO project dated August 1972.

2/ A study prepared by the Office of Management and Budget dated 1964.

3/ A study prepared for the use of the Joint Economic Committee of the Congress by representatives of the Office of Management and Budget, Civil Service Commission, and GAO dated August 4, 1972.



THE DISTRICT OF COLUMBIA

WALTER E. WASHINGTON
Mayor-Commissioner

WASHINGTON, D.C. 20004

OCT 16 1974

Mr. Victor L. Lowe
Director
General Government Division
General Accounting Office
Washington, D.C. 20548

Dear Mr. Lowe:

This is in response to your report entitled, "Opportunity to Improve Resource Management through Productivity and Effectiveness Measures in the District of Columbia," which explores the feasibility of applying productivity techniques to the Tax Audit and Liability Division of the District's Department of Finance and Revenue.

We welcome the General Accounting Office's interest in helping the District demonstrate how productivity techniques can be used to improve resource management. The subject matter of your report is particularly timely since central cities across the nation are beset with immense financial pressures. Given the high levels of taxation which central city residents are forced to bear, along with an inflationary spiral which shows no immediate prospects of moderation, it is imperative that cities provide the optimum quantity and quality of services to their residents for each dollar of revenue received. Urban residents simply cannot afford a continuation of tax increase-service decline trends which have been disrupting America's cities over the past two decades. I regard the monitoring of city program performance, coupled with specific productivity improvement projects, as the most viable tools elected officials have for restraining unit cost increases for city services and improving service quality per revenue dollar. Through the successful implementation of the District's own productivity improvement effort, I am confident that we can reverse the above-mentioned trend in urban government.

In terms of the thrust and contents of the GAO report itself, I should point out that there are significant variations in our productivity concepts, methodology and approaches to demonstrating the practical value of this important technique. Nonetheless, I believe that the

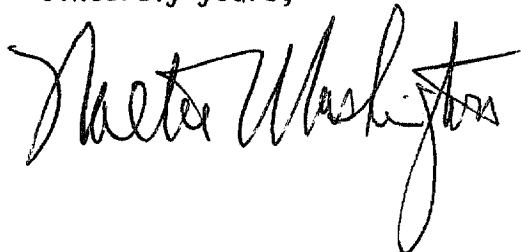
subject matter of the GAO report will add considerably to the ultimate effectiveness of the District's performance monitoring and productivity improvement efforts.

As you indicate in chapter one of your report, the productivity measures, standards, and trends presented in the report are for illustrative purposes only, to demonstrate the application of productivity techniques. The report also correctly points out that firm conclusions about the actual performance of our Tax Audit and Liability Division cannot be drawn since the data have not been tested.

The District Government has been developing a Performance Monitoring System (PMS) since early 1973 and, to date, we have identified 240 performance measures in 16 District agencies. We expect to have a fully operative reporting system with these agencies by July 1, 1975. Performance targets will then be set for programs and measures included in the PMS, enabling us to monitor agency performance against the approved targets throughout the 1976 fiscal year and thereafter.

As we implement our PMS, we shall draw on the experience you have gained from your analysis of the District's Tax Audit and Liability Division. Your continued cooperation with the District will be greatly appreciated, and I look forward to reviewing further advances in the field of productivity improvement which you may be generating in coming months and years.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Walter Washington". The signature is written in a cursive, flowing style with a large, prominent initial "W".

METHODOLOGY FOR DEVELOPING INDEXES USED

DEVELOPING INDEXES

The indexes compare productivity data and related costs and values over a period of time with a base period, fiscal year 1968. The base had an index value of 100. The index value for each subsequent year was obtained by dividing the figures for each successive year by the base year figure and multiplying by 100. The following table demonstrates the development of indexes for the individual income tax audit area.

Table IOutput ÷ base = index

	<u>Fiscal year</u>				
	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>
Output:					
Audit					
revenue	\$417,806	\$387,703	\$327,550	\$828,802	\$1,144,214
Illustration for 1969 index figures:					
		$\frac{\$387,703}{\$417,806} = 0.928$			
		$0.928 \times 100 = 92.8$			
Indexes	100.0	92.8	78.4	198.4	273.9

Current revenues and labor costs were adjusted for inflation; wage and price deflators were applied to derive constant dollar value indexes, as follows:

Table II

	Fiscal year				
	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>
Wholesale Price Index, all items (note a)	100.0	103.1	107.5	110.8	114.9
Consumer Price Index, all items (note a)	100.0	104.8	111.0	116.7	120.9
Compensation deflator (note b)	100.0	107.7	121.6	135.5	152.7

^a Bureau of Labor Statistics

^b Bureau of Economic Analysis

To obtain the constant dollar value of the indexes in table I, these indexes must be divided by the deflator factor shown in table II.

Table III

	Fiscal year				
	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>
Current Value Index	100.0	92.8	78.4	198.4	273.9
Consumer Price Index	100.0	104.8	111.0	116.7	120.9
Illustration for 1969 Constant Dollar Index:					
		$\frac{92.8}{104.8} = 0.885$			
		$0.885 \times 100 = 88.5$			
Constant Dollar Index	100.0	88.5	70.6	170.0	226.6

DISTRICT OF COLUMBIA AUDIT STATISTICS

BY TYPE OF TAX, FISCAL YEARS 1968-72

The following data was obtained from Department of Finance and Revenue records. We made no attempt to audit or otherwise verify it.

Type of tax	Fiscal year				
	1968	1969	1970	1971	1972
Individual income:					
Audited	7,681	8,338	7,045	9,982	11,322
Audit revenue	\$ 417,806	\$ 387,703	\$ 327,550	\$ 828,802	\$ 1,144,214
Audit hours	12,196	18,210	17,827	25,148	31,086
Audit cost	\$ 51,101	\$ 81,398	\$ 97,513	\$ 153,151	\$ 206,411
Fiduciary income:					
Audited	494	323	217	78	98
Audit revenue	\$ 12,519	\$ 5,448	\$ 30,069	\$ 9,051	\$ 4,860
Audit hours	184	184	84	147	140
Audit cost	\$ 771	\$ 822	\$ 459	\$ 895	\$ 929
Withholding:					
Audited	675	700	611	214	440
Audit revenue	\$ 5,550	\$ 7,131	\$ 14,511	\$ 9,829	\$ 82,448
Audit hours	1,211	980	758	499	949
Audit cost	\$ 5,074	\$ 4,380	\$ 4,146	\$ 3,039	\$ 6,301
Corporation:					
Audited	1,101	1,093	805	855	826
Audit revenue	\$ 176,569	\$ 321,722	\$ 214,383	\$ 373,988	\$ 198,808
Audit hours	1,973	3,597	3,060	2,926	3,192
Audit cost	\$ 8,266	\$ 16,078	\$ 16,738	\$ 17,819	\$ 21,194
Unincorporated business:					
Audited	482	589	271	206	353
Audit revenue	\$ 99,558	\$ 76,146	\$ 120,697	\$ 51,717	\$ 36,486
Audit hours	618	1,300	824	501	1,111
Audit cost	\$ 2,589	\$ 5,811	\$ 4,507	\$ 3,051	\$ 7,377
Sales and use:					
Audited	608	406	478	327	437
Audit revenue	\$ 381,058	\$ 391,420	\$ 579,254	\$ 335,777	\$ 836,298
Audit hours	21,446	20,820	17,278	11,668	21,353
Audit cost	\$ 89,858	\$ 93,065	\$ 94,510	\$ 71,058	\$ 141,784
Motor fuel:					
Audited	6	6	7	3	1
Audit revenue	\$ 15,376	\$ 5,005	\$ 12,808	\$ 1,351	\$ 2,022
Audit hours	565	510	425	313	83
Audit cost	\$ 2,367	\$ 2,279	\$ 2,324	\$ 1,906	\$ 551
Alcoholic beverage:					
Audited	56	56	57	57	60
Audit revenue	\$ 1,189	\$ 5,495	\$ 2,090	\$ 652	\$ 354
Audit hours	1,399	1,091	1,244	805	2,273
Audit cost	\$ 5,861	\$ 4,876	\$ 6,804	\$ 4,902	\$ 15,092

APPENDIX III

Type of tax	Fiscal year				
	1968	1969	1970	1971	1972
Cigarette:					
Audited	-	7	3	4	4
Audit revenue	\$ -	\$ 10,113	\$ 3,519	\$ 214	\$ 4,304
Audit hours	-	507	489	190	826
Audit cost	\$ -	\$ 2,266	\$ 2,674	\$ 1,157	\$ 5,484
Bus compact:					
Audited	399	328	275	86	-
Audit revenue	\$ 11,425	\$ 2,451	\$ 566	\$ 95	\$ -
Audit hours	7,352	1,061	519	143	-
Audit cost	\$ 30,804	\$ 4,742	\$ 2,839	\$ 870	\$ -
Inheritance and estate:					
Audited	3,202	3,277	2,984	3,219	3,219
Audit revenue	\$1,533,396	\$2,241,161	\$1,543,599	\$2,476,737	\$2,750,143
Audit hours	9,010	8,315	7,480	7,199	7,165
Audit cost	\$ 37,752	\$ 37,168	\$ 40,915	\$ 43,842	\$ 47,575
Total tax audits:					
Audited	14,704	15,123	12,753	15,031	16,760
Audit revenue	\$2,654,446	\$3,453,795	\$2,848,946	\$4,088,213	\$5,059,937
Audit hours	55,954	56,575	49,988	49,539	68,178
Audit cost	\$ 234,447	\$ 252,890	\$ 273,434	\$ 301,692	\$ 452,702

Note: This data covers audit production through professional audit activities only. It excludes all clerical, screening, audit selection, taxpayer assistance, and support activities. Audit cost totals do not add due to rounding.

SUMMATION OF DATA USED IN ANALYSES

	Fiscal year				
	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>
Labor productivity (note a):					
Inheritance and es- tate tax	100.0	110.8	112.3	125.8	126.4
Sales and use tax	100.0	68.8	97.5	98.9	72.2
Individual income tax	100.0	72.7	62.7	63.0	57.8
Corporation tax	100.0	54.5	47.1	52.4	46.4
Total tax audits	100.0	101.7	97.0	115.5	93.6
Average return per man- hour (note b):					
Sales and use tax	100.0	100.9	169.9	138.8	182.2
Individual income tax	100.0	59.3	48.3	82.4	88.9
Corporation tax	100.0	96.9	72.8	128.9	60.6
Unincorporated busi- ness tax	100.0	35.3	84.5	57.7	17.7
Total tax audits	100.0	122.7	108.2	149.2	129.5
Average return per audit (note c):					
Sales and use tax	100.0	146.7	174.2	140.3	252.4
Individual income tax	100.0	81.5	77.0	130.8	153.7
Corporation tax	100.0	177.9	154.4	246.1	130.7
Total tax audits	100.0	120.7	111.5	129.2	138.3
Individual income tax audits:					
Revenue (current)	100.0	92.8	78.4	198.4	273.9
Revenue (constant)	100.0	88.5	70.6	170.0	226.6
Number of returns audited	100.0	108.5	91.7	130.0	147.4
Man-hours	100.0	149.3	146.2	206.2	254.9

APPENDIX IV

	Fiscal year				
	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>
Individual income tax audits: (cont)					
Wages (current)	100.0	159.3	190.8	299.7	403.9
Wages (constant)	100.0	147.9	156.9	221.2	264.5
Average return per audit	100.0	81.5	77.0	130.8	153.7
Productivity (note a)	100.0	72.7	62.7	63.0	57.8
Productivity (note d)	100.0	73.4	58.4	58.7	55.7
Man-hour return ratio	100.0	59.3	48.3	82.4	88.9
Total tax audits:					
Revenue (current)	100.0	130.1	107.3	154.0	190.6
Revenue (constant)	100.0	124.1	96.7	132.0	157.7
Number of returns audited	100.0	102.8	86.7	102.2	114.0
Man-hours	100.0	101.1	89.4	88.5	121.8
Average return per audit	100.0	120.7	111.5	129.2	138.3
Productivity (note a)	100.0	101.7	97.0	115.5	93.6
Average return per man-hour	100.0	122.7	108.2	149.2	129.5

^aRatio of returns audited to man-hours.

^bRatio of revenue (deflated) to man-hours.

^cRatio of revenue (deflated) to returns audited.

^dRatio of returns audited to wage costs (deflated).

AVAILABLE PRODUCTIVITY DATA IN DISTRICT AGENCIES

During our review of the District's Multi-Year Program and Financial Plan for fiscal years 1973-77, we noted that quantitative data was available which showed measures of various units of input and output for at least 36 program subcategories.

<u>Program category</u>	<u>Program subcategory</u>
Protection of the Public, Their Rights and Property	Crime Prevention/Suppression Juvenile Delinquency Prevention Investigation/Apprehension Vice Control Preadjudication Detention Fire Prevention Firefighting Improvement of Vehicle Safety Traffic Law Enforcement Consumer Protection
Education	Instruction--Elementary Schools Instruction--Higher Education
Preservation and Development of Human Resources	Prevention and Detection Treatment and Restoration Delivery of General Medical Care Mental Illness Mental Retardation Prevention and Control of Drug Addiction Treatment and Rehabilitation of Drug Addicts Treatment and Rehabilitation of Alcoholics
Recreation and Cultural Enrichment	General Recreational Oppor- tunities Special Recreational Oppor- tunities Public Libraries

APPENDIX V

<u>Program category</u>	<u>Program subcategory</u>
Community Development	Highways Housing and Physical Development Economic Development
Environmental Protection	Air Pollution Control Water Pollution Control Maintenance of a Satisfactory Water Supply Solid Waste Management Industrial and Institutional Hazards Food, Drug, and Chemical Hazards Community Structural and Mechanical Hazards Miscellaneous Health Hazards
General Government	Provision of Employee Benefits and Services Tax Administration

CURRENT PRINCIPAL OFFICIALS OF
 THE DISTRICT OF COLUMBIA GOVERNMENT
 CONCERNED WITH ACTIVITIES
 DISCUSSED IN THIS REPORT

	<u>Tenure of office</u>	
	<u>From</u>	<u>To</u>
MAYOR (note a): Walter E. Washington	Nov. 1967	Present
DIRECTOR, BUDGET MANAGEMENT SYSTEMS (note b): Comer S. Coppie	Nov. 1969	Present
DIRECTOR, DEPARTMENT OF FINANCE AND REVENUE: Kenneth Back	Mar. 1969	Present

^aFrom November 1967 to January 1, 1975, the office title was Commissioner.

^bFrom November 1969 to December 3, 1974, the office title was Director, Office of Budget and Financial Management.