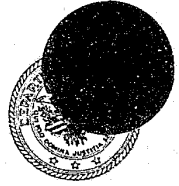


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Issues and Practices

Analyzing Costs in the Courts

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James K. Stewart

Director

Analyzing Costs in the Courts

by

Kent John Chabotar

with the assistance of

**Kimberly Wylie
Kathleen Floyd**

January 1987

Issues and Practices in Criminal Justice is a publication series of the National Institute of Justice. Designed for the criminal justice professional, each *Issues and Practices* report presents the program options and management issues in a topic area, based on a review of research and evaluation findings, operational experience, and expert opinion in the subject. The intent is to provide criminal justice managers and administrators with the information to make informed choices in planning, implementing and improving programs and practice.

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Foreword

As court workloads increase and public budgets grow tighter, court administrators must begin to concern themselves with how they justify costs and allocate their budgets. In a survey discussed at greater length in this report, two out of three polled jurisdictions reported they did not measure the costs of the programs and services they provide to the public, primarily because they had not needed to do so in the recent past, and, secondarily, due to lack of funds. As an administrative tool, cost analysis is not widely practiced among court administrators.

Analyzing Costs in the Courts is designed to provide court administrators with information on how court costs can be identified, analyzed and ultimately controlled. The information presented will enable administrators to identify and measure costs without the assistance of sophisticated financial management and computer support systems. As this report demonstrates, cost analysis need not be a complex art practiced only by the specially trained; it is a practice that consists of a relatively few concepts that can be applied with minimal cost to the court system.

In addition to presenting the concepts of cost analysis, this report also presents case studies of how three courts, each faced with a different problem, used the concepts of cost analysis to bring that problem under control.

The National Institute of Justice believes this document will become a handbook for court administrators as they strive to streamline court management during times of fiscal restraint.

James K. Stewart
Director
National Institute of Justice

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Preface

Cost analysis helps court systems to plan more accurately, budget more equitably, and generally to improve their management control over programs and staff. It provides information that judges and court administrators need to uncover wasteful and inefficient practices, and to refine how they organize their operations and assign their personnel. Court systems across the nation have used cost analysis to:

- obtain the funding necessary to operate new courtrooms and support new judgeships;
- establish the cost of court services in order to assess a user charge or contract out selected services;
- compare the costs and benefits of proposed facility renovations and microfilming of court records to save file space;
- determine overhead costs in order to qualify for federal and state grants; and
- assess the dollar impact of major procedural changes, like a speedy trial rule or the reduction of jury size.

Cost analysis does not necessarily demand bulky computers and hordes of accountants. It is not that complicated. From a technical point of view, cost analysis is a well-established management tool that has been used in business for centuries. After all, how long would entrepreneurs survive if their prices did not at least recover their costs? Cost analysis is relatively new in government, in that most public goods and services are given away (instead of sold) and cost recovery has not been a major issue. Moreover, abundant revenues from taxes and grants provided little incentive for public officials to control costs and improve financial management. This lack of cost consciousness was particularly evident in the courts. For funding, judges and court administrators could rely not only on the ample revenues available to the general government, but also on broad public support for criminal justice agencies and constitutional protections against executive or legislative interference. However, increased public demands in recent years for governmental accountability, intensified by revenue scarcity and the growth of state-funded courts, have eroded the fiscal independence of the judiciary and enhanced the importance of cost analysis.

Cost Analysis and the Courts

Cost analysis simply means figuring out the value of the resources used to produce or operate "something": costs of a training course, automobile, or restaurant meal. Many of these costs involve cash outlay for personnel salaries and fringe benefits. Other costs do not involve cash changing hands but rather the cash value of the "wear and tear" on plant and equipment used. In the courts, costs can be estimated for cases of a particular type, use of a courtroom, or an hour of a judge's time.

In fact, the first step in planning a cost analysis is deciding what to cost or, as cost accountants put it, defining the "cost objective." The next step is to identify the officials, departments, and other "cost centers" that work on that cost objective, not only because their budgeting and accounting records contain essential cost information, but also because different cost centers contributing to the same cost objective can produce different total costs. For example, the cost objective of preparing the annual budget will probably be more expensive if judges are the cost centers doing the preparation than if the same cost objective were assigned to a clerk and a bookkeeper.

Planning a cost analysis also involves deciding how extensive it will be. Will the analysis be limited to personnel costs, like salaries and fringe benefits? Or will it attempt to measure nonpersonnel costs, like travel and textbooks, that may also be related to the cost objective? Measuring personnel costs alone is certainly easier and, in labor intensive government departments like the courts, personnel costs frequently account for over 75 percent of total costs. However, "frequently" is not synonymous with "always," and it is possible that a particular cost objective will have a substantial proportion of nonpersonnel costs that would be ignored if the analysis focused exclusively on personnel costs.

Doing the cost analysis is next. Personnel costs can be estimated using timesheets and time studies. Nonpersonnel costs are located in the accounting records that summarize all the goods and services that the court has purchased. Most personnel and nonpersonnel costs can be easily and conveniently attributed to a particular cost objective. For example, witness fees can be tracked through the accounting system without undue difficulty and then allocated to the courtroom, case, or other cost objective that used the witness. Such costs are termed "direct costs."

Other costs are classified as "indirect" because they are shared by many cost objectives and cannot be easily allocated among them. For example, the maintenance costs of a court building are incurred in common by many cost objectives, and it is difficult to attribute some proportion of total

maintenance costs to a single cost objective such as the criminal courts. The challenge is to select a method for distributing these maintenance, administrative, and other indirect costs that equitably reflects the proportion of indirect cost prompted by each cost objective within the organization.

The final step in cost analysis is reporting the results. The costs incurred for the cost objective must be analyzed accurately and reported to the proper audiences at the right time. Poor reporting can ruin the impact of even the most sophisticated cost analysis.

Purpose

The purpose of this document is to facilitate cost analysis and the use of cost information in the courts by:

- increasing the awareness of how cost information can promote internal control and external accountability;
- improving the costing knowledge and skills of court-related personnel with professional training in disciplines other than accounting or economics;
- presenting practical cost concepts and techniques that can be used in a variety of courts with or without substantial financial management systems and computer support; and
- sharing the experiences of courts across the country in developing and using cost information.

"Analyzing Costs in the Courts" is directed to judges and court administrators who seek to make more realistic plans and tighter budgets, monitor the efficiency and cost effectiveness of their operations, and upgrade their financial reporting to funding agencies and the citizenry. Court planners and analysts, who often handle the details of fiscal management, need cost information in coordinating budget preparation and in evaluating program benefits and costs. The document is also directed at cost-conscious executive and legislative officials who oversee the judiciary and must address staffing and caseload problems in the courts within the confines of tax caps and budget ceilings. Staff in central budgeting, finance, and auditing departments can use the document either to review cost estimates generated by the courts or to perform their own cost analyses.

Methods and Sources

There were four primary sources for the material covered in this document:

- An extensive search of the literature in court management, public administration, and accounting was conducted using the National Criminal Justice Reference Service, and libraries at Harvard University, Boston University, and the Massachusetts Institute of Technology.
- Over thirty state and local court systems provided information and opinions in 1983 about their costing practices through telephone interviews and internal documents.
- Field visits were conducted to three court systems that represented a range of costing practices and geographic locations: Bucks County (Pennsylvania) Court of Common Pleas; Colorado Judicial Department; and the Los Angeles Superior Court.
- An advisory panel, whose membership included a county court administrator, a director of a university-based judicial administration program, and an independent consultant in court financial management, provided substantive input to the design and drafting of "Analyzing Costs in the Courts."

Scope and Content

"Analyzing Costs in the Courts" is organized around the steps of the cost analysis process, from deciding what to cost through reporting the results. It helps court administrators and others to answer such questions as the following:

- What is cost analysis?
- Why is cost analysis important?
- How do I decide which program or service should be costed?
- How do I select a costing approach that is appropriate to my information needs and accounting capabilities?
- Which financial records are most likely to contain cost data, and how can I work with accountants and other fiscal staff to collect them?
- How should cost analysis be reported to public officials, funding agencies, and the media?

In the document, **Chapter 1, Perspectives on Analyzing Costs in the Courts**, discusses how cost analysis contributes to key aspects of court management, including planning, budgeting, and reporting. It shows how cost analysis can assist the courts in responding more effectively to growing fiscal pressures and dependence on other branches of government for financial management and support. The chapter also acknowledges the problems that most courts have in measuring their costs and suggests why these problems exist.

Chapter 2, Fundamental Considerations in Analyzing Court Costs, presents basic terminology in cost analysis. It distinguishes between costs and expenditures, direct and indirect costs, and personnel and nonpersonnel costs. The chapter explores how these costs can be related to specific organizational units and activities. Finally, Chapter 2 examines the effects of inflation on multi-year cost estimates and the appropriateness of interjurisdictional cost comparisons.

Chapter 3, Planning for Cost Analysis, argues for deciding critical costing issues in advance of collecting or analyzing any cost data. The chapter demonstrates the significant impact on cost analysis of prior decisions about the purpose and users of cost information and the capacity of the court's existing accounting system to support the analysis. In terms of the outcomes of the costing effort, the chapter recommends unit costing as a way of accommodating changes in caseload or total budget.

Chapter 4, Doing Cost Analysis, answers the question, "Now that you know what you want to cost, how do you actually do the analysis?" It covers the measurement of direct personnel costs, direct nonpersonnel costs, and indirect costs. Sources of cost data are identified, and estimation techniques are provided when the existing accounting system contains information that is incomplete or incompatible with the cost objective. Chapter 4 ends with a discussion of how to report the results of the analysis to top management and other potential users.

Chapter 5, Case Studies in Cost Analysis, provides detailed examples of how three court systems measure their costs. Overall costing practices are described as well as the results of specific cost studies, e.g., the relative costs of eight versus twelve member juries.

Numerous examples from state and local trial courts are used to illustrate the "real world" of analyzing costs in the courts. Survey results that suggest the "state of the art" in court costing will be cited. The document does not provide detailed technical discussions or procedures in order to maximize its relevance and readability to judges, court administrators, and other non-accountants. However, a wide range of other resources are available to those who must actually implement cost analysis in a court system. The document concludes with two appendices that may help: a glossary of terms and a bibliography.

Chapter 1

Perspectives on Analyzing Costs in the Courts

Governor Cuomo is not happy with the \$575 million budget proposed by the state's court system because it does not make the cuts in personnel that state agencies are being asked to make. . . . Mr. Cuomo cannot change the court system's budget request on his own, as he can with the budgets of the state agencies. Under the State Constitution, he must submit the court request to the legislature. . . . [But] if Mr. Cuomo chooses to oppose the court budget, he will have support from the Republicans in the State Senate. "We'll be right behind him on this one," said. . . the chief spokesman for the Republicans on the budget. . . . He believed that \$30 million to \$35 million could be cut from the court budget.

The New York Times
February 27, 1983

The confrontation in New York between Governor Cuomo and the state court system typifies the new fiscal problems facing the courts. Despite constitutional protections, the courts are under increasing pressure to cut costs and decrease their budgets. This chapter describes the growing threats to the financial health and independence of the courts and how cost analysis is becoming more important. It also explains why cost analysis is needed when financial resources are more abundant. Finally, the chapter explores the limited cost analysis capabilities of the courts and suggests why judges and court administrators have not been able to upgrade this critical management function.

Growing Fiscal Pressures

Popular tax-cutting initiatives such as California's Proposition 13 and Massachusetts' Proposition 2-1/2, poor economic conditions, and federal funding cutbacks have reduced the amount of revenue available to fund government programs, including the judiciary. The new State Court Administrator in Oregon had to make a 15 percent budget cutback during her first year in office, and another 15 percent the second year.¹ Ironically, budgets are being reduced or level funded even as judicial systems are being expanded "owing to population growth, increasingly complex demands of society, and changes in the methods of providing justice. . . ."² Under such circumstances, decisions on whether to cope with the increased workload by hiring another court clerk or purchasing another recording device will be based on how much each item costs, as well as on what each is supposed to accomplish.

Historically, the courts have been somewhat insulated from these fiscal pressures and the need to worry about costs. Most courts have enjoyed a special budgetary status because of their position as an independent branch of government. The New York situation demonstrates that there are often constitutional limitations on the extent to which budgets formulated by the judiciary may be reduced or even considered by the executive or legislative branches. For example, Robert Tobin reported that:

In some states (e.g., Alabama), there are strong constitutional requirements for adequate legislative funding of the whole court system. In West Virginia the constitution prohibits the state legislature from cutting the judicial budget Other states (e.g., Iowa and Illinois), have statutes which permit courts to mandate county general fund appropriations for major aspects of court operations. In states where there is no explicit legislative recognition of the special status of courts, trial courts have occasionally resorted to mandamus or court-ordered appropriations to obtain funding (e.g., Indiana).³

However, there are at least three ways in which the apparent fiscal independence of the courts has been compromised and cost information made more important. First, the courts are becoming less inclined to invoke their judicial powers in order to compel adequate funding from the executive and legislature. "It is a struggle," Robert Tobin argues, "where the court may win the battle in court, but lose the war in broader realms of local politics."⁴ Threats of constitutional or statutory amendment, judicial recall or re-election defeat, and public hostility are all powerful incentives for courts to analyze and reduce costs, rather than insist on expanded budgets. Furthermore, in periods of high unemployment and economic strain, the courts may feel obligated to share in the financial sacrifices being made by the other branches of government and the citizenry.

Second, the courts are heavily dependent on executive branch agencies for performing many routine financial management functions, including fund and cash accounting, purchasing, contracting, and property management. Telephone contacts with court systems that did cost analysis revealed that 9 percent relied on executive branch agencies for basic cost information. The judicial branch has to adhere, in some jurisdictions, to executive branch fiscal procedures and reporting requirements. Data on operating or administrative costs may be requested from the courts.

Third, the increasing trend for states to assume some or all of the costs of local trial court operation has also eroded the fiscal independence of the courts. Twenty-two states were identified as totally or substantially state-funded in a 1979 study;⁵ today, with the additions of Oregon, Utah, Wyoming, North Dakota, Iowa, New Hampshire, and Michigan, there are 29.⁶ State funding has important implications for court financial management, since the level of government which supplies the money is the level which determines accounting and reporting procedures. In a totally unified system, the budget and accounting process may be imposed by the state executive branch. Trial court budgets are submitted to the state court administrator for inclusion in the overall court budget, which is presented to the other branches of state government. Trial courts in state-funded systems are particularly affected by the budget limitations and cost controls imposed by the state in order to cope with declining revenues.

It is important to note that cost analysis is not just a cutback management tool. Even when resources are more plentiful and there are budget surpluses, as is now happening in some states, cost analysis has been used to manage growth. If, for example, a state court system is allocated its fair share of new state or federal funds, it cannot simply increase the budgets of all of its programs and courts without examining each one's current costs and services. Certain programs may need additional funding more than

others. Courts in rural areas of the state may not be able to absorb significant budget increases, whereas urban courts, confronted by growing caseloads, need all the new funds they can obtain. Regardless of how much more money is made available to the courts, the demand for those funds has almost always exceeded the supply so that court officials must choose among competing alternatives. The expected cost of each alternative has been a key factor in making these decisions.

Uses of Cost Information

Cost analysis aids decision making at all levels of management, from state court administrator to district court clerk. When asked which public officials used cost information most regularly, 67 percent of the court officials that we interviewed named the court administrator. Seventeen percent identified executive branch officials outside the court (e.g., county commissioners, state budget office), 8 percent pointed to judges, and 8 percent to legislators. Information about the costs of court functions is essential to planning, budgeting, pricing, controlling, and evaluating the work of the courts. The National Council on Governmental Accounting acknowledged the value of cost information when it wrote:

Cost is an important consideration in . . . providing for the equitable distribution of financial burden among interested parties. In these contexts, it is the full economic cost— not merely the current outlays—that is important. Thus, a program that involves long-lived physical resources or future financial obligations has a cost that cannot be measured by reference only to short-term financial resources. These factors are relevant in determining the economic cost of the program.⁷

A discussion of basic uses and examples drawn from actual practice should confirm the importance of cost analysis to the courts.

1. **Planning.** Cost analysis helps to establish objectives, judge the feasibility of objectives, and compare alternative ways for achieving those objectives. By attaching a cost estimate or “price tag” to each objective, planners can identify those that are too expensive regardless of their priority or relevance to identified needs. For example, the Hawaii court system must study the cost implications of attempting to “process 75 percent of criminal cases within 180 days.”⁸ Hawaii may discover that the achievement of this objective is not affordable and decide either to uncover new sources of revenue or to make the objective less ambitious and less expensive. Once an objective is established, cost information can also assist in selecting the program

or strategy that accomplishes the objective most economically. Cost information may reveal, for example, that it is more economical to lease court vehicles than to purchase them.

2. Budgeting. A growing number of court officials recognize that they need accurate cost information to know what to ask for and why, and generally to prepare more accurate budget requests. (In our telephone interviews, budgeting was mentioned most frequently as the principal use of cost information.) Parkison and Buckles argue that: "Budget decisions require rational consideration of costs and benefits if any large system is to be managed efficiently."⁹ Cost analysis, together with projections of caseloads, personnel needs, and anticipated revenues, offers a more rational approach to budget deliberation than the incremental and across-the-board level funding approaches traditionally used.

For example, the Los Angeles Superior Court used projected case filings and a weighted caseload analysis in costing its recommendation to add \$4.8 million to the county budget for the purpose of appointing 42 new judges. At the time, the court had such a significant backlog that the time to trial averaged 40 months countywide and 48 months in the Central District. Exhibit 1.1 presents the results of this analysis, separating county costs from state costs. It shows that the county costs for new judicial and support staff and other resources will total \$7.2 million (after summing the subtotals under judicial staff, courtroom staff, etc.) and the state's share will total \$4.9 million. However, the exhibit does not make clear that the state reimbursement of \$2.4 million listed under the detailed state costs will be applied to the county total of \$7.2 million for a net county cost of \$4.8 million.

Without reliable information on the historical and projected costs of the personnel, equipment, and other resources, budgets can be very unrealistic, resulting in substantial cost underruns and overruns. Cost information is particularly important for projects requiring budget allocations over several years since executives and legislators demand estimates for the project's total costs before appropriating start-up funds.

3. Pricing. Inflation, federal cutbacks, and tax limitations have convinced many public officials, including judges and court administrators, that selected services ought to be sold rather than given away. To generate additional revenue, an increasing number of court systems are, for example, selling reporter services or charging case filing fees. This does not mean that citizens ought to pay a fee for every service in addition to paying taxes. Fees are applied mainly to those services for which there is especially heavy demand and which benefit certain users rather than the general public. User fees have two major purposes. First, and foremost, they raise revenue. Second, they limit consumption. Consequently, fees can be used to lessen inefficient or

Exhibit 1.1
USE OF COST DATA FOR BUDGET JUSTIFICATION*
(Los Angeles Superior Court)

DETAILED COUNTY COST

1.	Judicial Staff (42 Judges)		
	Judge's Salaries	42 x \$9,500	= \$ 399,000
	Employee Benefits	42 x \$1,425	= \$ 59,850
	TOTAL		\$ 458,850
2.	Courtroom Staff		
	42 (Post) Superior Court Clerk	42 x \$28,552.31	= \$1,199,197
	5 (Relief) Superior Court Clerk	5 x \$28,552.31	= \$ 142,762
	*42 Court Reporters	42 x \$39,184.00	= \$1,645,728
	*42 (Int. Post) Deputy Sheriff Generalist	42 x \$30,953.40	= \$1,300,043
	Salary Savings (112,157)		\$ (112,157)
	SUBTOTAL		\$4,175,573
	Employee Benefits		\$1,305,291
	TOTAL		\$5,480,864
3.	Superior Court Supporting Staff		
	6 Senior Judicial Secretary	6 x \$21,257	= \$ 127,542
	Salary Savings (25,506)		\$ (25,506)
	SUBTOTAL		\$ 102,036
	Employee Benefits	6 x \$ 4,863	\$ 29,178
	TOTAL		\$ 131,214
4.	County Clerk Supporting Staff		
	4 Supervising Superior Court Clerk	4 x \$32,023.75	= \$ 128,095
	5 Civil Filings Examiner	5 x \$17,155.60	= \$ 85,778
	6 Senior Typist Clerk	6 x \$17,028.00	= \$ 102,168
	6 Intermediate Typist Clerk	6 x \$15,061.00	= \$ 90,366
	1 Statistical Analyst	1 x \$23,853.00	= \$ 23,853
	1 Accounting Technician II	1 x \$21,364.00	= \$ 21,364
	2 Data Conversion Equipment Operator II	2 x \$17,541.00	= \$ 35,082
			\$ 486,706
	Salary Savings (8.3577%)		\$ (40,677)
	SUBTOTAL		\$ 446,029
	Employee Benefits (23.3059%)		\$ 103,951
	TOTAL		\$ 549,980
5.	Services and Supplies		
	Superior Court		\$ 289,800
	County Clerk		\$ 164,456
	TOTAL		\$ 454,256
6.	Equipment		
	Superior Court		\$ 144,700
	County Clerk		\$ 73,929
	TOTAL		\$ 218,629

DETAILED STATE COSTS

42 Judges		
State Portion of Judges Salaries	42 x \$53,767	= \$2,258,214
State Employee Benefits (12%)		\$ 270,986
State Reimbursement SB 90	42 x \$57,455	= \$2,413,110
TOTAL		\$4,942,310

*SOURCE: Los Angeles Superior Court/Frank S. Zolin, Executive Officer, "Judicial Officer Requirements" (November 7, 1983), Attachment I.

wasted use of court resources. If the court has not charged for civil case filing or reporter services, instituting a fee may discourage individuals from filing frivolous cases and prompt more attention to out-of-court settlement. However, it is important not to deny essential court services to the economically disadvantaged by setting the fee too high or refusing to waive the fee in hardship cases.

Many fees are set by statute, supreme court rule, or local ordinance rather than unilaterally by the courts. Examples of these externally-authorized fees often include docket fees, photocopying fees, and jury fees and mileage allowances. In this context, the role of the court or court administrator in pricing is not to impose fees for service but to recommend them to the legislative body or to review legislative proposals.

Before setting fee or price, it is essential to know the actual costs to the court of providing the service. Such costs include not only the direct costs incurred by the organizational unit providing the service, but also the overhead and general administrative expenses that may be "hidden" but substantial. Cost information is also useful when the court seeks to purchase goods or services from outside vendors or recover costs from other government agencies.

In order to win support for user fees and charges, judges and court administrators may use cost information to prepare exhibits that:

- show the cost to the government of providing the service;
- compare charges to those in neighboring jurisdictions;
- present past and projected service demand; and
- present conservative estimates of new revenues generated, since charging a fee may reduce both service demand and anticipated revenue.¹⁰

Exhibit 1.2 presents a checklist of items for the court or external legislative body to consider when establishing a user fee. It demonstrates the critical importance of accurate cost data in deciding whether and how much to charge.

An example of how costing supports pricing can be drawn from the Los Angeles Superior Court, which used cost information to support its recommendation to establish user fees for court reporters and jurors. Specifically, the court administrator recommended:

- charging civil, probate, and family law litigants the full cost of court reporter services after the first day of trial, which would produce about \$1.9 million additional revenue per year; and

Exhibit 1.2
CHECKLIST IN CONSIDERING USER CHARGES*

- Resist subsidizing programs that provide direct benefits to identifiable individuals. Implement user charges.
- Periodically review all user charges to determine the extent to which you are recovering the full cost of providing a service.
- When establishing a price, consider the potential users' ability to pay.
- Before setting a new charge, estimate its revenue producing capability.
- Structure your accounting system so that it provides information on the full cost of all programs. Make sure this information is available to the elected officials, department heads, and citizens.
- Avoid a situation where the public mistakenly believes certain services are "free." The public should be made aware of the full cost of the services provided.
- Undertake an educational program in your community to inform residents that user charges are to subject annual (or sooner) updating, depending upon the cost of providing the service.
- Place the responsibility of raising the necessary revenue to implement a new program or the expansion of existing programs on those persons who use the programs.
- Be alert to the fact that services with no charge attached to them may lead to overuse, overcrowding, and waste of the service—ultimately resulting in public pressures to expand the service facilities.
- Make sure that citizens urging that user charges not be increased realize that revenue to operate the service must then come from other sources. In such instances, non-users may be subsidizing users.
- Be aware that communities compete with each other to attract new business and industry. If you have too many charges, you may lose your competitive position.
- If certain services are subsidized to meet social goals, be sure the governing body is fully aware of the difference between the revenues received and the full cost of providing services.
- Consider how much it will cost to collect the fee or charge.
- Make sure the fee or charge is legal within state or local statute.
- Be aware that subsidizing a service which could stand on its own may draw needed revenue from other sources which cannot support themselves.
- Keep in mind that user fees provide market signals to government officials on the types of services desired and the quality and quantity of the service.
- Property taxes are deductible on federal personal income tax returns—user charges are not.
- Insure that there are adequate internal controls to protect the revenues collected.
- Keep in mind that consumption may be elastic. As the fee increases, consumption may go down.
- Consider holding public hearings prior to establishing or increasing a fee or charge.

*Adapted from: Department of Commerce and Community Affairs, State of Illinois, "User Charges—Overlooked Revenue Source," May 1981, pp. 9-10.

SOURCE: Massachusetts Executive Office of Communities and Development, *Costing and Pricing Municipal Services* (Boston, 1982), p. 55.

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- requiring civil litigants to reimburse the county for jury fees and mileage paid all jurors appearing for the voir dire examination, which would produce about \$.5 million in additional revenue per year.

The court administrator pointed out that the court reporter fee would apply to less than two percent of litigants, since all other trials are completed on the first day. The fee would be \$162.37 per day, based on the Los Angeles County Controller's daily rate for court reporters. Not charging a fee until after the first day of trial was justified, in part, on the grounds that a portion of the cost of reporting services was already included in the basic filing fee.

The Superior Court also considered, but did not recommend, an omnibus court fee as an alternative to specific fees for jurors or court reporters. It was estimated that the daily costs for non-jury trials during 1982-83 would be \$982 civil, \$1540 family law, and \$2876 probate. Such fees were not recommended because of: (1) opposition of the legal community and public to establishing such a "substantial financial hurdle for litigants requiring access to the courts," and (b) technical difficulties in determining the full cost and a fair price for services that vary considerably among trials.¹¹

4. Controlling. Historically, the word "control" refers to making sure that money is spent as legislatures and executives mandated through their plans and budgets. In controlling, unit costs are monitored over time in order to discover significant changes and, possibly, to compare the actual costs with planned costs. If costs are up and output is down, management must identify trouble spots and take corrective action if necessary. Cost information may uncover the uneconomical use of equipment, duplication of effort and overstaffing in relation to the work to be done, faulty purchasing practices, or procedures that may be more costly than justified. In the courts, accurate cost data that can be related to caseload and caseflow has been cited as a critical need.¹² On the other hand, higher unit costs may not result from management control problems at all, but from general salary or fringe benefit increases, inflation, or temporary drops in caseload.

In his book, *Financial Management*, Robert Tobin argued that "trial court budgets . . . contain items which are . . . variable and volatile. These items require special management control, since they can expand rapidly and may make the trial court budget open to attack." Many legally mandated expenditures are difficult to predict in advance because they are, by definition, open-ended. These include juror payments, attorney fees for indigent defense, witness fees, and costs of medical and psychiatric examinations. Other items in the court budget are not mandated, but still troublesome to control. These include travel, capital expenditures, contractor services, and

electronic data processing. Tobin stressed that the "key consideration is that certain budget items require special scrutiny because they are not fixed expenditures and because they possess one or more of the following characteristics:

- they are not items which normally require funding at a fixed level from year-to-year (e.g., contractor services);
- they are 'luxury' items which can be transformed into 'necessity' items (e.g., out-of-state travel);
- they are 'risk' items in the sense that they tend to generate sharply increased expenditures in future years (e.g., computer systems); and
- they are politically vulnerable items (those that are likely to be challenged by external agencies)."¹³

Exhibit 1.3 exemplifies the use of cost information to serve the control function. It was prepared by Mott-McDonald Associates as part of its analysis of case processing costs in the Bronx Criminal Justice System for the New York City Bar Association.¹⁴ It presents the average cost by offense type for cases disposed at arraignment, disposed after arraignment, and for all cases. By identifying case types with especially high costs, this analysis allows managers to take corrective action, where possible, to reduce costs and avoid budget overruns. For example, the Bronx study suggested that felony weapons cases were far more costly than misdemeanor marijuana cases, mainly due to the number of court appearances. Efforts to reduce the number of appearances by plea bargaining and limiting continuances would probably result in substantial cost savings and speedier case dispositions.

5. Evaluating. How successful is the court in achieving stated objectives? Are available resources being fully utilized? Cost analysis can help to answer these questions. It also can help to determine whether organizational effectiveness has been purchased at reasonable cost; at times of economic stress, an effective but expensive program may be beyond the means of most courts. Information on program costs can also be used in management performance appraisals in order to encourage "cost consciousness."

The Los Angeles Superior Court measured the costs of bailiffing courts during FY 1980-81 as part of its continuing evaluation of personnel costs and assignments. As shown in Exhibit 1.4, the court determined that the bailiffs cost \$10.5 million, of which \$8.4 million were direct costs of various courts and \$2.1 million were indirect department and countywide overhead. These data would also be helpful in evaluating the relationship between bailiffing costs and caseload and whether the costs of additional bailiffs might be justified by the benefit of reducing the superior court's significant case backlog.

Exhibit 1.3
CONTRIBUTION OF COST DATA TO MANAGEMENT CONTROL*
(Bronx Criminal Justice System)

Average Cost of Selected Offenses
 For Cases Disposed at Arraignment and After Arraignment
 By the Bronx Criminal Court Between July 1, 1977, and June 30, 1978

<u>Offense</u>	<u>Cases Disposed At Arraignment</u>	<u>Cases Disposed After Arraignment</u>	<u>All Cases</u>
Felony Assault	\$280.05	\$1,094.53	\$1,000.87
Misd. Assault	337.61	971.09	838.66
Murder	225.08	711.03	652.93
Rape/Sex Offense	240.31	935.10	906.80
Kidnapping	282.20	738.63	721.08
Felony Burglary	386.40	961.28	896.60
Misd. Burglary	225.06	772.55	591.10
Felony Mischief	339.34	906.85	833.62
Misd. Michief	344.11	789.89	667.71
Arson	225.08	1,062.25	1,043.08
Felony Larceny	464.72	1,036.82	891.70
Misd. Larceny	401.56	781.91	645.35
Robbery	304.87	975.24	941.97
Felony Possession	410.03	935.52	874.52
Misd. Possession	382.42	839.15	684.25
Felony Fraud	400.84	1,069.47	932.85
Misd. Fraud	357.54	1,278.85	935.16
Obstruct. Justice	375.44	1,058.11	867.10
Escape	345.20	977.00	819.05
Felony Drug Offense	615.62	843.93	832.74
Misd. Drug Offense	389.42	706.93	640.33
Felony Marijuana	441.18	778.22	641.08
Misd. Marijuana	389.63	611.64	468.54
Gambling	498.82	903.85	857.43
Prostitution/Lewdness	535.40	1,041.21	818.35
Public Order	500.95	767.88	637.29
Felony Weapons	283.75	1,218.09	1,179.04
Misd. Weapons	388.03	1,041.60	889.26
Weighted Average Cost	\$390.51	\$ 968.98	\$ 851.52

*SOURCE: Mott-McDonald Associates, *The Cost of Justice: An Analysis of Case Processing Costs in the Bronx Criminal Justice System* (New York: Association of the Bar of the City of New York, 1979), p. III-6.

Exhibit 1.4
USE OF COST DATA FOR EVALUATION*
(Los Angeles Superior Court)

SHERIFFS DEPARTMENT COSTS OF BAILIFFING COURTS FISCAL YEAR 1980-81

Courts Bailiffed	Costs	Percent of Total	+24.737%		
			Indirect Departmental and Countywide O.H.	=	
Criminal Court	\$3,170,756	37.8%	\$784,350	=	\$3,955,106
Juvenile Court	1,574,473	18.8	389,477	=	1,963,950
Civil Court	2,191,847	26.1	542,197	=	2,734,044
Family Law Court	1,319,470	15.7	326,397	=	1,645,867
Probate Court	42,780	.5	10,583	=	53,363
Appellate Court	4,194	.05	1,038	=	5,232
Mental Health Court	84,721	1.0	20,957	=	105,678
TOTAL COST	\$8,388,241	100	\$2,074,999		\$10,463,240

*SOURCE: Los Angeles Superior Court/James F. Butcher, Finance Officer (January, 1984).

Costing Systems

Courts across the country are giving increased attention to the development and use of cost information. In addition to the examples cited previously:

- The Superior Court of Los Angeles County has performed detailed cost studies to determine the costs of operating each courtroom. These studies have also measured costs in major program areas and distinguished between direct and indirect costs.
- The Colorado State Judicial Department has established cost-per-case objectives for trial courts.
- The Missouri Council on Criminal Justice funded a project to estimate the total annual costs of providing court services in the state, to estimate total costs of providing services in each court, and to identify reasons for costs differing among types of cases and courts.

-
- The Assigned Counsel Unit of New York State's Appellate Division calculated the average professional fees and administrative expenses incurred in assigning counsel from panels to various types of criminal and juvenile cases.
 - In Bucks County, Pennsylvania, the Court Administrator has devised 39 cost centers to monitor the cost effectiveness of jury management, juvenile and adult probation, and other court functions.

Exhibit 1.5 summarizes data from the telephone interviews with selected court systems that had developed or emerging costing practices. Eleven of the 32 jurisdictions surveyed are represented. For each system, the exhibit addresses the following issues:

1. Who performs your cost analysis?
2. What types of costs do you measure?
3. How often does your system measure costs?
4. How would you rate the accuracy of your cost information?
5. How is cost information used?
6. What basis of accounting does your court system use?
7. When your system measures costs, what cost items are typically included?
8. Who uses the cost information on a regular basis?
9. On the whole, how would you rate the capacity of your court system to measure costs?

The information presented in Exhibit 1.5 will be cited at various points throughout the document and, therefore, need not be detailed here. However, several key findings should be highlighted. First, the courts included in the exhibit are not representative of the larger population of trial and appellate courts, in that these selected courts have much better than average costing systems. Second, among these "advanced" systems, the types of costs measured most frequently were the costs of program areas (e.g., criminal and civil courts) and objects of expenditure (e.g., salaries and travel expenses). Third, most claimed that they measured costs very frequently and very accurately which, as we shall examine in the next section, is far from typical practice. Fourth, court administrators were the principal generators and users of the cost information, primarily for budgeting and internal control.

Exhibit 1.5
SELECTED COSTING SYSTEMS

SURVEY ITEM SITE	(1) Who does cost analysis?	(2) Types of costs measured?	(3) How often?	(4) How accurate?	(5) How used?	(6) Basis of accounting?	(7) Level of cost analysis?	(8) Users of cost analysis?	(9) Rating of costing capacity?
Supreme court of MISSOURI Jane Hess, State Court Admin.	State Court Administrator	Function Object of Expenditure	Very frequently	Accurate	Planning Budgeting	Cash	Direct personnel/ non-personnel costs	Office of State Court Administrator	Fair
Administrative Office of the Courts ALABAMA A.L. Tapley, Director	State Court Administrator	Department Object of Expenditure	Very frequently	Very accurate	Budgeting Internal Control	Accrual	Direct personnel/ non-personnel costs	Office of State Court Administrator	Good
Judiciary, HAWAII Lesto Cingcade, Admin. Dir. of Courts	Clerk of Court	Program Area Function Object of Expenditure	Very Occasionally	accurate	Budgeting	Accrual	Direct personnel/ non-personnel costs	State/ Local Court Administrators	Fair
COLORADO Judicial Department James Thomas, State Court Admin.	State Court Administrator	Cost by Disposition	Very frequently	Very accurate	Planning Budgeting Internal Control	Accrual	Direct personnel/ non-personnel costs	Office of State Court Administrator Legislature	Good
Administrative Office of the Courts, NORTH CAROLINA Fran Tallifer, Admin. for Info. Sys.	State Court Administrator	Department Object of Expenditure	Very frequently	Very accurate	Planning Performance Appraisal	Accrual	Direct personnel/ non-personnel costs	Office of State Court Administrator Executive Branch	NA
Bucks County Courthouse PENNSYLVANIA Paul Kester District Court Admin.	Local Court Administrator Executive Branch Clerk of Court	Department Object of Expenditure	Occasionally	Accurate	Planning Budgeting Performance Appraisal Internal Control	Modified Accrual	Direct personnel/ non-personnel costs (incl. bldg.)	Local Court Administrators	Excellent

**Exhibit 1.5 (Cont.)
SELECTED COSTING SYSTEMS**

SURVEY SITE \ ITEM	(1) Who does cost analysis?	(2) Types of costs measured?	(3) How often?	(4) How accurate?	(5) How used?	(6) Basis of accounting?	(7) Level of cost analysis?	(8) Users of cost analysis?	(9) Rating of costing capacity?
District Court of Hennepin Co. MINNESOTA Fancis Dosal, Deputy Court Admin.	Local Court Administrator	Program Area Object of Expenditure	Very frequently	Very accurate	Planning Budgeting Internal Control	Cash	Direct non-personnel costs only	Judges Court Administrators	Excellent
Administrative Office of the Courts, NEW JERSEY Frank Farr, Deputy Asst. Direct.	State Court Administrator	Program Area Object of Expenditure	Very frequently	Somewhat inaccurate	Planning Budgeting Performance Appraisal	Cash	Direct and indirect costs	Office of State Court Administrator Legislature	Excellent
Chief Court Administrator, Superior Court, CONNECTICUT Joseph Keefe, Executive Secretary	State Court Administrator	Program Area Object of Expenditure	Very frequently	Very inaccurate Excellent financial data	Planning Budgeting Internal Control	Cash	Direct personnel/ non-personnel costs	Office of State Ct. Administrator Executive Branch	Good
Cook County Courts ILLINOIS Jeffrey Arnold, Administrative Director	Executive Branch (Budget Bureau)	Department	Very frequently	Accurate	Budgeting	Cash	NA	Local Executive Branch Court Administrators	Not sure
Los Angeles Superior Court CALIFORNIA Fank Zolin, Executive Officer	Local Court Administrator	Program Area Department Object of Expenditure	Very frequently	Accurate	Budgeting Performance Appraisal Internal Control External Reporting	Cash	Direct and Indirect Costs	Court Administrators Executive Branch Officials	Good

Limited Cost Analysis Capabilities

Unfortunately, these examples are more the exception than the rule. To be sure, almost all of the practitioners and researchers that we contacted reported an enhanced awareness of the need for cost analysis in appellate and trial courts. However, in response to the question, "Does your court system measure the costs of its programs and services?", 21 of the 32 jurisdictions contacted (66 percent) reported that they did not.¹⁵ In a few instances, these self-reports contradicted the prevailing view in the field. (For example, the District of Columbia Superior Court was viewed by other respondents as having an "exemplary" costing system while the D.C. Court Administrator reported having no regular costing system at all.) When asked why they did not measure costs, most respondents cited lack of interest or need (36 percent) and lack of money (18 percent).

What is lacking in how courts cost their services? The telephone interviews and other data sources disclosed that existing cost analysis systems in many courts have four major shortcomings:

- Overemphasis on cash expenditures in identifying costs and insufficient attention to the fact that costs can be incurred even when no cash is expended, e.g., the costs of "wear and tear" on buildings and equipment used by the courts. About 60 percent of the court systems contacted used cash accounting rather than the accrual accounting that tracks use and thereby facilitates cost analysis. In fact, many of these court systems, including some depicted in Exhibit 1.5, claimed that they measured costs when they were actually just counting cash expenditures.
- Difficulty in identifying and measuring indirect costs. Only three of the eleven court systems shown in Exhibit 1.5 included indirect costs in their definition of full cost.
- Allocation of cost information by organizational unit or object of expenditure rather than by specific service. This practice makes it easy to determine who is responsible for the cost, but it obscures the service or purpose for which it was incurred.
- Slow and cumbersome reporting methods that provide cost information in a format too complicated to use, at a level too general to comprehend, and at a time too late to influence decision-making.

There are a number of plausible explanations for this situation. One is that, due to their special budgetary status and dependence on their state or local governments' financial management system, the courts have not been staffed by persons with cost accounting interests or skills. Judges are trained in law, and not in accounting. Even professional court administrators are uncomfortable with cost analysis because their formal education and previous experience in financial management is much more likely to have included finance and budgeting than accounting. Some are also uncomfortable because they view cost analysis as a political art whose real object is to justify reduced court budgets; others see it as a mysterious science, understandable only by certified public accountants; still others consider cost analysis to be a waste of time, given the court's lack of control over caseload and the resultant costs.

Another explanation for the poor court costing systems is that when judges and court administrators seek outside help for cost analysis, the options are few. Their state or local government may not include the cost accounting function in its financial management system, which limits the amount of support that the government is able or willing to give to cost analysis in the courts. Accounting firms have the technical expertise, but may be too expensive and business-oriented. "Packaged" and comparatively inexpensive accounting software requires significant adaptations in the programming to fit local needs and contexts. Moreover, existing software is based on business accounting practices that are more suitable for expensing a manufactured product than costing a public service.

Third, cost information of the technical quality recommended in this report is often unfamiliar and sometimes confusing to external funding bodies. Legislatures and federal agencies are accustomed to receiving funding requests in terms of today's expenditures rather than long-term costs. Given limited costing expertise and available time, courts are more likely to concentrate on the expenditure compilations that their funding bodies require, forgoing the rigorous cost analysis that may eventually lead to reduced expenditure requests.

Finally, the literature is not very helpful. Several monographs and textbooks exist on financial management in the courts, but very few of them deal specifically with cost analysis even in part, and none deals exclusively with the subject. Many interview respondents pointed to case studies and standardized costing developed and implemented in specific jurisdictions by the National Center for State Courts. However, these same persons also acknowledged that these studies and systems are so jurisdiction-specific that others would have great difficulty in adapting them without expert help. Robert Tobin characterizes the literature's coverage of cost analysis in the courts, including his own work, as "virgin territory. There's nothing out there."

Footnotes

1. Interview with Elizabeth Belshaw (February 25, 1983).
2. James M. Parkison and Stephen G. Buckles, "Cost Analysis—in Courts: A Case Study," *State Court Journal* (Winter 1978), p. 13.
3. Robert Tobin, *Financial Management* (Washington, D.C.: National Institute of Law and Criminal Justice, 1979), p.2.
4. *Ibid.*, p. 4.
5. Institute for Advanced Studies in Justice, *State Funding of Court Systems: An Initial Examination* (Washington, D.C.: American University Law School, 1979), p. 1.
6. Letter from Harry Lawson (November 26, 1985). See also: Harry O. Lawson and Barbara J. Gletne, *Fiscal Administration in State-Funded Courts* (Williamsburg, VA: National Center for State Courts, 1981), p. iii.
7. National Council on Governmental Accounting, "Exposure Draft: Objectives of Accounting and Financial Reporting for Governmental Units" (Chicago, 1981), p. 13.
8. Interview with L.E. Cingcade, Administrative Director of the Courts, Judiciary, State of Hawaii (June 14, 1983).
9. Parkison and Buckles, *op. cit.*, p. 13.
10. Massachusetts Executive Office of Communities and Development, *Costing and Pricing Municipal Services* (Boston, 1982), p. 14.
11. Los Angeles Superior Court, *Report on Court Financing and User Fees* (1982).
12. Richard B. Hoffman, "New York State Court Financing: Developing the Centralized Process," *State Court Journal* (Winter 1979), p. 7.
13. Robert Tobin, *op. cit.*, pp. 25-26.
14. Mott-McDonald Associates, *The Cost of Justice: An Analysis of Case Processing Costs in the Bronx Criminal Justice System* (New York: Association of the Bar of the City of New York), p. III-6.
15. In a telephone interview with the author, Keith Bumstead of the National Center for State Courts was less optimistic about costing capabilities, at least in the trial courts. He estimated that fewer than 10 percent of the 2,233 general jurisdiction trial courts are able to measure their costs on an ongoing basis.

Chapter 2

Fundamental Considerations In Analyzing Court Costs

Like most professions or disciplines, cost analysis has its own concepts and terminology. These guide the accountant who generates the cost information and inform the manager who uses it. However, there is no one best way to determine cost or even to define what cost is. There are many different types of cost, and these costs are developed and used differently, depending on the characteristics and objectives of the organization and the purposes for which cost information is collected. Chapter 2 examines these and other fundamental considerations in order to place in perspective the various techniques of costing described in the chapters that follow.

What is a Cost?

Cost is the cash value of the labor, supplies, equipment, and other resources used to accomplish a purpose or carry on an activity. Note the emphasis on *resources used*. A cost is not an expenditure, which records or recognizes cash outlay for resources as soon as payment is made and money changes hands. Costs are not recorded until the resources are used, regardless of when money changes hands. Cost in one fiscal year will be all resources used that year, whether payment is made that year, in previous years, or in future years.

- For example, a court pays \$5,000 to a consultant in 1984 for work performed in 1983. The \$5,000 is recognized as a cost of 1983, because that is when the consultant resource was used, and as an expenditure of 1984 when the consultant was actually paid.
- Also in 1984, the court purchased \$2,000 worth of supplies which would be recorded in full as an expenditure of that year. If only 50 percent of the supplies were used in 1984 and the other 50 percent in 1985, then the cost of the supplies would be \$1,000 in 1984 and \$1,000 in 1985.
- This same cost principle of accounting for resources only as they are used also applies to buildings, equipment, and other "fixed assets." Cost analysis recognizes that fixed assets are used over a number of years and records (or "depreciates") the costs of that use over the lifespan of the asset. It allocates the acquisition cost of the asset over the several years in which the asset is used. For example, the annual cost of a \$6,000 word processor with an estimated service life of three years would be \$2,000. The \$6,000 expenditure for this equipment would be recorded in full when payment is made.

Full cost means the total cost of all the resources used for a specified purpose or activity. Measuring that use and assigning it a cash value can be difficult. If cost estimates are based on readily available expenditure records, it is possible to overestimate the true costs for years in which many long-lived assets were purchased, and to underestimate the costs for other years because the continued use of those same assets would not be recognized. However, most court systems are "labor intensive," i.e., a high percentage of their budgets is allocated to personnel salaries and fringe benefits. Since these expenditures are paid during the same period in which the personnel services are used for cost purposes, expenditure compilations and cost analyses will provide these courts with comparable results. Nevertheless, most expenditure records provide fiscal data by organization units (such as family court) and objects (such as salaries) rather than by the courtrooms and case types for which cost information is typically sought.

In all organizations, measurement of full cost involves the following decisions: (1) defining a cost objective, (2) specifying cost centers, (3) distinguishing between direct and indirect costs, and (4) choosing bases for assigning costs to cost centers and, ultimately, to cost objectives. These decisions are rarely made today in the court fiscal process, so much of the discussion that follows will be "new" to many court officials. The concepts and methods examined provide a conceptual and definitional framework toward which courts might work.

Cost Objective

A cost objective is the process or job for which cost information is sought. The cost analysis might focus on "how" the court operates, and include cost objectives such as the cost of a courtroom, cost of judicial education, cost of computerization, or the cost of jury trials. Other cost objectives might pertain to "what" the court achieves, especially in terms of case dispositions. Examples of the latter include the cost of civil cases settled out-of-court, cost of criminal cases dismissed, and the cost of family court trials ended by decree.

Depending on the information needed, the cost objective can be defined very broadly (e.g., cost of criminal case juries) or quite narrowly (e.g., cost of criminal case juries in first degree murder cases). As the cost objective becomes more specific, the technique required to measure its costs becomes more complicated. For example, it is easier to estimate the total costs of a court system than to identify the cost of a particular case or case type. Yet, information about the more specific cost objectives is probably more useful for court planning, budgeting, and evaluating. The value of cost analysis is being able to relate cost to service.

Cost objectives may be expressed in total dollars (e.g., the cost of the criminal courts was \$10 million) or in total dollars related to some unit of effort (e.g., the number of cases processed). The latter is known as determining the *unit cost*. A unit cost is determined by dividing the total cost of a process or job by some measure of effort or output. For example, dividing a total cost for juries (\$500,000) by the number of jurors (1,000) yields a unit cost per juror of \$500. Developing cost analysis techniques for specific units of effort is the best way to relate financial resources to organizational efficiency or effectiveness. To know that a district court cost \$150,000 last year is less meaningful than knowing, by dividing the \$150,000 by 3,000 criminal cases processed, that the average cost per case was \$50.

Calculating unit costs is especially important because it provides a normal or standard value for the gross dollars expended, which allows comparisons between court systems with different budgets and case volumes. Exhibit 2.1 shows the types of unit costs that were studied in the Bronx Criminal Justice System. Differences in unit costs—such as the \$20.24 per fingerprint check versus the \$1.20 per case history check—may reflect actual differences in total cost, volume, or both. However, as will be argued later in this chapter, intergovernmental cost comparisons should be approached with the utmost caution because at that level, differences in unit cost may result from differences in accounting practices rather than any management action.

Exhibit 2.1
TYPICAL UNIT COSTS*
(Bronx Criminal Justice System)

The Average Cost of an Activity Unit for
Bronx County Criminal Justice Agency Cost Center

<u>Agency and Cost Center</u>	<u>Cost</u>	<u>per</u>	<u>Unit</u>
Judiciary			
All Purpose Parts	\$ 22.27		Hearing
Jury Parts	2,054.69		Trial
Bronx District Attorney			
Felony Case Evaluation Unit	8.38		Screening
Complaint Room	2.57		Complaint
Criminal Court Bureau	7.84		Appearance
Legal Aid Society	33.94		Appearance
Department of Corrections			
Bronx Court Pens	56.28		Admission
Detention Facilities	49.39		Inmate Day
	454.39		Detention Episode
Department of Probation	150.73		Investigation
Criminal Justice Agency			
Interview and Verification	15.89		Interview
Follow-up Notification	10.28		Notification
Division of Criminal Justice			
Services	20.24		Fingerprint Check
	1.20		Case History Check
Police Department			
Pre-Arrestment	133.71		Booking
Court Appearances	67.57		Appearance

*SOURCE: Mott-McDonald Associates, *The Cost of Justice: An Analysis of Case Processing Costs in the Bronx Criminal Justice System* (New York: Association of the Bar of the City of New York, 1979), Exhibit 59.

Unit cost measures vary according to the size of the unit being measured. For example, large unit costs may be calculated by applying all costs of the system to total output, e.g., total personnel costs related to case terminations produce a personnel cost-per-case standard. Exhibit 2.2 presents the results of a Rand Corporation study of court expenditures for processing tort cases, in which the cost objective was to determine the unit cost per case filed. Because all three states in the study had different average salary levels, Rand adjusted the state expenditure estimates by using the national

Exhibit 2.2
USE OF UNIT COSTS AS COST OBJECTIVES*

Summary of FY 1982 Estimated Average Government
Expenditure Per Tort Case Filed in Various Courts

Court and Type of Tort Case	Average Expenditure per Case Filed	
	Using the State's Average State-Judge Salaries	Using National Average State-Judge Salaries ¹
California Superior Court		
State excluding Los Angeles	\$ 511	\$ 372
Los Angeles	383	279
Florida Circuit Court		
Auto negligence	331	320
Other negligence	466	450
Washington Superior Court	525	536
U.S. District Court		
Motor vehicle personal injury	N.A.	1,506
Other personal injury	N.A.	1,750
Airplane personal injury	N.A.	4,197
Marine personal injury	N.A.	1,562
Torts to land	N.A.	1,995
Other personal property damage	N.A.	1,129
Assault, libel, and slander	N.A.	2,823
Federal employers' liability	N.A.	1,402
All U.S. District Court ²	N.A.	1,740

NOTES:

Figures were calculated using FY 1982 expenditures per minute, and time data from most recent year with "total time" data available. N.A. = not applicable.

¹Calculated by multiplying the individual state's average expenditure per case filed by a ratio of the U.S. average state general trial court judge's salary (\$45,633 in FY 1982) to the individual state's average general trial court judge's salary. For example, multiplying California's average expenditure per case for Los Angeles (\$383) by a ratio of the U.S. average salary (\$45,633) to California's average salary (\$62,670) or .72, yields an adjusted per case expenditure of \$279 ($\$383 \times .72 = \279).

²Average weighted by number of cases of each type filed.

*SOURCE: J.S. Kakalik and A.E. Robyn, *Costs of the Civil Justice System* (Santa Monica, California: The Rand Corporation, 1982), p.xx.

average for a state-court judge's salary instead of the three states' actual salaries. The adjusted results shown in the exhibit indicate that there is little revision to the Florida and Washington numbers, but the California adjusted estimates are significantly lower because the average state-court judge's salary (\$45,633) was considerably lower than California's (\$62,670).¹

An example of unit costs on a smaller scale is the measurement method used in Cook County, Illinois. In that model, standards are calculated for much smaller units of output, such as the number of questionnaires processed, number of psychological examinations, number of drunk driver evaluations, and number of traffic tickets processed.²

When using unit costs, however, it is important to remember that they are average figures representing a range of actual costs. The unit cost per criminal case may well be \$50, but actual costs may vary from \$20 to \$20,000. Where the cost range is very wide, the analyst should determine whether certain types of cases cost more than others and define a separate unit cost for each type.

The analyst should also remember that unit costs are simply one measure of a court's efficiency; they have little direct relation to its effectiveness. Efficiency concerns how well the court maximizes the case terminations and other outputs while minimizing the investments of time and money. Thus, one court with a unit cost per terminated case of \$50 may appear to be more efficient than another court with a per case cost of \$75. Yet, the first court may be achieving this comparatively low unit cost, not by keeping costs down or streamlining trial procedures, but by dismissing a significant number of cases under a speedy trial rule. Unit costs are not a very good indicator of effectiveness (the measure of how well the court is meeting its objectives). A court may appear grossly inefficient in terms of its unit costs while still being very effective. High unit costs may suggest wasteful and inefficient practices, or they may really be spotlighting a court that is more concerned with rendering effective justice than in staying within its budget.

Cost Center

Cost centers do the work needed to accomplish the objective being costed (e.g., cases filed, traffic tickets processed, or courtrooms operated). A cost center is the smallest unit of activity or area of responsibility into which an operating organization is divided and to which costs can be assigned. Examples of cost centers include the office of the court administrator or chief judge, cleaning and maintenance department, and data processing centers. Costs are collected in cost centers before they are assigned to cost

objectives. The end result of a cost analysis is to allocate a fair proportion of the costs of each cost center to the product or service being costed. In organizations that produce different types of products or services, each type will use different amounts of resources from different cost centers and, therefore, will have different costs.

Some cost centers are called "mission centers" because they are directly related to the mission and major objectives of the organization. Mission centers in the courts deal directly with dispensing justice and include the offices of judges, prosecutors, and court reporters. Other cost centers are "service centers," in that they support the work of the mission centers. Examples of service centers in the courts would be the office of the court administrator and, in the case of a county court system, the county commissioners and personnel director.

In the courts, a cost objective (such as the unit cost per criminal case) may include a range of cost centers with varying levels of involvement. Mission centers (such as the judges, prosecutors, and public defenders) incur the heaviest costs for criminal cases. Other mission centers (court reporter and sheriff) incur lighter, but still significant, costs. The criminal caseload generates costs which are measurable but insignificant to still other cost centers such as the service cost centers of the county auditor and budget director.

Exhibit 2.3 illustrates the use of cost centers in determining court costs. Drawn from the study of court costs in the Bronx, it allocates court division personnel among the cost centers that participate in case processing.

Direct and Indirect Costs

Direct costs can be readily attributed to a specific cost objective or cost center. As shown in Exhibit 2.4, direct costs include personnel costs as well as certain nonpersonnel costs such as equipment and supplies. For example, to estimate the direct cost per case, the analyst would include a part of the salaries and fringes paid to judges and other court personnel, travel and jury expenses, and other costs that can be assigned specifically to particular cases or case types.

However, knowing the direct cost per case is not the same as knowing the full cost. Have we considered the costs of the court administrator and his staff in managing the court system? The cost of the city or county payroll department in preparing their paychecks? Or, the costs of building and servicing court facilities? Such costs are often classified as indirect because they cannot be tied to some specific cost objective or center but are necessary to all of them.

Exhibit 2.3
ALLOCATION OF COURT DIVISION PERSONNEL TO COST CENTERS*
(Bronx Criminal Justice System)

Number and Percent of Non-Supervisory Court Division Personnel
Allocated to Each Cost Center

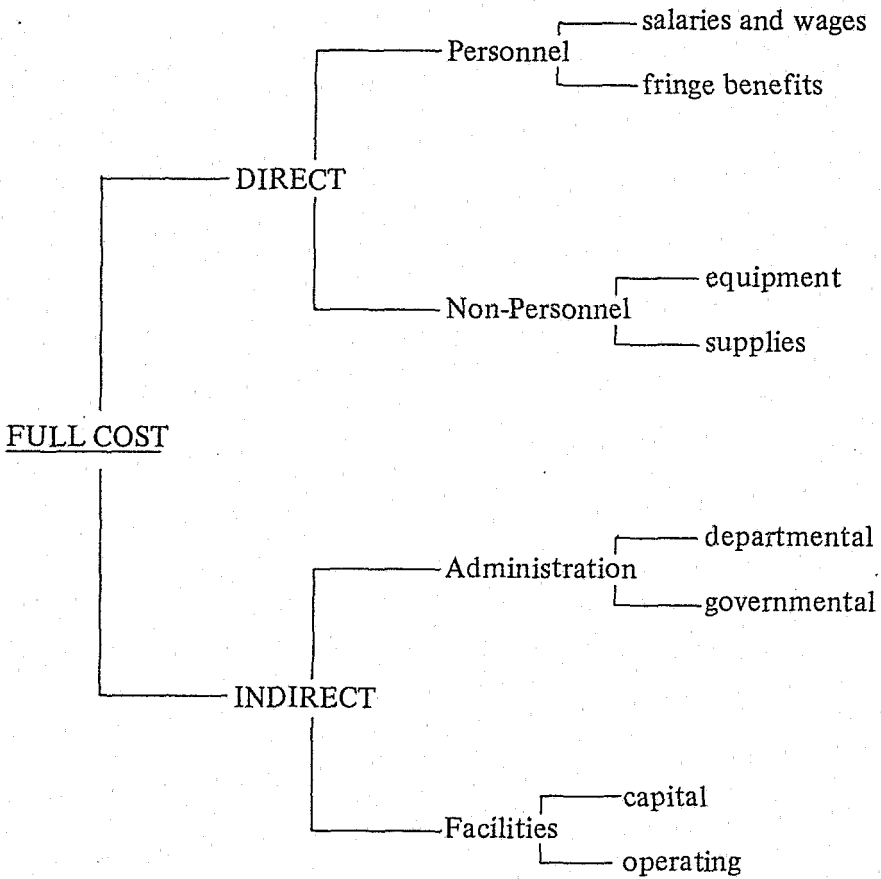
<u>Cost Center</u>	<u>Number of Personnel</u>	<u>Percent</u>
<u>Pre-Arrestment</u>	48	69.6%
Pre-Arrestment Unit	44	
FAX (Finger Printing)	4	
<u>Court Appearances</u>	11	15.9
Attendance Section	11	
<u>Outside Criminal Court</u>	10	14.5
A.A.B. (Traffic)	4	
Supreme Court	4	
Family Court	2	
TOTAL	69	100.0%

*SOURCE: Mott-McDonald Associates, *The Cost of Justice: An Analysis of Case Processing Costs in the Bronx Criminal Justice System* (New York: Association of the Bar of the City of New York, 1979), Exhibit 50.

Whether a cost is direct or indirect depends on the circumstances. For example, the rent on a building used exclusively for criminal court cases may be considered a direct cost of that activity. However, if other government departments are also housed in the building, then the rent may be considered an indirect cost that should be allocated among the court and other departments on some equitable basis, such as the percentage of space occupied. Management must have a clear understanding of the impact these indirect costs have on full cost: basing a fee-for-service or budget request on direct costs alone may significantly underestimate the true costs, in turn leading to unexpected operating deficits and unanticipated demands for administrative support and facilities usage.

Exhibit 2.4 divides indirect costs into administrative and facilities costs. Administrative costs include the departmental costs of internally operating and managing the court system, as well as governmental costs incurred by the state or local government for payroll processing, annual budgeting, and other activities in support of the court system. Facilities costs involve the capital costs of constructing court facilities and operating costs such as utilities and maintenance. Some of these costs may be charged to the court system's budget; alternatively, they may be included in the general government budget and not charged. In either case, the costs may be significant and should be included in the cost analysis. Chapter 4 provides a more detailed explanation of how to identify and measure indirect costs.

Exhibit 2.4
TYPES OF COSTS*



*SOURCE: J.T. Kelley, *Costing Government Services: A Guide for Decision Making* (Washington, DC: Government Finance Research Center, 1984), p. 24.

Allocation of Costs to Cost Centers

After determining the direct costs of all relevant cost centers, indirect costs must be allocated to the department or other mission center responsible for the service or activity that is being costed (i.e., cost objective). Allocation is the process of distributing service center costs to mission centers in order to determine the full cost of each mission center. Because service centers typically support more than one mission center, the costs of each service center must be distributed among the various mission centers on a basis that accurately reflects its actual use. The challenge to the analyst is to pick the most accurate basis of allocation without forgetting that, in general, increased precision adds to the expense of the cost accounting system. For example, maintenance costs might be allocated to various courtrooms based on the number of square feet that each occupies. Alternatively, these same costs might be allocated based on the number of hours of service rendered to each courtroom. As an allocation base, hours of service is more accurate than square footage, but it requires detailed hourly records and added recordkeeping expense.

Exhibit 2.5 presents the cost centers employed by the Bucks County Court of Common Pleas in Pennsylvania in 1981. It allocates both employee costs and operational expenses to court programs and individual justices as well as to other court-related offices. In the exhibit, the "Main Courts" category applies to the Court of Common Pleas, and the categories beginning with "Justice Ritter" and ending with "Justice Leonard" apply to magistrate courts. An especially interesting feature is that each cost center is also credited with the revenue it produced. For example, the \$268,436 in expense incurred by the Clerk of Courts was more than offset by the \$396,066 in revenue that the office generated.

Assignment of Costs to Cost Objectives

In some cases, the mission cost centers are also cost objectives. For example, the mission center of the Los Angeles Superior Court and the cost objective of total case processing costs would have the same costs. If so, the preceding step of allocating costs to mission centers completes the cost analysis process. In other cases, the mission center works on several cost objectives and its costs must be assigned to each of these objectives. Rather than defining its cost objective at the most general level of total case processing costs, a court system may seek to cost more specific objectives such as criminal case costs, civil case costs, and juvenile case costs. Costs can be assigned to each case type based on the relative level of effort that each requires. If criminal cases are assigned half of the judges or consume half of the working hours of all judges, they would be assigned half of the costs of the court system.

Exhibit 2.5 **ALLOCATION OF COSTS TO COST CENTERS*** **(Bucks County Court of Common Pleas)**

Calendar Year 1981

Judicial and Related Account Expenditures and Revenues

COST CENTER	EMPLOYEE COSTS	OPERATIONAL EXPENSES	TOTAL EXPENSES	CREDITED REVENUE
Main Courts	1,518,571.08 (69%)	681,217.92 (31%)	2,199,789.00	530,267.53 (24%)
Jury Commissions	9,034.76 (94%)	551.50 (8%)	9,586.06	-0-
Court Information System	-0-	63,814.64 (100%)	63,814.64	-0-
Law Library	30,721.20 (29%)	75,533.25 (71%)	106,254.45	1,420.35 (01%)
Domestic Relations	687,602.30 (69%)	314,707.07 (31%)	(1,002,309.37)*	1,365,325.70 (136%)
			245,664.00	
Adult Probation and Parole	569,930.30 (93%)	44,016.40 (7%)	613,964.70	45,490.00 (7%)
Juvenile Probation and Parole	484,772.77 (29%)	1,208,774.13 (71%)	1,693,546.90	628,565.83 (37%)
Youth Center	574,911.76 (81%)	131,098.31 (19%)	706,010.07	305,725.10 (43%)
Group Homes	54,478.12 (26%)	157,313.00 (74%)	211,791.12	162,222.00 (77%)
Justice Ritter	78,157.14 (63%)	46,070.83 (37%)	124,227.97	68,541.32 (55%)
Justice Manto	62,564.34 (74%)	22,546.57 (26%)	85,110.91	31,467.23 (37%)
Justice Pekarski	66,916.63 (60%)	44,453.57 (40%)	111,370.20	39,472.61 (35%)
Justice Huhn	63,983.43 (58%)	45,544.12 (42%)	109,527.55	30,930.20 (28%)
Justice Basile	39,139.64 (47%)	44,274.07 (53%)	83,413.71	24,438.68 (29%)
Justice Pollock	51,134.76 (57%)	38,926.53 (43%)	90,061.29	34,275.80 (38%)
Justice Marks	89,671.77 (72%)	34,806.38 (28%)	124,478.15	54,453.87 (44%)
Justice Spadaccino	100,973.98 (68%)	46,607.95 (32%)	147,581.93	70,795.82 (48%)
Justice Kelly	70,708.14 (60%)	46,947.22 (40%)	117,655.36	59,997.86 (51%)
Justice League	67,088.55 (64%)	37,918.15 (36%)	105,006.70	49,489.06 (47%)
Justice Orazi	59,006.63 (54%)	50,819.84 (46%)	109,826.47	37,358.28 (34%)
Justice Leedom	61,267.66 (56%)	47,552.24 (44%)	108,819.90	47,650.86 (44%)
Justice Groman	64,414.50 (67%)	31,207.81 (33%)	95,622.31	58,685.47 (61%)
Justice Hunsiker	41,710.10 (66%)	21,785.53 (34%)	63,495.63	24,852.75 (39%)
Justice Leaver	55,045.44 (66%)	27,846.40 (34%)	82,891.84	62,279.88 (75%)
Justice Stump	53,852.79 (55%)	43,232.74 (45%)	97,085.53	44,298.75 (43%)
Justice Leonard	41,761.59 (64%)	25,861.74 (36%)	65,623.33	27,353.45 (42%)
Supplementary Judicial Clerks	26,868.37 (48%)	29,375.40 (52%)	56,243.77	90 (00%)
Constables	-0-	223,885.09 (100%)	223,885.09	58,430.69 (26%)
COURT RELATED ROW OFFICES				
Clerk of Courts	247,668.07 (92%)	20,768.70 (8%)	268,436.77	396,066.78 (148%)
Prothonotary	347,884.57 (93%)	27,896.41 (7%)	375,780.98	444,753.30 (118%)
Register of Wills	201,394.37 (91%)	19,696.73 (9%)	221,091.10	220,208.60 (99%)
Sheriff	700,028.30 (85%)	121,300.70 (15%)	821,329.00	313,501.79 (38%)
GRAND TOTAL	6,521,263.06 (63%)	3,774,350.74 (37%)	(10,295,613.80)*(1) 9,538,968.43	5,235,320.46 (55%)
TOTAL COST	\$ 9,538,968.43			
LESS REVENUE	\$ 5,235,320.46 (2)			
	\$ 4,303,647.97	(Cost to taxpayers) (13.66% of total tax dollars)		
	\$31,495,000.00	(Total tax dollars collected)		

*The 1981 expenditures for Domestic Relations totaled \$1,002,309.37; however, the County share is \$245,664. The remaining costs are paid from IV-O funds which are federal funds under the Social Security Act which provides incentive and reimbursement funds to local domestic relations offices for improved efforts in collecting child support.

- (1) Court Budget Balance Report as prepared by County Controller's Office on 1-22-82
- (2) Year-End Revenue Report as prepared by County Controllers Office on 1-22-82 plus supplementary court records on Title IV-O funds.
- (3) Annual Budget of the County of Bucks for the year 1982 as prepared by County Finance Department 12-30-81.

*SOURCE: 1981 Annual Report (Doylestown, 1981), p. 7.

Exhibit 2.6 exemplifies how costs may be assigned to cost objectives. It measures three types of case costs hypothesized by New York State: automobile negligence, contracts, and real estate. The analysts from the National Center for State Courts claim that the:

first benefit of such a breakout is the availability of information showing the consumption of court resources by case type. Primary among the other benefits is the ability to compare such costs across suburban, rural and urban boundaries. (Allowances for smaller courts and salary differences can be factored in to make the figures comparable on a statewide basis.)³

Cost Comparisons Over Time

Between 1981 and 1983, the average unit cost per case in the Colorado Judicial Department increased from \$74.45 to \$80.32. Cost analysis cannot address the extent to which this increase was due to policy changes or productivity declines, but it can identify the effects of inflation. Using the Consumer Price Index (CPI) or a comparable price inflator, the effects of inflation on unit or total costs can be isolated.

For example, the change in Colorado's unit costs represented an increase in actual dollars of about 7.9 percent. Also between 1981 and 1983, however, the CPI rose from about 275 to about 300, or approximately 9.0 percent.⁴ Thus, the increase in Colorado's unit costs did not even keep pace with inflation.

Another way to analyze inflationary effects is to use the CPI to transform actual dollars expended in different years into "constant dollars." The inflation reflected in the CPI is used to deflate actual dollars to their purchasing power in the first or base year. In the Colorado example, 1981 is the base year and 1983's dollars have to be deflated to their 1981 purchasing power.

	1981	1983
Cost Per Case (Actual Dollars)	\$ 74.45	\$ 80.32
CPI	275.00	300.00
% 1981 Purchasing Power		.92
Cost Per Case (Constant Dollars)	\$ 74.45	\$ 73.89

Dividing the 1981 CPI (275) by the 1983 CPI (300) yields a percentage (.92) which, when applied to the 1983 actual cost per case of \$80.32, yields an adjusted cost in constant dollars of \$73.89. This \$73.89 represents the

Exhibit 2.6
ASSIGNMENT OF COSTS TO A COST OBJECTIVE*
(New York State)

Hypothetical Court Costs by Traditional and Case Breakouts

TRADITIONAL BREAKOUT

Personnel	\$550,000
Supplies and Budget	50,000
Travel	70,000
Equipment	25,500
General	10,000
Total Costs	\$705,500

CASE COST BREAKOUT

	Judge Time	Clerical Services	Court Reporting Services	Court Officers	Jurors	Computer Services	Miscel- laneous	Total Costs
Automobile								
Negligence	\$ 500	\$ 30	\$ 100	\$ 50	\$ 100	\$ 30	\$ 50	\$ 860
Contracts	\$ 120	\$ 75	\$ 180	\$ 50	\$ 10	\$ 60	\$ 30	\$ 515
Real Estate	\$ 50	\$ 25	\$ 20	\$ 60	\$ 30	\$ 10	\$ 5	\$ 200

Multiplying these case costs by case volumes as done below yields the same cost as the traditional budget.

	COST	VOLUME	TOTAL COST
Automobile			
Negligence	\$ 860	510	\$ 438,600
Contracts	\$ 515	420	\$ 216,300
Real Estate	\$ 200	253	\$ 50,600
		1,183	\$ 705,500

*SOURCE: *New York State Budget Review Manual*, A Report of the Senate Select Task Force on Court Reorganization (Albany: National Center for State Courts, 1978), pp. 20-21.

1981 equivalent of the costs incurred in 1983. Now the dollar amounts in both years are equivalent and comparable; both are expressed in terms of the purchasing power of the same year (1981). The results confirm that the costs per case have indeed increased more slowly than the CPI. With inflation removed from the figures through a constant dollar adjustment, the cost per case in 1981 of \$74.45 has decreased to \$73.89 in 1983.

This type of analysis assists management control and performance appraisal. It also helps to strengthen budget requests by removing inflation as an excuse for rising costs and poor productivity. The analyst can demonstrate how inflation has increased court costs or how court costs have stabilized or even declined despite inflation.

Cost Comparisons Among Courts

Court administrators often compare their costs with the costs incurred by other courts for the same cost objective. Many feel that such inter-governmental cost comparisons provide them with rough benchmarks or standards of what their costs should be. For example, rural county courts in Colorado incurred average unit costs per case of \$34.78 in 1981. That same year, the district courts in Bucks County, Pennsylvania had average costs of \$20.45 per case. Should the Bucks County Courts brag about their lower unit costs? Should the Colorado Judicial Department be concerned that their costs were higher?

Probably not. Differences among courts (and other organizations) in total or unit costs can be caused by a variety of management and accounting practices which have nothing to do with cost consciousness. Among the major causes of "uncontrollable" differences in reported costs are:

- incompatible definitions of "full cost," possibly with one court including only direct costs while the other includes both direct and indirect;
- variations in size, with larger courts benefiting from economies of scale and their ability to earn discounts on bulk purchases;
- dissimilar budgeting practices, with some courts being budgeted for certain items, like psychological or psychiatric evaluations, while other courts may receive those services from outside agencies and thus never reflect them in their budget or accounting records;
- differences in court jurisdiction, which varies from state to state;

-
- diverse funding arrangements, with state-funded courts not being responsible for the same costs as those that are funded locally;
 - regional price differences and variations in prevailing wage rates; and
 - disparities in accounting bases, with some courts confusing expenditures (resource acquisition) with costs (resource use).

Before comparing costs, the analyst must either ensure that the other court really is comparable or adjust the cost data from both courts to a common standard.

Footnotes

1. J.S. Kakalik and A.E. Robyn, *Costs of the Civil Justice System* (Santa Monica, California: The Rand Corporation, 1982), p. xx.
2. Cited in H.O. Lawson and B.J. Gletne, *Workload Measures in the Court* (National Center for State Courts, 1980), p. 40.
3. *New York State Budget Review Manual*, A Report of the Senate Select Task Force on Court Reorganization (Albany: National Center for State Courts, 1978), p. 20.
4. CPI is based on a market basket of the commodities (food, utilities, shelter) that could be purchased for \$100 in 1967. By 1981, the index of 275 meant that the price of those same commodities had inflated to \$275 which represented a 175 percent increase over 1967.

Chapter 3

Planning for Cost Analysis

In cost analysis, as in all management activities, planning precedes doing. Deciding in advance on the purpose, scope, and content of the cost analysis project helps to ensure that its implementation will be efficient and its results useful. Chapter 3 sets forth the basic choices involved in planning for cost analysis. Based on generally accepted accounting principles and existing field practices, Exhibit 3.1 depicts the four tasks of the planning process:

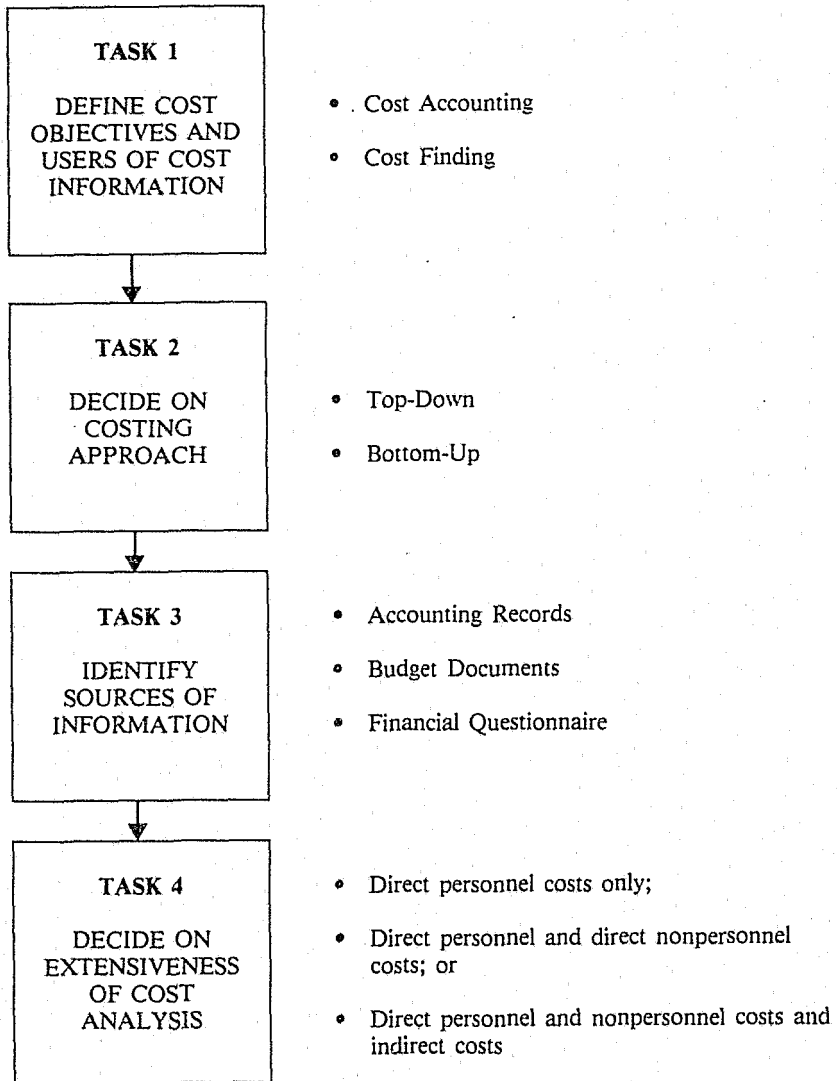
- Define cost objective and users of cost information;
- Decide on costing approach;
- Identify sources of information; and
- Decide on extensiveness of cost analysis.

In each of these areas, there are a variety of options to consider and final decisions will depend on local needs and circumstances. The central point of this chapter is that planning requires choosing among the options before proceeding to the actual analysis.

Task 1: Define Cost Objective and Intended Users of Cost Information

Different users of cost information have different management or technical needs that must be met in different ways. The policy level information that a chief judge might need for long-range planning and budgeting is not the same as the detailed analysis that a fiscal specialist requires for an indirect cost plan or grant proposal. Among the types of costs for which

Exhibit 3.1
PLANNING FOR COST ANALYSIS



telephone interview respondents said they most needed additional information were:

- cost per case;
- personnel vs. nonpersonnel cost per case; and
- cost per juror.

A critical decision at this point is whether the cost analysis project will be an ongoing, institutionalized cost accounting system or an exercise in cost finding. One source distinguishes between cost accounting and cost finding as follows:

Cost Accounting is the continuous process of analyzing, classifying, recording, and summarizing cost data within the confines and controls of a formal cost accounting system and reporting them to users on a regular basis. . .

Cost Finding is a less formal method of cost determination or estimation on an irregular basis. There may be no formal accounting entries during the year to record costs incurred in specific cost accounts. Instead, cost finding usually involves taking available fund financial accounting data and recording it and adjusting it to devise the cost data or estimate needed.¹

In other words, cost accounting is continuous and aims at measuring costs precisely whereas cost finding is satisfied with cost estimates computed and reported only as needed. An ongoing cost accounting system means permanent additions to staff and equipment that cost finding studies can often avoid by temporary assignments or outside consulting help. However, a court system that performs a limited number of cost finding studies is likely to incur a higher cost per study because of the need to "re-learn" complicated costing procedures and retrieve the required data from diverse sources. Cost accounting systems, especially when computerized, can achieve economies of scale and speed. Of court systems contacted by telephone that had adequate costing systems, less than 25 percent had a system that resembled cost accounting while more than 75 percent seemed to practice cost finding.

Cost Accounting

Court administrators and clerks generally have the most interest in costing the same cost objective on a regular basis, e.g., the cost per case by disposition category. They rely on these data for internal control of operations and budget preparation. In the Colorado Judicial Department, the State Court Administrator tracks the costs per case in urban and rural courts in order to promote efficiency, provide greater uniformity of court services,

and set workload standards for judges and clerks. Every five years the Los Angeles Superior Court conducts a comprehensive study of the full costs incurred in each of its seven program areas: criminal, civil, juvenile, family law, probate, mental health, and appellate. In its most recent study (1980-81), the Superior Court determined that 43.8 percent of its costs reflected its own expenditures, whereas the remaining 56.2 percent represented support services provided to the court system by the County Clerk, District Attorney, Public Defender, County Counsel, Probation, and Sheriff. These data become part of the court's cost accounting system, and are constantly referenced in budget documents and management reports.

Cost accounting systems can measure costs in three analytical categories: input, process, and output. Courts purchase inputs (products and services) and use them in their work processes (administration, adjudication) in order to accomplish their desired outputs (case dispositions).

1. **Input.** Court systems purchase a range of services, equipment, facilities, and other resources that are essential to their ongoing operation. Knowing the costs of their input can help courts to identify areas of cost containment and control as funding tightens and budgets are more carefully monitored. Input costs are also an important element in efficiency studies, in which they are compared to output costs in terms of case dispositions. There are a number of inputs that should be costed:

- **Personnel:** salaries, wages, fringe benefits. Salaries and wages for judges and other employees assigned to court-related activities are actual expenditures in this category. The costs for fringe benefits for nonjudicial employees (which include employer contributions to social security, pensions, workmen's compensation, unemployment compensation, disability insurance, and health and life insurance) are estimates. Comptrollers can provide percentages from which these estimates are derived.
- **Facilities:** building maintenance, services, property insurance (excluding capital costs). Operating costs for any part of the courthouse that provides court-related services.
- **Administrative services:** personnel department, treasurer, comptroller, solicitor, central purchasing, printing, and mailing services provided by the general government and used by the judicial department.
- **Arbitration costs:** fees paid to panels of lawyer/arbitrators.
- **Computer-related services,** whether independently maintained by the courts, time-shared with the executive branch, or contracted to a private vendor.

- **Juror costs:** fees, mileage, costs of meals and lodging for jurors in criminal and civil trials.
- **Office supplies:** equipment, books, travel, postage, advertising, microfilm, telephone, and vehicle maintenance.
- **Transcripts** for indigent criminal cases.
- **Viewers costs:** fees paid to individuals appointed to conduct reviews of, and hearings on, property and eminent domain matters.
- **Witness costs:** fees for appearing in criminal trials.²

2. **Process.** The business of adjudicating legal matters comprises a number of activities, programs, and services. These process components may be classified to distinguish administration from case processing activities, for example, or to differentiate among the various levels of the court system. Further, each component may be costed separately (to analyze productivity or employee performance in that area) or in tandem with other components for a more comprehensive view of court operations.

- **Adjudication:** hearing and deliberation of cases by judges, either in court or in chambers.
- **Administration:** auditing, budgeting, building security, community liaison, equipment, evaluation, facilities/space management, personnel management, planning, public relations, purchasing and property, and training.
- **Calendar management:** assigning and scheduling cases, notification of hearing/trial dates.
- **Case processing:** filing, docketing, and indexing cases; updating case records; assisting litigants.
- **Courtroom support:** court clerks and attendants, court reporting, language interpreters, law libraries, prisoner transportation, security.
- **Financial:** receiving and disbursing fees, fines, and bail; accounting.
- **Investigation and supervision:** bail and case investigations, collection of fines, intake, supervision, witness/victim assistance.
- **Jury management.**
- **Records management:** designing and procuring forms; maintaining, microfilming, storing, retrieving, and destroying records; storing evidence.

- **Service of process:** serving summonses, writs, and warrants; executing judgments.
- **Statistics, computers, and information systems:** compiling and preparing statistical reports.³

Another way to view process is by *who* does it. The telephone interviews identified four state court systems that used process cost objectives of this type. Alabama classifies costs by circuit judges, circuit clerks, district judges, district clerks, court administrator, and jury commissioner. In Hawaii, process cost objectives include district courts, circuit courts, family courts, appellate courts, support services, library services, driver education, and land taxes. Criminal courts and civil courts are the primary cost objectives in Minnesota. Finally, New Jersey has defined the supreme court, superior court, tax court, general support services, and legal services as cost objectives.

3. Output. Cases disposed is the most measurable and concrete product of the judicial system. However, calculating unit costs per case is not easy because cases are defined differently at various stages of processing. A single court proceeding involving several defendants or several charges against one defendant may later be handled in separate hearings or trials for each defendant or charge. In order to allocate the costs of the various stages to cases in a meaningful way, the analyst must first understand the purposes for which the cost figures will be used. Then the definition of a "case," whether related to a defendant, a court proceeding, or a court or charge, can be tailored to the purposes at hand. Unit costs can be compiled for all cases, for cases in a specific court type, or by disposition category. In Pennsylvania, for example, the following case disposition categories were specified:⁴

- Criminal
 - Diversion
 - Dismissals
 - Pleas
 - Non-jury trial
 - Jury trial
- Civil
 - Arbitration:
 - settlement/default hearing
 - Arbitration Appeals:
 - settlement
 - non-jury trial
 - Settlement
 - Conciliation
 - Non-jury trial
 - Jury trial

- Family
 - Decree
 - Order
 - Dismissal
 - Settlement
 - Hearing
 - Jury trial
- Orphan's Court
 - Hearing
 - Decree
 - Order
 - Adjudication

Exhibit 3.2 exemplifies the type of analysis possible when case dispositions are costed. Based on a study by the Fourth Judicial District of Minnesota, it shows that a five-day felony criminal court trial cost \$7,758 in 1982, or an average cost per day of \$1,551. These data are especially meaningful because they include not only direct personnel and nonpersonnel costs such as salaries and juror meals, but also "hidden" costs, such as employee fringe benefits and overhead (which is an allowance for space acquisition and maintenance rather than administrative support costs).

Cost Finding

Because it is less formal and done much less frequently, cost finding is easier than cost accounting. It is especially suitable for courts with little costing experience or expertise, but with a desire to "get started." Cost finding requires only (1) something of interest to cost and (2) access to the organization's regular accounting records and other readily available sources of fiscal information. For many courts, their costing systems will consist of a series of cost-finding projects.

Judges and court administrators often undertake special cost finding studies to defend budget requests, to cut costs, or to inform their decisions regarding new programs or experimental approaches to case disposition. For example, the Bucks County Courts compared the costs of eight and twelve person juries to determine whether enough money would be saved via the former to justify sacrificing the greater representativeness promoted by the latter. Other examples:

1. New Programs. When resources tighten, cost-effectiveness becomes a key criterion for deciding whether to approve new programs proposed by or for the courts. And, once seed money is awarded for a demonstration, program managers must maintain a high level of cost-effectiveness to assure continuation funding—especially if the program began as a federal initiative and must compete for state or local tax dollars when federal support is discontinued. Also, legislatures sometimes mandate new programs for the courts

Exhibit 3.2
CASE DISPOSITION COSTS*
(Minnesota Fourth Judicial District)

Five Day Felony Criminal Courtroom Cost
January 1982

County Personnel

Judge	\$ 960.00
Court Reporter	613.66
Law Clerk	358.53
Court Deputy	385.08
Two Bailiffs	827.53
County Attorney	1,031.23
Public Defender (.6)	<u>535.64</u>

Subtotal	\$ 4,711.67
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20% Fringe Benefits	<u>942.33</u>	<u>\$5,654.00</u>
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Jury

1/16 Jury Deputy	\$ 24.62	
16 Jurors ¹		
a) Per diem	1,200.00	
b) Mileage	266.27	
Meal (Total 14)	<u>272.13</u>	<u>\$1,738.40</u>

Overhead

Computed at \$5.85/sq. ft./year (3,125 sq.ft.)		<u>\$365.63</u>
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TOTAL		<u>\$7,758.03</u>
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Average cost per day		<u>\$1,551.61</u>
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¹Decreasing voir dire for two days, trial for three (averaged)

*SOURCE: Fourth Judicial District, State of Minnesota/F.E. Dosal, Deputy Court Administrator
(July 7, 1983).

(such as competency assessment clinics or victim assistance) but fail to allocate the necessary appropriations. In some states such as Colorado, such legislation cannot be enacted before a "judicial impact statement" is submitted to detail the costs that the courts and related agencies would incur. All of these decisions depend on accurate and timely cost information that can usually be found in program proposals and budget documents.

2. Supporting Establishment of a New Institution. Sometimes court plans create basic institutions, such as a Judicial Discipline Board or Nominating Commission, or offices of court administration. Costing procedures for new institutions are usually fairly standard, regardless of whether they are funded initially by the state or federal government.

3. Court Reorganization. A number of states have undertaken to consolidate judicial districts or to assume all or part of local court costs. Again, cost information is useful, especially for the implementation stages when most of the costs are incurred. Some of the cost components that have been included in this stage are:

- travel costs and compensation for advisory groups working on various aspects of implementation;
- personnel costs for new judges and other court officials;
- operational costs incurred to revise or upgrade record systems, various forms, and personnel and financial systems;
- training costs to prepare for system changes, particularly if many new judgeships are being created; and

facility costs for additional or renovated office space and possibly equipment. For example, the analysis shown in Exhibit 3.3 projects that a remodeling cost of \$80,000 will be more than offset by cost savings of \$117,959, produced by productivity gains and resultant reductions in personnel. The \$117,959 saved comprises \$87,459 in cost savings based on the current workload and \$30,500 in additional savings as workload increases.

4. System Design and Implementation. Complex systems for managing information, calendars, personnel, finances, and records typically require a system design before they can be installed. This axiom is particularly true for electronic data processing systems. Computer hardware decisions depend heavily on the software selected, which, in turn, is invariably difficult to price. In order to maintain control over the long-range cost implications of computerization, the following cost items have been considered:

- initial software costs;
- anticipated costs of software modification, system expansion, or upgrading;
- hardware costs;
- preparing facilities (platforms, air conditioning, wiring, etc.);
- staffing of computer installation (e.g., machine operators, system analysts, programmers, key punchers, etc.);
- testing, training, monitoring costs;
- record conversion costs (which may be significant if many historical records are being converted);
- ongoing costs of converting data to machine-readable form;
- facility maintenance costs; and
- terminal costs, line costs.

5. Training Programs. Training and judicial education may be conducted at the job site or in an off-site location such as a judicial college. Although the direct costs of job site training are generally lower, there are important drawbacks, such as a limited ability to change staff as training needs change, and the higher long-term pension costs for training staff and instructors (unless independent consultants are hired). When comparing training programs, analysts have tried to identify the full costs of each alternative: apparent differences are often attributable to greater or lesser diligence in detailing the program's true costs. Major cost items in training include instructor salaries or consultant fees; participants' tuitions and travel (if enrolled in an outside program); and, if a court-operated program, the costs of training rooms, materials, and equipment.

6. Development of Reference Materials. New reference materials—such as bench books or procedures manuals for judges, clerks, and other court personnel—are often developed by private contractors, whether contracted on a sole source or competitive basis. To avoid unnecessary overruns, these projects should be costed in advance. Major cost items include salaries for the project director and other contractor staff, and the costs of typing, printing, reproducing, and binding the document.

7. Projects to Effect Changes in Statutes or Rules. Unless drafting is minor in scope or done by in-house attorneys, legislative packages and rule revisions typically incur any or all of the following costs: travel costs and compensation for members of an advisory board, compensation to legal draftsmen, secretarial costs (including required supplies and equipment), printing and reproduction costs, and costs of disseminating statutes or rules for comment.

Exhibit 3.3 SPACE REMODELING ANALYSIS*

Example of Cost-Benefit Analysis Applied to Space Remodeling

Estimated Remodeling and Relocation Costs

A) No workload increase—estimated employee savings

1) Reduction of two FTE (Average annual salary of \$12,000 + \$2,160 fringe)	
2) Apply attrition rate	
One employee after five months	\$ 8,260
One employee after eight months	4,673
.....First year savings	<u>\$12,933</u>
3) Savings second year (Assuming 7% salary increase)	\$30,300
4) Savings third year (Assuming 7% salary increase)	<u>\$44,226</u>
No workload increase— total saving	<u>\$87,459</u>

B) Additional savings—projected workload increase

1) Second year—one new FTE saved (Average annual salary of \$12,000 + \$2,160 fringe + \$1,200 for equipment, operating costs)	\$15,360
2) Third year—same one FTE saved (Assuming 7% salary increase)	<u>\$15,140</u>
Additional savings—workload increase	<u>\$30,500</u>
Total Savings	\$117,959
Remodeling Cost	<u>80,000</u>
Estimated cost benefit over three years	<u>\$37,959</u>

*SOURCE: H.O. Lawson and B.J. Gletne, *Workload Measures in the Court* (National Center for State Courts, 1980), p. 30.

8. **Cost Savings.** Implied in many of the above examples is the notion of cost savings and cutback management. Scarce financial resources often prompt quick but across-the-board cuts which treat efficient and high-priority programs the same as programs that are not as well managed or needed. To fight these cuts, court administrators need credible information about the present and future costs of their programs and services. Cost information includes not only budgeted expenditures for the current year but also costs allocated from the expenditures of prior years for facilities, equipment, and other fixed assets. Should it be discovered that a program serving few citizens incurs disproportionate costs, alternative programs may be sought. Certain programs, such as misdemeanor appeals or trials *de novo*, are widely viewed as having limited utility and thus become likely candidates for reductions. Any cost savings that are realized can either be used to satisfy the demands for budget cuts or reallocated to programs that could benefit from additional resources. Such reallocations do not have to wait for financial crisis; they can be a standard operating practice in any court that strives to maintain maximum efficiency regardless of economic circumstances.

Task 2: Decide on Costing Approach

Regardless of the cost objective, there are two ways to calculate unit costs: "top down" or "bottom up." The top-down approach starts with an aggregate measure of court costs, such as the annual budget or total expenditures, and attempts to allocate a fair portion of the total to the activity, outcome, or other cost objective. Bottom-up begins with the specific cost objective, identifies the staff and other resources that it consumes, and calculates the cost of each resource in order to arrive at a total cost for the activity or outcome.

For example, the Rand Corporation sought to estimate the average expenditure per tort case filed in three states and the U.S. District Court. These estimates were made by multiplying total case-related judge work-minutes per case filed by the estimated government expenditure per case-related judge minute. In other words, if a judge spent 1,200 hours per year or 72,000 minutes on case-related activities and the estimated expenditure per minute of his time was \$3.50 (including allowances for support staff and facilities), the cost per judge would be \$252,000. In determining government expenditures for each of the court jurisdictions, Rand used both a top-down and a bottom-up approach. The analysts' top-down method involved adding court-related government expenditures and dividing by the FTE number of judges to estimate expenditure per judge. In the bottom-up method, Rand estimated the number of each type of support staff and other resources used per judge, multiplied by the average salary plus fringe benefits for each type

of staff, and then summed to estimate the total annual government expenditure per judge.

Exhibit 3.4 shows the results of both approaches in the case of the Washington Superior Court. Using the top-down method, the total expenditure per FTE judge in FY 1982 was \$261,000, and expenditure per case related judge minute was \$3.78. The bottom-up approach yielded similar results: \$264,048 per FTE judge and \$3.83 per case-related judge minute.

Cost objectives with fairly homogeneous personnel and nonpersonnel components should be costed via the bottom-up method, since almost any listing of the components for that objective will be "typical." For example, almost all of the court reporters and bailiffs in a particular court may earn about \$20,000 per year and work in similar courtrooms with the same capital and operating costs. In estimating the cost per FTE judge or case-related judge minute, it makes little difference which staff member or courtroom is used in the analysis, since the costs of one will be about the same as any other. On the other hand, cost objectives entailing a wide range of personnel and nonpersonnel components should be considered with the top down method, since it would be impossible to define a "typical" situation. Another court might be staffed with reporters and bailiffs earning anywhere from \$15,000 to \$40,000 and use courtrooms ranging from 500 to 5000 square feet. Under these circumstances, unit costs may be determined by aggregating the costs of all the components involved in a case-related judge minute and then dividing by the number of available minutes.

Task 3: Identify Sources of Information

Many sources can provide the financial and non-financial information required for cost analysis, ranging from summarized accounting statements and budgets to records of individual accounting transactions such as invoices and purchase orders. The determination of which sources are most appropriate will vary with the court system doing the analysis. It is important to determine the availability of data from particular sources early in the planning process, since that will govern the extent to which given cost objectives can be measured. Additionally, the quality of the data must be checked in order to protect the accuracy and credibility of the results. There are three measures of data quality:

- **Timeliness.** The data must be as current as possible, especially when using cost analysis to set user fees intended to recover full costs. Basing fee levels on data that are several years old is likely to underestimate current costs and lose needed revenue.

Exhibit 3.4
ESTIMATES OF SUPERIOR COURT EXPENDITURES*
(State of Washington)

TOP-DOWN APPROACH			BOTTOM-UP APPROACH		
Type of Expenditure	FY 1980	FY 1982	Type of Expenditure	FY 1980	FY 1982
State share of salaries and benefits of Superior Court judges	\$ 3,198,000	\$ 3,687,000	Judicial salary	\$41,700	\$ 44,700
			Judicial fringe benefits	8,340	8,940
Local adjudication expenditures			Nonjudicial personnel salaries and benefits (clerks and administrators)	72,732	77,965
Personal services	7,936,000	9,150,000	Court reporter salaries and benefits	20,793	22,289
Supplies	223,000	257,000	Bailiff salaries and benefits	11,142	11,944
Other services and charges	5,237,000	6,038,000	Miscellaneous services and supplies	56,550	60,618
Governmental services	70,000	81,000	Indirect costs	<u>35,069</u>	<u>37,592</u>
Capital outlay	119,000	137,000			
County clerk expenditures			Total per FTE judge	\$246,326	\$264,048
Personal services	6,938,000	8,000,000			
Supplies	212,000	244,000	Total per case-related judge minute	\$3.58	\$3.83
Other services and charges	742,000	856,000			
Governmental services	63,000	73,000			
Capital outlay	64,000	74,000			
Indirect overhead (16.6 percent in 1977)	4,117,000	4,747,000			
Total state expenditures	3,729,000	4,299,000			
Total local expenditures	<u>25,190,000</u>	<u>29,045,000</u>			
Total, all expenditures	\$28,919,000	\$33,344,000			
Total per FTE judge	\$243,000	\$261,000	Total per FTE judge	\$246,326	\$264,048
Total per case-related judge-minute	\$3.53	\$3.78	Total per case-related judge minute	\$3.58	\$3.83

*SOURCE: J.S. Kakalik and A.E. Robyn, *Costs of the Civil Justice System* (Santa Monica, California: The Rand Corporation, 1982).

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- **Consistency.** Changes in accounting practices or differences in reporting periods impede the consistency of the data and the reliability of cost comparisons across court systems or years. For example, many courts use the cash basis of accounting, which records expenditures only when money changes hands, i.e., cash is paid or a check is issued. Other courts use the accrual basis, which recognizes expenditures only when the resources that the expenditure purchased (e.g., personnel time, office space) are used in court operations. Inconsistencies must be addressed in the cost analysis by adjusting the data to a common standard or by acknowledging the problem in the final report.
 - **Validity.** The information collected should actually measure what it is supposed to measure. Using salary expenditures, for example, to estimate staff workload is often invalid because the data include time not worked due to vacation, sick leave, and other factors. Financial data certified by responsible financial agencies are usually superior to financial reports made by the agencies themselves or financial questionnaires completed by court officials.

Sources of Financial Information

Apart from prior studies of the same cost objective, the two primary sources of financial information about the courts are accounting records and budget documents. Accounting records are generally more reliable, but the budget is easier to obtain and understand. A third but less important source is the financial questionnaire.

An adequate cost analysis does not necessarily require a detailed examination of every source. One source may contain all of the needed information. Additionally, aggregate data may be available which, when analyzed and allocated, provide useful and timely cost estimates. For example, budgeted salaries for the criminal courts, when divided by the number of cases terminated of a particular type, will yield a rough approximation of the personnel cost per case. It is also important to remember that records are often shared between the courts and the general government's accounting and bookkeeping systems. This dispersion of information can be a major structural impediment to ongoing cost accounting in the courts. Courts without centralized administration and control over most of their own accounting functions and records may always have to rely on special studies for their cost information.

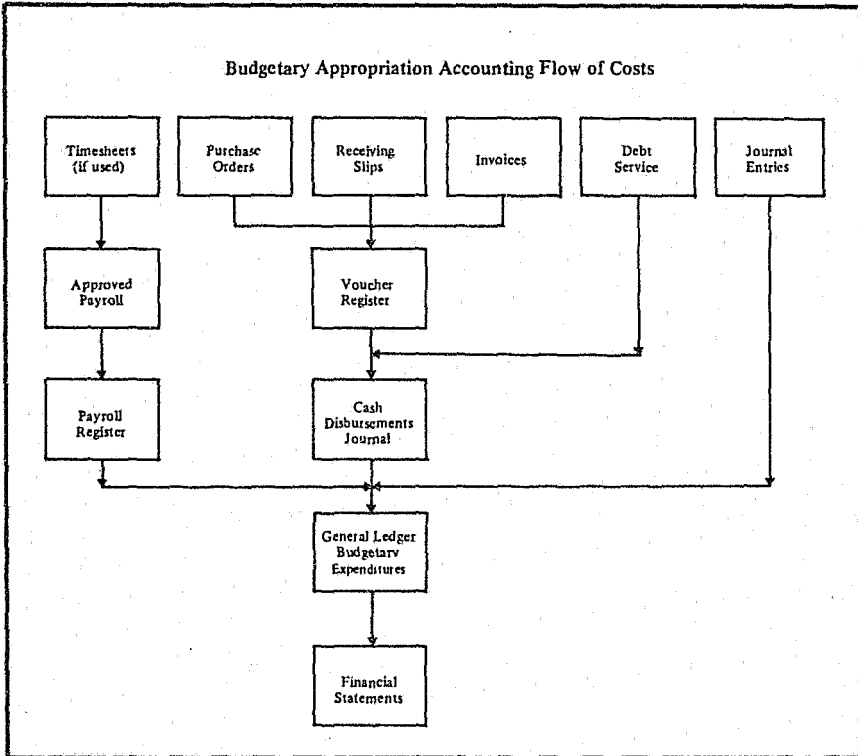
1. Accounting Records. The Annual Financial Report of the governmental unit or court system is a good starting point. It should provide information on actual expenditures by department and/or function (e.g., judiciary, education, environment). For support centers such as maintenance or the personnel department, the amounts presented may be used to estimate the costs of these functions, which can then be allocated as indirect costs to the court system and the specific cost objective. Direct costs of the court system will require more detailed expenditure estimates than are typically included in the financial report. Exhibit 3.5 suggests that:

- The payroll register or appropriations ledger can often supply information about salaries, overtime, and fringe benefits.
- Information about expenditures for supplies and materials and other nonpersonnel commodities can be located in the cash disbursements journal.
- Individual purchase orders, invoices, and other transaction level accounting records may be needed to uncover bulk purchases of supplies or equipment purchases that may not be separately identified in the appropriation accounts.
- Debt service and fixed asset records will be needed to estimate depreciation costs of buildings, major utilities, and significant equipment items.
- Reports of state treasurers or comptrollers will supply information on state funds received and expended, possibly supported by detailed submissions from courts, local governments, or court clerks.

Cost analysis can be facilitated if the court's accounting system uses account codes that allocate expenditures not only to the object class, but also to other categories such as the fund, organizational department and unit, and, in the case of the courts, case or disposition type. For example, an account code like 03-01-11-02 might refer to salaries (03) — general fund (01) — office of the court administrator (11) — criminal cases (02). The most effective accounting coding schemes are developed by operating managers as well as accountants; managers do most of the actual coding since they know best the purpose of the expenditure. An analyst interested in criminal case costs would use these account codes to compile the information needed across organizational units.

Obviously, the expenditure information collected from these sources will have to be adjusted to reflect the costs of the current accounting period. For example, an expenditure of \$1,000 for legal services is not a cost of the court system in 1984 unless those services were actually rendered in 1984.

Exhibit 3.5
USE OF ACCOUNTING RECORDS*



*SOURCE: Massachusetts Executive Office of Communities and Development, *Costing and Pricing Municipal Services* (Boston, 1982).

Likewise, a \$2,000 cash outlay for a microcomputer in 1984 is an expenditure of 1984, but a cost of all the years in which the microcomputer will be used. Exhibit 3.6 shows how expenditure data can be transformed into genuine cost information. Fortunately, in most courts, there are small differences between current operating expenditures and costs, since both include a high proportion of salary expense. Salaries are paid or expended in the same accounting period that they are earned for costing purposes. Reconciliation will be necessary mainly for nonpersonnel expenditures that are paid in one accounting period, but used over several periods.

2. Budget Documents. State and local budgets can provide expenditure estimates for the current and prior fiscal years. In addition, the supporting schedules and worksheets used during budget preparation should contain information directly relevant to personnel and nonpersonnel cost analysis. For example, a personnel services worksheet can detail projected employee salaries, turnover, new hires, etc. Exhibit 3.7 demonstrates how the National Center for State Courts used budget data as a rough indication of the cost of legal guardian services through the Legal Aid Society of New York.

Unfortunately, a budget is only a limit on expenditures. The budget, as prepared and adopted, may not reflect actual expenditures due to transfers, budget amendments, and supplemental appropriations. Such changes can be quite significant, distorting a cost analysis based on the initial budget numbers. If the changes are minor, or the budgeted amounts can be adjusted to reflect them, the budgets may be a reliable substitute for the actual expenditure data in the accounting records.

3. Financial Questionnaire. There is generally no great problem in using state-level accounting and budget data. Moreover, particular local governments may have adequate financial management systems that would allow them to analyze their own costs or to participate in a statewide study of county or municipal court costs. Rarely are the inconsistencies in expenditure categories so pervasive that experienced auditors cannot take local records and extract the necessary information in reasonably uniform categories.

Alternatively, the auditors could prescribe their own format and ask local officials to provide the information via a financial questionnaire. The success of this approach depends on the completeness of the instructions provided and the care and time that local officials are willing to devote to this time-consuming task. In many cases, it is impossible to verify the reliability of the information provided without asking for supporting evidence or spot-checking the returns.

The success of financial questionnaires also depends on the comparability of the accounting systems that provide the data reported on the questionnaire. As discussed earlier in Chapter 2, local courts may differ in their

Exhibit 3.6
RECONCILIATION OF EXPENDITURES AND COSTS*

	19XX - 1	19XX	19XX + 1
Accounts of the fund through which the activity is primarily financed		CURRENT OPERATING EXPENDITURES	
		less	
		EXPENDITURES BENEFITING ANOTHER PERIOD'S ACTIVITIES ¹	
		add	
		EXPENDITURES OF OTHER PERIODS BENEFITING THIS PERIOD ²	
		add	
		DEPRECIATION ³	
		add	
		OTHER ACTIVITY EXPENSES FINANCED THROUGH ANOTHER FUND	
		<u>TOTAL COST OR EXPENSE</u>	

GENERAL
FIXED ASSET
RECORDS

DEBT SERVICE,
OTHER FUNDS

Notes

¹ Excludes debt principal retirement and capital outlay expenditures.

² For example, prepaid insurance and inventory adjustments where expenditures are recorded on a "purchases" basis and other accrual and deferral adjustments for items reflected in the Expenditures account for the period that are applicable to previous or future periods.

³ Adjustments for items such as those in Note 2 that are reflected in the Expenditures account in a previous or future period, but are applicable to 19XX.

*SOURCE: Edward S. Lynn and Robert J. Freeman, *Fund Accounting: Theory and Practice* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1974), p. 647.

Exhibit 3.7
USE OF BUDGET DOCUMENTS IN COST ANALYSIS*
(New York State)

LAW GUARDIAN COSTS—FIRST DEPARTMENT

The highly developed program in the First Department serves as a useful example. The Juvenile Rights Division of the Legal Aid Society in New York City budget justification for 1977-78 presented a wide range of cost and performance indicators. Sheer volume militates against casual review and the most telling single calculation—the cost of representation by type of case—cannot under present circumstances be easily developed, largely because, even without consideration of the extensive social services available through the Juvenile Service Unit, much social service counseling, and investigation is provided in individual cases and records are not kept to disclose key indicators. Case cost for comparison with delivery of like services is unreliable.

With this warning, a rough indication of the cost of legal guardian services through the Legal Aid Society of New York may be computed as follows. In calendar year 1975, law guardians from the program were assigned in 17,439 matters. For comparability, the total cases disposed—13,239, as adjusted—will be used. The adjustment includes addition of appeals cases disposed of during the period and final results in the following tabulation:

<u>PERCENT OF TOTAL</u>		
Delinquency	5,160	39%
PINS	3,353	25%
Child Protection	1,916	14%
Past Disposition Procedures	2,810	21%
Appeals	43	1%
	13,282	100%

The cost incurred to provide the required services amounted to \$2,558,368. This amount is approximately \$166,000 below the appropriated budget of \$2,724,167 accounted for by the exclusion of staffing the Special Litigation Writs and Stays Unit, which is not directly involved in the disposition of cases either as listed in the report or as adjusted here.

Direct client services in legal representation, investigation, and social services subject to the exclusion stated above amount to \$1,476,510. Administrative services including management, training, clerical, operating and administrative cost equal \$1,081,858. Specifically these costs were as follows:

<u>ADMINISTRATIVE</u>		<u>DIRECT CLIENT SERVICES</u>	
<u>SALARIES</u>		<u>SALARIES</u>	
Management	\$ 350,000	Attorneys(55)	\$1,002,265
Training Others	18,223	Investigators	116,500
Clerical	118,170	Social Services Personnel	122,000
	<u>\$ 556,396</u>		<u>\$1,240,765</u>
Fringe Benefits		Fringe Benefits	
Computed at 19%	105,715	Computed at 19%	235,745
Total Personnel	<u>\$ 662,108</u>	Total	<u>\$1,476,510</u>
Operating	244,750		
Administrative	175,000		
	<u>\$1,081,858</u>	Grand Total	<u>\$2,558,368</u>

*Source: *New York State Court Budget Review Manual*, A Report of the Senate Task Force on Court Reorganization (Albany: National Center for State Courts, 1978), pp. 30 - 31.

accounting practices to the extent that court costs cannot be fairly compared. Statewide totals may represent an invalid consolidation of very different costing approaches, tantamount to "mixing apples and oranges." Data derived from a financial questionnaire should be examined with these concerns in mind.

Sources of Non-Financial Information

The principal use of non-financial information is to estimate unit costs. For example, an estimate of the unit cost per jury trial demands information not only on expenditures, but also on the number of jury trials, possibly with further breakdowns by case type. Non-financial information also serves as a basis for allocating indirect costs, e.g., statistics on the square footage occupied by courtrooms and administrative offices.

In some court systems, case statistics and related non-financial information are kept manually, often in large, leather-bound ledgers. The information is logged primarily for the traditional purpose of providing a formal, legal record. Other court systems organize these same records into a management information system which provides both a legal record and a device for controlling court operations by monitoring case flow and personnel assignments. Such information systems are usually computerized, which speeds data retrieval and reporting.

1. Disposition Data. Case dispositions measure what courts do. Such measures include computations of the percentage of cases disposed of through pleas, jury trials, bench trials, diversionary programs, and dismissals. At a minimum, the data required would include:

- elapsed time from arrest to disposition for each case or case type;
- the number of filings by case type; and
- the method of disposition by case type.

These data requirements may be expanded to include more detailed case descriptions: civil/criminal, criminal by most serious charge, disposition by route and verdict, and sentence if convicted. Breakdowns by sentence may involve not only prison terms but also fines and probation, which add to the court's workload and costs.

Typically, these data, in whole or in part, are compiled quarterly or monthly and published in the state judicial system's annual report. An NCSC study identified 24 states that compiled elapsed time information, most often the age of criminal cases pending or age at time of disposition⁵. Data on annual filings and dispositions are much more likely to be available than elaps-

ed time data for the typical general jurisdiction criminal court. The same NCSC study found 43 states reported total numbers of filings and dispositions, 24 states reported felonies as a separate category. Data on dispositions by type are relatively available: 32 states used jury trial as a disposition category in their reporting systems, 30 states used "non-jury," 25 used "plea," 18 used "dismissed," and 9 used *nolle prosequit*.

2. Resource Utilization Data. These data are used to describe and evaluate how well the court uses the resources at its disposal to accomplish its work. Such resources include administrative and clerical personnel, physical facilities (especially courtrooms), office equipment and supplies, jurors, and witnesses. Relating disposition data to the resources consumed in case processing measures court productivity and cost effectiveness. Specifically, the analyst would compile data on:

- number of hours each court is in session;
- out-of-courtroom work related to case disposition;
- number of judges;
- number of jury trials and jurors used for given periods of time; and
- amount of time spent per jury trial and juror.

Much of this information is not regularly collected by the courts. None of the annual reports that the Research Triangle Institute solicited from 45 of the 50 state court administrators contained data on the average number of hours per day court was in session.⁶ Nor did they report time spent by personnel on particular activities. Although data are generally available on the number of jury trials held in a year (32 states in the 1975 NCSC study reported jury trials as a method of disposition), time spent on various activities and number of jurors used on a day-to-day basis are not.

Task 4: Decide on Extensiveness of Cost Analysis

As discussed in both the Preface and in Chapter 2, efforts to calculate the total cost of providing a service must consider two kinds of costs: direct and indirect. Direct costs generally include the expenses of salaries, supplies, and materials that can be readily measured and directly attributed to the service being provided. An indirect cost is one which is incurred for several services, and is not, therefore, readily identifiable with a specific service, e.g., the expenses of utilities, buildings, and equipment. After direct costs have been determined and directly charged to the service being costed, the remain-

ing costs become indirect, are added together to form a "pool" of costs, and then distributed among the pertinent services in a rational and logical manner. The distinction between direct and indirect costs has to be judgmental in most cases, based not only on the relationship of the cost to the service, but also on the feasibility of collecting the cost information. Minor direct cost items may be classified as indirect for reasons of practicality.

Not every cost analysis needs to account for the total cost of a given service. Indeed, the telephone interviews and case study research suggest that most service cost estimates are based on direct costs. Only a few jurisdictions, notably Bucks County, Pennsylvania, and Los Angeles, California, attempt to add some consideration of indirect costs.

Studies focusing only on major direct cost elements may be justified because of limited information needs, lack of time or money for the analysis, or an awareness that indirect costs may only account for a negligible portion of total costs. Frequently, after spending much effort tracking down indirect costs, the results are not materially different than they would have been had these costs been merely estimated or not even measured. At other times, indirect costs may be substantial, and not including them in the analysis would lead to unrealistically low total cost estimates. A balance between analysis effort and cost information benefit must be struck, so that the extent of cost analysis is limited to what is both practical to collect and useful in management decision making.

Essentially, therefore, cost analysis can be conducted on any one of three levels. As will be explained in Chapter 4, each level accounts for an increasing proportion of total cost:

- Direct personnel costs only;
- Direct personnel and direct nonpersonnel costs; or
- Direct personnel and nonpersonnel costs and indirect costs.

Footnotes

1. R.J. Freeman et al., "Cost Accounting and Analysis in State and Local Governments," in H.A. Black and J.D. Edwards (eds.), *The Managerial and Cost Accountant's Handbook* (Homewood, Illinois: Irwin, 1979).
2. Adapted from: J.A. Gainey et al., *Pennsylvania Court of Common Pleas Unit Cost Procedures Manual* (National Center for State Courts, 1982), p. 16.
3. *Ibid.*, pp. 14-15.
4. *Ibid.*, p. 17.
5. National Center for State Courts, *State Court Caseload Statistics: The State-of-the Art* (Washington, D.C.: U.S. Department of Justice, 1978).
6. R. Johnson and R. Ironside, *Evaluation of Fundamental Court Improvement Projects in Four States* (Research Triangle Park, North Carolina: Research Triangle Institute, 1980).

Chapter 4

Doing Cost Analysis

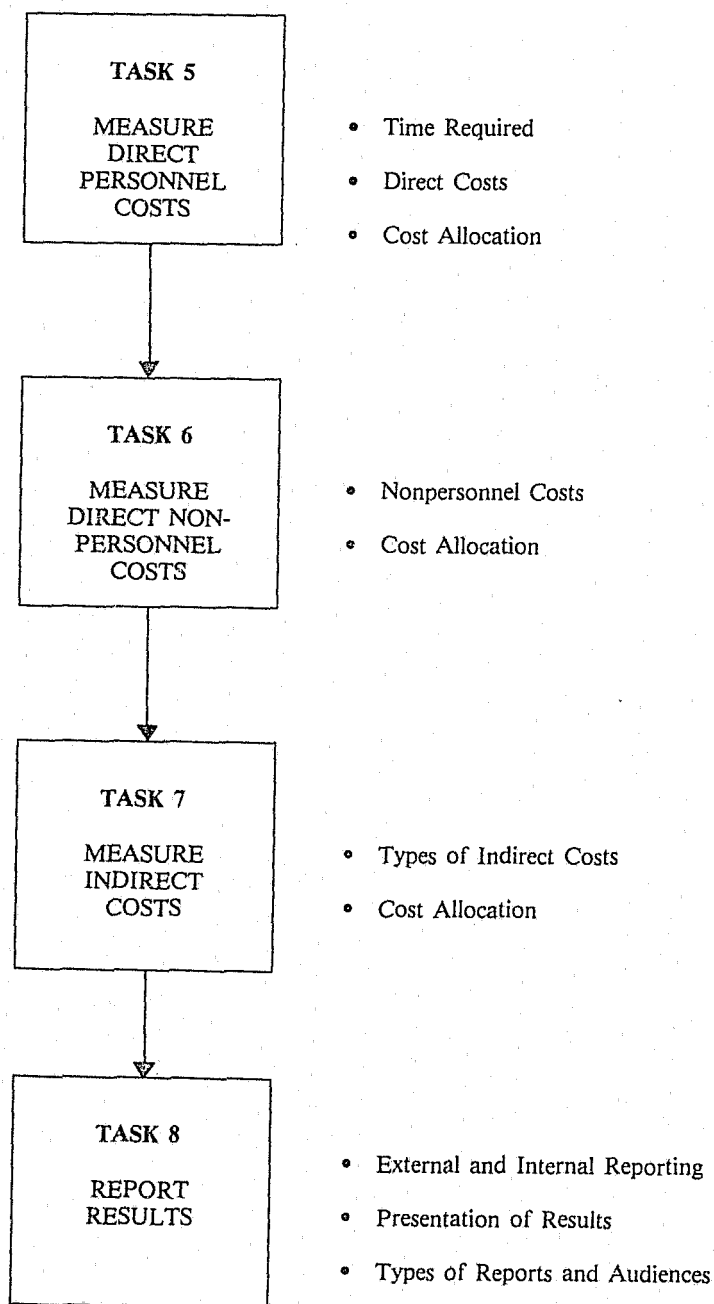
Doing cost analysis is both an art and a science. It is a science to the extent that costing principles and techniques are well known and can be documented in a pre-established plan. Discussed in the previous chapter, the plan should identify the cost objectives, sources of information, and other components of a valid and reliable cost analysis. But costing is also an art in that the analyst cannot view the plan as a straitjacket and must be aware of changing circumstances and the possible need to make adjustments "on the spot." Perhaps salary records are not as complete as originally anticipated. Caseload information may turn out to be outdated or unavailable. The analyst must rely on experience and intuition to discover alternative means to the same end.

Chapter 4 covers the key tasks in doing a cost analysis that are depicted in Exhibit 4.1:

- Measure direct personnel costs;
- Measure direct nonpersonnel costs;
- Measure indirect costs; and
- Report the results.

For each task, the text provides technical guidance as well as practical examples drawn from the courts.

Exhibit 4.1
DOING COST ANALYSIS



Task 5: Measure Direct Personnel Costs

Cost analysis usually starts with personnel costs since they are the most significant component of total court costs. Including not only wages and salaries but also fringe benefits such as vacation time and health insurance, personnel costs constitute 87 percent of the Los Angeles Superior Court budget and 80 percent of the costs of the Colorado Judicial Department. Because of this high percentage, many cost analyses may equate total costs with personnel costs alone. The costs of juror compensation and management training, for example, are often so labor intensive that personnel costs may be sufficient for a reasonable cost estimate. Surely, for the sake of completeness if nothing else, it is desirable to try to determine total costs, but the information obtained simply may not be worth the effort in every case.

Personnel costs in the courts can be measured by estimating the time required for the task or product being costed and then calculating the cost of that time in salaries and fringe benefits. Ideally, the time requirements of a given task or product can be obtained from the court's existing records. For example, a computerized management information system would compile the time spent by each employee on various activities, each of which has a unique account code. Judges, clerks, and other staff would behave like private attorneys and use timesheets to charge their time to specific cases on a regular basis. Stored in a computer (or manual) file, these data could be retrieved as needed for cost analysis or any other management objective.

Timesheets show the specific use that has been made of the time that has been purchased. Staff allocate or "charge" their hours to the court function or program on which they have worked during the day. Timesheets are usually completed daily and collected weekly, although most staff will wait until the end of the week to account for their hours. The timesheet used by the Bucks County Court of Common Pleas is presented in Exhibit 4.2. It asks staff to account for their time and to allocate their work hours by program area (administration, civil, criminal) and sub-program (case processing, calendar management). Other courts that regularly use timesheets include state systems in Hawaii, New Jersey, and North Carolina.

Unfortunately, court information systems are rarely that sophisticated. Court personnel are reluctant to account for their time in such detail or so regularly, especially when their salaries are not tied to specific cases or other activities. On occasion, timesheets have been viewed, in government and business, as a meaningless, time-consuming exercise whose real function is to check up on the number of hours worked rather than on the tasks on which those hours were spent. Such views usually prevail in organizations with poorly designed timesheets and haphazard provisions for reporting timesheet results to managers and employees.

Exhibit 4.2
SAMPLE TIMESHEET *
(Bucks County Court of Common Pleas)

WORKSHEET 1a - Monthly Position Time Reporting Sheet		
Employee Name	Department	
Job Class	Date	Total Time

Subprogram	Hours Worked by Program Area						(7) Total Court Hour (cols. 1-5)
	(1) Administration	(2) Civil	(3) Criminal	(4) Family	(5) Orphan's Court	(6) Non-Court	
1. Administration							
2. Statistics & Info. Systems							
3. Adjudication							
4. Case Processing							
5. Calendar Management							
6. Service of Process							
7. Records Management							
8. Financial							
9. Courtroom Support							
10. Investigation & Supervision							
11. Other - Court							
12. Overhead ¹							
13. Total Hours							

¹ Overhead includes all vacation, sick, and personal leave time; coffee breaks; or other generally non-productive time.

*SOURCE: Bucks County Court of Common Pleas, *Unit Cost Procedures of Bucks County Court/Unit Instruction Manual for Department Heads*, Draft (August 10, 1982)

As a compromise to minimize staff burden while still obtaining reliable time estimates, many court systems use special studies. These studies collect time use data periodically rather than regularly by employing timesheets or observation on randomly sampled days or other limited periods. In fact, sampling is more common because it has proven to be as reliable as a system of weekly timesheets but is much less demanding.¹ The timesheet used in a special study could be the same as that used in a regular costing system; frequency of completion would be the major difference. For example, court personnel who are participating in a special study could be asked to complete timesheets for one randomly picked day or week per month over a three-to six-month period. The timesheet that is used by the Bucks County Court is completed during one randomly chosen day per month. This approach was also implemented successfully in a cost study of the U.S. Trustee Program, which aimed at identifying the personnel costs in adjudicating various types of bankruptcies.²

Observation techniques include both time studies and work sampling. Time studies are based on observations of workers performing "manual operations which are sufficiently repetitive to have justified standardizing the methods of working and the lay out of materials and equipment used and training the workers in their performance."³ For example, the court administrator estimates the amount of time it takes a clerk to initiate a case by first identifying the activities involved in the initiation process (receipt of papers, time and date are stamped, etc.) and then timing each activity from beginning to end. Work sampling involves randomly selected observations of work. It is commonly used "to produce statistically sound estimates of the percentages of time that a work system is in any of a variety of states of work activity."⁴ For example, someone may shadow a judge in her courtroom for a day or two each week until sufficient observations are recorded to allocate her time among several case types. Alternatively, the analyst might ask judges and other staff to estimate the amount of time spent on these same activities, but these figures are subject to selective perception and excessive subjectivity. To enhance the reliability of such personal estimates, a Delphi technique might be used, in which panels of court personnel are asked to provide time estimates in successive rounds until consensus is achieved.

Observation was used to study case processing costs in the Bronx Criminal Justice System. Volunteer observers clocked case processing operations at the following sites:

- the Complaint Room, where an assistant district attorney, the arresting police officer(s), and complainant(s), drew up a complaint, or accusatory instrument;

- the Felony Case Evaluation Unit, where an assistant district attorney screened cases to determine if a potential felony case should be taken to the Grand Jury, whether it should remain in the Criminal Court for a preliminary hearing, or should be reduced to a misdemeanor; and
- courtroom proceedings, where a judge was present, making decisions on the case-related issues.

During a 10-day survey period, observers were stationed in each site to record the following data on each case, using the form included as Exhibit 4.3.

- Beginning time
- Ending time
- Hearing type
- Number of personnel involved
- Number of defendants
- The most serious charge
- The docket number

The times in the courtroom were determined by when a judge began reviewing case papers, spoke to an attorney or defendant, or otherwise began to review a case, and the final moment when a decision was made, such as when the court papers were given to the clerk or the next case was called. If a case was temporarily delayed or recalled, the gap was not included, and the two separate times were summed.⁵

Both the output of a regular costing system and the results of a special time study can be expressed as a percentage of time or a number of minutes. Thus, if a judge spends 10 percent of her time on motions and hearings during the study period, then that cost objective is allocated 10 percent of the annual costs of her salary and fringe benefits. This allocation method assumes that the percentages derived during the study period are representative of her use of time during the rest of the year. If timesheets are distributed or observation incidents are picked randomly over a period of six months or more, representativeness should be assured. Expressing time in total minutes is less reliable since it may presume that the study period extended over the life of the case or other activity. Commenting on a 1969-70 time study of the Federal District Court, Steven Flanders argued that

It did not account adequately for what has come to be known as 'the window effect.' Case weights were calculated as though the survey contained a complete accounting of judicial time expended on each case . . . The time period of this survey was 132 days, but the life of a typical case is much longer . . . Two important difficulties and potential distortions result. First, a survey

Exhibit 4.3
SAMPLE OBSERVATION GUIDE*
 (Bronx Criminal Justice System)

PERSONNEL/TIME SURVEY

OBSERVER _____ DATE _____ COURT PART/LOCATION _____

TIME	BEGUN						
	ENDED						
	DURATION						
	HEARING TYPE						
	NUMBER OF PERSONNEL						
	JUDGE						
	COURT REPORTER						
	COURT OFFICER						
	INTERPRETER						
	COURT CLERK						
	ASSISTANT D.A.						
	D.A.'S CLERK						
	POLICE OFFICER						
	CORRECTION OFFICER						
	LEGAL AID ATTORNEY						
	LEGAL AID CLERK						
	APPOINTED ATTORNEY						
	PRIVATE ATTORNEY						
	NUMBER OF DEFENDANTS						
	TOP CHARGE						
	DOCKET NUMBER(S)						
	OCA ENTRY						

*SOURCE: Mott- McDonald Associates, *The Cost of Justice: An Analysis of Case Processing Costs in the Bronx Criminal Justice System* (New York: Association of the Bar of the City of New York, 1979).

almost certainly captures less of the time for cases for which the typical pending time is long than for shorter cases Another type of distortion may be even more serious: the failure of the 1969 survey to count all cases. A case finds its way into a caseweight survey only if a judge does some work on the case in a sufficient degree to lead him—following whatever instructions—to make a note on his reporting form. There is every reason to believe that different types of cases reach such a threshold in different proportions. The exact magnitude of this effect is hard to estimate, but it appears that it can be very large.⁶

Direct Personnel Costs

Personnel costs include not only wages and salaries but also fringe benefits such as health and life insurance, vacation time, pension contributions, and other allowances. Fringe benefits are a large fraction of total personnel costs and must be included in the analysis. Exhibit 4.4 details the wide range of costs that are typically classified as personnel costs.

Payroll records and personnel rosters can supply basic salary data. However, in using such records, several factors can distort the cost analysis. Appropriate adjustments may have to be made, for example, if:

- A position was vacant for the first nine months of the fiscal year;
- A long-term sickness caused the hiring of a temporary worker paid through a contract and not charged to the personnel services account;
- Pay increases often occur randomly throughout the fiscal year, yet have full-year cost implications;
- A peak load demand requires an outside contractor to perform an activity normally undertaken by government employees; or
- Payroll records may not show an employee temporarily “on loan” to another activity.⁷

Fringe benefits are usually budgeted centrally rather than department by department. To determine the fringe benefit costs attributable to court personnel, it is not practical to do a detailed analysis of the benefit costs that each staff member incurred. A better approach would be to identify benefits as a percentage of wages: add all annual benefit costs and then divide that amount by the total salaries paid.

Exhibit 4.4
TYPICAL PERSONNEL COSTS*

- expenditures for salaries;
- overtime;
- other premium pay (e.g., holiday pay, shift differential, environmental or hazardous duty pay, pay for temporary help during periods of peak loads);
- various fringe benefits, such as:
 - medical and dental insurance
 - FICA- if applicable
 - pension contributions
 - workers' compensation
 - unemployment insurance
 - group life insurance
 - disability insurance
 - uniform allowance
 - tuition reimbursement
 - use of city vehicle
- leave, which includes the costs of:
 - annual leave
 - sick leave
 - military leave
 - bereavement
 - jury duty
 - holidays

*SOURCE: Massachusetts Executive Office of Communities and Development, *Costing and Pricing Municipal Services* (Boston, 1982), p. 36.

Annual Benefits Payments

Vacations	\$200,000
Insurance Premiums	150,000
Retirement Contributions	400,000
Other benefits	250,000
	\$1,000,000

Benefits as a percentage of payroll:

$$\$1,000,000/\$4,000,000 = 25\%$$

This fringe benefit rate can then be applied to individual and total salaries to determine total personnel costs.

	<u>Salary</u>	<u>Fringe@25%</u>	<u>Total Cost</u>
Judge	\$50,000	\$12,500	\$62,500
Court Reporter	25,000	6,250	31,250
Secretary	15,000	3,750	18,750

As Exhibit 4.5 illustrates, the Los Angeles Superior Court uses the total salary method to determine its fringe benefit rate. It divides total salary and wages of \$20.6 million by employee fringes of \$5.9 million to arrive at a benefit rate of 28.597%.

Personnel Cost Allocation

Total personnel costs may be allocated to a specific case type or activity in one of two ways: (1) using the same percentages used during the time study or (2) dividing total compensation by the number of minutes in a judicial work year to arrive at a cost per minute, which is then multiplied by the number of minutes that each case type consumed enroute to completion or disposition.

In the first instance, total personnel costs could be distributed across two or more cost objectives on a percentage basis. The larger the number of cost objectives, the smaller the percentage assigned to any one objective. At the most general level, cost objectives for a judge might be limited to administration, criminal cases, and non-court activities. Becoming more specific, criminal cases might be subdivided into disposition types: diversion, dismissals, pleas, jury trial, and non-jury trial.

	<u>Administration</u>	<u>Criminal</u>	<u>Non-Court</u>
Judge \$62,500	30%	60%	10%
	(\$18,750)	(\$37,500)	(\$6,250)

Exhibit 4.5
CALCULATION OF FRINGE BENEFIT RATE*
(Los Angeles Superior Court)

1983-84 Estimated Employee Benefit (EB) Rate

82-83 Estimated Cost		
County-wide Cost Allocation Plan		(50,181)
Budgeted 82-83 (9-1-82 Spreadsheets)		
County Retirement	\$3,642,939	
Retirement-OASDI	940,737	
Health Insurance	1,036,371	
Dental Insurance	222,803	
Life Insurance	5,478	
Workers' Compensation	113,097	
		<u>5,961,425</u>
		<u>5,911,244</u>
82-83 Estimated Salary and Wage Base		
Net Salary and Employee Benefit		
82-83 Budget		31,297,803
Less: Budgeted Employee Benefit	5,961,425	
Non-Employee Benefit Salaries	<u>4,665,460</u>	<u>10,626,885</u>
		<u>20,670,918</u>
Rate 5,911,244 :- by 20,670,918 = 28.597%		
1983-84 Employee Benefit Rate		<u><u>28.597%</u></u>

*SOURCE: Los Angeles Superior Court/James F. Butcher, Finance Officer, "Certification for 1983-84 Indirect Cost Proposal," (June 30, 1983).

Alternatively, a cost per minute approach would require a determination of the number of work minutes in a given year. Assuming an average judicial work year of 215 days (260 days minus 13 sick days, 27 holiday and vacation days, and 5 days for conference attendance) and multiplying by 480 minutes per day (8 hours @ 60 minutes each) yields an estimate of 103,200 minutes per year. However, this estimate falsely assumes that 100 percent of a judge's time on-the-job is spent on case-related activities when actually a substantial portion of time is consumed by administrative matters, professional development, and other activities that are not directly case-related. The Rand Corporation, in its study of court expenditures for processing tort cases, used court records and special studies to estimate the number of case-related minutes per day in the California Superior Court (340 minutes per day), Florida Circuit Court (390), Washington Superior Court (282), and

the U.S. District Court (318).⁸ Multiplying the 215 work days by, for example, 318 case-related minutes per day results in a more conservative estimate of 68,370 minutes per year.

Dividing the judge's total compensation by the number of case-related minutes per year yields a personnel cost per minute of 91¢ for the judge. This rate can then be applied to the total minutes consumed by various disposition categories to compute a personnel cost for each category. In jury trials, for example, 20,000 minutes at 91¢ per minute yields an estimated personnel cost for the judge of \$18,200.

$$\text{Judge } \frac{\$62,500}{68,370 \text{ min.}} = 91\text{¢/min.}$$

	<u>Diversion</u>	<u>Dismissals</u>	<u>Pleas</u>	<u>Jury Trial</u>	<u>Non-Jury</u>
Tot. Minutes	8935	8935	10,500	20,000	20,000
	\$8,131	\$8,131	\$ 9,555	\$18,200	\$18,200

Robert Tobin's study of the costs of the District of Columbia Superior Court estimated personnel costs in a three-step process.

- First, personnel salaries and FTEs in each court department were assigned to specific cost objectives and the results entered on organizational worksheets;
- Second, the data on the organizational worksheets were reclassified on function worksheets which allowed the personnel salaries and FTEs to be aggregated by cost objective across organizational units; and
- Third, the salary data for each objective were used to compile percentage allocations which were then applied against the actual personnel expenditures for the period. Cost objectives were listed in two dimensions: by function (felony, misdemeanor) and by cost area (judges, jury, etc.).

Exhibit 4.6 presents the personnel cost allocation for the D.C. Superior Court by function and cost areas. To illustrate how personnel costs were allocated, the personnel costs of the felony function were derived by multiplying the total personnel costs (\$20,897,480) by the percentage of total salaries (17 percent) representing the felony function, to yield a cost of \$3,552,571. The exhibit shows that over two-thirds of the personnel costs related to four functions: misdemeanors, felonies, juvenile, and civil actions. In terms of cost areas, general clerical and secretarial accounted for over 28 percent of the FTEs, but only 18.9 percent of the salaries because the personnel in this

Exhibit 4.6
PERSONNEL COST BY FUNCTION AND COST AREA*
(D.C. Superior Court)

FUNCTION	% FTE	% SALARIES	PERSONNEL COSTS
Felony	15.5	17.0	\$ 3,552,571
Misdemeanor	20.9	21.4	4,472,060
D.C. Offenses	.9	.8	167,180
Traffic	4.8	4.2	877,694
Civil Actions	11.1	11.4	2,382,313
Landlord-Tenant	2.1	1.8	376,155
Small Claims	2.3	1.9	397,052
Divorce	4.3	4.0	835,899
Support/Paternity	3.3	2.7	564,232
Intra-Family	4.6	4.4	919,489
Juvenile	19.4	19.3	4,033,214
Mental Health	2.1	3.3	689,617
Mental Retardation	.7	.8	167,180
Probate	6.5	5.8	1,212,054
Tax	.2	.2	41,795
Other	1.4	1.0	208,975
TOTALS	100.1	100.0	\$20,897,480
COST AREA TITLE			
Judges/Personnel Employees	15.3	21.8	\$ 4,555,651
Quasi-Judicial	.5	1.0	208,975
Line Directors/Personnel Staff	2.4	3.1	647,822
Deputies Supervisors (GS 12+)	6.8	10.6	2,215,133
Social Service	19.5	20.8	4,346,676
Jury	.7	.5	104,487
General Secretarial/Clerical	28.1	18.9	3,949,624
Clerical Financial	2.4	1.6	334,360
Calendar Clerks	2.9	2.0	417,950
Court Room Support	7.0	5.0	1,044,874
Security	2.9	1.4	292,565
Court Reporting	4.8	5.9	1,232,951
Legal	.7	.6	125,385
Medical	.9	1.7	355,257
Psychological/Psychiatric	.8	1.3	271,667
Auditing	2.2	1.9	397,052
Appraisal	.5	.4	83,590
Other	1.6	1.5	313,462
TOTALS	100.0	100.0	\$20,897,480

*ADAPTED FROM: Robert Tobin, *Functional Cost Study of the Superior Court of the District of Columbia* (Williamsburg, Virginia: National Center for State Courts, 1982).

category are not highly paid. Not surprisingly, judge/personnel employees consumed the highest percentage of salary dollars among the cost areas at 21.8 percent.

Exhibit 4.7 depicts how the Bucks County Courts measure personnel costs, using a unit cost model developed for Pennsylvania by NCSC (cited in Chapter 2 of this document). It shows how time and cost data are integrated to estimate courtwide expenditures. The key steps in the process that are noted on the exhibit are (1) monthly reporting of time spent by position, allocated to court programs and sub-programs; (2) use of the county controller statement and other documents to estimate the costs of that time; (3) collection of disposition statistics and FTE estimates by department heads to allocate personnel time by disposition type; and (4) use of cost data by position and personnel allocations to determine total and unit costs by disposition type.

Task 6: Measure Direct Nonpersonnel Costs

Nonpersonnel costs can be divided into two broad classes: (1) operating costs and (2) capital costs. Operating costs are the resources consumed during the current fiscal year to support the court's programs and services. Capital costs are longer-term costs; they are incurred for the acquisition of an asset to be used over several years, e.g., buildings, vehicles, equipment, and other "fixed" assets. Operating costs often result from the care and upkeep of a fixed asset. Exhibit 4.8 illustrates typical costs in both categories. Some of these costs (e.g., capital and debt service costs) are rarely recognized in court budgets or accounting records because they are incurred by the general government on behalf of the courts. Nevertheless, to ignore these costs in an analysis might significantly underestimate the true costs of the program or service. For example, just because the courthouse was built by the county does not mean that its capital cost is not attributable to the courts.

Determining the direct nonpersonnel costs of a given cost objective involves, first of all, a total for the nonpersonnel costs of the responsibility centers contributing to the objective and, second, an allocation of the costs to the specific objective. For example, if the presiding judge and court administrator are the only two responsibility centers that contribute to the cost objective of "measuring the costs of court administration," it would first be necessary to total the nonpersonnel costs of each responsibility center. Then, since both centers contribute to cost objectives other than just court administration (e.g., the presiding judge also hears criminal cases), it is necessary to allocate a fair percentage of each center's nonpersonnel costs to all relevant cost objectives, including administration.

Direct Nonpersonnel Cost

In estimating direct nonpersonnel costs, a key issue is distinguishing between the expenditure required to acquire the item, and the cost incurred when it is used. Court systems typically count goods and services as costs when they are acquired, rather than when they are consumed because that is how their monthly and year-to-date budget reports treat nonpersonnel costs. In many cases, the distortion this practice introduces is negligible, because most nonpersonnel items are used during the same accounting period in which they are bought and they account for only a small percentage of total costs.

However, when costing buildings and other fixed assets, the dollar amounts can be quite substantial, and failing to distinguish between expenditures and costs can distort the objective's true cost. Unfortunately, if the purchase was funded from a general fund appropriation, standard accounting practice would require that the full amount of the expenditure be charged in the year of purchase and no charges for the item appear thereafter. Thus, a \$1 million renovation of the court administrator's office would be considered in full as a cost of the year in which the renovation was done and have a significant impact on the total nonpersonnel costs of that year. Prices for services based on that year's cost would be higher than prices set the year before or the year after.

For costing purposes, it is better to focus on the use of the fixed asset rather than on the disbursement of cash. The purchase price of the office renovation should be spread out over the years of useful life rather than expensed all in one year. The annual use or consumption of a fixed asset is measured by its "depreciation." Depreciation is the portion of the cost of a fixed asset that is charged as an expense or cost during a particular time period. In accounting for depreciation, the cost of the fixed asset, less any salvage or resale value, is prorated over the estimated service life of the asset, and each period is charged with a portion of such cost. Exhibit 4.9 shows how depreciation can be taken on a fixed asset (in this case, ten vehicles) in order to determine its annual capital cost. It results in an annual depreciation of \$1,500 and a depreciation rate of 2.5 percent per year.

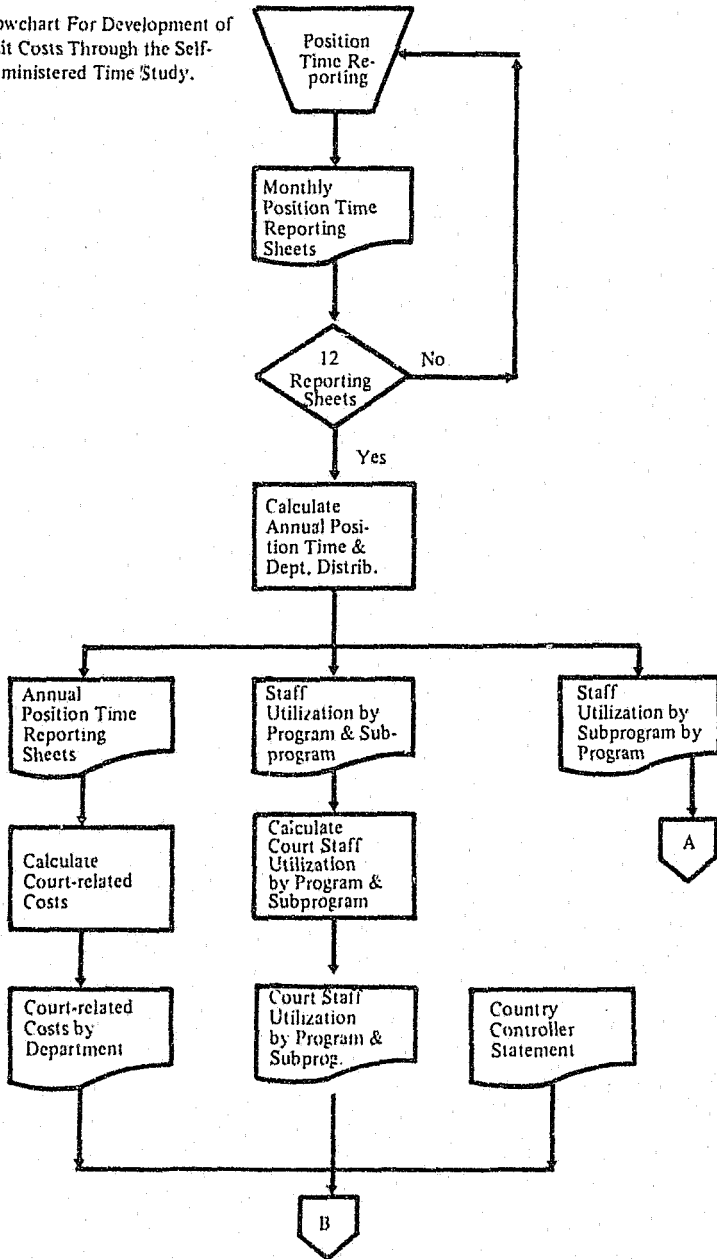
The vehicle's annual operating costs must also be considered.⁹ To the capital cost of \$1,500 per year must be added the operating costs of maintenance, insurance, tires, etc. This can be calculated by hours of service or miles of service, depending on which basis more equitably reflects use. If miles of service is the standard measure, and if it is known that:

- the average vehicle is driven 20,000 miles a year;
- the average cost per vehicle for maintenance and repairs is \$370 per year;

Exhibit 4.7
PERSONNEL COST MEASUREMENT*
(Bucks County Court of Common Pleas)

Key Steps

Flowchart For Development of
 Unit Costs Through the Self-
 Administered Time Study.



1

2

*SOURCE: Bucks County Court of Common Pleas/H. Paul Kester, Court Administrator (December, 1983). Prepared by David E. Gunnett, Procedural Auditor.

Exhibit 4.7
PERSONNEL COST MEASUREMENT
(Bucks County Court of Common Pleas)
(Continued)

Flowchart For Development of
 Unit Costs Through the Self-
 Administered Time Study. (cont'd.)

Key Steps

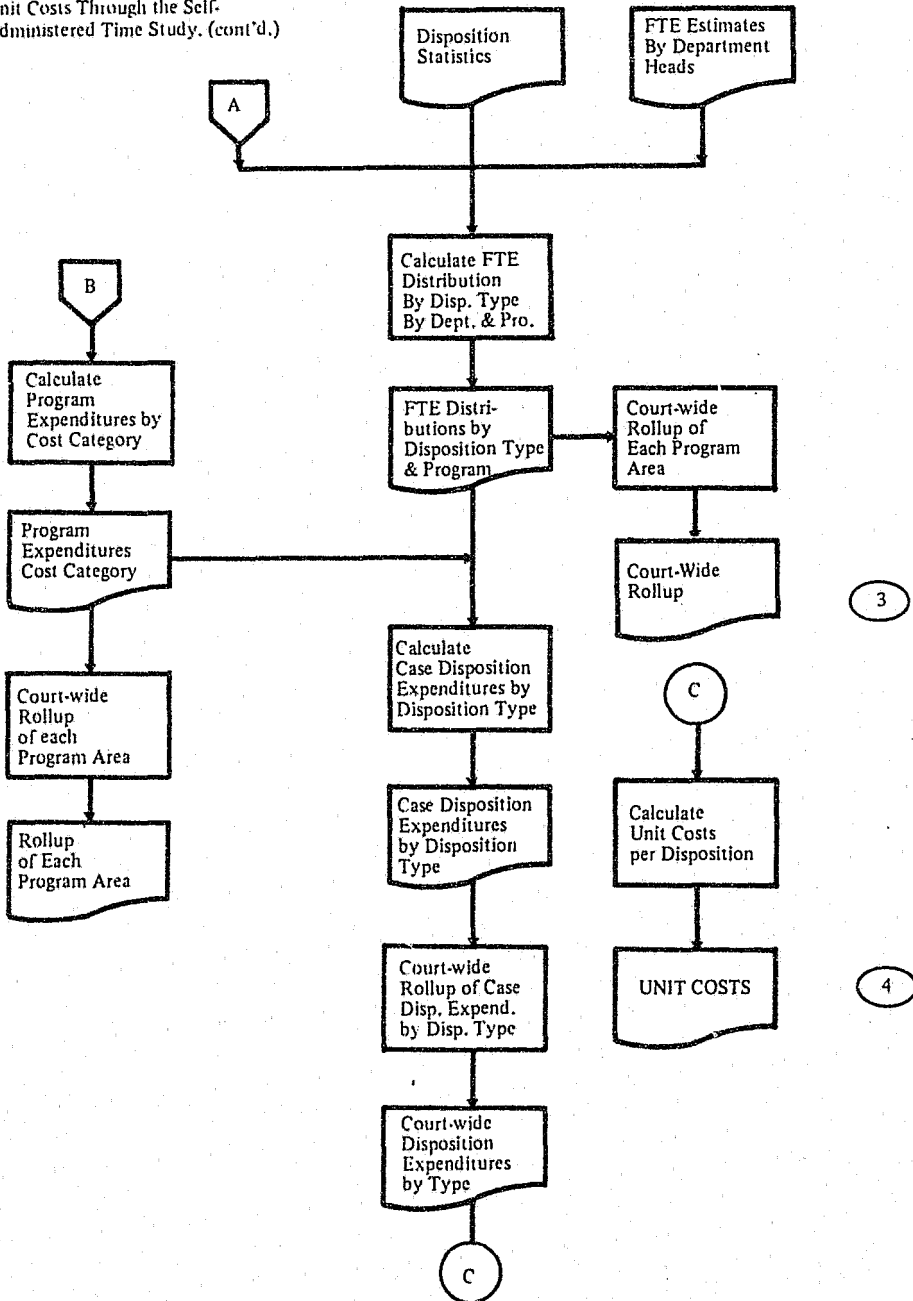


Exhibit 4.8
TYPICAL NONPERSONNEL COSTS*

1. Operating Costs

PURCHASE OF SERVICES

Energy
Nonenergy Utilities
Repairs and Maintenance
Rentals and Leases
Other Property-related Services
Professional and Technical
Tuition
Communication
Recreational
Other Purchased Services

SUPPLIES

Energy
Office
Building Repairs and Maintenance
Custodial and Housekeeping
Groundskeeping
Vehicular
Medical and Surgical
Educational
Public Works
Other Supplies

OTHER CHARGES AND EXPENSES

In-state Travel
Out-of-state Travel
Due and Subscriptions
Insurance Premiums
Witness Fees
Jury Fees
Otherwise Unclassified

2. Capital Costs

CAPITAL OUTLAY

Land
Buildings
Plant
Improvements
Additional Equipment
Replacement Equipment
Capital Projects

DEBT SERVICE

Principal and interest
payments on loans,
notes, and bond

OTHER FINANCING USES

*ADAPTED FROM: *Massachusetts Uniform Municipal Accounting System for Local Units of Government* (1981).

- the average cost per miles for gasoline and oil is 14.5 cents;
- the cost of liability insurance is \$221 per year; and
- the average cost of four tires is \$256, and the vehicles average 32,000 per set;

then the total cost per mile can be calculated as follows:

Exhibit 4.9 CALCULATING DEPRECIATION*

Suppose a group of 10 vehicles for the trial court was purchased in 1980 at a cost of \$80,000, and that communications and other equipment was then installed in each vehicle for a total cost of \$20,000. Based on experience, it is estimated that each vehicle will average four years of service before it has to be replaced; some will have a longer useful life, and some less, but the average will be four years. After four years, the average salvage value per vehicle is estimated to be \$4,000, including the installed equipment. The cost per vehicle per year would be calculated as follows:

10 vehicles @ \$8,000 each	\$ 80,000
Equipment @ \$2,000 per vehicle	20,000
Total initial costs	\$ 100,000
Less salvage @ \$4,000 per vehicle	(40,000)
Total net cost	\$ 60,000
Divided by 10 to get cost per vehicle	\$ 6,000
Divided by 4 to get cost per vehicle per year	\$ 1,500
Divided by \$60,000 to get depreciation rate per year	2.5%

*ADAPTED FROM: J.T. Kelley, *Costing Government Services: A Guide for Decision Making* (Washington, DC: Government Finance Research Center, 1984), p. 60.

Sample Vehicle Operating Costs Per Mile

Vehicle: \$1,500/20,000 miles	= 7.5 cents
Maintenance: \$370/20,000 miles	= 1.9 cents
Gasoline and oil: \$0.145/mile	= 14.5 cents
Insurance: \$221/20,000 miles	= 1.1 cents
Tires: \$256/32,000 miles	= 0.8 cents
Total cost per mile	= 25.8 cents

Exhibit 4.10 is a worksheet that can be used to reconcile expenditures and expenses when estimating direct nonpersonnel costs. Assume that the numbered entries pertain to these transactions:

1. **Total Expenditures** of this period are \$500,000.
2. **Deduction of Capital Outlay** pertains to a \$5,000 microcomputer with a five-year useful life that was purchased this period, of which only \$1,000 reflects use or benefit during this period. Therefore, \$4,000 must be deducted from the expenditure total.
3. **Deduction of Other Period Expenses** may be \$20,000 worth of supplies purchased this period but intended for use in other periods.

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[illegible]

*SOURCE: W.W. Holder and R. Kermer, *Cost Accounting for California's Cities* (Sacramento: League of California Cities, 1981), p. 62.

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4. **Addition of Depreciation** in the amount of \$50,000 for fixed assets purchased in other periods but used in this period. The \$50,000 amount reflects how much use will occur during this period.
 5. **Current Period Expenses Paid in Other Period** may be \$25,000 in purchased services paid for in the last period, but used during this period, e.g., office rent.
 6. **Addition of Expenses from Other Funds** may be \$25,000 that benefit this program in the general fund, but are paid by other funds, e.g., debt service.
 7. **Total Expenses** result from taking total expenditures of \$500,000 and deducting expenditures benefiting other periods while adding expenditures of other periods that benefit this period. Total equals \$576,000.

For certain types of fixed assets—such as furniture and office machines— depreciation should be calculated by the group method. Under this approach, the total costs of groups of similar fixed assets are recorded and the depreciation is calculated based on this total. Because depreciation is based on an assumed useful life, it is also good practice to review periodically the actual life of the asset and to adjust the depreciation rate accordingly. Some jurisdictions may want to consider a “usage charge” as an alternative to taking depreciation. Federal Management Circular 74-4 suggests that 2 percent of the cost of undepreciated buildings, and 6-2/3 percent of equipment costs, may be used as the approximate annual expense of these fixed assets.

Nonpersonnel Cost Allocation

Once total nonpersonnel costs are known, they must be allocated to the cost objective being measured. One way is to take each nonpersonnel item and decide how much the cost objective uses it. Depending on how broadly the cost objective is defined, the objective may use 100 percent of the cost of the nonpersonnel item. For example, a very broad cost objective, such as cost per case disposed, may consume 100 percent of jury fees and witness fees. Allocation under these circumstances is relatively simple.

Allocation becomes complicated when the cost objective is more specific and must share the nonpersonnel item with other objectives. Examples of such cost objectives are the cost per felony case versus the cost per misdemeanor case, which share the costs of jury and witness fees. If the accounting records are coded by case type as the fees are paid, allocation merely

entails compiling the total fees paid to date. On the other hand, if the analysis is done retrospectively and without benefit of prior coding, it is often acceptable to allocate total direct nonpersonnel costs by the percentage of personnel costs attributable to each objective. If, through the use of timesheets or observation, it is known that felony cases consume 40 percent of total direct personnel costs, they are also allocated 40 percent of total nonpersonnel costs.

In his functional cost study of the D.C. Superior Court, Robert Tobin had to divide about \$9.2 million in nonpersonnel expenditures among sixteen functional areas. Exhibit 4.11 shows that \$6.8 million directly related to seven specific functions: felony, misdemeanor, D.C., traffic, civil, juvenile, and mental health. These direct nonpersonnel expenditures did not require allocation. The remaining nonpersonnel expenditures of about \$2.3 million were allocated among the seven functions in relation to their proportion of total personnel costs. For example, felony cases consumed 17 percent of the personnel salaries and were allocated 17 percent of the remaining nonpersonnel expenditures, or \$396,650. Since the seven functions together accounted for 77.4 percent of personnel costs, only 77.4 percent of the \$2.3 million in nonpersonnel expenditures could be allocated to them, or \$1.8 million. As shown in the footnote to the exhibit, the other 22.6 percent of nonpersonnel expenditures, or \$.5 million, was divided among nine other functions including landlord tenant, small claims, etc.

Task 7: Measure Indirect Costs

Direct costs are personnel and nonpersonnel resources that can be specifically identified with a specific court function, activity, or other cost objective. For more precise costing, costs should be charged directly to the cost objective to the extent possible. Costs that cannot be easily and conveniently charged to the cost objective are classified as indirect and generally require allocation based upon statistical relationships. For example, rent on a building that houses both criminal and civil courts may require allocation based on the square footage occupied by each type of court. Data processing costs may be allocated based on the proportion of reports produced for a given department or service or on the machine time used. In general, indirect costs should be allocated to cost objectives in proportion to the amount of service received, provided that the effort required to determine indirect costs is justified by the quality and usefulness of the information gained.

Exhibit 4.12 shows how the Bucks County Court of Common Pleas distinguishes between indirect costs that must be allocated and direct costs that may be assigned directly. For each allocated indirect cost, the court specifies the basis of allocation, e.g., the costs of the answering service are allocated based on the number of lines per department.

Exhibit 4.11
NON-PERSONNEL EXPENDITURES BY FUNCTION*
(D.C. Superior Court)

Function Number	Function	CJA	Jury Fees	Sequestered Juries	Witness Fees	Total Direct	% Personnel Cost	Total Allocated
1	Felony	\$1,500,000	\$740,295	\$ 67,715	\$ 397,200	\$2,705,210	17.0	\$ 396,650
2	Misdemeanor	1,500,000	832,832		400,255	2,733,087	21.4	499,312
3	D.C.	30,000	5,000		12,000	47,000	.8	18,665
4	Traffic	120,000	32,015		49,000	201,015	4.2	97,996
5	Civil		240,496			240,496	11.4	265,990
11	Juvenile	709,075			101,000	810,075	19.3	450,315
12	Mental Health	120,000				120,000	3.3	76,997
TOTALS		\$3,979,075	\$1,850,638	\$ 67,715	\$ 959,455	\$6,856,883	77.4 ¹	\$1,805,925

¹ Remaining 22.6% divided among other functions: landlord tenant, small claims, divorce, paternity/support, intra-family, mental retardation, probate tax, and other.

*ADAPTED FROM: Robert Tobin, *Functional Cost Study of the Superior Court of the District of Columbia* (Williamsburg, Virginia: National Center for State Courts, 1982).

Exhibit 4.12
ALLOCATION BASES FOR SELECTED COSTS*
(Bucks County Court of Common Pleas)

DEPARTMENT	BASIS OF ALLOCATION
Building Use Charge	
Administration Building	Usable square footage occupied by department
Court House Annex	Usable square footage occupied by department
Equipment Use Charge	
Use Allowance	Inventory of equipment in use in central service departments
Property Insurance	
Court House Complex	Usable square footage in complex
Court House Annex	Usable square footage in annex
Malpractice Insurance	Direct to user department
Auto Insurance	Number of autos assigned by department
Other Insurance	Direct to user department
Personnel Insurance	
Hospital Insurance	Analysis of premiums paid during December
Life Insurance	Analysis of premiums paid during December
Communications	
Answering Service	Number of lines per department
Switch Board	Light week sample of logged calls
Central Purchasing	
Purchasing	Purchase orders by department for year
Mailroom	
Mail In	Mailroom activity during one month
Mail Out	Mailroom activity during one month
Microfilming/Photocopying	
Printing and Reproducing	Actual charges by department
Microfilming	Number of rolls of microfilm by department for year
Media	
Media Service	Number of press releases in year
Data Processing	
Systems Programing	Cost distribution reports
Computer Operations	Cost distribution reports
Data Entry	Cost distribution reports
Finance	
Finance Budget	Percentage of individual salaries weighted to effort
Finance Payroll	Number of payroll checks issued by department
Finance Insurance	Direct to user department
Controller	
General Accounting	Number of non-payroll transactions by department during year
Post-Audit	Number of post-audit hours by department during year

*SOURCE: Bucks County Court of Common Pleas, "Summary of Allocation Bases," (July 28, 1981).

Types of Indirect Costs

There are two sources of indirect costs: (1) administration and (2) facilities. Administrative costs refer to those expenses necessary for the general overall operation of the court system. They are incurred on two levels. The first, or general governmental level, consists of the indirect costs incurred by the jurisdiction's central offices in supporting the employees and services of all its line departments, including the court. The county comptroller or city auditor would be examples of central offices that could be expected to support the court. Another example might be the sheriff in jurisdictions where he provides the court with bailiffs or process servers. The second, or departmental level, involves the indirect costs of each line department incurred in support of its own employees and services, e.g., the court administrator's office. Administrative costs are often termed "general and administrative (G&A) costs."

Facilities or "overhead" costs are the expenses incurred for buildings, equipment, and other fixed assets that cannot be charged directly to the cost objective. Although debt service and rental costs, as well as the costs of acquiring new fixed assets, are often budgeted centrally, they must be allocated to the departments and, ultimately, to the cost objectives that use them.

Indirect Cost Allocation

But how should these indirect costs be allocated? Frequently, the court can estimate the indirect costs of a cost objective without having to isolate and measure each source of indirect cost. Before compiling any indirect costs, court officials should first ensure that some other individual or agency has not already done the job for them. For example, an "audited indirect cost rate" may have been calculated by the state as part of a cost reimbursement scheme for local trial courts or by a federal agency for a grants program. Additionally, a county comptroller may have devised an indirect cost rate for the courts in order to serve her own cost accounting objectives. Indirect cost rates may be applied to the total direct cost to yield a figure for indirect costs.

Where no audited indirect cost rate exists, court officials interested in indirect costing are "on their own." Their more critical decisions involve choosing proper allocation bases. The choice of allocation base (square footage, number of transactions processed, etc.) can make a significant difference in the amount of indirect cost that is charged to a specific cost objective. It is important to select a base that fairly and equitably reflects the indirect costs that were generated by the cost objective. If a court's civil division uses more space and consumes more administrative support than its

criminal or juvenile divisions, then a higher percentage of total indirect costs should be allocated to the civil division. It is also important to select a base that can be readily measured. Attempting to use "number of hours used" to allocate vehicle costs may be impossible unless careful records are kept on which departments use which vehicles for how many hours. And, to reconstruct that information after the fact may not only be unreliable but also too cumbersome and time consuming. In cost accounting, as in other management functions, the worth of the information generated must be commensurate with the level of effort required to generate it.

There are two ways to allocate indirect costs: (1) individual allocation and (2) blanket allocation. Individual allocation entails a separate allocation base for each source of indirect cost as shown in Exhibit 4.13. For example, telephone costs would be allocated by the number of phones or headsets in use, rent by square footage, life insurance premiums by the number of employees, and so forth. Such detail has the advantages of precision and accuracy but may not be worth the effort.

In blanket allocation, total indirect costs are pooled and allocated as a group on the basis of total direct costs, total direct personnel hours, or total direct personnel dollars. The resultant blanket rate is established which, when applied to the cost objective's total direct costs, direct personnel hours, or direct personnel dollars, yields an estimated indirect cost as depicted below:

<u>Basis</u>	<u>Formula</u>	<u>Blanket Rate</u> ×	<u>Direct Cost of Cost Objective</u>	= <u>Indirect Cost Allocation</u>
Total Direct Cost	$\frac{\text{Total indirect costs @\$1 million}}{\text{Total direct costs @\$2 million}}$	\$.50 per \$ of direct cost	\$100,000 of direct cost	\$50,000
Total Personnel Hours	$\frac{\text{Total indirect costs @\$1 million}}{\text{Total direct personnel hours @ 160,000 hours}}$	\$6.25 per hour of personnel time	5,000 hours of personnel time	\$31,250
Total Personnel Dollars	$\frac{\text{Total indirect costs @\$1 million}}{\text{Total direct personnel dollars @ \$1,600,000}}$	\$.625 per dollar personnel cost	\$60,000 of personnel cost	\$37,500

For example, in the total direct cost basis, dividing total indirect costs of \$1 million by total direct costs of \$2 million yields a blanket rate of \$.50 per dollar of direct cost. Applying the blanket rate to the direct costs of any

Exhibit 4.13
SAMPLE ALLOCATION BASES FOR INDIRECT COSTS*

<u>Service</u>	<u>Allocation Base</u>
Telephone	Number of handsets
Rent	Square feet of space
Custodial Services	Square feet of space
Payroll Expenses	Number of employees
	Number of personnel transactions
Data Processing:	
Data Entry	Time on task
	Number of key strokes
Programming	Hours of programming time
Machine Use	Proportion of machine time used
Purchasing Expenses	Number of requisitions
	Number of purchase orders or contracts
Accounting Expenses	Number of transactions processed
Vehicle Expenses	Number of miles driven
	Number of hours used
Insurance:	
Risk	Number of employees within a worker's compensation risk classification code
Health	Number of employees
Life	Number of employees

*SOURCE: J.T. Kelley, *Costing Government Services: A Guide for Decision-Making* (Washington, D.C.: Government Finance Research Center, 1984), p. 26.

cost objective in the court system results in the appropriate indirect cost allocation to that cost objective. Thus, a blanket rate of \$.50 and a direct cost of \$100,000 for the cost objective produces an indirect cost allocation of \$50,000 and a total cost of \$150,000.

The formula values suggested above involve the total direct and personnel costs of the entire jurisdiction, and not just the cost objective being measured. Thus, after applying the rate to each and every cost objective of the jurisdiction, there should be \$0 left in what was originally a \$1 million indirect cost pool. The choice of a basis for determining the blanket rate depends on which basis most accurately and fairly reflects the indirect costs incurred by the cost objective. Generally, the total direct cost basis is preferred when nonpersonnel costs vary significantly among cost objectives and

their relative proportions need to be included in the blanket rate. However, since most court systems are labor intensive, one of the two personnel cost bases (dollars or hours) will be satisfactory in most cases.

Three examples of indirect cost allocation illustrate these alternatives: Bronx Criminal Justice System, D.C. Superior Court, and the North Carolina Office of Judicial Administration.

1. Bronx Criminal Justice System. In the 1979 analysis of case processing costs in the Bronx Criminal Justice System, personal services (PS) costs expressed in personnel dollars were used to allocate the costs of central administration to Bronx Operations.¹⁰ These central administration costs included both PS costs and OTPS (Other Than Personal Services) costs. Dividing the personal services costs incurred in the Bronx (\$458,627) by the total personal services costs citywide (\$2,362,529) yielded an indirect cost of .194. As illustrated in Exhibit 4.14, when this rate of .194 was applied to total central administration costs of \$914,772, the portion of central costs allocable to the Bronx was \$177,466.

2. D.C. Superior Court. Robert Tobin's cost study of the D.C. Superior Court also used a blanket rate for indirect costs but in a slightly different manner:

- First, all employees performing indirect support functions were identified on personnel printouts;
- Second, the FTEs and the salaries of those employees at full staffing were computed;
- Third, the salary total for indirect support personnel was divided by the salary total for direct support personnel, to arrive at a rate of 11 percent; and
- Fourth, this rate was used to:
 - add an indirect cost increment of 11 percent to the direct personnel costs of each function; and
 - add an indirect cost increment of 11 percent to the direct, generally allocated nonpersonnel costs of each function.

The results of this study, as presented in Exhibit 4.15, suggest that the indirect costs of the Superior Court are fairly modest.

3. North Carolina Office of Judicial Administration. This example illustrates a method for distributing the administrative costs of a state agency or county government to a local court system. The Office of Judicial Administration administers the courts as well as the offices of the prosecutors and public defenders. To distribute the state's share of administrative costs

Exhibit 4.14
USE OF TOTAL PERSONNEL DOLLARS TO ALLOCATE INDIRECT
COSTS*
(Bronx Criminal Justice System)

CJA Fiscal Year 1977-78 (11 Months Actual Expenditures Annualized)

Full-Time Employee	TITLE	Line \$
1	Director	\$ 30,909
1	Deputy Director/Operations	7,906
1	Deputy Director/Plans	8,158
1	Deputy Director/Administration	2,377
1	Deputy Director/Personnel	16,334
2	Secretary	20,875
1	Messenger	4,220
1	Technical Assistant	9,410
1	Fiscal Director	20,000
3	Fiscal Associate	42,818
2	Fiscal Assistant	17,965
1	Data Assistant	8,969
1	Research Director	7,319
1	Research Secretary	3,363
1	Research Associate	11,637
1	Research Senior Analyst	14,781
1	Research Systems Analyst	10,505
2	Research Analyst	12,586
1	Research Assistant	3,541
-	Temporary Help	1,726
2	Data Assistant	17,501
2	Associate Director	35,228
1	Administrative Assistant	7,500
1	Planner Analyst	7,091
1	Statistician Programmer	647
1	Research Clerk	3,560
		<hr/>
	Merit Increase	\$326,926
		500
		<hr/>
	SUB TOTAL	327,426
	Emergency Overtime	1,726
		<hr/>
		329,152
	Fringe .16 x 327,426	52,388
		<hr/>
	Personnel & Fringe	381,540
		<hr/>
	OTPS	533,232
		<hr/>
	TOTAL	\$914,772

Portion of Central Administration Costs Allocable to Bronx Operations

Central Administration x $\frac{\text{Bronx PS}}{\text{City-Wide PS}}$ = Central Administration for Bronx

$$\$914,772 \times \frac{(\$458,627)}{(2,362,529)} = \$914,772 (.194) = \$177,466$$

*SOURCE: Mott-McDonald Associates, *The Cost of Justice: An Analysis of Case Processing Costs in the Bronx Criminal Justice System* (New York: Association of the Bar of the City of New York, 1979), Exhibit 45.

Exhibit 4.15
INDIRECT AND DIRECT COSTS OF SUPERIOR COURT*
FY 1980-81
(D.C. Superior Court)

<u>Category</u>	<u>Direct</u>	<u>Indirect</u>	<u>Total</u>
Personnel	\$20,897,480 (89%)	\$2,298,720 (11%)	\$23,196,200
Non-Personnel			
Specific			
Functional			
Allocation	6,856,883		6,856,883
General			
Functional			
Allocation	<u>2,333,235 (89%)</u>	<u>256,657 (11%)</u>	<u>2,589,892</u>
TOTALS	\$30,087,598	\$2,555,377	\$32,642,975

*SOURCE: Robert Tobin, *Functional Cost Study of the Superior Court of the District of Columbia* (Williamsburg, Virginia: National Center for State Courts, 1982).

down to the local judicial district, we could use the method discussed earlier, i.e., the local district's percentage of statewide salaries and fringe benefits. However, the comptroller in Raleigh recommends his federally-approved allocation plan, which was based on the ratio of the number of employees in the operating agency (e.g., prosecutors) to the number of staff employed at the state level in its administrative functions (e.g., information systems, administration).¹¹

Again, accurate cost analysis depends on making direct as many costs as possible and specifically allocating them to the cost objective. Only those costs that cannot be conveniently assigned should be considered indirect and included in the indirect cost pool. For example, it may seem at first that duplicating costs must be indirect since so many cost objectives utilize the same equipment to make copies. Perhaps duplicating costs can be individually allocated as an indirect cost based on FTE personnel assigned or included in the blanket rate. In some cases, this may result in undercharging some cost objectives that make heavy use of the copying machine while overcharging lighter users. Alternatively, one could directly measure the number of copies made for each objective by assigning a counter to each cost objective which, when inserted into the machine, would record the number of copies made for that objective. Some of the newer, larger copiers are equipped with cost allocation accessories that are controlled by user cards. While less reliable, a log book might also be kept in which the number of copies made would be entered as well as the account code of the objective for which they were made.

Task 8: Report Results

"It is an unfortunate fact of life," wrote Joseph Kelley, "that many good ideas have been ignored because they were expressed poorly." Inadequate presentation of findings has ruined many good cost analyses. This is particularly unfortunate at a time when governmental agencies, including the courts, are under increasing pressure to provide legislators and the general public with information about the costs and benefits of various public programs and initiatives. Moreover, cost data are needed by judges and court administrators within the government to prepare realistic budgets and control expenditures.

External and Internal Reporting

Public demand has increased the availability of financial and cost information about the courts. Judges and court administrators are more aware than ever before that they are accountable to the citizenry, not only for the administration of justice but also for the efficiency of their operations. In justifying a new court building or additional judges, for example, court officials must convince the public, and their elected representatives, that such expenditures will be cost effective.

Moreover, federal and state laws, and administrative regulations, often dictate the scope and content of the costing reports that must be submitted to external agencies. External funding agencies, especially in state-funded court systems, usually specify the accounting practices that must be used in compiling reports on financial transactions related to grants and contracts. To promote efficiency, it is also important to minimize differences in the data used for internal versus external reporting. The monthly cost summaries developed for the court administrator may use the same data, format, and terminology as the reports developed for the state or federal government.

Within the courts, the cost information system may produce regular reports on actual versus budgeted expenses, the cost per case or courtroom (as the Los Angeles Superior Court does), and other components of the judicial system. Judges and court administrators use these data to monitor case flow and control costs. Policy analysts factor cost data in models for projecting capital and operating budgets.

Presentation of Results

Reports of cost analyses not only present the results but also the methodology used to collect and analyze the cost information. Although many reports are prepared for the purpose of informing management decisions,

many are quickly forgotten because they were not understood by management, were submitted too late to influence the decision, or were not well organized. The following suggestions may make the report more usable by decision-makers.¹²

1. **Cost findings should be in writing.** This reduces the possibility that misunderstandings will develop over the content and interpretation of evaluation findings. Errors and poor methodology might not be apparent and cannot be checked unless results are written. Even though government policy officials may not have the time to read such backup material, a staff member who did not participate in the study should review it carefully to ensure that the study's scope and methodology follow the initial agreement and that the procedures and findings are reasonable. Written reports normally would be supplemented by an oral presentation to decisionmakers. In this regard, computerized reports can be quite cost effective in that they can be produced quickly and inexpensively, even on a micro-computer. Exhibit 4.16 contains a jury costing report generated by computer for the Fourth District Court of Minnesota. It is easy to read and contains concise cost data that can be periodically updated without difficulty.

2. **Every report should be accompanied by an honest appraisal and critique of the strengths and weaknesses of the cost analysis.** The appraisal is necessary because even the most rigorous analyses require judgments and inferences from the data to arrive at the conclusions. The reward for the analyst or accountant in criticizing completed work is increased credibility, both personally and for the analysis itself.

3. Effective reports generally begin with a **brief summary**, then provide **background information** before they proceed to the body of the report. Most effective reports conclude with clear and unambiguous **recommendations**.

4. **If recommendations are made, they should be stated in terms of a plan for action and should be followed up.** The action plan should include the following:

- (a) the purposes or objectives of the proposed changes;
- (b) guidelines on how to implement the proposed changes including work steps, staff responsibilities, time frame and cost; and
- (c) identification of staff responsible for implementing the changes.

5. **To have the greatest payoff, the findings of cost analysis evaluations should be followed by an analysis of alternative ways to achieve program objectives.** This analysis should consider variations of the existing

Exhibit 4.16
COMPUTERIZED COST REPORT
(Fourth District of Minnesota)

Run Date 7/01/83

District Court Of Minnesota

Fourth Judicial District

DC1706RI Page 1

District Court Jury Report
 For The Period
 06/01/83 To 06/30/83

During the period, 560 jurors appeared for jury duty, of these, 406 served less than one week. 137 served for one to two weeks and 17 served more than two weeks. The average length of stay was 5.02 days. The courts paid for a total of 2,812.5 juror days.

A total of 44 Panels were drawn during this period at an average of 2.0 per day. These were sent out as follows:

District : 24	Municipal : 20
Civil : 15	Criminal : 29
Six-Man : 33	Twelve-Man : 11

A total of \$50,753.10 was paid out to jurors during the period. The average payment per day of service was \$18.04, which includes \$15.00 per diem and payment for an average commuting distance of 9.2 miles. The average total amount earned per juror was \$90.63. The total money, distributed proportionately, was used as follows:

Per Diem \$ 42,187.50	Mileage \$ 8,565.60
District \$ 31,178.88	Municipal \$ 19,574.22
Civil \$ 14,680.64	Criminal \$ 36,072.46
Six-Man \$ 32,297.40	Twelve-Man \$ 18,455.70

The average cost of a six-man panel drawn was \$978.70 and that of a twelve-man panel was \$1,677.79. The average cost of all panels was \$1,153.47.

Total Grand Jury Payments:	Month to date	\$0.00
	Year to date	\$2,869.80
Total Petit Jury Payments:	Month to date	\$50,753.10
	Year to date	\$259,665.90
Total Petit and Grand Jury Payments:	Month to date	\$50,753.10
	Year to date	\$262,535.70

N = Number of court days	22
A = District civil	Six-Man 13
B = Municipal civil	Six-Man 2
C = District civil	Twelve-Man 0
D = Municipal criminal	Six-Man 18
E = District criminal	Twelve-Man 11

programs (some of which may have been tested in the evaluation) as well as entirely new approaches. Seldom will cost data alone tell what should be done in the future. Thus, a major use of cost data will be to provide information from which estimates can be made of the costs and impacts likely to occur if the same program or variations of it are supported. For example, Exhibit 4.17 shows the cost and benefits of opinion publishing practices in ten states in 1975-76. It is important to note that this is a summary table that simplifies a number of complex processes. In addition, costs and revenue totals are not precisely comparable because of differences in accounting practices. Nonetheless, the exhibit suggests how to present alternative costs clearly and accurately.¹³

6. All tables and graphs should be clearly and plainly labeled in order to minimize misunderstanding. The State of Ohio's Office of Budget and Management recommended the following checklist in this regard:

Is the time period covered clearly shown?

Is the title sufficiently clear so that a person unfamiliar with the organization and the subject being presented can readily understand the meaning of the figure?

Is the legend clear and complete so that all numbers, colors, or other identifying symbols are readily understood?

Are the sources of the data identified?

Are all irregularities and questionable features explained by special notes?¹⁴

7. Reports should offer comparative figures (a comparison of actual versus budgeted costs or of standard unit costs with actual unit costs) **and should isolate variances** (differences between actual costs and the costs originally budgeted or expected). Comparisons among jurisdictions with similar political and socioeconomic characteristics may also be pertinent.

8. A report must be intellectually honest. Sources should always be cited. The degree to which the report presents more than the writer's opinions should be clear to the reader.

9. Agencies involved in the analysis should have an opportunity to review the findings before they are disseminated. Their reactions and suggestions will often add to the overall perspective; occasionally, they will detect major omissions in the evaluation that can be either corrected or considered in future decisions. Controversial interpretations by agency personnel should be expected, especially when the findings are negative. A government might

Exhibit 4.17
A COMPARISON OF BENEFITS AND COSTS OF
VARIOUS METHODS OF PUBLISHING CASE LAW OPINIONS*

	BENEFITS					COSTS ¹	BENEFITS AND COSTS
	REVENUES	SETS OF CASE LAW OPINIONS MAINTAINED	CONCISE DIGESTS	SPEEDY PUBLICATION OF OPINIONS	LOW COST OFFICIAL OPINION SERIES		NET COST PROFIT OR (LOSS)
Connecticut	220,824	570	Yes	No	Yes	371,660	(150,836)
Delaware	0	250	No	Yes	No	27,800	(27,800)
Maine	0	300	No	Yes	No	27,250	(27,250)
Massachusetts	24,042	500	No	No	Yes	242,587	(218,545)
New Hampshire	31,800	100	No	Yes	No	30,920	880
New Jersey	0	800	No	Yes	No	97,600	(97,600)
New York	1,000	1,025	No	Yes	Yes	783,000	(782,000)
Pennsylvania	1,610	N.A.	No	N.A.	No	N.A.	N.A.
Rhode Island	14,875	150	No	Yes	No	39,375	(24,500)
Vermont	7,990	400	No	Yes	No	33,750	(25,760)

¹ Yearly figures, covering 1975 or 1976 operations

*SOURCE: National Center for State Courts, *A Comparison of State Judicial Publishing Practices* (Boston 1976).

want to provide space in the final report for program offices to respond to the findings of the analysis.

Types of Reports and Audiences

A cost report can involve a range of cost data and analyses: from straightforward computations of a service's major personnel and nonpersonnel costs to sophisticated multivariate analysis of costs, effects, and benefits. The composition of any single report will depend on many factors, including:

- definition (back in Task 1) of the purpose of the study, which should have strongly influenced how the study was designed and what cost information should be reported.
- availability of particular kinds of cost information, especially information about indirect costs and other "hidden" costs;
- identification of management functions that should benefit from particular kinds of cost information, i.e., planning, budgeting, controlling, evaluating, pricing, and external reporting; and
- specification of target audience(s) that need particular kinds of cost information, including chief judges and court administrators, operating managers, planners and researchers, fiscal managers in central finance, budget, or auditing departments, public officials (mayors, city managers, legislators, etc.), and the general public.

These factors interact in different ways in different situations to produce different types of reports. For example, cost information reported by organizational unit is most useful for preparing the unit's budget, controlling its operations, and evaluating its performance, and is most helpful to top managers, operating managers, and central fiscal managers. Reports on the full costs of providing certain services assist in establishing a fair price for the service and an equitable fee, e.g., fees for psychiatric services. Finally, information about a service's costs and benefits is most useful to planners and researchers, as well as to central fiscal managers, in budgeting the court and in evaluating its effectiveness.

Exhibit 4.18 offers a more systematic way of examining the relationships among the kinds of cost information, management functions, and target audiences. It cross-references various kinds of cost information that can be reported (organized by type of cost, level of cost, timing of cost, and impact of cost) with the management functions and target audiences that such a report would best serve. It assumes that one report usually contains more

than one kind of cost information. Most of the cross-references were based on telephone interviews and in-depth field visits, in which respondents suggested a number of management functions and audiences that could be served by specific kinds of cost information.

For example, the exhibit suggests that the primary management contributions of personnel cost information are in planning, budgeting, controlling, and evaluating. Personnel costs account for such a large percentage of total court costs that almost every management function can benefit from accurate and timely personnel cost information. Planning and budgeting additional staff cannot proceed without knowing the costs of existing and proposed staffing levels. Cost control would be impossible if personnel costs were not identified and monitored. An evaluation of the impact of jury size on court costs, as was conducted by the Bucks County Court of Common Pleas, would be incomplete without personnel cost data. According to the exhibit, the primary target audiences for personnel cost information are judges and court administrators, operating managers (such as court fiscal officers or personnel coordinators), planners and researchers, and central fiscal managers such as state finance directors or county comptrollers.

With a more limited scope, the exhibit declares that cost-benefit information—comparing the costs of a program or department with its monetary benefits—makes its primary management contributions to budgeting and controlling. The costs of a new courtroom assignment process could be compared to its benefits, possibly expressed as the amount of money saved. If cost savings were presumed to be the sole monetary benefit, then the costs saved by the new assignment process should at least equal, if not exceed, the costs incurred in installing the process. This information would be most useful for planners, researchers, and central fiscal managers.*

However, since the exhibit is meant to be illustrative of the most common practices in court cost reporting, it should not be used to limit the reporting of cost information to particular functions or audiences. The exhibit

*Cost effectiveness analysis, technically speaking, compares program costs with *non-monetary* benefits. In the above example of the new courtroom assignment process, one non-monetary benefit might be a reduction in the number of days before a case could come to trial. If the process cost \$10,000 and was expected to reduce aggregate delay by 1,000 days, then a cost-effectiveness analysis would show that the process cost \$10 per day saved. This information could be used by a wide audience of court officials to judge if the new process was worth its cost.

Exhibit 4.18
TYPES OF REPORTS AND AUDIENCES*

Kind of Cost Information Reported		Primary Management Contribution					
		Planning	Budgeting	Controlling	Evaluating	Pricing	External Reporting
By Type of Cost	Personnel Costs	X	X	X	X		
	Nonpersonnel Costs	X	X				
	Indirect Costs		X				X
	Full (Total) Cost	X	X		X	X	X
	Unit Cost	X		X	X	X	
By Level of Cost	Specific Service	X	X	X	X	X	X
	Organization Unit		X	X	X		
	Department-Wide	X	X				
	Intergovernmental Comparison				X	X	X
By Timing of Cost	Historical	X	X			X	
	Current Period			X			
	Fiscal Year-to-Date			X			
	Projected	X	X			X	
	Current vs. Projected	X	X		X		
	Actual vs. Budgeted		X	X	X		
By Impact of Cost	Cost Effectiveness Analysis	X	X	X	X		X
	Cost Benefit Analysis		X		X		

*ADAPTED FROM: K.J. Chabotar, *Measuring the Costs of Police Services* (Washington, DC: National Institute of Justice, 1982).

Exhibit 4.18
TYPES OF REPORTS AND AUDIENCES
(Continued)

Kind of Cost Information Reported		Primary Target Audience					
		Judges & Court Admin.	Operating Managers	Planners & Researchers	Central Fiscal Managers	Public Officials	General Public
By Type of Cost	Personnel Costs	X	X	X	X		
	Nonpersonnel Costs			X	X		
	Indirect Costs			X	X		
	Full (Total) Cost	X	X			X	X
	Unit Cost		X		X	X	X
By Level of Cost	Specific Service	X	X	X	X	X	X
	Organization Unit	X	X		X		
	Department-Wide	X		X		X	
	Intergovernmental Comparison	X		X		X	X
By Timing of Cost	Historical			X	X	X	
	Current Period		X	X	X		
	Fiscal Year-to-Date		X	X	X		
	Projected			X	X	X	
	Current v. Projected		X	X	X		
	Actual vs. Budgeted	X	X	X	X	X	
By Impact of Cost	Cost Effectiveness Analysis	X	X	X	X	X	X
	Cost Benefit Analysis			X	X		

is descriptive rather than prescriptive of the ways in which cost information assists management decision making.

Footnotes

1. Robert Elkin, *A Human Service Manager's Guide to Developing Unit Costs* (Falls Church, Virginia: Institute for Information Studies, 1980), p. 17.
2. N.L. Ames et al., *An Evaluation of the U.S. Trustee Pilot Program for Bankruptcy Administration: Findings and Recommendations* (Washington, D.C.: Executive Office of U.S. Trustees, U.S. Department of Justice, 1983).
3. N.A. Dudley, *Work Measurement: Some Research Studies* (London: Macmillan, 1968), p. 8.
4. D.W. Karger and F.H. Bayha, *Engineered Work Measurement*, 3rd Edition (New York: Industrial Press, 1977), p. 173.
5. Mott-McDonald Associates, *The Cost of Justice: An Analysis of Case Processing Costs in the Bronx Criminal Justice System* (New York: Association of the Bar of the City of New York, 1979), pp. II-8, 22.
6. Steven Flanders, *The 1979 Federal District Court Time Study* (Washington, DC: Federal Judicial Center, 1980), p. 22-26.
7. Massachusetts Executive Office of Communities and Development, *Costing and Pricing Municipal Services* (Boston, 1982), p. 24.
8. J.S. Kakalik and A.E. Robyn, *Costs of the Civil Justice System* (Santa Monica, California: Rand Corporation, 1982).
9. J.T. Kelley, *Costing Government Services: A Guide for Decision Making* (Washington, DC: Government Finance Research Center, 1984), pp. 60-61.
10. Mott-McDonald Associates, *op. cit.*, Exhibit 45.
11. Author is indebted to Joan Jacoby for this example.
12. Adapted from: J.T. Kelley, *op. cit.*; Office of Budget and Management, State of Ohio, *Measuring Program Results: A Guide for Managers in State Government* (Columbus, 1975); and H.P. Hatry et al., *Practical Program Evaluation for State and Local Government Officials* (Washington, DC: The Urban Institute, 1973).
13. National Center for State Courts, *A Comparison of State Judicial Publishing Practices* (Boston, 1976). Cited in *New York State Budget Review Manual* (Albany: NCSC, 1978), pp. 11-12.
14. Ohio Office of Budget and Management, *op. cit.*

Chapter 5

Case Studies In Cost Analysis

This chapter contains case studies of how three court systems measured their costs. As evidenced in Exhibit 5.1, the systems were chosen to represent a range of management structures and information needs, geographic locations, and accounting capabilities. Each case study addresses different costing objectives and practices. The author visited each court system and had access to many court officials and documents.

The case study from Bucks County, Pennsylvania compares the costs of eight and twelve member juries. It explores the factors that may explain why 12-member juries are 148 percent more expensive than 8-member juries in that system, a difference that does not arise from juror fees alone. The second case study is drawn from the Colorado Judicial Department and its judicial cost model. The model is used to measure and control the cost per case in the state's district and county courts. Finally, the Los Angeles Superior Court periodically computes total and unit costs by program category (criminal, civil, juvenile, etc.) and by agency (superior court, county clerk, public defender, etc.). An interesting feature of the Los Angeles accounting system is that it includes not only direct costs, but also indirect (overhead) costs.

When reviewing the cases, it should be noted that they accurately reflect the costing methods in each jurisdiction at a specific point in time (Spring, 1984), and that subsequent events may have altered the court system or its cost analysis practices. It should also be noted that, while all of the jurisdictions adhere to the basic logic of cost analysis—namely, definition of a service to be costed, collection of personnel and nonpersonnel costs, and determination of total cost—none of them exactly duplicates the costing tasks

Exhibit 5.1
CHARACTERISTICS OF CASE STUDY SITES

CHARACTERISTIC	CASE STUDY SITE		
	Bucks County Court Of Common Pleas	Colorado Judicial Department	Los Angeles Superior Court
Government Level	Local	State	Local
Geographic Area	Northeast	Mountain	Far West
Funding Source	Mixed	State	Mixed
Annual Budget (1983-84)	\$5M	\$68M	\$61M
Type of Costing	Periodic Cost Finding	Ongoing Cost Accounting	Ongoing Cost Accounting
Scope of Analysis	Direct Costs and Selected Indirect Costs	Direct Costs	Direct and Indirect Costs

presented in Chapters 3-4. Their procedures were developed to fit local information needs and resources. Finally, it may be necessary to refer back to earlier chapters of the Issues and Practices document to understand certain technical terms repeated in the case studies.

Jury Costs in Bucks County¹

The Bucks County Court commissioned an analysis of the comparative costs of eight versus twelve member juries. Thirty-three (33) trespass cases adjudicated by jury trial between January and October 1982 were examined to answer two study questions: (1) What is the average cost per case of eight and twelve member juries? and (2) Are the differences between these costs statistically significant?

Comparative Costs

To estimate the costs of eight and twelve member juries, the following data were collected:

- salaries for judges, stenographers, minute clerks, and other staff
- number of defendants
- number of jurors
- voir dire time
- number of trial days
- trial time
- juror fees and average mileage fee

Based on the thirty-three (33) cases examined, the average cost to adjudicate a trespass case was \$1,265. But when this cost was disaggregated to examine the effect of jury size, the average cost for an eight-member jury trial was \$757, compared to \$1,874 for a twelve-member jury trial. Thus, a 50 percent increase in jury size from eight to twelve jurors prompted a 148 percent increase in average cost. This difference in average cost was statistically significant at the .05 level (i.e., there is only a 5 percent probability that the difference was due to random effects).

Of course, twelve-member juries will be more costly than eight-member juries, due to the difference in juror fees alone. But, the \$1,117 (148 percent) difference in average trial cost between an eight and twelve member jury indicated that there were other contributing factors. Identifying these other sources of cost differences was important to the Bucks County Court, since jury size is considered when projecting demand for courtroom use and judge time, and thus affects overall court scheduling and management. Consequently, the cost study examined each component of total jury trial cost in an effort to isolate those that help to "explain" the variation in costs between eight- and twelve-member juries.

Components of Total Cost

The cost analysis revealed that the relative costs of eight and twelve member juries were most affected by the following components: voir dire time, number of trial days, trial time, and number of jurors.

Exhibit 5.2 presents a case-by-case breakdown of these data. It shows that the average time to voir dire was 48 minutes for an eight-member jury compared to 85 minutes for a twelve-member jury. This finding was statistically significant at the .05 level. An eight-member jury trial required an average

Exhibit 5.2
INDIVIDUAL CASE ANALYSIS*
(Bucks County Court of Common Pleas)

DOCKET#	VOIR DIRE	TRIAL	JURORS	DAYS	DEFENDANTS
78-5539	60	865	12	2	10
78-8692	82	1465	12	7	2
79-4248	25	445	8	2	1
80-5863	44	480	12	2	1
78-1299	35	220	8	1	1
78-1771	25	535	8	2	1
80-0040	25	340	8	2	1
77-1023	180	2210	12	8	2
78-6579	30	270	8	2	2
79-6530	130	175	12	1	6
79-8203	105	360	12	2	1
80-8021	45	200	8	1	2
81-4859	50	800	8	3	2
80-0770	45	410	8	2	2
81-0094	60	165	8	1	2
81-0502	30	810	8	1	2
81-3040	43	165	8	1	2
77-4752	130	2085	8	9	6
78-9479	190	1810	12	6	2
76-6660	95	675	12	2	2
78-0488	60	330	8	1	1
80-5792	40	925	8	3	2
81-9355	40	345	8	1	1
76-5939	105	885	8	4	2
79-2786	45	320	12	2	5
76-9179	60	470	12	2	2
81-4306	50	160	12	1	1
81-8450	70	2115	12	8	4
81-9236	40	445	12	1	2
81-7691	55	25	8	1	3
81-3993	20	145	8	1	1
80-11020	60	2100	12	7	1
80-12621	65	1290	12	4	3

NOTE:

Voir Dire and Trial Time are measured in minutes.

*SOURCE: Bucks County Court of Common Pleas (December 20, 1983), p.3.

of 2.1 days, compared to an average of 3.7 days for a twelve-member jury trial. Also, the average trial time (or bench time) required for eight-member versus twelve-member juries was 506 and 996 minutes, respectively. These differences are statistically significant at the .05 level.

Size of the jury was the last component of total cost to be examined. Although many factors may explain the probability of a larger jury being requested, this analysis focused on one: the number of defendants in the case. The average number of defendants in trials that requested an eight-member jury was 1.9, compared to an average of 2.9 defendants in trials that requested a twelve-member jury. This result was not statistically significant.

In summary, the number of defendants in a case had no significant impact on the size of jury requested. However, the amount of time to complete voir dire, the amount of trial time, and the number of trial days all contributed significantly to the differences in total costs to adjudicate cases with eight- and twelve-member juries.

SUMMARY OF FINDINGS:

SIZE OF JURY

	8-Member	12-Member
Average Voir Dire Time	48 minutes	85 minutes
Average Number of Trial Days	2.1 days	3.7 days
Average Trial Time	506 minutes	996 minutes
Average Number of Defendants	1.9 Defendants	2.9 Defendants
Average Cost to Complete	\$757	\$1,874

Colorado Judicial Cost Model²

The Colorado State Court Administrator developed the Judicial Cost Model to integrate the budget process with the overall management of the courts, thereby improving the quality, availability, and uniformity of court services.

The Cost Model is a pictorial and analytical representation of all costs associated with a case, regardless of the source of funds. The concept avoids the typical situation where one public agency changes procedures to "save public dollars," but in reality creates costs for another public agency, thus increasing the total costs to the taxpayers.

The Cost Model assumes that, at any established level and quality of court-related services, the most efficient administration of justice will pro-

vide those services at the lowest cost per case. That goal can be achieved either by reducing the cost per case, or by improving case processing at level cost, adjusted for inflation. Additional improvements are accomplished by comparing public benefits with the additional cost per case and convincing the funding authorities that the increased costs are justified.

Several standards have been developed to implement the Cost Model: workload standards for judges, clerical personnel, and administrators; and standards for case-related operating costs. These standards, in conjunction with case projection technology also developed for the model, provide the bases for annual budget requests for court personnel and operating costs, and for allocation and transfers of available personnel and operating funds among the various judicial districts.

The Cost Model is also used in preparing fiscal impact statements for proposed legislation. It is the model against which all proposed substantive changes in court processing or jurisdiction should be evaluated.

Cost Classifications

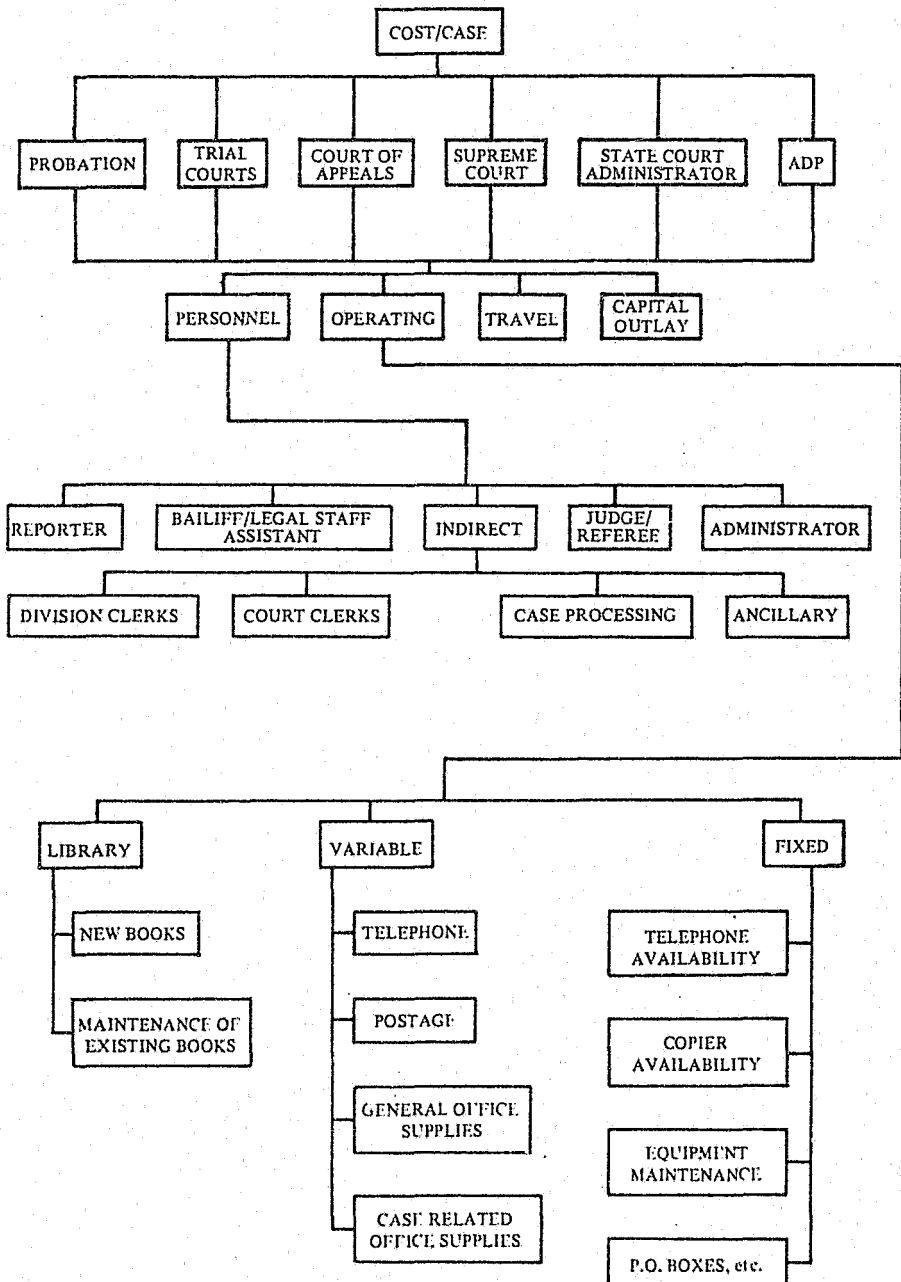
Cost per case can be classified by type and source. By type, costs are incurred for personnel, operations (telephone, postage, photocopying, etc.), travel, and capital outlay. By source, the cost per case represents the case-related costs of various components of the criminal justice system: state court administrator, supreme court, court of appeals, probation department, administrative data processing, and trial courts. Exhibit 5.3 illustrates the personnel and operating costs portions of the trial courts component of the state criminal justice system. This graphic display suggests how changes contemplated for one component must be evaluated for their impact on the other components and on the total cost per case before the changes are adopted. For example, significant increases in variable costs for telephone, postage, and supplies will increase total operating costs of one or more components which will, in turn, increase the cost per case.

Analysis

Analysis of the Cost Model began by determining how the courts were actually performing with measurable workload, equipment, facilities, and existing procedures. Accepting as satisfactory the level and quality of services provided in fiscal year 1976-1977, the following assumptions were applied to the entire analysis:

- The measurable product of the judicial system is the resolution of cases. Therefore, all costs of the system are assigned to cases.

Exhibit 5.3
COMPONENTS OF COST PER CASE*
(Colorado Judicial Department)



*SOURCE: Office of the State Court Administrator, *Colorado Judicial Cost Model, 1980-81* (Denver, 1981), pp. 3-4.

- All personnel in the court (with the exception of judges, reporters, bailiffs, and administrators) are concerned with indirect support for each court filing. Indirect costs were determined by averaging the salaries of all indirect personnel and allocating the costs to cases terminated.
- Actual staffing and termination figures were used for FY 1976-1977 through FY 1979-1980, in order to represent actual work accomplished with existing procedures, equipment, and facilities.
- Future performance should not be reduced if all factors remain constant.

Data were analyzed and standards were developed for personnel services and operating expenses in the trial courts. Exhibit 5.4 shows the cost per case from FY 1981 through FY 1985, providing cost breakdowns by type and source within the trial courts. Costs are detailed for urban and rural district courts, and urban and rural county courts. For example, total costs per case in FY 1985 ranged from a high of \$230.69 in district rural courts to a low of \$36.09 in county urban courts, due more to the latter's larger caseload than lower expenditures. The exhibit also aggregates the cost per case for all courts. This cost has increased from \$74.45 per case in FY 1981 to \$86.30 in FY 1985 and became the basis for workload and cost standards. These standards are used to monitor the efficiency of local courts and, in cases of significant variation from the standards, to suggest the need for corrective action to increase workload, decrease costs, or hire additional staff.

These cost data have been used to examine the relationship between the cost per case and the number of filings (number of cases per judge or referee). Exhibit 5.5 depicts the personnel cost for judges vs. filings for county courts for two fiscal years. The "leveling off" point represents actual workload performance by the judge or referee. Thus, the standard for number of filings became 930 per judge or referee, and the personnel cost standard became \$48 per case terminated.

Los Angeles Superior Court Cost Study³

The Superior Court Cost Study for FY 1980-81 was undertaken to determine the full costs, both direct and indirect, of seven program areas: 1) criminal, 2) civil, 3) family law, 4) probate, 5) mental health, 6) juvenile, and 7) appellate. Cost figures by program category are enormously useful in planning and evaluating court operations, especially in estimating the superior court's dependence on services provided by other criminal justice agencies, e.g., the district attorney.

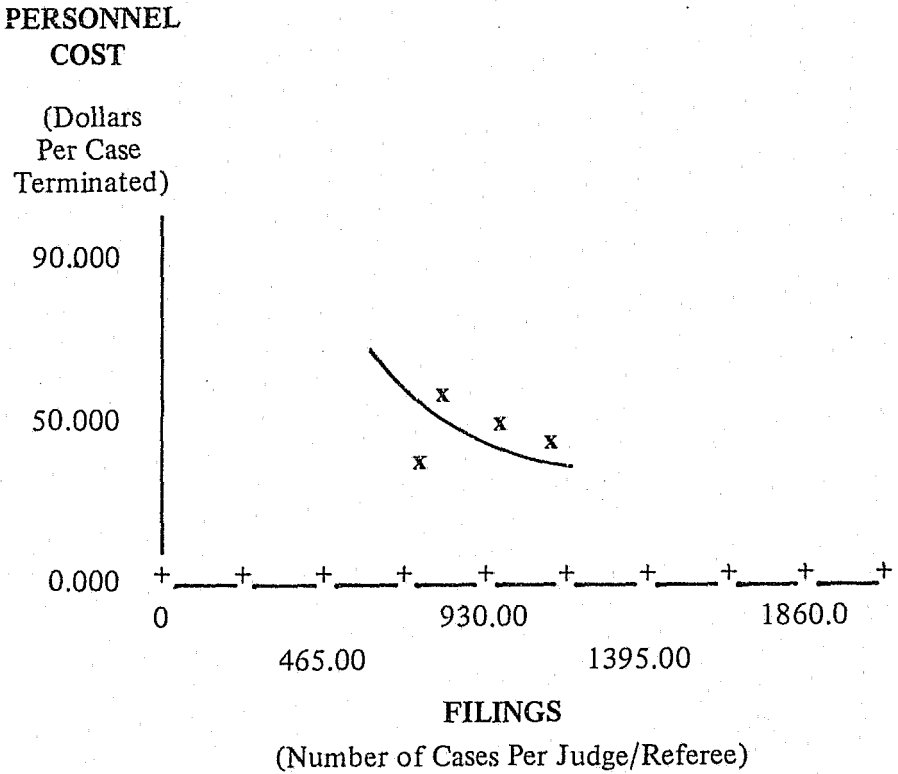
Exhibit 5.4
COST PER CASE, BY FISCAL YEAR*
(Colorado Judicial Department)

<u>LINE ITEM</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>
DISTRICT-URBAN					
Personnel	\$152.99	\$161.43	\$166.74	\$167.75	\$174.91
Var. Oper.	3.87	3.96	3.57	3.70	4.17
Fixed Oper.	3.17	3.60	3.06	3.74	4.45
Library	1.89	1.63	2.04	1.72	1.80
Travel	.19	.22	.31	.22	.27
Microfilm	.38	.45	.24	-0-	.25
TOTAL	\$162.49	\$171.28	\$175.97	\$177.12	\$185.95
DISTRICT-RURAL					
Personnel	\$177.02	\$173.43	\$197.79	\$214.71	\$209.19
Var. Oper.	5.34	5.45	6.44	6.66	7.51
Fixed Oper.	6.36	4.96	5.25	4.32	4.81
Library	3.79	4.62	3.38	4.39	4.53
Travel	3.63	3.31	2.71	2.83	3.24
Microfilm	.93	1.09	.64	.72	1.41
TOTAL	\$197.06	\$192.86	\$216.22	\$233.64	\$230.69
COUNTY-URBAN					
Personnel	\$26.67	\$27.86	\$31.40	\$32.43	\$33.39
Var. Oper.	1.02	1.38	1.03	1.07	1.20
Fixed Oper.	.60	.70	.63	.80	.93
Library	.35	.32	.42	.36	.40
Travel	.04	.05	.06	.05	.06
Microfilm	.09	.10	.05	.06	.12
TOTAL	\$28.76	\$30.40	\$33.59	\$34.76	\$36.09
COUNTY-RURAL					
Personnel	\$31.49	\$35.40	\$38.46	\$44.31	\$43.87
Var. Oper.	1.30	1.17	1.16	1.20	1.35
Fixed Oper.	.87	.84	1.41	1.18	1.34
Library	.52	.78	.91	1.20	1.26
Travel	.50	.66	.73	.78	.90
Microfilm	.10	.11	.06	.04	.11
TOTAL	\$34.78	\$38.07	\$42.72	\$48.72	\$48.83
COST PER CASE FOR ALL COURTS					
Personnel	\$69.24	\$71.37	\$75.13	\$78.26	\$80.10
Var. Oper.	2.04	2.20	1.99	2.05	2.32
Fixed Oper.	1.63	1.68	1.62	1.78	2.09
Library	.97	.97	1.07	1.06	1.14
Travel	.37	.38	.38	.36	.43
Microfilm	.21	.24	.13	.08	.22
TOTAL	\$74.45	\$76.85	\$80.32	\$83.59	\$86.30

*SOURCE: Office of the State Court Administrator (January, 1984)

Exhibit 5.5
RELATIONSHIP OF CASE FILINGS TO PERSONNEL COST PER CASE*
(Colorado Judicial Department)

Judges and Referees Urban District Courts
FY 1978-79 and FY 1979-80



*SOURCE: Office of the State Court Administrator, *Colorado Judicial Cost Model 1980-81* (Denver, 1981), p. 13.

Methodology

All cost distributions reflected in the study were based on the Superior Court's seven program categories. The primary data sources used in identifying and allocating costs incurred by the court and supporting agencies were:

- **Superior Court judicial officer allotment for FY 1980-81.**
This reflected the total number of permanent and temporary judicial officers utilized during the report year (less the number of permanent judicial officers assigned to the State Appellate Court). For FY 1980-81, this figure, for costing purposes, was 243 (full time equivalent) judicial officers.
- **1980-81 Actual Expenditures by the Superior Court,** as reported by the County Auditor.
- **Direct input from support departments,** including the county clerk, county counsel, district attorney, public defender, probation department, and sheriff regarding actual court-related expenditures for 1980-81.
- **Certified indirect cost proposals** for the Superior Court and all supporting agencies for FY 1980-81, which reflect applicable overhead rates for the report year. The rates for the court and each supporting agency were applied to salaries in each program category.

The actual expenditures for each program category in 1980-81 provided the basis for applying costs. These costs reflected a combination of direct personnel expenditures (in courtroom personnel), all other support expenditures (salaries, employee benefits, services and supplies, equipment), less costs applied elsewhere and revenue. Employee benefits were included with salary costs.

The program costs of the supporting departments were allocated to the Superior Court as follows:

- **County Clerk**—all program costs, excluding marriage license and corporation operations.
- **District Attorney**—all program costs for felony prosecution, misdemeanor appeals, juvenile proceedings, mental health proceedings, and child support enforcement.
- **Public Defender**—all program costs for defense of accused adults in Superior Court proceedings, misdemeanor appeals, defense of juveniles, mental health proceedings, and a portion of the costs attributable to public defender family law activities.

- **County Counsel**—all program costs for representation in juvenile dependency and probate matters.
- **Probation Department**—all program costs for juvenile investigation and transportation, child custody and abandonment investigations, and a portion of costs for adult investigation attributable to Superior Court proceedings.
- **Sheriff**—all program costs for court bailiff services and legal process serving, and a portion of prisoner transportation costs attributable to Superior Court proceedings.

All Superior Court program costs include all Superior Court expenditures. In addition, expenditures for the state's portion of the Supreme Court judges' salaries were included in order to reflect accurately the full costs attributable to Superior Court operations.

Results

Exhibit 5.6 summarizes the most significant findings of this study, as follows:

- In FY 1980-81, public expenditures for Superior Court operations totaled \$140.8 million.
- \$61.7 million (43.8 percent) of the total expenditures was directly attributable to the Superior Court (including \$12.7 million for the state's portion of judges' salaries);
- \$79.1 million (56.2 percent) of the total expenditures reflected costs for support services provided to the Superior Court by the County Clerk, District Attorney, Public Defender, County Counsel, Probation, and Sheriff.
- Total average cost per court per day was \$2,318, and \$579,616 per year.⁴

Exhibit 5.7 illustrates how the cost figures were determined for the criminal program area. It depicts how various public agencies incur direct (net county) and indirect costs in support of the criminal courts. For example, the county clerk incurred net county cost of \$2.6 million on behalf of the criminal courts and indirect costs of \$766,097, or a total of \$3,393,173. This total accounted for 4.7 percent of the total cost of the criminal courts.

Exhibit 5.6
COST SUMMARY BY PROGRAM AND AGENCY (1980-81)*
(Los Angeles Superior Court)

SUMMARY BY PROGRAM CATEGORY

Total Criminal	\$72,031,079	51.1%
Total Civil	18,864,167	13.4
Total Juvenile	32,484,502	23.1
Total Family Law	11,001,599	7.8
Total Probate	2,979,035	2.1
Total Mental Health	1,538,104	1.1
Total Appellate	1,948,193	1.4
GRAND TOTAL	\$140,846,679	100.0%

Total Average Cost Per Court Per Year (243 Courts)	\$579,616
Total Average Cost Per Court Per Day (250 Days)	\$2,318

SUMMARY BY AGENCY

Total Superior Court	\$61,706,010	43.8%
Total County Clerk	6,954,582	4.9
Total District Attorney	20,412,735	14.5
Total Public Defender	13,625,545	9.7
Total County Counsel	2,038,385	1.5
Total Probation Department	17,743,780	12.6
Total Sheriff	18,365,642	13.0
GRAND TOTAL	\$140,846,679	100.0%

*SOURCE: Los Angeles Superior Court, Executive Office, *Superior Court Cost Study, Fiscal Year 1980-81* (July, 1982), p. 1.

Recent Improvements

On July 1, 1985, the Los Angeles Superior Court implemented an automated cost accounting program entitled "Financial Information and Resources Management" (FIRM). The program is managed through the County's Office of the Auditor-Controller. The two departments of the Superior Court and County Clerk merged prior to the FIRM implementation date, and data are collected for the newly consolidated department.

The seven program cost centers in the 1980-81 study have been expanded to twelve for Phase I of FIRM. Expenditures and revenues are collected for the following cost centers: juvenile delinquency, juvenile dependency, juvenile

Exhibit 5.7
COST OF CRIMINAL COURTS (1980-81)*
(Los Angeles Superior Court)

<u>CRIMINAL</u>				Percentage of Total
SUPERIOR				
Net County Cost	\$17,402,690			
Indirect Cost		\$2,727,859		
State Portion of Judges' Salaries			\$4,725,670	
TOTAL			\$24,856,219	34.5%
COUNTY CLERK				
Net County Cost	2,627,076			
Indirect Cost		766,097		
TOTAL			3,393,173	4.7
DISTRICT ATTORNEY				
Net County Cost	11,598,699			
Indirect Cost		6,604,647		
TOTAL			18,203,346	25.3
PUBLIC DEFENDER				
Net County Cost	6,776,361			
Indirect Cost		2,525,784		
TOTAL			9,302,145	12.9
PROBATION DEPARTMENT				
Net County Cost	5,880,601			
Indirect Cost		1,764,209		
TOTAL			7,644,810	10.6
SHERIFF				
Net County Cost	6,919,668			
Indirect Cost		1,711,718		
TOTAL			8,631,386	12.0
NET COUNTY COST	\$51,205,095			
INDIRECT COSTS		\$16,100,314		
TOTAL CRIMINAL			\$72,031,079	100.0%
TOTAL PER COURT PER YEAR (76 COURTS)			\$947,777	
TOTAL PER COURT PER DAY (250 DAYS)			\$3,791	

*SOURCE: Los Angeles Superior Court, Executive Office, *Superior Court Cost Study, Fiscal Year 1980-81* (July, 1982), p.2.

traffic, civil, family law, probate, criminal, mental health, appellate, grand jury, county clerk (business filings and marriage licenses) and municipal court support. Although not a cost center, overhead costs are also collected on a divisional and departmental basis.

The purpose of the FIRM cost accounting system is the same as that of the manually prepared cost study: to identify the "cost of doing business." The advantages of the new system include automated data collection, more accurate data, and a refining of program areas.⁵

Footnotes

1. Analysis prepared by David E. Gunnett, Procedural Auditor, Bucks County Court of Common Pleas (December 20, 1983).
2. Description adapted from *The Judicial Cost Model 1980-81* (Denver: Office of the State Court Administrator, 1981).
3. Analysis prepared by the Los Angeles Superior Court, Executive Office, Superior Court Cost Study, Fiscal Year 1980-81 (July 1982).
4. To inflate the cost data to reflect 1983-84 prices, an inflation factor of 11.3 percent should be applied according to: H.L. Hufford, Chief Administrative Officer, Los Angeles County, "Fiscal Impact of the Criminal Court Procedures Initiative," (October 28, 1983), p. 3.
5. Letter from Frank S. Zolin, County Clerk/Executive Officer, Los Angeles Superior Court (December 23, 1985).

Conclusion

The case studies, and indeed this entire document, should have made the point that cost analysis in the courts is both managerially important and practically possible. Cost analysis does not have to be mysterious, complicated, or something that only accountants do. It is a mainstream management activity of increasing value and importance, not only to court systems in financial crisis but also to systems with surplus revenues and a desire to become more cost conscious and efficient.

Cost analysis serves every management function. It serves organizational planning by providing data on the costs of proposed objectives and alternative means of reaching those objectives. When combined with workload statistics, cost information makes a major contribution to budgeting by relating proposed budget increases to improvements in case processing, more equitable distributions of labor, and reduction of backlog. Cost analysis also assists budgeting by detailing the long-term capital and operating costs of a proposed program or service rather than just the current year's out-of-pocket expenditures.

User fees cannot be priced or assessed without reliable cost information. Fees for photocopying or case filing must be based, at least in part, on how much it costs the court to offer those services. Internal control over operations and the avoidances of budget overruns are also aided by cost analysis and information. Unit cost information about the cost per case terminated or the cost per judge is very helpful to court officials, especially when actual costs during the year can be compared to budgeted costs and

significant variances corrected to avert budget overruns. Finally, program evaluation and external reporting need cost analysis to assess the extent to which the court has met its objectives and to inform others of the financial condition of the courts.

Technical terms and concepts are important to the court official interested in doing his or her own cost analysis, but they also help the official to communicate effectively with outside auditors and fiscal officers. This document has defined the most critical of these terms. Cost is a measure of resources used or earned rather than expenditures paid during the year, although in many courts this distinction does not significantly affect the results of the analysis. These courts spend over 75 percent of their expenditures on salaries and fringe benefits that are paid in the same period in which they are earned. Costs are incurred by cost centers (like the office of the court administrator or the public defender's office) and then allocated, through cost analysis, to the proper cost objective, or the program or service being costed.

Most of these costs are classified as direct because they can be easily and conveniently assigned to the cost objective, e.g., judicial salaries to the costs of criminal trials. Other costs are indirect and not so easily assigned. Indirect costs involve either administrative costs (such as the court administrator) or facilities costs (such as courtroom building and equipment). These costs must be allocated carefully using methods described in this document, in order to estimate the total costs of the cost objective. Costs over time must be adjusted for inflation. Cost comparisons among courts are invalid unless the courts have exactly the same accounting practices and other characteristics.

Cost analysis has two phases: planning and doing. Planning for cost analysis ensures its smooth implementation and promotes the validity of its results. Planning involves four tasks: defining the cost objective; deciding on a costing approach (i.e., between top-down or bottom-up); identifying sources of information from among accounting records, budget documents, and financial questionnaires; and deciding on the extensiveness of the cost analysis. This latter task is crucial—not every cost analysis has to account for every possible cost. To capture all direct and all indirect costs only makes sense when the data are reasonably accessible and/or the cost objective requires particular accuracy. Otherwise, it may be possible to design cost analyses which are limited to direct personnel costs or to direct personnel and direct nonpersonnel costs.

Doing a cost analysis also has four tasks: measuring direct personnel costs via timesheets or special studies; measuring direct nonpersonnel costs,

in which a key concern is distinguishing between capital and operating costs; measuring indirect costs by using a pre-existing indirect cost rate where possible or an allocation plan where necessary; and reporting the results. Effective reports begin with a brief summary, state recommendations in terms of a plan for action, and have been reviewed by other agencies involved in the analysis. Most importantly, effective reports relate the cost information provided to the appropriate management function and target audience.

The three case study sites reflect the growing awareness and appreciation of cost analysis in the courts. The Bucks County Court of Common Pleas analyzed the comparative costs of eight versus twelve member juries. The Colorado Judicial Department has developed a judicial cost model that integrates cost information and workload standards with departmental planning, budgeting, and internal control. And, the Los Angeles Superior Court conducts periodic studies of its costs by program category (civil, criminal, etc.) and by agency (county clerk, sheriff, etc.). The Superior Court recently computerized its cost accounting system and expects even more accurate and timely information, which can contribute to greater efficiency and effectiveness.

These sites, and others described throughout this document, prove that cost analysis can be, and has been, done. Their examples should not only offer insight but also inspire action, for the issue facing the court official "in search of excellence" is not whether to analyze costs, but only how and when.

*Bibliography
and
Glossary of Terms*

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Glossary of Terms

The scope of the terminology is basically in the field of governmental accounting; the terms used and the definitions and examples provided are applicable to courts and other criminal justice agencies. Many of the terms used were adapted from: National Committee on Governmental Accounting, *Governmental Accounting, Auditing, and Financial Reporting* (Chicago: Municipal Finance Officers Association, 1980), pp. 53-77.

ACCOUNTING PERIOD. A period of time for which a cost analysis is prepared, e.g., a month, quarter, or fiscal year.

ACCRUAL ACCOUNTING. The basis of accounting under which revenues are recorded when earned and expenditures are recorded as soon as they result in liabilities, regardless of when revenue is actually received or payment is actually made.

ADMINISTRATIVE COST. An element of **INDIRECT COST** necessary for the operations or management of the organization providing the service, e.g., the cost of a **SERVICE CENTER** like accounting or personnel. Also known as "general and administrative expense."

ALLOCATION BASE. The standard used to allocate indirect costs among the services that use them. Greater use should be reflected in greater indirect costs. For example, a typical base for allocating the cost of utilities is the square footage of the building occupied by the service being costed. A service occupying 15 percent of the building space is charged 15 percent of the utilities' costs.

APPROPRIATION. An authorization granted by a legislative body to make expenditures and incur obligations for specific purposes.

BLANKET INDIRECT COST RATE. A rate established for all the services in a department or jurisdiction. Although a blanket rate may distort the indirect costs actually incurred by any one service, it is easier to establish than a rate "custom-tailored" for each service or group of services.

BOTTOM UP COSTING. Begins with the specific **COST OBJECTIVE**. Identifies the staff and other resources that it consumes, and calculates the cost of each resource in order to arrive at a total cost for the activity or outcome. Assumes that the cost objective is fairly "homogeneous," i.e., contains the same or similar elements. This assumption allows the cost analyst to use any one element as the basis for costing all the elements in the objective, since selecting any one element has the same effect on total cost as select-

ing any other. An example of a homogeneous cost objective would be courtroom security that is staffed by 10 uniformed officers, all of whom earn \$20,000 per year. The salary of any one of the ten officers can be used to represent the cost of the personnel component of this cost objective, since all the uniformed officers earn the same salary.

CAPITAL COST. An element of cost which results in the acquisition of **FIXED ASSETS** or additions to fixed assets which are presumed to have an **ESTIMATED USEFUL LIFE** greater than one year. Examples include the costs of land or existing buildings, improvements of buildings and grounds, construction of new buildings, or initial, additional, and replacement equipment.

CASH ACCOUNTING. The method of accounting which records revenues only when they are actually received and expenditures only when cash is paid. It is the most common form of governmental accounting.

CONSTANT DOLLARS. Dollar amounts over several years in which the effects of inflation have been removed, thereby allowing the analyst to focus on that portion of the increase due to programmatic expansion, lack of productivity, and other causes not related to consumer prices.

CONTROL. Management function that aims at insuring that organization actions match plans, e.g., actual **EXPENDITURES** do not exceed planned or budgeted expenditures.

COST. Cash or cash value of resources used in the delivery of a good or the provision of a service.

COST ACCOUNTING. Continuous process of cost analysis in which cost data are analyzed, classified, and recorded within the confines and controls of a formal cost accounting system and reported to users on a regular basis.

COST ANALYSIS. The method of accounting which records all the elements of cost incurred to accomplish a purpose, to carry on an activity or operation, or to complete a unit of work or specific job. It accounts for the cash or cash value of all resources used when they are used and not when the resources were purchased or acquired. See also: **COST ACCOUNTING** and **COST FINDING**.

COST BENEFIT ANALYSIS. Evaluation technique that compares a service's costs with its monetary benefits and derives a cost benefit ratio. For example, a cost benefit analysis of a new courtroom procedure might compare the costs incurred by the procedure with the benefit measure of dollars saved by the procedure. If the analysis revealed a 1:2 cost-benefit ratio, it would mean that for every \$1 that the new procedure cost, it had saved \$2.

COST CENTER. An organization unit, program, service, or some other entity to which costs are related.

COST EFFECTIVENESS ANALYSIS. Evaluation technique that compares a service's costs with its effects expressed in non-monetary terms. For example, a cost effectiveness analysis of a new courtroom procedure might compare its costs with the number of days that case backlogs were reduced. Such a comparison would derive a UNIT COST per day of reduction.

COST FINDING. Informal method of COST ANALYSIS or estimation on an irregular basis. There may be no formal accounting entries during the year to record costs incurred in specific cost accounts. Instead, cost finding usually involves taking available fund financial accounting data and recording it and adjusting it to devise the cost data or estimate needed.

COST OBJECTIVE. Organizational function, activity, or service being costed.

DEPARTMENTAL COST. A level of ADMINISTRATIVE COST incurred by line departments (e.g., court administrator, district attorney) in support of their own employees and services.

DEPRECIATION. The portion of the cost of a FIXED ASSET that is charged as an expense during the current accounting period. The cost charged reflects the gradual expiration of the service life of the fixed asset due to wear and tear, deterioration, action of the physical elements, inadequacy, and obsolescence. Through this process, the entire cost of the asset is ultimately charged off as an expense.

DIRECT COST. Those elements of cost that can be easily, obviously, and conveniently identified with a particular cost objective, as distinguished from INDIRECT COSTS incurred for several different objectives and whose elements are not readily identifiable with specific objectives.

EFFECTIVENESS. A measure of performance that assesses the extent to which an organization is achieving its stated objectives.

EFFICIENCY. A measure of performance that relates the goods and services produced by an organization to the amount of resources used to produce them. Examples of efficiency measures include cost per case and cost per vehicle mile.

ESTIMATED USEFUL LIFE. The amount of time (usually expressed in years) that a building, piece of equipment, or other FIXED ASSET is expected to be in active use.

EXPENDITURE. Cash outlay for goods delivered or services rendered which is presumed to benefit the current accounting period.

EXPENSE. Measure of resources used during a particular accounting period.

FACILITIES COST. An element of **INDIRECT COST** required to acquire, maintain, or use a physical asset used in the provision of an organization's services, e.g., costs of building construction, utilities, and maintenance. Also known as "overhead."

FIXED ASSET. Land, buildings, machinery, furniture, and other equipment intended for use over a period greater than one year. "Fixed" denotes probability or intent to continue use or possession, and does not indicate immobility of an asset.

FIXED COST. Costs which remain constant in total regardless of changes in volume or level of activity, e.g., cost of a leased vehicle for which a flat annual fee is paid.

GOVERNMENTAL COST. A level of **ADMINISTRATIVE COST** incurred by a jurisdiction's central offices (e.g., finance, personnel) in supporting the employees and services of all its line departments, including the court.

INDIRECT COST. Those elements of cost associated with the provision of a service but not conveniently traceable to that service. An indirect cost is incurred when a resource is shared by many cost objectives and thus it becomes difficult to allocate to any one objective a fair percentage of the costs of that resource, e.g., light, heat, supplies, building space, etc.

INFLATION. A rise in the general price level caused by an increase in the volume of money and credit relative to available goods and services. Inflation not only increases the cost of court services but also complicates the comparison of service costs derived over several years. Differences in service costs may be due to inflation as well as to changes in productivity or the mode of service delivery.

INVENTORY. The quantity of materials and supplies in stock that are available for use in providing an organization's services, e.g., tires, paper, or gas.

INVOICE. An itemized list of merchandise purchased from a particular vendor. The list includes quantity, description, price, terms of payment, date, and the like.

JOURNAL. An accounting record that lists financial transactions chronologically as they occur. It usually organizes these transactions by the object for which they were incurred, e.g., personnel salaries, materials and supplies, or fixed assets.

LEDGER. An accounting record which classifies financial transactions by object or by the organization unit or service which incurred them.

MISSION CENTER. An organizational unit that contributes directly to the accomplishment of an organization's primary purpose or mission, e.g., judges in a court system.

MODIFIED ACCRUAL ACCOUNTING. The basis of accounting under which revenues are recorded when they become both measurable and available to finance expenditures of the current period. Expenditures are recorded when the related fund liability is incurred, except for inventories, prepaid insurance, accumulated unpaid employee benefits, and debt service on long-term debt.

NONPERSONNEL COST. The costs of materials and supplies, travel and transportation, fixed assets, contractual services, and miscellaneous charges attributable to the provision of a service. Nonpersonnel costs are classified as **DIRECT COSTS** if they can be readily identified with a particular cost objective and are a significant cost element. If the nonpersonnel costs cannot be readily identified with a particular objective, or are an insignificant cost element, they are classified as **INDIRECT COSTS**.

OBJECT. As used in expenditure classification, applies to the article purchased or service obtained as distinguished from the results obtained from expenditures. Examples are personal services, materials, and supplies. Synonyms include **OBJECT OF EXPENDITURE**, **OBJECT CODE**, and **LINE ITEM**.

OFFICIAL INDIRECT COST RATE. A rate established by a federal, state or other authorized auditing agency. Although the primary purpose of establishing this rate is to support indirect cost charges on grants from these agencies, an official indirect cost rate can also be used to estimate the indirect costs of a court service.

OPERATING COST. An element of cost that results from the care and upkeep of buildings, land, equipment, and other **FIXED ASSETS**. Also refers to the costs of delivering an established service on a regular basis, as opposed to the **DEVELOPMENT COST** of initially planning and organizing the service.

PERSONNEL COST. The costs of salaries and wages, fringe benefits, pay differentials, and other labor charges attributable to the provision of a service. Personnel costs are classified as **DIRECT COSTS** if they can be readily identified with a particular cost objective and are a significant cost element. If the personnel costs cannot be readily identified with a particular objective or are an insignificant cost element, they are classified as **INDIRECT COSTS**.

PRICING. Organizational function that aims at setting the appropriate fees for goods produced or services rendered. A price may or may not recover the full **COST** incurred by the organization in producing the good or rendering the service.

RESOURCES. The personnel and nonpersonnel assets of an organization that can be used to support its operations and activities. These assets include staff time, buildings, equipment, and cash.

REVENUE. Resources earned by the organization during a particular accounting period, regardless of whether the cash is received during that same period.

SERVICE. A program or activity that does not produce a tangible commodity but which nonetheless contributes to the welfare of others, e.g., providing public defenders to the indigent, processing burglary cases, preparing the court calendar, etc.

SERVICE CENTER. An organizational unit that supports one or more **MISSION CENTERS** in accomplishing the organization's primary purpose, e.g., finance department in a court system. A service center contributes indirectly to organizational effectiveness.

TIME STUDIES. Based on observations of workers performing manual operations that are sufficiently repetitive to justify standardizing the methods of working and the outlay of materials and equipment used and training the workers in their performance. For example, the court administrator estimates the amount of time it takes a clerk to initiate a case by, first, identifying the activities involved in the initiation process (receipt of papers, time and date they are stamped, etc.) and, second, observing the clerk performing those activities on randomly selected days.

TOP DOWN COSTING. Starts with an aggregate measure of court costs, such as the annual budget or total **EXPENDITURES**, and attempts to allocate a fair portion of the total to the activity, outcome, or other **COST OBJECTIVE**. Assumes that the cost objective is "heterogeneous," i.e., uses resources with a wide range of costs. This diversity prevents the cost analyst from defining a typical delivery mode for the service and thereby costing the service based on any one element of the objective. For example, the cost objective of courtroom security might be staffed by 10 uniformed officers who earn from \$15,000 to \$40,000 per year. In this case, the salary of any one officer is likely to be unique and could not represent the salaries of the others in costing the service.

UNIT COST. A term used in cost accounting to denote the cost of producing a unit of product or rendering a unit of service, e.g., cost per non-jury trial, cost per arraignment, etc.

VARIABLE COST. Costs which vary in direct proportion to changes in volume or level of activity, e.g., cost of a rental car for which a mileage fee is paid.

WORK SAMPLING. Involves randomly selecting observations of work. It is commonly used to produce statistically sound estimates of the percentages of time that a work system is in any of a variety of states of work activity. For example, someone may shadow a judge in her courtroom for a day or two each week until sufficient observations are recorded to allocate her time among several case types.