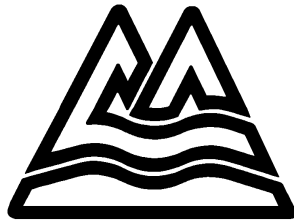


**A TRANSACTIONAL AND INSTITUTIONAL  
ANALYSIS MODEL OF THE MULTNOMAH  
COUNTY, OREGON ADULT CRIMINAL JUSTICE  
SYSTEM: SERIOUS ADULT CRIMES**



**MULTNOMAH COUNTY**

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## User's Guide To This Report

This analysis of the portion of the Multnomah County criminal justice system that deals with the impact of serious adult crimes offers several challenges for the reader. The subject matter – a consideration of some of the most important economic consequences of a complex network of public organizations – is difficult to fully conceptualize by even the most sophisticated policy analyst or policy maker. The sources of information involve dozens of agencies and encompass a tremendous range of functional requirements. Perhaps the biggest challenge involves the fact that this report involves the application of a new logic for the analysis of criminal justice systems – transactional and institutional cost analysis. The terms and methods used in this approach will be foreign to most readers.

To assist the reader in overcoming these challenges, we have sought to organize the report to be as “user friendly” as possible. Elements of the report organization that should be noted and utilized by the reader include the following:

- The report is organized into three components:
  - 1) **An executive summary** that introduces the subject matter, explains the transactional and institutional cost analysis approach, and summarizes some of the most notable findings of the report.
  - 2) **The body of the report** that offers more detailed analyses of each of the five subsystems of the criminal justice system that we have identified; and,
  - 3) **Appendixes** that provide the financial details that support the analyses found in the executive summary and body of the report. When the reader comes across references to budgetary, cost, and activity information, he or she will find detailed support for the information, including source documentation, in the appendixes.
- **The appendixes are critical** in that they demonstrate the complex linkages among the financial resources drawn from dozens of local agencies involved in dealing with the consequences of serious adult crimes. To provide substantiation for these economic linkages and make the sources of the referenced information used accessible to the reader, we organized the appendixes as follows:
  - 1) **There are worksheets for each subsystem of the criminal justice**, and in the case of what we call the “law enforcement” subsystem, worksheets for each of the jurisdictions that provide support for the subsystem. The worksheets identify each of the

organizational units that provide budgetary support for responses to serious adult crime, specify the estimated amounts that are provided, and allocate such amounts to what we call the “transactional cost subenvironment” or the “institutional cost subenvironment.”

**2) Following each worksheet** (except in the cases of the summary table for the entire criminal system, and the summary worksheet for the law enforcement subsystem) **there are line-by-line explanations** of how we dealt with each amount indicated in the worksheet. **At the end of each line explanation there is a specific reference to the source of the information, including the cited document and the page in the document where the source data can be found.**

- In an attempt to bring the information in the report to life, where possible, we have included illustrative figures and tables. In all instances these illustrations are grounded in the logic of transactional and institutional cost analysis and the data sources that we have relied upon for the preparation of the report.

**Although we deal with data that generally relates to adult criminal activity that ordinarily corresponds with “part one crimes” as reported in the FBI’s uniform crime reports, in this report we do not seek to explicitly define “serious adult crimes.” Rather, we deal with the cumulative “transactional consequences” of resources that are dedicated to the steps through the criminal justice system that obviously must be dedicated to the most serious adult crimes. Thus, we consider the transactional resources dedicated to *felony* prosecutions as perceived by the district attorney’s office. We also consider the correctional resources dedicated to the sanctions most frequently associated with “serious” adult criminals – incarceration and community supervision.**

# Executive Summary

## I. What is the Multnomah County Criminal Justice System?

Local criminal justice in Multnomah County, Oregon is administered within the context of a complex system that combines resources drawn from the municipalities of the County and Multnomah County Government. This system can be described in summary terms by five major clusters of functions that it encompasses:

**Law enforcement** – Municipal police departments and the Multnomah County Sheriff's Department investigate crimes, apprehend and arrest suspected criminals.

**Booking** – Suspected criminals are formally taken into the criminal justice system and screened as to how they will next be treated by the system.

**Prosecution** – The Multnomah County District Attorney's office, with the support of other agencies, prosecutes suspected criminals.

**Incarceration** – The Corrections Facilities Division of the Multnomah County Sheriff's Office houses suspected and convicted criminals.

**Supervision, Services and Sanctions** – Multnomah County's Department of Community Justice has lead responsibility for the supervision of convicted criminals who are not incarcerated.

These five elements of the criminal justice system each stand as complex subsystems that blend together the activities and financial resources of a variety of agencies. In this report we seek to describe each of these subsystems and how they are linked together in the overall criminal justice system and identify the costs associated with the pursuit of their primary activities. Figure A. is a summary flowchart that describes the linkages among the subsystems of the Multnomah County criminal justice system.

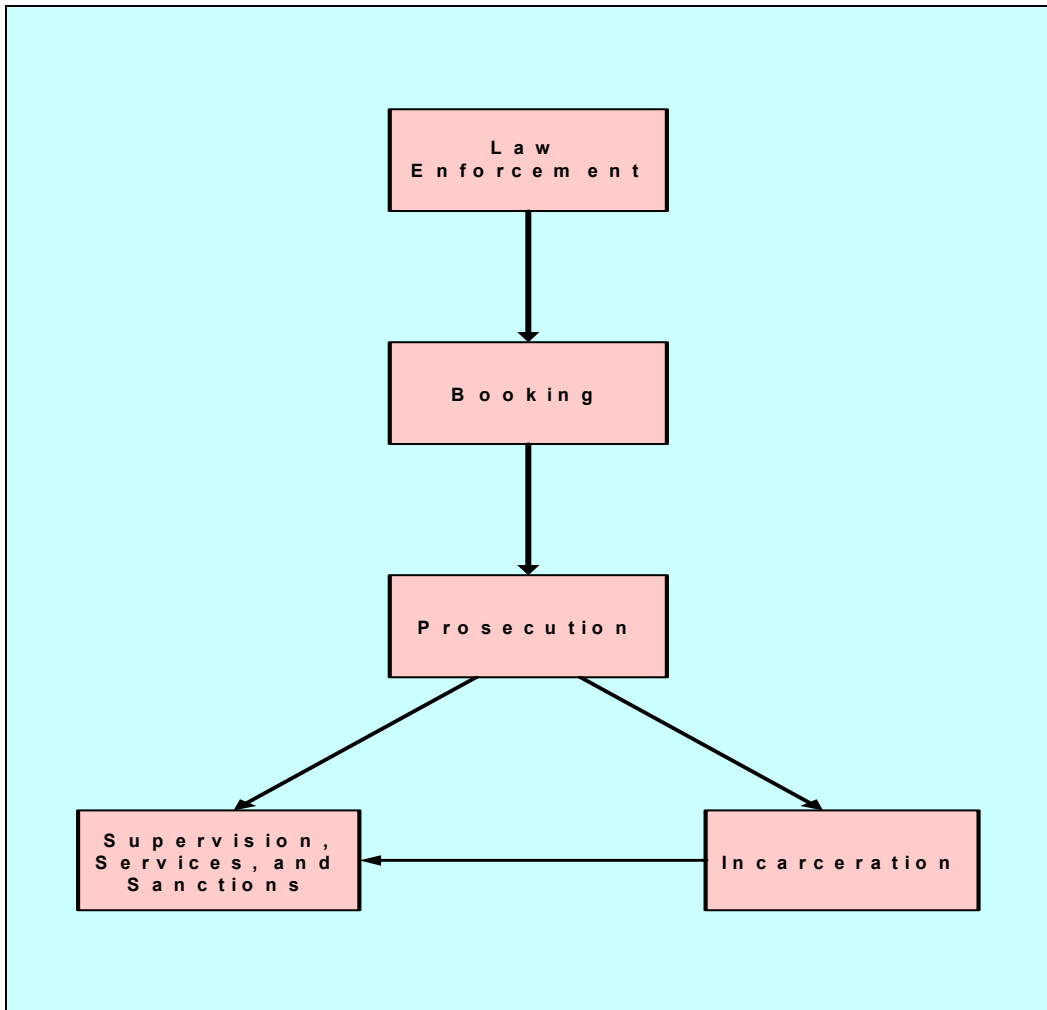


Figure A. Subsystems of the Multnomah County Criminal Justice System.

## II. The Transaction Cost Analysis Approach

This report utilizes a new approach for the analysis of criminal justice systems. This approach is called “transaction cost analysis” – also referred to as “TCA.” The authors believe that this analysis of the Multnomah County criminal justice system represents the first application of this analytic approach to a local criminal justice system in the United States. TCA is built upon three basic concepts: 1) the “transaction;” 2) “transactional cost;” and, 3) “institutional costs.” Through the provision of answers to key questions regarding the basic characteristics of transaction cost analysis, in the following paragraphs we will briefly describe what we mean by these concepts that serve as the building blocks for the application of TCA to a local criminal justice system.



**What is a “transaction” in the context of the Multnomah County criminal justice system?** The subsystems of the Multnomah County criminal justice system that we described above in Section I. produce identifiable outcomes that support the overall operation of the larger system. These outcomes link the individual subsystems to the overall criminal justice system and to the other subsystems that comprise it. For instance, the outcomes that define the connection of the prosecution subsystem to the broader criminal justice system are “cases referred for prosecution.”

In the context of TCA, these key outcomes that link these subsystems to the Multnomah County criminal justice system and to one another are called **“transactions.”** In TCA we use these transactions as key milestones to evaluate the cost consequences of the passage of cases through the criminal justice system. When we add together the cost consequences of the subsystem transactions the result can be described as the total cost consequences of the overall criminal justice system. In this report we describe the total cost consequences of the transactions of the Multnomah County criminal justice as the **“total cost environment.”**

**How are the costs of transactions determined?** As noted in Section I., above, each subsystem in the Multnomah County criminal justice is made up of complex multi-agency relationships. For instance, in the law enforcement subsystem we see the involvement of four municipal police departments plus the Multnomah County Sheriff’s office.

In each of the subsystems we see organizational segments rather than the total organization of agencies dedicated to the support of subsystem transactions. An example of this can be seen in the booking subsystem. In this instance several work units of the Corrections Division of the Multnomah County Sheriff’s Office are dedicated to the support of the key subsystem outcomes rather than the organizational resources of the entire Division.

**In TCA we tie together the cost consequences of organizational resource commitments that are made by all agencies that support the subsystem transactions that we have identified. To identify such cost consequences we have turned to the operating budgets of the agency components in question.** Again, using the law enforcement subsystem as an example, we have identified those organizational components of municipal police department budgets and the budget of the Multnomah County Sheriff’s Office that directly or indirectly support responses to reported offenses.

In the TCA approach used in this report we separate the cost consequences of criminal justice subsystem transactions into two components: **“transactional”** and **“institutional”** costs. We discuss these concepts in the following two subsections.

**What are “transactional costs?”** Within the operating budgets of the agencies that provide support for the five subsystems of the Multnomah County criminal justice system we can identify budgeted personnel, materials, supplies, and contractual services that are specifically allocated to support the transactions that we have identified for the subsystems. These are the budgeted resources that are essential to accomplish the most important outcomes of each component of the overall criminal justice system. These resources are “consumed” by the criminal justice system as it processes the passage of cases from one key subsystem to the next, and allocated in response to workload demands. **In theory, if the criminal justice system were to suddenly experience an elimination of its workload – if crime disappeared and the system no longer processed criminal cases – the resources that we refer to as transactional costs would also disappear.**

As indicated above, in this report we use the budgets of the agencies involved in the criminal justice system to assist us in determining the cost consequences of the transactions that result from the system’s component subsystems. In the interest of developing the most accurate, most comprehensive picture of the interagency nature of transactional costs, we have often linked agency budgets across organizational boundaries. As the reader reviews this information he or she will note that we have in many cases isolated limited portions of agency budgets that support subsystem transactions. **In the appendixes of this report we specify the organizational units and page locations in the municipal and County budgets from which we have drawn this cost information.**

**In this report we identify transactional costs for each subsystem. These subsystem transactional costs represent the average transactional cost for cases for which subsystem resources are committed. When these individual subsystem transactional costs are added together they represent the total average transactional costs for cases for which resources from all five of the subsystems have been committed.**

We describe the transactional costs for each of the five subsystems of the Multnomah County criminal justice system as follows:

<b>Law enforcement:</b>	<i>Transactional cost per reported offense.</i>
<b>Booking:</b>	<i>Transactional cost per standard booking.</i>
<b>Prosecution:</b>	<i>Transactional cost per case referred.</i>
<b>Incarceration:</b>	<i>Transactional cost per incarceration.</i>
<b>Supervision, services, And sanctions:</b>	<i>Transactional cost per case supervised.</i>

**What are “institutional costs?”** There are organizational elements and activities within the agencies of the Multnomah County criminal justice system that are, to a great degree, unaffected by the level of crime-related activity in the system. These components of the criminal justice are involved in the management, coordination, and performance oversight of the operation of the five subsystems of the overall system. These organizational elements are also dedicated to organizational functions that are not related to criminal activity. These are “institutional costs.”

An example of how this concept of institutional costs works can be seen in the municipal police departments included in the law enforcement subsystem of the Multnomah County criminal justice system. The patrol divisions of the municipal police agencies comprise a large portion of the total cost environment of the law enforcement subsystem. However, we estimate that only about 20% of that total cost environment of such “front line” police units is dedicated to serious crime transactions. The balance of the total cost environment may be dedicated to traffic control, professional development, “peace-keeping,” and other activities typically pursued by police departments. These stand as institutional costs that exist beyond the transactional costs that are specifically dedicated to reported criminal offenses. These costs are assumed to remain in place even if there are no serious crime transactions.

Another component of institutional costs involves the management of the police departments. A portion of the chief of police’s time is dedicated to the management of those specific resources that are dedicated to transactions such as serious crimes. The portion of the police department budget that includes the personal services, materials and supplies and other costs that can be prorated to correspond to the amount of time and effort that the chief of police applies to the management of such activities is thus identified as in support of the transactional costs associated with serious crime transactions. However, if serious crime was to disappear, the chief’s time and effort that had been dedicated to supervising responses to such crime would be redirected to his or her other duties. Thus, the budget support for the chief should be considered to be part of the law enforcement subsystem’s institutional cost subenvironment.

**In terms of the methodology of this report, for each subsystem we identify the total cost environment for the transaction that we have identified for that subsystem. Next, through a detailed analytic routine described below, we identify the transactional cost subenvironment associated with the transaction. The arithmetic difference between the total cost environment and the transactional cost is the institutional cost subenvironment.**

### III. The Focus of This Report: The Cost of Serious Adult Crime In Multnomah County

**The comparative cost of serious adult crimes in the Multnomah County criminal justice system.** The focus of this report is limited to analysis of the cost consequences of serious adult crimes in Multnomah County. It excludes less serious adult crimes and juvenile crimes.

Approximately three-fourths of the resources dedicated to the Multnomah County criminal justice system are committed to the total cost environment of adult serious crimes. Figure B. is a pie chart that compares the total cost environment of serious adult crimes as compared to that for less serious adult crimes and juvenile crimes. Of the total \$399.4 million cost of the Multnomah County criminal justice system \$199.9 million is dedicated to serious adult crimes, \$127.7 million to less serious adult crimes, and \$71.8 million to juvenile crimes.

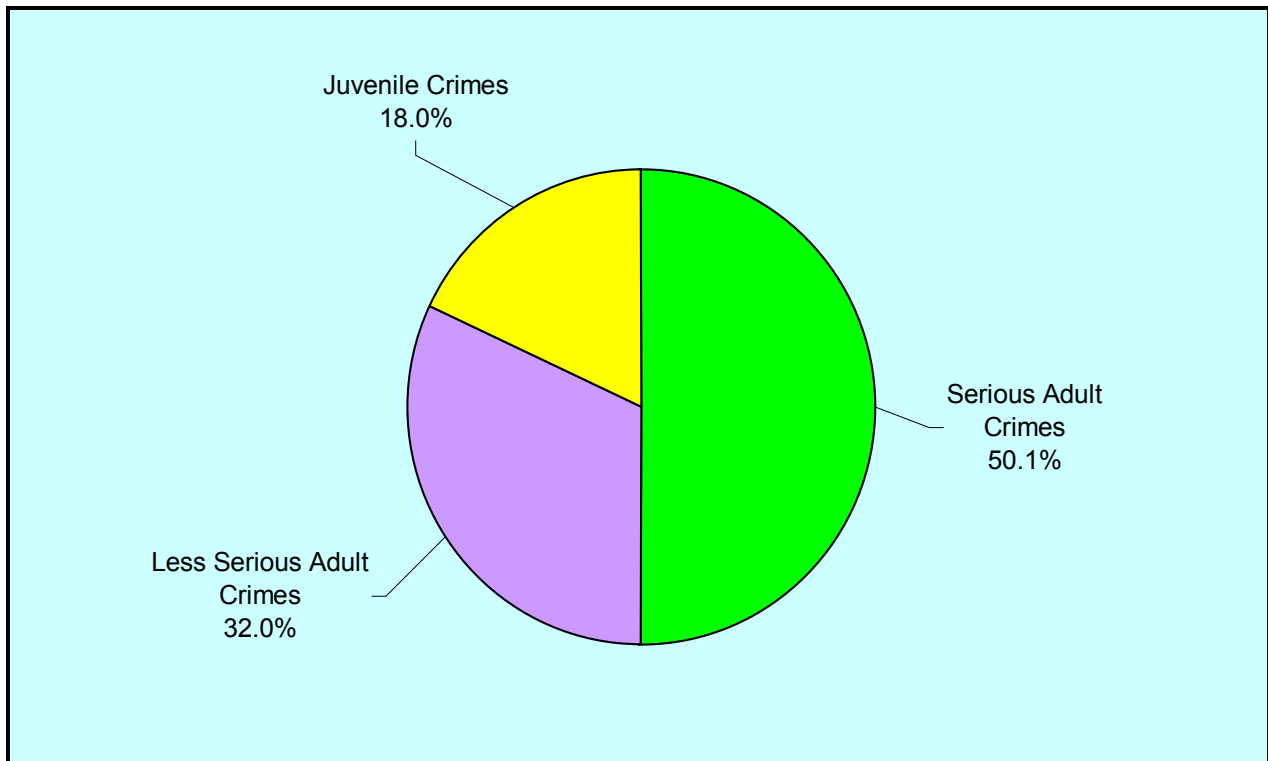


Figure B. Percentage of the cost of the Multnomah County criminal justice system dedicated to serious adult crimes, less serious adult crimes, and juvenile crimes.

The pie chart in Figure C. includes a comparison of the portions of the total 108,000 criminal offenses reported in 1999 in Multnomah County represented by serious adult crimes, less serious adult crimes, and juvenile crimes. A comparison of

the costs associated with each crime component shown in Figure B. and the activity levels seen in Figure C. shows a lack of alignment in cost and activity. Figure B. shows that nearly three-fourths of the resources committed to the criminal justice system are allocated to responding the impacts of serious adult crimes. However, serious adult crimes represent only about a third of the total reported criminal offenses in Multnomah County. What is the cause of this discrepancy?

As will be described in greater detail in the report, one of two most expensive subsystems of the overall criminal justice system is incarceration (law enforcement is the other). Serious adult crimes obviously consume the great majority of the resources allocated in this subsystem. This commitment in the incarceration subsystem to serious adult crimes results in the dedication of a disproportionate percentage of criminal justice system resources to this dimension of crime.

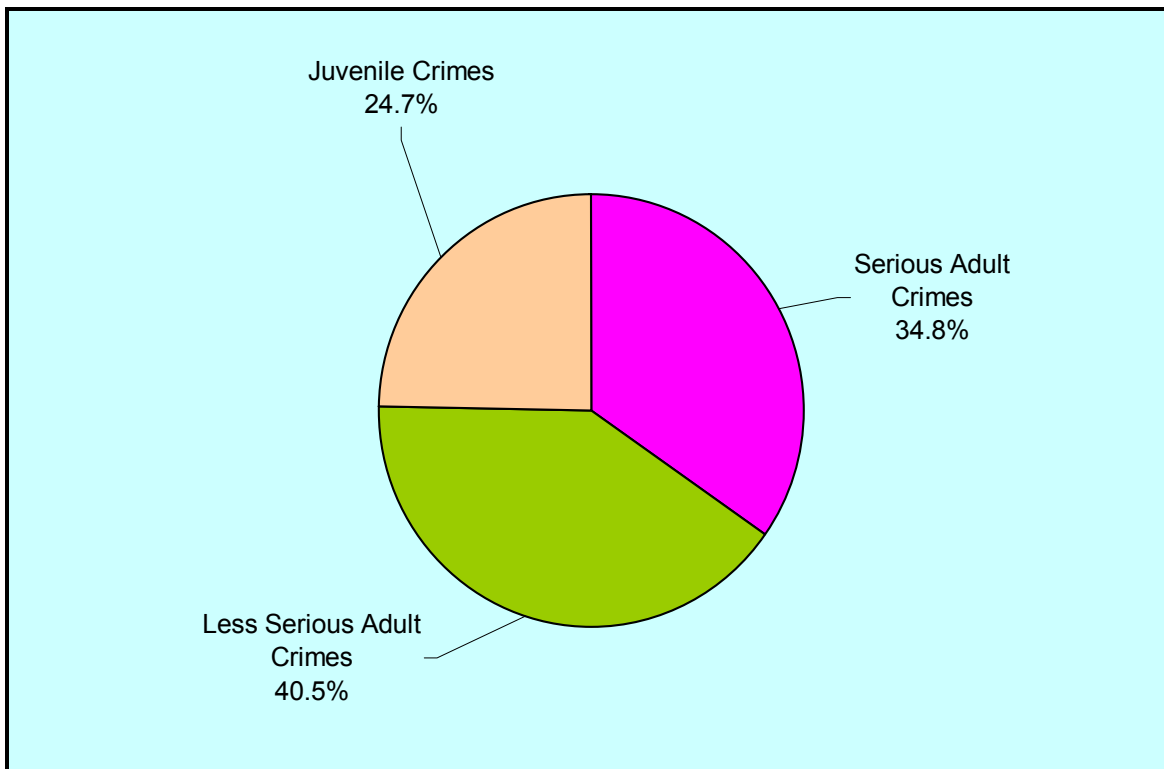


Figure C. Percentage of the cost of the Multnomah County criminal justice system dedicated to serious adult crimes, less serious adult crimes, and juvenile crimes.

**Revenue sources of the Multnomah County criminal justice system.** The financial resources of the criminal justice system are drawn from the County’s municipalities and Multnomah County Government. The pie chart in Figure D. demonstrates the relative financial commitments of the County’s jurisdictions to the total cost environment of the portion of the County criminal justice system dedicated to serious adult crimes.

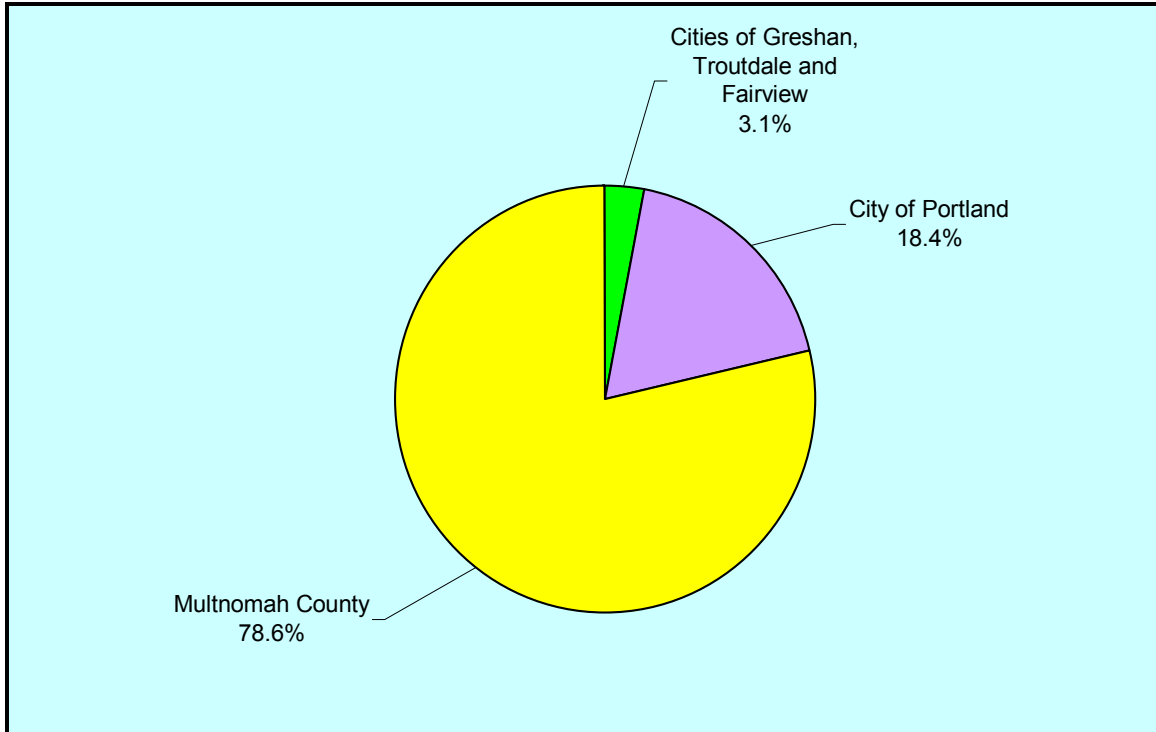


Figure D. Revenue sources of the total cost environment of the portion of the Multnomah County criminal justice system dedicated to serious adult crime.

**The costs of the subsystems of the Multnomah County criminal justice system dedicated to serious adult crimes.** As noted above, approximately three-fourths of the total cost of the County criminal justice system is dedicated to the consequences of serious adult crime. In the flowchart seen in Figure E. we have identified the portion of the total \$199.9 million cost of serious adult crime that is incurred in each of the five subsystems of the criminal justice system. In the flowchart we also offer a graphic indication of the percentages of each subsystem that are dedicated to transactional and institutional costs. **As can be seen in the flowchart, approximately 63% of the total cost environment of the criminal justice system dedicated to serious adult crime can be classified as transactional costs, while 37% are institutional costs.**

In Figure E. we can also see the comparative costs of the five subsystems of the criminal justice system as they are dedicated to serious adult crime, as well as the transactional and institutional costs identified for each subsystem. To allow the reader a more clear picture of the comparative total cost environment, transactional cost subenvironment, and institutional cost subenvironment of each subsystem within the context of the overall criminal justice resources dedicated to serious adult crimes, the

pie charts in Figures E., F., and G. demonstrate the portion of each cost perspective that each subsystem represents.

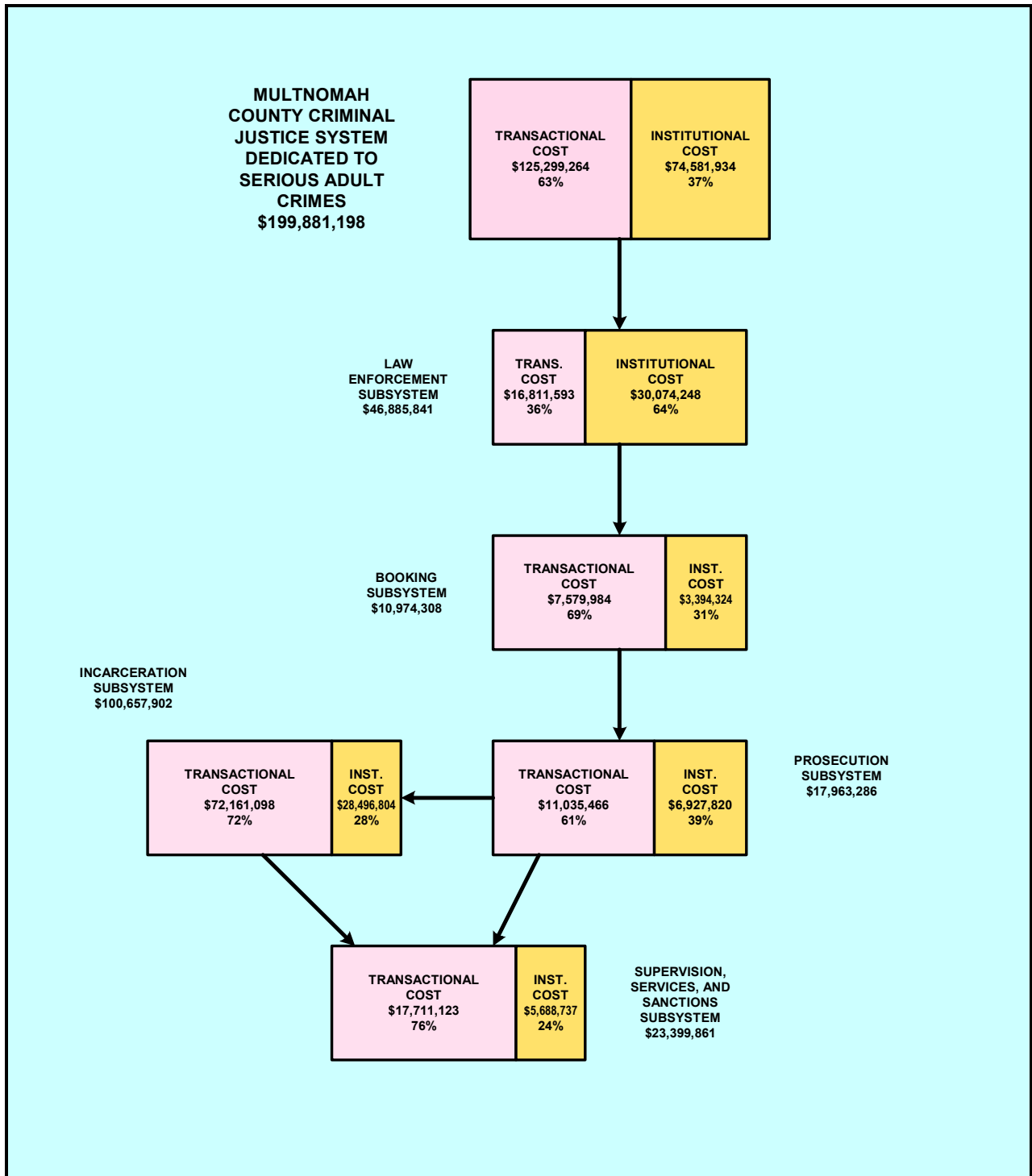


Figure E. The total cost environment, transactional costs, and institutional costs of the subsystems of the Multnomah County criminal justice system dedicated to serious adult crimes.

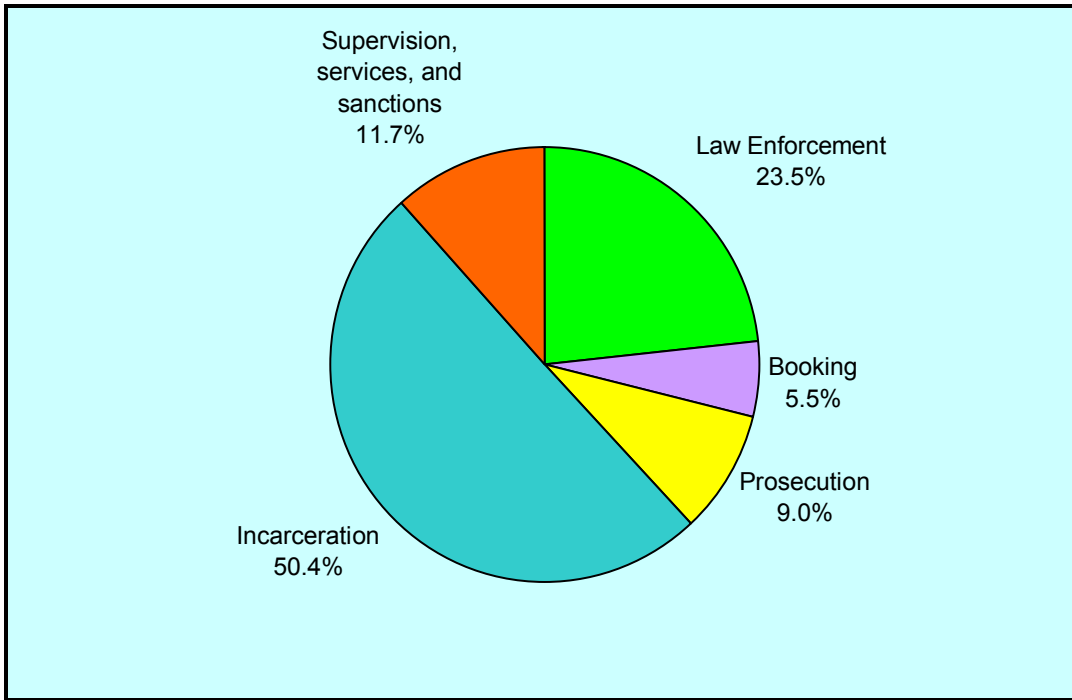


Figure F. The percentage of the **total cost environment** of the Multnomah County criminal justice system dedicated to serious adult crimes that is allocated to each subsystem.

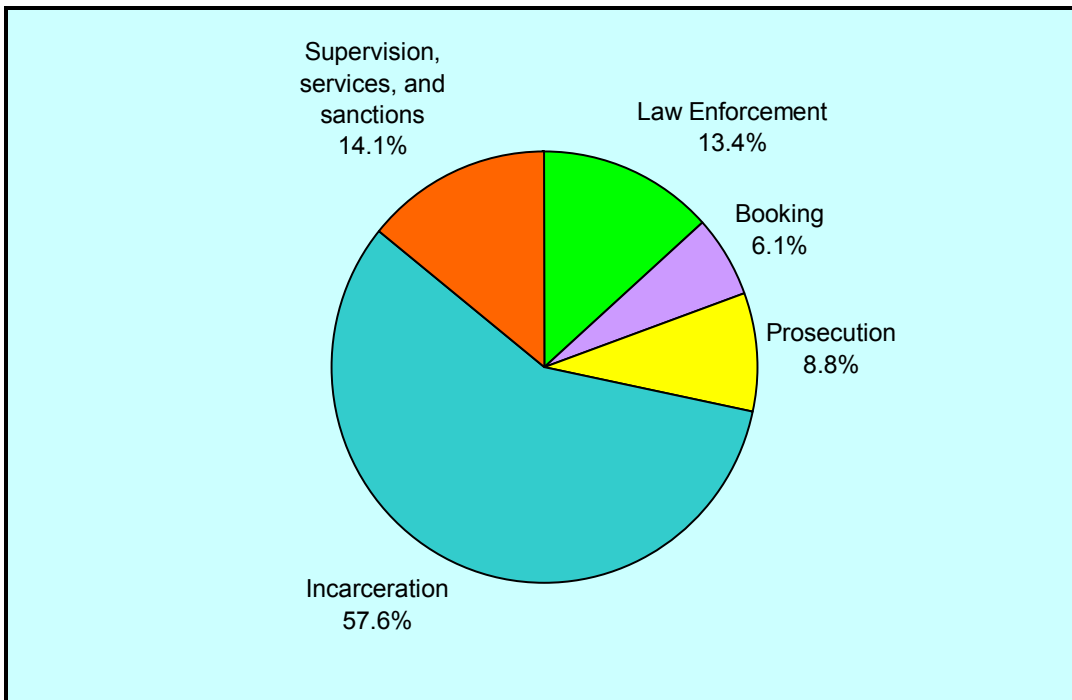


Figure G. The percentage of the **transactional cost subenvironment** of the Multnomah County criminal justice system dedicated to serious adult crimes that is allocated to each subsystem.



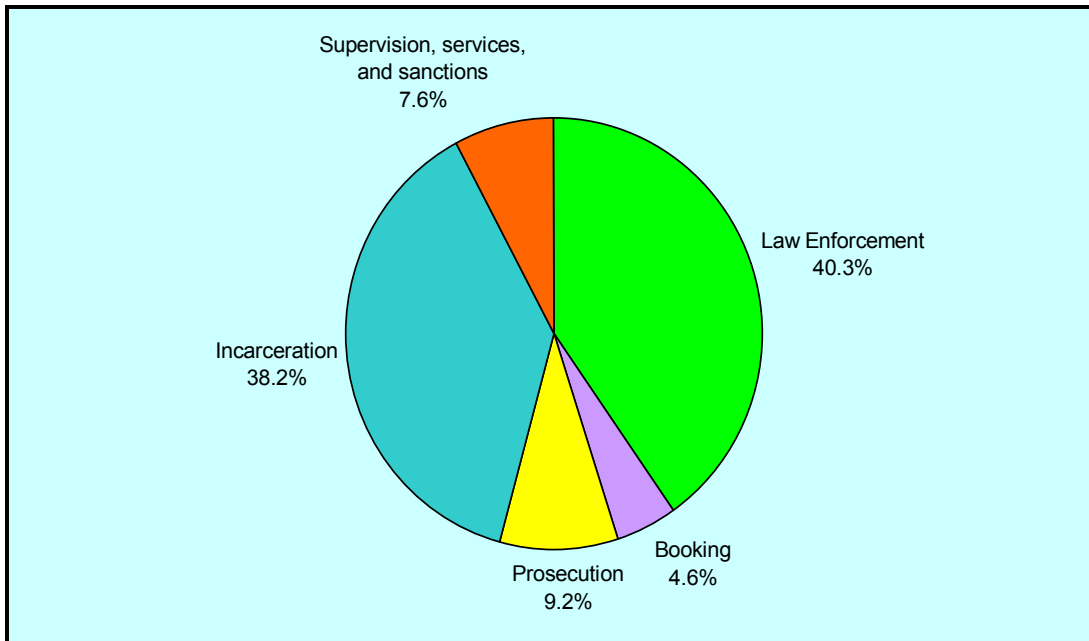


Figure H. The percentage of the institutional cost subenvironment of the Multnomah County criminal justice system dedicated to serious adult crimes that is allocated to each subsystem.

Table 1. represents the budgetary support provided by each of the jurisdictions of the Multnomah County criminal justice system for each of the subsystems dedicated to serious adult offenses. It also shows the budgetary commitments associated with each Multnomah County department for each of such subsystems.

**What are the comparative costs per transaction for each of the subsystems of the criminal justice system dedicated to serious adult crimes?** As noted above, the use of transactional and institutional cost analysis in this report allows us to calculate the estimated average cost per transaction for each of the five subsystems of the criminal justice system dedicated to serious adult crimes. When the average cost per transaction of the five subsystems are added together we find the total average cost per transaction for a case that passes through each of the five subsystem. **As can be seen in the summary worksheet in Appendix A., this total average cost per transaction for cases that pass through all five subsystems is \$4,950 for serious adult crimes. For cases that involve all four subsystems other than incarceration, the total average cost per transaction is \$3,281.** In Figure I. the comparative cost per transaction of all five subsystems of the County criminal justice system dedicated to serious adult crimes can be seen.

Jurisdiction Agency	Total Cost Environment of the Criminal Justice Subsystem Dedicated to Serious Adult Crimes					Total
	Law Enforcement \$46,885,841	Booking \$10,974,308	Prosecution \$17,963,286	Incarceration \$100,657,902	Supervision, Services, and Sanctions \$23,399,861	
City of Fairview	\$431,733					\$431,733
City of Gresham	\$4,690,793					\$4,690,793
City of Portland	\$36,706,443					\$36,706,443
City of Troutdale	\$1,013,107					\$1,013,107
Multnomah County <i>(Includes totals of costs from the following departments)</i>	\$4,043,765	\$10,974,308	\$17,963,286	\$100,657,902	\$23,399,861	\$157,039,122
Community and Family Services					\$1,802,357	\$1,802,357
Community Justice			\$813,475		\$17,401,177	\$18,214,651
District Attorney			\$11,000,304			\$11,000,304
Health		\$372,775		\$11,375,823		\$11,748,598
Sheriff's Office	\$3,517,627*	\$8,321,462	\$971,538	\$70,109,666	\$850,917	\$83,771,210
Nondepart-mental	\$119,235*	\$514,938	\$3,697,462	\$4,146,874	\$1,031,282	\$9,509,791
Support Services	\$103,250*	\$445,905	\$562,219	\$3,590,939	\$893,027	\$5,595,340
Environmental Services	\$95,308*	\$411,606	\$518,973	\$3,314,722	\$824,335	\$5,164,944
Fixed Assets From CAFR	\$208,345*	\$907,622	\$399,315	\$8,119,878	\$596,766	\$10,231,926

Table 1. Sources of budgetary support for the total cost environment of the portion of the criminal justice system dedicated to serious adult crime. Specific documentation regarding the sources of information used for this table will be found in Appendixes A – F. Such documentation takes the form of specific source documents utilized and pages in such documents where relevant budgetary information can be found. *Note: \* We have used an estimator of 34.8% of the law enforcement cost environment dedicated to serious adult crimes.*

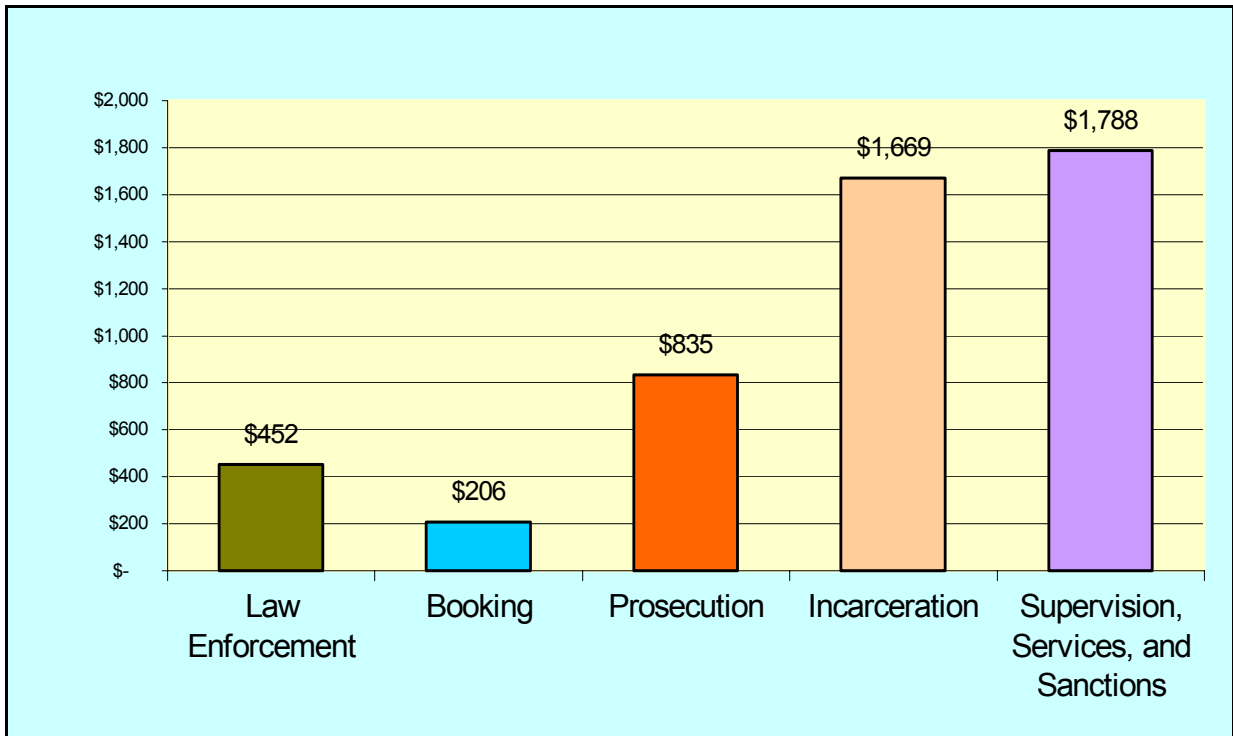


Figure I. The cost per transaction of the subsystems of the Multnomah County criminal justice system dedicated to serious adult crimes. The derivation of these amounts can be seen in summary form in Appendix A.

**What does this comparative cost information mean?** Even a cursory review of the information included in Figures D. through I. offers the reader useful information regarding how resources are allocated in the portion of the County criminal justice system that is dedicated to serious adult crimes. Among the more important points suggested by this information are the following:

1. **The law enforcement subsystem represents a large portion of the cost of the Multnomah County criminal justice system dedicated to serious adult crimes – nearly one-quarter of the total cost environment. However, it represents a much smaller percentage of the transactional cost subenvironment of the criminal justice system committed to serious adult crimes – less than 14%. As a result, according to the logic of our TCA approach, reductions in serious adult crimes will have relatively less impact on the law enforcement subsystem than on other subsystems. Stated another way, the institutional costs of the law enforcement subsystem – the costs that must be incurred by the subsystem, regardless of the level of**

serious adult crime – are relatively greater in this subsystem than in other subsystems.

2. **Like the law enforcement subsystem, the incarceration subsystem represents a large percentage of the cost of the criminal justice system dedicated to serious adult crimes – more than half of the total cost environment. However, when transactional and institutional costs are examined, a pattern opposite of that observed in the law enforcement subsystem is seen.** In regard to transactional costs, the incarceration subsystem represents 58% of the transactional cost subenvironment for the criminal justice system dedicated to serious adult crimes. *Thus, in terms of our TCA approach logic, reductions in serious adult crimes will have relatively greater impacts on the incarceration subsystem than on other subsystems.* In other words, the institutional costs of the incarceration subsystem – the costs that must be incurred by the subsystem, regardless of the level of serious adult crime – are relatively less in this subsystem than in other subsystems.
  
3. **The subsystem that appears to be most sensitive to changes in levels of crime is the supervision, services, and sanctions subsystem.** This subsystem represents 11.7% of the total cost environment of the County criminal justice system dedicated to serious adult crimes. However, in terms of transactional costs, 14.1% of the total criminal justice system costs are committed to supervision, services, and sanctions. *Again, based on the TCA logic, this subsystem will be affected to a greater degree by changes in levels of serious adult crimes than other subsystems.* The institutional costs of the supervision, services, and sanctions subsystem – the costs that must be incurred by the subsystem, regardless of the level of serious adult crime – are relatively less than in any other subsystems.

## **1.0 Introduction**

### **1.1 Multnomah County Relationship With the Hatfield School of Government, Portland State University**

In the autumn of 1999, Multnomah County Government contracted with the Hatfield School of Government at Portland State University to pursue several projects. One such project would involve an examination of cost factors associated with the criminal justice system of Multnomah County. This examination would be pursued in light of the County administration's interest in the consideration of economic costs and benefits that could be identified in this system.

In recent years the County has made substantial investments in analyzing various characteristics of different parts of the criminal justice system. The County's Evaluation/Research Unit staff is familiar with a recently completed study authored by the Washington State Institute for Public Policy (WSIPP, 1999) that used cost benefit methodology to conduct a national review of programs to reduce crime. Thus, Multnomah County is committed to a review of economic and outcomes characteristics of the entire criminal justice system as they impact the taxpayers of the County. The County looked to PSU's Hatfield School where it found staff experienced in the operational and financial characteristics of criminal justice administrative structures around the United States.

This report considers cases involving adults who are arrested, tried, and either acquitted, incarcerated, and/or assigned to supervision, services, and sanctions as the result of the commission of serious crimes. It is seen as a building block that will be used by the County as it further considers the effectiveness of its complex criminal justice system.

### **1.2 Why An Economic Approach to the Examination of the Criminal Justice System?**

For Multnomah County to have a better understanding of the costs and benefits associated with its system for the administration of criminal justice it first needed a better understanding of how the system works, literally from "inside out." This system that is so important to welfare of the community needed to be better understood in terms of its structural and process characteristics and the financial consequences of these organizational features.

In recent years economics has been an ascendant force in organizational theory. The realm of economics that has had the most notable impacts has not been that based in neoclassical theory. Rather, the recent impetus that has driven the economic

analysis of organizations has originated in what one noted student of organizations (Moe, 1984) calls the “new economics of organizations.” This line of theory is concerned with, among other things, transactions costs, the rationality of structure, and economic methods of analysis. A major influence in this new economics of organizations is transaction cost economics. In this school of thought, which draws on the work of Commons, Coase, Ouchi and others (Martinez & Dacin, 1999), economic transactions are used to inform the analysis of governance structures, the development of asset specificity, and the rise of bureaucratic systems. Oliver E. Williamson (1981), one of the early theorists of transaction cost economics, describes it as follows:

The transaction cost approach to the study of economic organization regards the transaction as the basic unit of analysis and holds that an understanding of transaction cost economizing is central to the study of organizations. Applications of this approach require that transactions be dimensionalized and that alternative governance structures be described. Economizing is accomplished by assigning transactions to governance structures in a discriminating way. The approach applies both to the determination of efficient boundaries . . . and to the organization of internal transactions . . . (p. 548)

Terry Moe has led the way in moving transaction cost economics from the private sector to the study of public organizations.

### **1.3 An Institutional Context**

Transaction cost analysis (TCA) will tell us a great deal about how the criminal justice system and its component subsystems are organized and function, should be “priced,” and relate to one another. Ultimately, it will offer us an approximation of the financial impact of transactions on the criminal justice system – at a minimum it will essentially tell us the average local systems costs of individual crimes. However, TCA cannot tell us the complete organizational or financial story of the criminal justice system or any other public organization. To do this we need to follow the suggestion of Martinez and Dacin (1999) who join TCA to institutional theory to account for organizational design as a response to uncertainty in the organization’s social, economic, or political environment.

If suddenly no crimes were committed in Multnomah County the transaction-specific costs associated with the criminal justice system’s response to them may be eliminated. Yet, the citizens of the County would still be faced with certain organizational and institutionalized financial consequences related to the vast criminal justice administration that has evolved over many decades. Institutional theory helps us to account for this phenomenon.

The Multnomah County criminal justice system is made up of subsystems that involve a variety of governance structures, sources of policy delineation, budget control

and organizational objectives. Institutional cost analysis brings enhanced descriptive and analytic power to the TCA approach in the examination of these essential characteristics of the criminal justice system.

**The Hatfield School of Government’s Transactional and Institutional Cost Model** (“Hatfield Model”) offers a new approach to organization analysis that combines the theory of TCA and institutional analysis. The Hatfield Model provides assistance to policy analysts and policy makers in the examination of complex processes that involve the consideration of alternative programming of transactional and institutional resources. *With the delineation of the financial consequences of transactions and institutional organization elements within discrete subsystems of activities as identified in the Hatfield Model, participants in policy development can reconsider such financial consequences in terms of what may be referred to as “opportunity resources.” A view of transactional and institutional resources as opportunity resources supports determinations of to what extent resources may be reprogrammed among criminal justice system subsystems and/or cost subenvironments within subsystems. The language of transactional and institutional cost analysis helps policy leadership to view the criminal justice system as series of linkages among transactions, institutions and opportunities for alternative resource allocation. **The transactional and institutional cost analysis model is thus more than a descriptive model – it is a policy choice model.***

We believe that the consideration of transaction costs in an institutional context that informs the Hatfield Model and this report will offer Multnomah County officials a fresh perspective that will provide support for the objectives included in the scope of work for the County Local Public Safety Coordinating Council’s ongoing Criminal Justice Resource Management project. The coherence of the transactional/institutional system approach developed in the current report will provide a broad framework within which the detailed analyses that result from the Resource Management project can fit.

## **2.0 Description of the Multnomah County Criminal Justice System**

The Multnomah County criminal justice system can be described as a tightly coupled system of highly differentiated, yet complementary subsystems. Each subsystem is largely self-governing, but is subject to substantial influence, and in some cases control, by the other subsystems.

We believe that the Multnomah County criminal justice system lends itself to consideration in light of transaction cost analysis in an institutional setting. In this complex system we see networks of highly specialized organizations that operate within identifiable subsystems that are responsible for the completion of transactions that link the subsystems to the larger criminal justice system. Each transaction assists us in

understanding the financial and institutional linkage that exists between its subsystem and the overall system.

The Multnomah County criminal justice system represents a series of exchanges wherein certain specialized “services” are “purchased” by the system from definable subsystems. The institutionalized structures, patterns of governance, and other organizational characteristics of the component subsystems are responses to the nature of the transactional relationships that exist between them and the overall criminal justice system. Transaction cost analysis in the Hatfield Model will assist policy analysts and policy makers in the consideration of what “services” are being “purchased,” and under what circumstances such “services” are acquired.

We have designated the following component subsystems in the County criminal justice system: law enforcement; booking; prosecution; incarceration; and, supervision, services, and sanctions. Figure 1. demonstrates the basic relationships of the subsystems in the overall criminal justice system in a flow chart format.

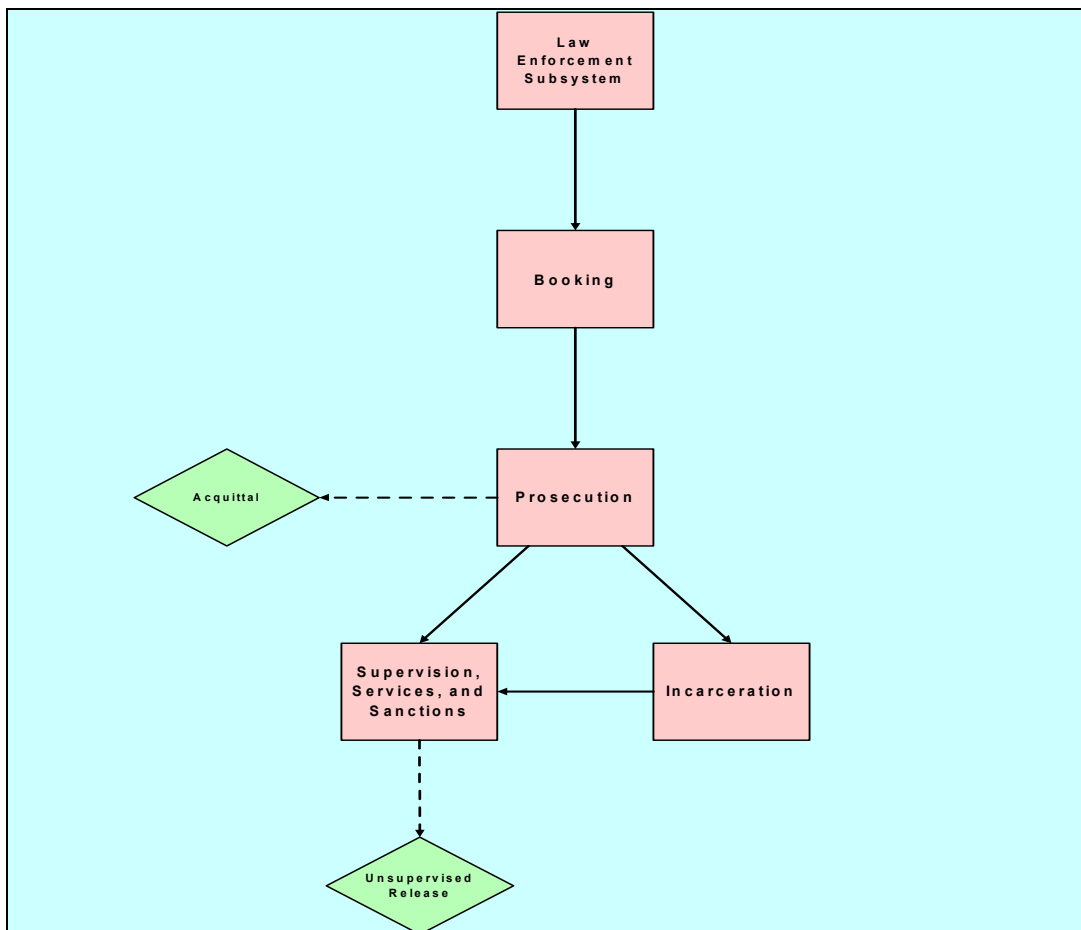


Figure 1. Subsystems of the Multnomah County Criminal Justice System.



### 3.0 The Hatfield School Transactional and Institutional Cost Analysis Model

#### 3.1 Transaction Cost Calculation

The Hatfield Model does what is described in the preceding sections – it connects TCA with institutional theory to provide a description of the transactional and institutional characteristics of the Multnomah County criminal justice system. The underlying assumption of the TCA component of the Hatfield Model is that cases “flowing” through the County’s criminal justice system can be described in terms of movement through a sequence of subsystem transactions that are supported by more or less discrete cost environments. The cost environment for each transaction subsystem is made up of cost factors identified in cost subenvironments.

As we describe the subsystems supported by cost environments, we assume that inclusive unit costs drawn from cost subenvironments can be assigned to subsystem transactions. We also assume that each subsystem transaction involves the consumption of an identifiable amount of service from cost subenvironments against which unit costs can be multiplied. Such consumption of services can be expressed in terms of average cost per transaction. The ultimate total transactional cost of a criminal case would be the sum of the transactional costs that are incurred as the case passes through the various subsystems to the point that the case exits the overall criminal justice system. Thus, as seen in Table 1., using the prosecution subsystem as an example, we can describe our method for connecting costs to transactions as they pass through the various subsystems of the County criminal justice system.

Analytic Action	Result
Step 1. Identify subsystem	Prosecution
Step 2. Identify component organizational units in the subsystem	District Attorney’ Office
Step 3. Identify budget commitments made by component organizational unit to support the subsystem	Specify transactional and institutional cost elements found in the organizational unit’s budget
Step 4. Identify useful transactions	Cases presented by Deputy District Attorneys
Step 5. Identify cost per transaction	Divide the transactional cost subenvironment identified in Step 3. by the number of transactions identified in Step 4.

Table 1. Transactional cost calculation.

With the completion of this procedure for each subsystem we see can identify an additive effect of subsystem transactional costs resulting in a cumulative modification of the flowchart shown in Figure 2.

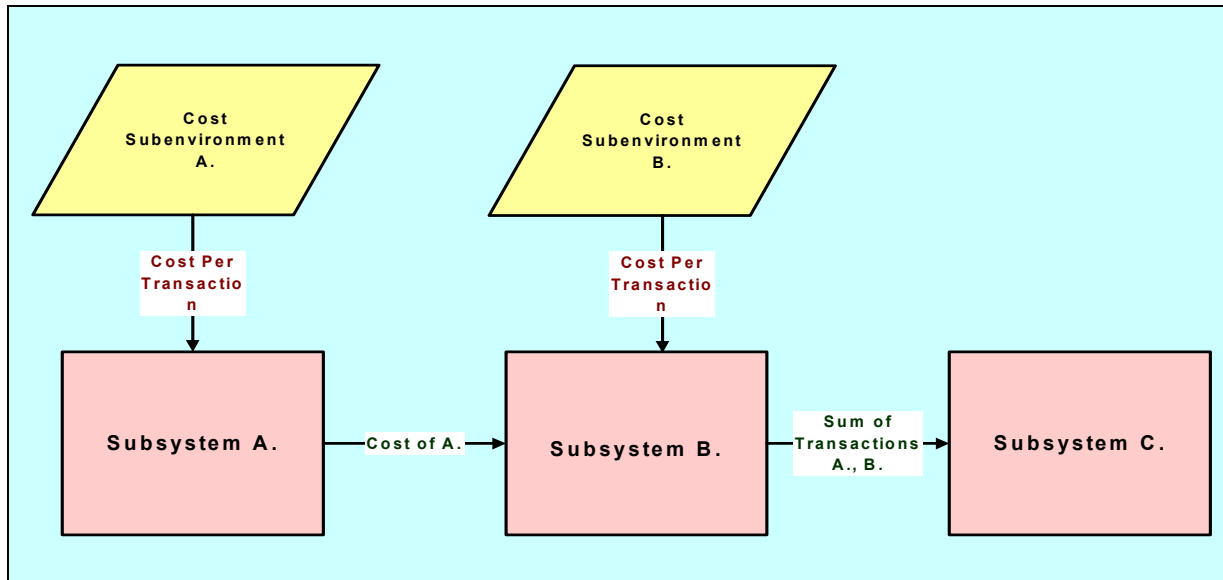


Figure 2. The additive effect of subsystem transaction costs in the Multnomah County criminal justice system.

### 3.2 Subsystem Institutional Cost

The Multnomah County criminal justice system is more than the sum of its subsystem transactions. It is also made up of structures in each subsystem that deal with instability in its environment, pursue system monitoring and accountability, and provide administrative linkages to other subsystems in the overall system. This can be described as the institutional subenvironment and the costs associated with it can be referred to as the institutional subenvironment costs. The Hatfield Model describes that how, taken together with the transactional subenvironment costs, the institutional subenvironment costs form the total cost environment of the subsystems that make up the overall criminal justice system.

As noted above, it should be remembered that we assume that these institutional costs are budgetary commitments that exist independent of the direct expenditures that are connected to the key transactions of the five subsystems of the criminal justice system. In theory, these costs would remain in place regardless of the level of serious adult crimes in Multnomah County.

### 3.3 Methods

The methods utilized in the research for and preparation of this report were pursued within the context of the transactional and institutional cost approach as discussed above. The identification of meaningful transactions was done in terms of highlighting how organizations and subsystems connect and contribute to the larger criminal justice system. Costs of transactions were accumulated such that the significance of their contribution to the “pricing” of the criminal justice system can be relatively easily understood.

On a national level in the United States, research related to criminal justice systems usually relies upon aggregated and/or proxy data. A notable characteristic of this examination of the Multnomah County criminal justice system is that, for the most part, it is based upon direct, relatively contemporaneous information.

**We use 1999 for crime information and FY 1999-2000 for budgetary and other cost information in our analysis.** Among the resources utilized in this effort are the following: Operating budgets of the jurisdictions that comprise the County’s criminal justice system; recent studies regarding component parts of the criminal justice system; comprehensive annual financial reports (CAFRs) of the County’s jurisdictions; uniform crime reports from each of the jurisdictions; operational performance reports from some agencies; and, telephone and personal interviews with key personnel associated with the County’s criminal justice system. The analyses included in this report have been subjected to numerous reviews by managers and analysts employed by various agencies of the criminal justice system.

Information that would inform our transactional and institutional analysis approach is not currently accumulated to that end by any of the organizations of the Multnomah County criminal justice system. As a result, we have had to make a number of choices regarding how service provision patterns should be described and how budgeted resources should be disaggregated and reallocated to work within the context of the transactional and institutional cost approach. Such choices have been made in light of careful consideration and our experience in public resource management. Hopefully, any arbitrariness that may appear in this initial effort will be improved upon in future refinement.

Since this model is designed to assist Multnomah County policy analysts and policy makers as they review choices in the utilization of resources in the County’s criminal justice system, consideration was limited to resources that are more or less endogenous to local governance. In other words, rather than consider resources controlled by other levels of government – particularly State operation of the Circuit Court and correctional facilities, we focused attention on resources bound by the

budgetary and comprehensive financial reporting mechanisms of the municipalities of Multnomah County and Multnomah County Government.

**The transactions considered in this report were limited to those involving the commission of serious crimes by adults.** However, the Hatfield Model will be equally useful in the consideration of the juvenile criminal justice system and less serious adult crimes that are processed through the County criminal justice system.

## 4.0 Analysis of the Subsystems of the Adult Multnomah County Criminal Justice System

### 4.1 Law Enforcement Subsystem

#### 4.1.1 Subsystem Description.

The law enforcement subsystem is, independent of its role in the overall criminal justice, a complex system itself. It involves seven local jurisdictions: the municipalities of Fairview, Gresham, Maywood Park, Portland, Troutdale, and Wood Village; and, Multnomah County Government. It includes the pursuit of functions that would be found in most jurisdictions (patrol and investigations) and a number of specialized or unusual operations (river patrol). The law enforcement agencies range in size from very small (nine sworn officers in Fairview) to very large (approximately 1,000 sworn officers in Portland). The level of criminal activity among the agencies range from 1,343 reported criminal offenses in Troutdale in 1999, to nearly 100,000 reported criminal offenses in Portland during the same year. In terms of the connection of the law enforcement subsystem to the overall criminal justice system, the law enforcement agencies of Multnomah County largely function in the similar ways: they investigate reported criminal offenses, make arrests and deliver suspected perpetrators to Multnomah County Justice Center for further processing through the criminal justice system.

#### 4.1.2 Data Collection To Determine Transaction Cost.

**4.1.2(a) Identification of a useful transaction indicator.** One of the first tasks in determining the transaction cost for the law enforcement subsystem was to determine a serviceable transaction to utilize. Among the candidates for use as the key law enforcement indicator would be arrests, calls for service, cases cleared, national crime victimization estimators, and others. (Measuring what matters, 1996) In considering which indicator to use we considered the following factors: 1) The transaction indicator should be inclusive – it should relate to data that applies to all law enforcement agencies and is subject to a common definition among them. 2) The indicator should be locally generated more or less contemporaneously with the budget periods that we consider; and, 3) The chosen indicator should involve the broadest possible definition of criminal activity.

The indicator that we believe is most useful is **reported criminal offenses**. This indicator includes all crimes against persons and property, and behavioral crimes reported by all of the jurisdictions of Multnomah County. Since this report focuses on serious crimes committed by adults, the reader may ask why we use an indicator that

also includes less serious crimes and juveniles. Our response is that the law enforcement resources of Multnomah County are a “common pooled resource” that deals with the broad range of less and more serious criminal activity for all age groups. For purposes of this report we assume that the average law enforcement unit cost per transaction will be the same, regardless of crime type or age group. Thus, as indicated below, we use an estimator for the number of serious adult crimes that we can calculate with this unit cost.

**4.1.2(b) Identification of subsystem cost elements.** The beginning point for the identification of subsystem costs for law enforcement was to turn to the operating budgets of the local law enforcement agencies of Multnomah County. Approved budgets for the 1999-2000 fiscal year were examined. Utilizing the Hatfield Model, we have discriminated between those units of cost that are directly associated with transactions and those that are not. In analyzing the budgets of the County’s law enforcement agencies we identified those cost factors that supported the portions of police operations that were committed to “active law enforcement” – these are the budgeted resources involved in responding to reported criminal offenses. We also examined the CAFRs for the jurisdictions under examination and identified those portions of their fixed assets that we would reasonably estimate to be dedicated to support the law enforcement cost environment.

**4.1.2(c) Identification of transactional cost subenvironments.** Our interviews with law enforcement administrators revealed that none of the agencies in the County keep specific records regarding the human and other resources that are consumed in the pursuit of activities related to reported criminal offenses. Therefore, we relied upon input from law enforcement professionals, examined organizational documents and the national law enforcement literature to generate reasonable estimates of what resources are dedicated to what might be called “active law enforcement” – those activities associated with responses to reported criminal offenses. To do this we pursued the following routine:

1. Identified the organizational units within law enforcement agencies that have direct responsibility for responding to reported criminal offenses.
2. Identified the direct and indirect cost factors associated with the support of these active law enforcement resources. Indirect costs include those within law enforcement agencies and identifiable support costs budgeted elsewhere in the jurisdictional budgets.

3. We made what we believe to be reasonable assumptions regarding how specified resources are committed to “active law enforcement.” For instance, we assumed that, although investigative units participate in relatively few arrests, (Eck, 1999) their “institutional purpose” is active law enforcement geared toward part reported criminal offenses. As a result, we assigned 100% of the investigations resources to the transactional cost subenvironment in law enforcement.

On the other hand, as we considered what law enforcement agencies refer to as “field operations,” “patrol,” or similar such names, given the fact that the agencies do not track the portion of such operations that are directly consumed in response to reported criminal offenses, we turned to the literature to consider what would be a sound approach to the creation of an estimator. We found that very little has been written regarding what we are referring to as “active law enforcement” associated with the commission of reported crimes. However, in their consideration of the results of the Kansas City Preventive Patrol Experiment conducted in the 1970s, Kelling, et al. (1998) assess that 10 – 25% of “non-committed” patrol time is spent in “active law enforcement.” Based upon this assessment we assigned 20% of such resources in Multnomah County law enforcement agencies to the transactional cost subenvironment. Stated differently, this represents our view of the resource that law enforcement agencies make available to respond to reported criminal offenses.

4. Based on the assumptions pursued in 2. and 3., we identified and summarized costs for the transactional subenvironment, and then pursued the calculation procedure indicated in section 3.1, above.
5. Since less serious adult crimes and juvenile crimes are included in the total offense figures that we used to calculate the cost per transaction, to determine the cost of serious adult crime we had to develop an estimator of such that we could use to multiply against the transactional cost. To do this we turned to State crime reports to create an estimate of adult versus juvenile crime totals. We then turned to the uniform crime reports for the jurisdictions of Multnomah County to determine serious versus less serious crimes. As a result of this analysis, we estimate that 34.8% of total reported offenses can be considered to be serious adult crimes. As a result, we multiplied cost information that we developed for the total cost environment, transactional cost subenvironment, and institutional cost subenvironment by 34.8% to established the estimated costs that associated with serious adult crime.

### **4.1.3 Calculation of Total Cost Environment, and Transactional and Institutional Cost Subenvironments in the Law Enforcement Subsystem.**

Appendix B. includes total cost environment, and transactional and institutional cost subenvironment calculations for each law enforcement agency in Multnomah County, as well as the combined results for all agencies. Details regarding the methods involved in each calculation are also included, as well as documentation regarding sources of information. Key results taken from this data include the following:

1. Over 100,000 criminal offenses were reported by Multnomah County law enforcement agencies in 1999. Of these we estimate that over 37,000 could be classified as “serious adult crimes.”
2. The total cost environment of the law enforcement subsystem dedicated to responding to reported adult criminal offenses County was \$46,885,841 in fiscal year 1999-2000.
3. The total transactional cost subenvironment was \$16,811,593, or 35.8% of the total cost environment.
4. The cost per transaction was \$452.
5. The institutional cost subenvironment for the law enforcement subsystem totaled \$30,074,248, or 64.2% of the total cost environment.

With this information in hand we can update the Multnomah County criminal justice flowchart as indicated in Figure 3. to represent the impact of the law enforcement subsystem as expressed in terms of its cost per transaction.

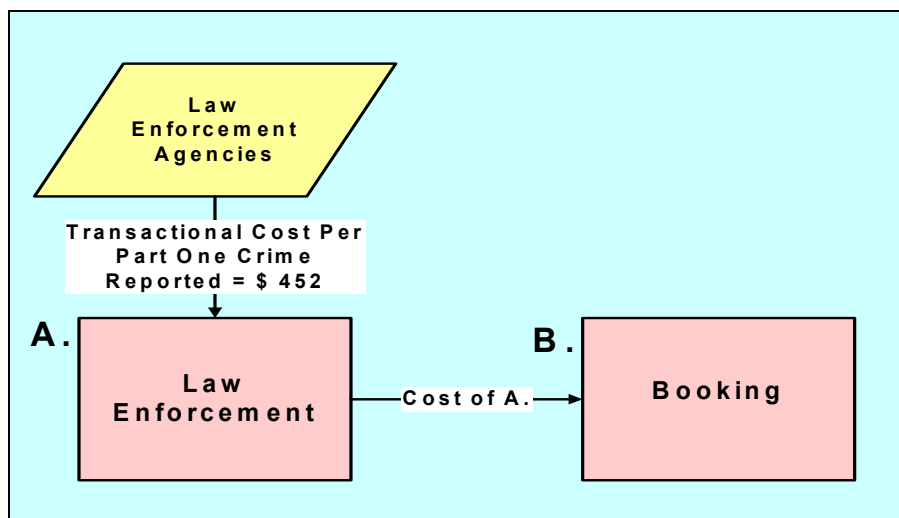


Figure 3. The law enforcement subsystem cost environment.



## **4.2 Booking Subsystem**

### **4.2.1 Subsystem Description.**

Booking of suspected criminals in the Multnomah County criminal justice involves a set of functions wholly contained within the Multnomah County Government organizational structure. Within the booking subsystem we include a complex set of activities that are completed normally within a few hours at the County's Justice Center in downtown Portland. In addition to the physical transfer of suspected criminal perpetrators from local law enforcement agencies to the Multnomah County Sheriff's Office (MCSO) Booking and Release Division, this phase of the criminal justice system also includes a determination of an appropriate level of supervision and placement of suspected offenders. These assessments are based upon information drawn from criminal histories, self-reported information, and a contemporaneous risk assessment performed by County personnel. (Budget narrative, 1999) These activities are performed by a combination of MCSO's Booking and Release, and Warrant and Detention Records Divisions. The Corrections Health Division of the County Health Department also conducts medical assessments and pursues appropriate treatment of suspected offenders.

MCSO identifies four types of bookings: In-transit; standard; turn-in self (TSI); and cite and identify. Standard bookings have disproportionate impacts upon the criminal justice system. In addition to representing over three-fourths of the workload in the booking subsystem, standard bookings ultimately affect correctional housing facilities. If the suspected offenders in question are not released on bail, on their own recognizance or to a third party such as a County sanctioned intervention program, a court must act on their disposition before they are released – resulting in temporary correctional housing (particularly over weekends). (Jail population report, 1999)

### **4.2.2 Data Collection To Determine Transaction Cost.**

**4.2.2(a) Identification of a useful transaction indicator.** The identification of a useful transaction indicator for the booking subsystem presents some of the same challenges that we found in law enforcement. As in the case of law enforcement, in the booking subsystem a lack of detailed data that links consumption of resources with specific transactional activities leads us to look to a broad, easily understood transaction indicator. The obvious candidate is "standard bookings." Given their more direct relationship with the subsequent transactions in the criminal justice system than other subtypes of bookings, standard bookings is the best choice as the transaction indicator.

The fact that relatively unambiguous records of numbers of standard bookings exist in easily retrievable form make them accessible for analytic consideration.

**4.2.2(b) Identification of subsystem cost environments.** The 1999-2000 operating budgets and narrative materials that support the budgets for MCSO and the County Health Department are the primary sources of information that we utilized regarding the cost considerations in the booking subsystem. As in the case of the law enforcement subsystem, we identified units of cost that directly support the activities associated with booking transactions. In the case of the booking subsystem the delineation of those costs most directly related to the defining transaction was much less difficult than in the law enforcement subsystem. Such costs relate to the human and other resources of two distinct work units in one County department (MCSO) that has operational responsibility for the transaction-related activities in the subsystem. Given the fact that the work units in MCSO dedicated to this subsystem are specialized units focused on the transactions, we believe that it is reasonable to assume that the largest portion of their total cost environment should be assigned to the transaction cost subenvironment.

#### **4.2.3 Calculation of Transactional Costs in the Booking Subsystem.**

The detailed results of our analysis of the subsystem cost environment are summarized in Appendixes C.1. and C.2.. Notable results seen in this data include the following:

1. In 1999 Multnomah County processed 36,808 standard bookings.
2. The total cost of the booking subsystem was \$10,974,308.
3. The transactional subenvironment budget totals \$7,579,984.
4. The average cost per booking transaction in 1999-2000 was \$206.

Having calculated the cost per transaction of the booking subsystem we can update the Multnomah County criminal justice flowchart as seen in Figure 4. to demonstrate the cumulative impacts of the law enforcement and booking subsystems.

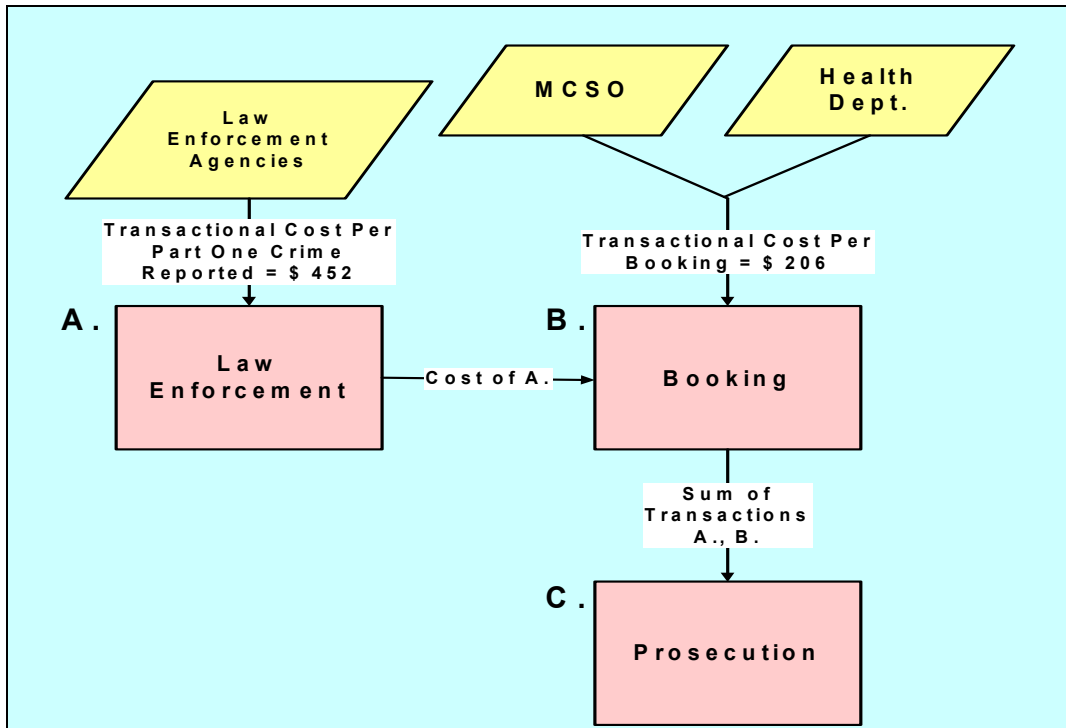


Figure 4. The booking subsystem cost environment.

### 4.3 Prosecution Subsystem

#### 4.3.1 Subsystem Description.

The core of the prosecution subsystem, the Multnomah County District Attorney's Office, is responsible for the review, filing and prosecution of criminal cases. Trial teams in the department are made up of deputy district attorneys, paralegals, and support personnel. (Multnomah County Budget Narrative, 1999). Areas of activity pursued by trial teams include: 1) Preparation for and appearance before the Grand Jury; 2) Court hearings and trials; 3) Review of cases for legal sufficiency and further action; and, 4) A variety of negotiations, meetings, and research associated with cases. (Caseload report, 2000) In Figure 5. we show a breakdown of the cases presented by the District Attorney's Office in 1999.

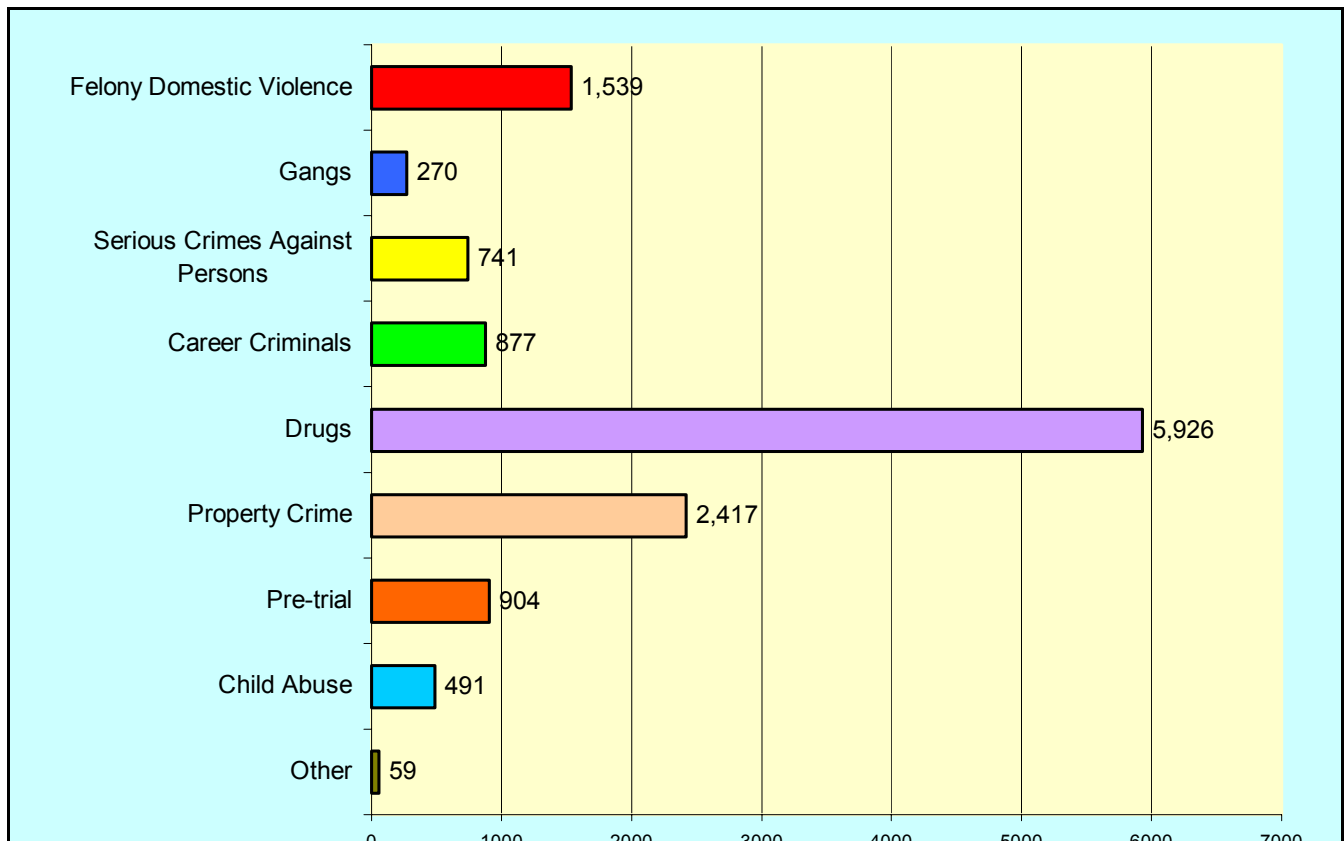


Figure 5. Breakdown of cases presented by Multnomah County District Attorney's Office, January 1 – December 31, 1999.

In our analysis we have also included within the prosecution subsystem Pre-sentence Investigation Unit of Adult Community Justice. The Pre-sentence Investigation Unit provides a full written investigation of the circumstances of a criminal offense, a defendant's criminal record, and other personal information to the court. (Multnomah County Budget Narrative, 1999).

#### 4.3.2 Data Collection To Determine Transaction Cost.

**4.3.2(a) Identification of a useful transaction indicator.** The choice of a transaction indicator for the prosecution subsystem is relatively straightforward. Based upon how the District Attorney's Office views its workload (Caseload report, 2000), we have a choice between the cases that are presented for prosecutorial consideration ("cases presented") and cases that are issued for further action. Since "cases presented" has the broadest impact on the resources of the subsystem, we have selected it as the most reasonable transaction indicator.

**4.3.2(b) Identification of subsystem cost environments.** Once again, our primary source of information for the identification of cost factors to be included in the prosecution subsystem cost environments were the budgets and supportive narrative statements for the District Attorney's Office and Adult Community Justice. This was enhanced by contemporaneous analysis performed by the District Attorney's staff. In the case of the role of the District Attorney's Office we identified over half of the resources in the Office as dedicated to the prosecution of serious adult criminal cases. In Adult Community Justice financial resources are clearly indicated in the Pre-sentence Investigations operating budget.

An additional large cost item that we have allocated to the prosecution subsystem is space for the Oregon State Circuit Court that is provided by Multnomah County. The expense for this space is budgeted in the County's Nondepartmental budget. We have allocated this expense to the institutional cost subenvironment of this subsystem.

### **4.3.3 Calculation of Transactional Costs in the Prosecution Subsystem.**

The detailed results of our analysis of the subsystem cost environment are summarized in Appendixes D.1. and D.2. Notable results seen in this data include the following:

1. In 1999 Multnomah County processed over 13,000 cases that were presented to the District Attorney's Office.
2. The total cost environment of the prosecution subsystem was \$17,963,286.
3. The transactional cost subenvironment of the subsystem was \$11,035,466 in 1999-2000.
4. The transactional cost – the average cost per case presented in 1999-2000 - was \$835.

Having calculated the cost per transaction of the prosecution subsystem we can update the Multnomah County criminal justice flowchart as seen in Figure 6.

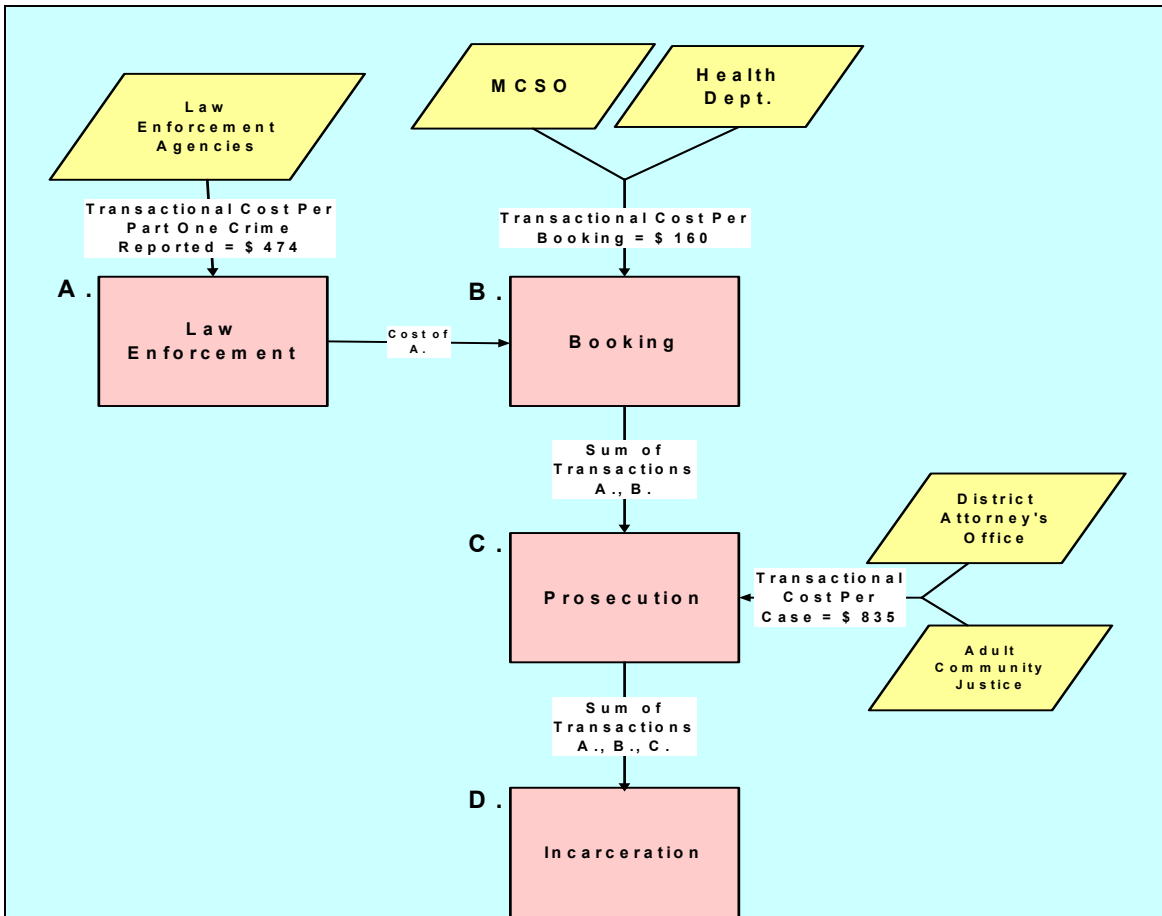


Figure 6. The prosecution subsystem cost environment.

#### 4.4 Incarceration Subsystem.

##### 4.4.1 Subsystem Description.

One of the outcomes of the prosecution subsystem is the sentencing of convicted criminals to detention in the correctional facilities of Multnomah County. These facilities are the operational responsibility of the Corrections Facility Division (CFD) of MCSO. CFD is responsible for five major facilities identified in Table 2. (Jail bed capacity, 1999). CFD also manages programs to deal with alcohol and drug abuse, education, life skills and other needs of inmates.

Facility	Capacity
Detention Center	676
Inverness Jail	977
Correctional Facility	190
Courthouse Jail	70
Restitution Center	160
<b>Total</b>	<b>2,073</b>

Table 2. Multnomah County correctional facilities.

Of the subsystems that comprise the Multnomah County criminal justice system, the incarceration subsystem most resembles a line production operation. It is also capital intensive, with the capital assets of the subsystem impacting directly upon the capacity of the subsystem to fulfill its role in the overall system. The operation of an inventory of jail beds available is ultimately the transactional resource that the subsystem has to “sell” to the overall criminal justice system. The subsystem has a relatively straightforward mission: the incarceration of individuals who await trial or have been convicted of crimes and the operation of programmatic activities that support such incarceration. **The reader should note that the County’s correctional facilities house a number of persons with misdemeanor charges and/or are held on behalf of other agencies (United States Marshall’s Service, for example).**

#### **4.4.2 Data Collection To Determine Transaction Cost.**

**4.4.2(a) Identification of a useful transaction indicator.** The production characteristics of the services “sold” by the incarceration subsystem to the criminal justice system lend themselves to somewhat different unit cost considerations than are made in the evaluation of the other subsystems. In the incarceration subsystem we allocate total, transactional and institutional costs on the service produced – jail bed nights of incarceration. With the identification of a cost per jail bed night we can focus on the linkage of the service supplied to the system demand for service to identify the subsystem’s transactional cost environment. The criminal justice system “purchases” a certain number of jail bed nights per case from the incarceration subsystem. Thus, the transactional cost per case is the number of jail bed nights per case multiplied by the cost per jail night.

**4.4.2(b) Identification of subsystem cost environments.** The cost environment of the incarceration subsystem is dominated by two sets of functionally

related work units in MCSO – those that deal with correctional security activities and those that are responsible for the operation of correctional facilities. The direct and indirect costs of the subsystem are largely those associated with the Correctional Facilities and Enforcement Divisions of the Multnomah County Sheriff's Office. However, the budget of Corrections Health Division of the Multnomah County Health Department have also been allocated to the incarceration subsystem.

#### **4.4.3 Calculation of Transactional Costs in the Incarceration Subsystem**

The total cost environment, and transactional and institutional cost subenvironment information that we identify in Appendixes E.1 and E.2. allow us to analyze a range of cost consequences and calculate the cost per transaction of the incarceration subsystem. Among the most notable items that we see in this information are the following:

1. The total cost environment of the incarceration subsystem in fiscal year 1999-2000 was \$100,657,902, while the transactional cost subenvironment was \$72,161,098.
2. The average total cost per jail bed night was \$133.03, while the average transactional cost per bed night was \$95.37
3. Assuming an average length of stay (ALS) of 17.5 days, (Jail bed capacity Forecast, 1999, Jail population report, 2000) the average cost per transaction was \$1,669.
4. The institutional cost environment of the incarceration subsystem was \$28,496,804. This tells us that, were crime in Multnomah County to suddenly disappear, the County's institutional investment in the institutional structures, fixed assets and other indirect and support costs of the incarceration subsystem – investments that represent roughly a quarter of the total subsystem cost - would remain.

Having calculated the cost per transaction of the incarceration subsystem we can update the Multnomah County criminal justice flowchart as seen in Figure 6.



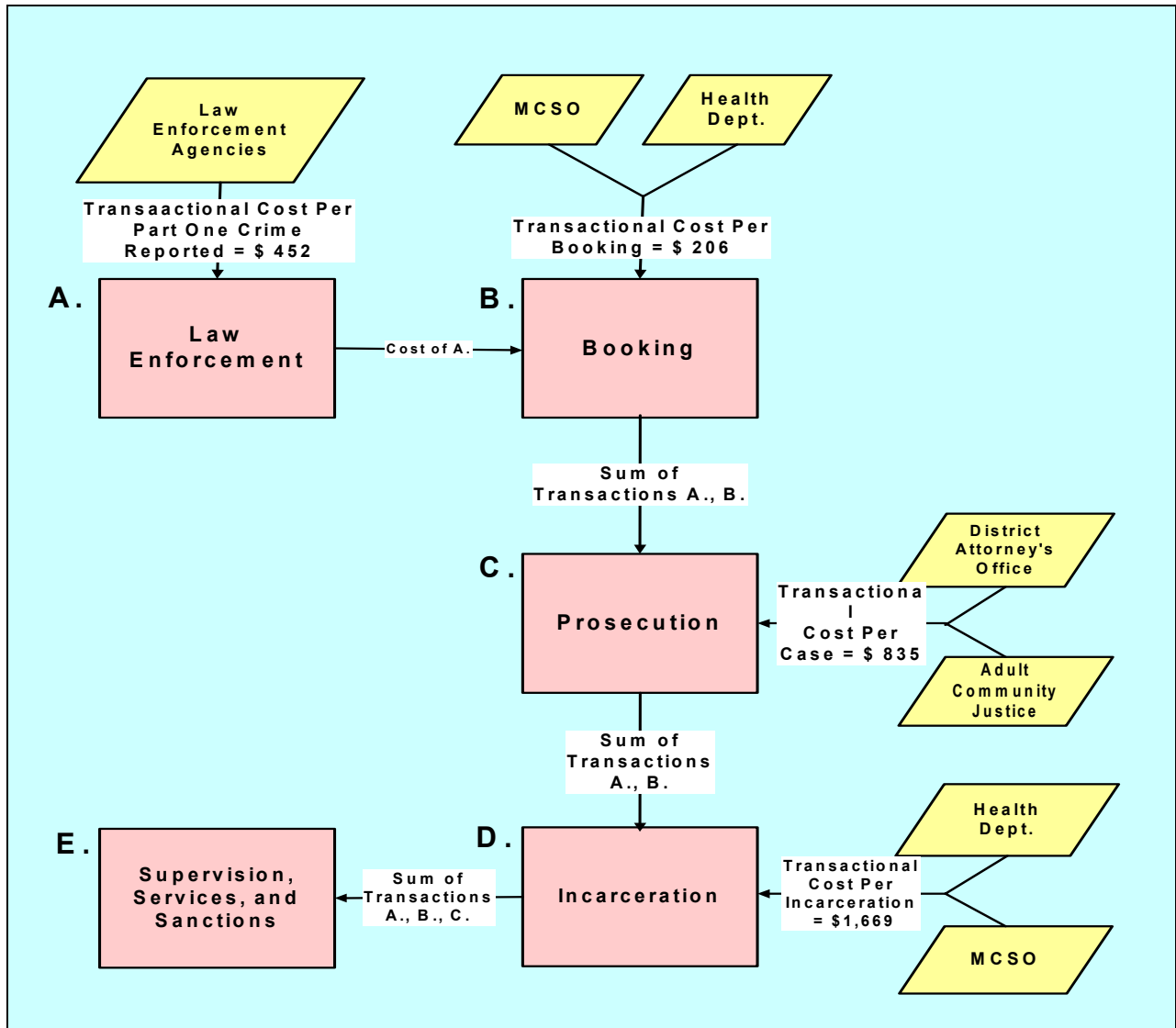


Figure 7. The incarceration subsystem cost environment.

## 4.5 Supervision, Services, and Sanctions Subsystem

### 4.5.1 Subsystem Description.

Individuals in Multnomah County who await adjudication or have been convicted of crimes are supervised in the community while not incarcerated. Such supervision is managed by Adult Community Justice of the Department of Community Justice and MCSO. The largest portion of resources dedicated to this subsystem are provided by Adult Community Justice through its Centralized Intake, Pretrial Services, Hearings,

Sanctions Tracking, Local Control, and Supervision organizational units. Adult Community Justice seeks to “enhance public safety and promote the positive change of offenders in the community through integrated supervisory, rehabilitative and enforcement strategies.” (Multnomah County Budget, 1999, p. DCJ 32) MCSO’s Community Supervision Program in the Corrections Program Division includes the Close Street, Furlough and Electronic Monitoring Programs which are designed to provide structured supervision while individuals accused or convicted of crimes either await trial or sentencing. Aside from the criminal supervisory characteristics of this subsystem, there is a notable “quasi-social service programmatic” appearance to it as well. As a result, we also consider that immediate impacts of criminal domestic violence that are addressed by Multnomah County should be considered to be within the realm of criminal resource management. Therefore, we have included the Department of Family and Community Services’ Domestic Violence Program in this subsystem.

As compared to other subsystems in the overall County criminal justice system, the organizational units in the supervision, services, and sanctions subsystem interact with a wider array of other components of the system. Case supervisors interact frequently and coordinate closely with law enforcement agents, prosecutors, the courts, and other correctional agents. In addition, they interact extensively with elements exogenous to the criminal justice system proper – families, social service agencies and employers.

#### **4.5.2 Data Collection To Determine Transaction Cost.**

**4.5.2(a) Identification of a useful transaction indicator.** The cost environment that we have identified as supervision, services, and sanctions associated with accused and convicted offenders and, in a limited sense, their victims, is relatively clear in what it “sells” to the criminal justice subsystem – behavioral regulation of supposed criminals on a per case basis. Thus, we consider the focus of the subsystem is on what we will refer to as cases managed by case supervisors. As a result, we have a relatively discrete transaction indicator: “cases supervised.”

However, the question remains as to which “cases supervised” are most indicative of the commitment that the subsystem makes to the impact of serious adult crime. Multnomah County Department of Community Justice’s report titled Adult Community Justice Core Services (1999) identified 77% of its adult caseload as dedicated to the supervision of low, medium, and high-risk felony cases. ACJ staff considers this workload component to be indicative of the Department’s resources that are committed to what we consider to be serious adult crime in this report. As a result, we have used this indicator in the calculation of the portion of the cost elements budgeted for ACJ that we have allocated to this subsystem.

**4.5.2(b) Identification of subsystem cost environments.** The elements of cost in the supervision, services, and sanctions subsystem were identified in the budgets and management narratives of Multnomah County's Departments of Community and Family Services (Domestic Violence Program and prorations of Community Programs and Partnerships Management and Community and Family Services Management), and Community Justice (prorations of Adult Justice Management, Information Services and Resource Management Services, Centralized Intake, Pre-trial Services, Hearings, Sanctions Tracking, Local Control, and Supervision), and the Community Supervision Program and related support costs in MCSO.

### **4.5.3 Calculation of Transactional Costs in the Supervision, Services, and Sanctions Subsystem**

The cost data that we identify in Appendixes E.1. and E.2. allow us to calculate the cost per case supervised in the supervision, services, and sanctions subsystem. Among the most significant items that we see in this information are the following:

1. The total cost of the supervision, services, and sanctions subsystem in fiscal year 1999-2000 was \$23,399,861.
2. The transactional cost subenvironment in this subsystem was under \$17,711,123.
3. The average cost per transaction was \$1,788.
4. The institutional cost subenvironment was \$5,688,737. This indicates that the County has an investment in the management and support infrastructure for this subsystem that represents roughly one-quarter of the subsystem's total cost.

Having calculated the cost per transaction of the supervision, services, and sanctions subsystem we can not only update the Multnomah County criminal justice system flowchart as seen in Figure 8. on the following page to represent the impact of this subsystem, but we can also complete the flowchart representation of this system, including the indication of notable exit points.

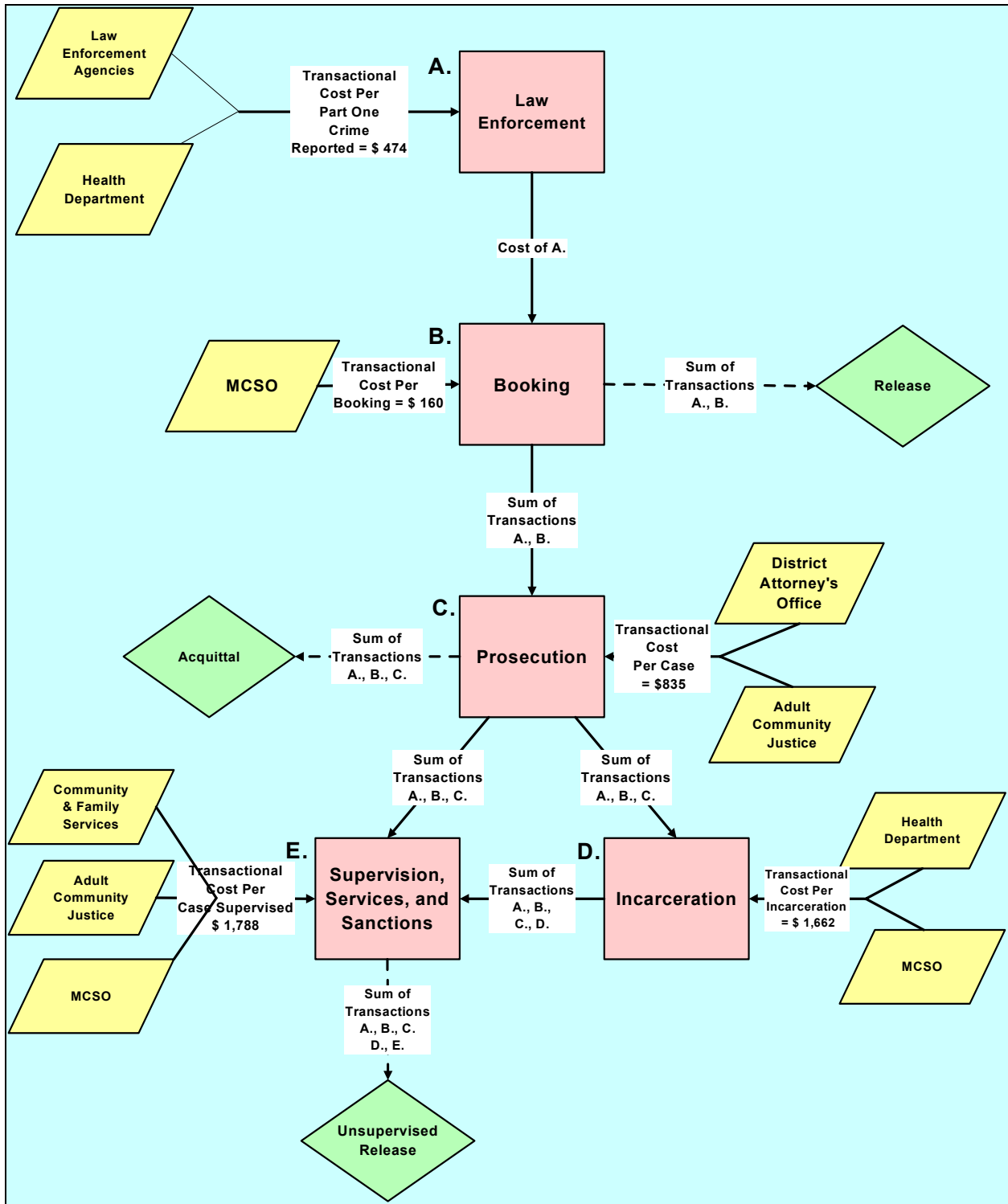


Figure 8. The Multnomah County adult criminal justice system from a transactional cost perspective, including the supervision, services, and sanctions subsystem.

## 5.0 Summary and Discussion of the Transactional and Institutional Costs Of the Multnomah County Criminal Justice System for Adult Felonies

### 5.1 Summary of Findings

Appendix F. is a compilation of the total cost environment, and transactional and institutional cost subenvironment analyses that we performed on each of the subsystems of the Multnomah County adult criminal justice system. Among the more notable results that we see in this information are the following:

1. The total cost environment of the adult criminal justice system was \$199,881,198 in fiscal year 1999-2000.
2. The cost of the transactional subenvironment “invested” by the criminal justice system in services associated with adult felony crimes was \$125,299,264. This represents 62.7% of the adult criminal justice total cost environment associated with felony crimes.
3. The total average cost per transaction for cases that passed through all five of the criminal justice subsystems was \$4,950. The cost per transaction ranged from \$206 for booking to \$1,788 for supervision, services, and sanctions. Figure 9. shows the relative cost per transaction among the subsystems of the County’s adult criminal justice system for felonies.

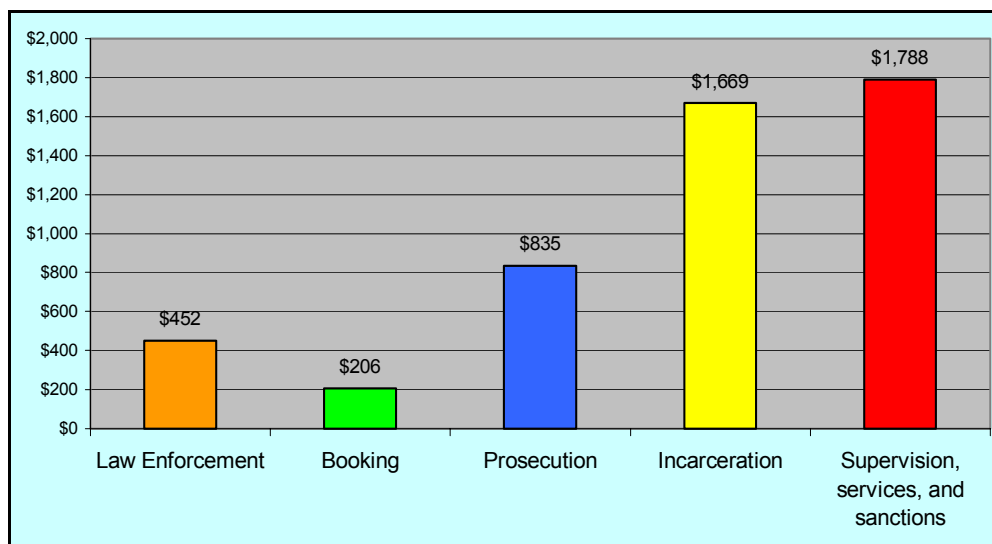


Figure 9. Comparative cost per transaction among the subsystems of the Multnomah County adult criminal justice system for serious crimes.

4. The institutional cost subenvironment for the portion of the criminal justice dedicated to serious adult crime was \$74,581,934. This represents 37.3% of the total cost of the criminal justice system involved in arrests, bookings, prosecutions, incarceration, and supervision, services, and sanctions in Multnomah County.
5. In terms of the resources invested by the citizens of Multnomah County in the subsystems of the criminal justice system, we see that 23.5% of the total cost environment is dedicated to the law enforcement subenvironment. However, in terms of resources dedicated to the key transactions related to the adult criminal justice system - arrest, booking adjudication, corrections, and community supervision - law enforcement represents only 13.4% of the transactional cost subenvironment.
6. On the other hand, whereas the incarceration subenvironment represents 50.4% of the total cost environment of the adult criminal justice system committed to serious crimes, in terms of the transactional cost subenvironment associated with serious adult crimes, it accounts for 57.6% of the total resources “consumed” by the total criminal justice system.

The pie chart in Figure 10. shows the percentages of the adult criminal justice transactional subenvironment that the transactional budgets of each subsystem represents.

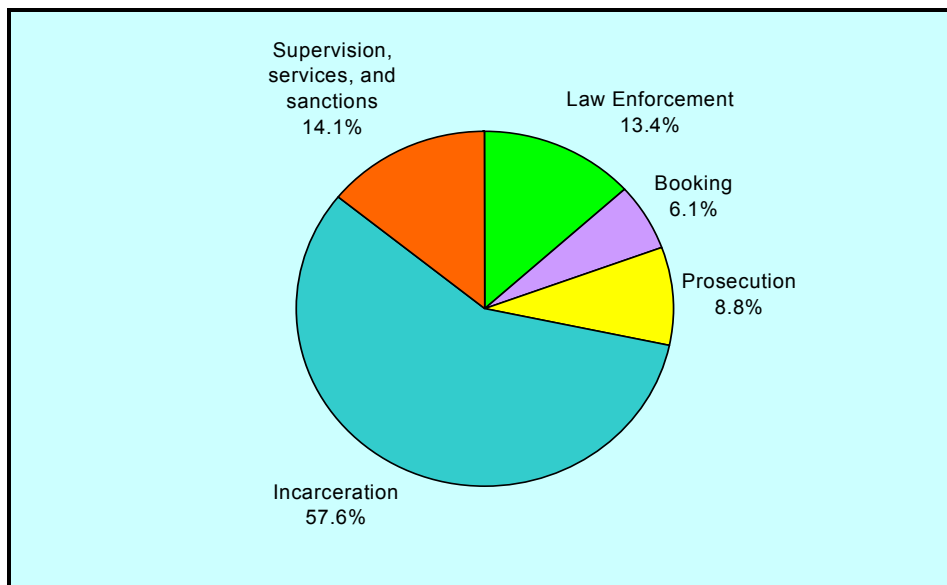


Figure 10. The budget percentage of the adult criminal justice system associated with felony crimes that each subsystem represents.

## **5.2 Discussion and Prospectus for Future Research**

The Hatfield Model provides a new and useful logic for the description and analysis of the Multnomah County criminal justice system. One of the most important elements of the Model is the framework that it offers for the examination of intra-organizational relationships and the financial impacts that subsystems process based upon key transactions that have been identified in the criminal justice system. We believe that the logic of the Hatfield Model will assist the County's policy analysts and policy makers as they consider the vast number of issues that arise in the examination of this complex system. As County officials move forward into additional research and analysis we suggest that, based upon our work associated with this report, the following items be kept in mind:

1. The cost per transaction information that we developed in this report is in the form of averages. This is, of course, a reasonable approach. However, in each of the subsystems the averages result from a wide range of outcomes. For instance, in the prosecution subsystem some cases involving court trials consume much more extensive resources than do plea arrangements that are effected with the investment of much less in deputy district attorney time and the supportive resources associated with the application of that time. In the incarceration subsystem some cases involve much longer periods of housing in County correctional facilities and result in substantially greater consumption of supportive services than do other cases. Through the tracking of cohorts of individuals through the criminal justice system and the application of the Hatfield Model a better understanding of such resource consumption patterns can be established.
2. The Hatfield Model results in the development of useful indicators related to the financial resources consumed to support transactions throughout the criminal justice system. The Model, through the use of transaction cost analysis provides a logic that effectively links resources, costs, and transactions. However, as we consider the data generating characteristics of the Multnomah County criminal justice system, at this point in time the some of the available financial information that we have relied upon in this report has to be considered as proximate.

To get a better idea of the financial impacts of the criminal justice system more detailed research as to how work is actually done should be pursued. An example can be seen in the law enforcement subsystem. There appears

to be little national research and no research on the local level that has been done as to how the time of front-line police officers is consumed. Officers on patrol in Multnomah County play a critical role in investigations and arrests associated with the commission of crimes. However, we have very little information at hand with which to assess how much time is invested in what we have referred to “active law enforcement” and/or the amount of time involved in specific arrest transactions. A similar scarcity of key transaction cost-related information can be seen elsewhere in the criminal justice system.

We suggest that studies performed in recent years in relation to the workloads of Oregon circuit court judges (National Center for State Courts, 2000) and case supervisors in the Oregon Department of Corrections (Time Study, 1995) could be used as instructive examples of informative research regarding to workload analysis. In each of these studies the researchers identified the amount of time committed to each of the subjects’ duties – information that, combined with the Hatfield Model approach, can result in more highly refined transactional and institutional cost information.

3. We believe that the Hatfield Model should be useful to policy analysts and policy makers in a broad range of applications. In particular, transactional and institutional cost analysis as utilized in the Hatfield Model can be a powerful new frame for budget preparation and analysis, program evaluation and performance assessment throughout the Multnomah County organization and the other jurisdictions of Multnomah County.
4. In this report we have utilized our model of transactional and institutional cost analysis to consider the adult criminal justice system as it deals with serious crimes. We believe that the Hatfield Model would be equally applicable to the juvenile criminal justice system and to less serious adult crimes.
5. The goals identified in the proposed scope of work for the County’s ongoing study of the management of the criminal justice system relate to the evaluation of jail time and recidivism. This report and the Hatfield Model will provide support for the pursuit of the identification of practices that will help the County “reduce recidivism and crime and/or more effectively use current or additional criminal justice resources” (RFP, 2000) as called for in the request for proposals for the criminal justice system management study.
6. In the application of the Hatfield Model to the Multnomah County criminal justice system dedicated to serious adult crimes we have identified approximately 72% of the transactional resources of the overall system as being applied to two subsystems – law enforcement and incarceration. Yet a



review of the criminal justice literature yields very little research regarding the impact of these subsystems on criminal justice effectiveness indicators. This is particularly the case in relation to policing practices. For example, the WSIPP report regarding the cost and benefits of crime reduction programs does not consider policing practices.

Given the level of resources dedicated to law enforcement activities, we suggest that the impact of policing practices on recidivism, deterrence and other critical criminal justice outcomes should be carefully considered. Policing practices have an obvious impact on the “selection” process that initiates the chain of transactions considered in this report. Since police officers have more contact with the environment to which the institutions of the criminal justice must adjust, it stands to reason that these agents of law enforcement are in particularly critical and opportunity-laden positions to affect that environment. Therefore, policing practices should be carefully analyzed in terms of how they impact the workload and outcomes of the criminal justice system and the level and focus of funding for specific policing activities.

As indicated in suggestion 2., above, we have found that very little is known about the amount of time front-line officers spend on their various duties. A better understanding of this time allocation and the normative consequences of alternative policing practices for the criminal justice system will offer policy analysts and decision makers opportunities to more effectively allocate scarce resources in this critical realm of public policy.

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### Interviews

*Note: Most contacts with personal sources involved multiple telephone and in-person conversations. As a result, specific dates and modes of contact are not indicated.*

Aab, Larry A, Multnomah County Sheriff's Office.  
Aos, Steve, Washington State Institute for Public Policy, Olympia, WA.  
Beedle, Steve, Portland Police Bureau.  
Bray, Douglas M., Oregon Judicial Department.  
Brower, Barbara, City of Troutdale Police Department.  
Grossman, Linda, City of Gresham Police Department.  
Jaber, Carl J., Multnomah County Department of Community Justice.  
Kvarsten, Erik, City of Troutdale, OR.  
Merrill, Dennis C., City of Portland Police Bureau.  
Nelson, Dave, City of Troutdale Police Department.  
Owen, Sharon, Multnomah County Sheriff's Office.  
Phelan, Judith N., Multnomah County District Attorney's Office.

Reilly, Larry, Multnomah County Sheriff's Office.  
Rhyne, Charlene, Multnomah County Department of Community Justice.  
Simpson, Thomas G., Multnomah County District Attorney's Office.  
Smith, Helen T., Multnomah County District Attorney's Office.  
Spence, Jane C., Multnomah County Health Department  
Steele, Meganne, Multnomah County Department of Community Justice  
Stewart, Jo'ey, Multnomah County District Attorney's Office.  
Wall, Roy, City of Fairview, OR.  
Wurtz, Bethany, Multnomah County Sheriff's Office.

## Notes to Appendixes

Appendixes A. through F. financial worksheets and supportive explanations that provide the bases for the analysis found in the body of the report. A worksheet has been included for each subsystem (in the case of the law enforcement subsystem there is a worksheet for each jurisdiction. Each worksheet includes the total cost environment, transactional cost subenvironment, and institutional cost subenvironment for each element of cost. Following each worksheet (with the exception of the summary sheet for all subsystems and the summary sheet for the law enforcement subsystem) there is an explanation of each line in the worksheet.

As explained in the report, the sources for this information were budgets and other documents obtained from the jurisdictions of the Multnomah County criminal justice system. At the end of each line explanation following the worksheets we have included the source document with page number accessed to obtain the line of information in question. The source documents used, with the abbreviation used in the explanation, are as follows:

City of Fairview, Oregon (1999). Adopted budget: Fiscal year 1999-00. Fairview, OR. **Abbreviation: Fairview Budget.**

City of Gresham, Oregon (1999). Adopted budget: Fiscal year 1999-00. Gresham, OR. **Abbreviation: Gresham Budget.**

City of Gresham, Oregon (2000). Comprehensive annual financial report: Fiscal year ended June 30, 1999. Gresham, OR. **Abbreviation: Gresham CAFR.**

City of Portland, Oregon (1999). Adopted budget: Fiscal year 1999-00. Portland, OR. **Abbreviation: Portland Budget.**

City of Portland, Oregon (1999). Comprehensive annual financial report: Fiscal year ended June 30, 1999. Portland, OR. **Abbreviation: Portland CAFR.**

City of Portland, OR (2000). Service Efforts and Accomplishments: 1998 – 1999. Portland, OR. **Abbreviation: Portland Service Efforts.**

City of Troutdale, Oregon (1999). Adopted budget: Fiscal year 1999-00. Troutdale, OR. **Abbreviation: Troutdale Budget.**

City of Troutdale, Oregon (2000). Comprehensive annual financial report: Fiscal year ended June 30, 1999. Troutdale, OR. **Abbreviation: Troutdale CAFR.**

Multnomah County, Oregon (1999). Adopted budget, 1999-2000: Narrative. Portland, OR. **Abbreviation: MC Budget Narrative**

Multnomah County, Oregon (2000). Comprehensive annual financial report:  
Fiscal year ended June 30, 1999. Portland, OR. **Abbreviation: MC CAFR.**

Appendix A. Summary Of Multnomah County Criminal Justice System Total Cost Environment, and Transactional and Institutional Cost Subenvironments Associated with Serious Adult Crimes.

Subsystem	Total Cost Environment	Transactional Cost Subenvironment	Cost Per Transaction	Institutional Cost Subenvironment
Law Enforcement	\$ 46,885,841	\$ 16,811,593	\$ 452	\$ 30,074,248
Booking	\$ 10,974,308	\$ 7,579,984	\$ 206	\$ 3,394,324
Prosecution	\$ 17,963,286	\$ 11,035,466	\$ 835	\$ 6,927,820
Incarceration	\$ 100,657,902	\$ 72,161,098	\$ 1,669	\$ 28,496,804
Supervision, services, and sanctions	\$ 23,399,861	\$ 17,711,123	\$ 1,788	\$ 5,688,738
<b>TOTALS</b>	<b>\$ 199,881,198</b>	<b>\$ 125,299,264</b>	<b>\$ 4,950</b>	<b>\$ 74,581,934</b>

**Appendix B. Analysis of Law Enforcement Subsystem Total Cost Environment, and Transactional and Institutional Costs Subenvironments Associated with Serious Adult Crimes in Multnomah County.**

**Appendix B.1. Summary of Total Cost Environment and Transactional and Institutional Cost Subenvironments Associated with Serious Adult Offenses for Law Enforcement Agencies in Multnomah County.** This table is a compilation of the information regarding individual law enforcement agencies in Appendices B.2 – B.6. As indicated in section 4.1.3 of the report and the note below, it also includes an estimator of the law enforcement cost environment that is dedicated to serious adult crimes.

Cost Center	Total Cost Environment	Transactional Cost Subenvironment			Institutional Cost Subenvironment
	Budget	Budget	Reported Offenses	Cost Per Transaction	Budget
City of Fairview	\$ 1,240,613	\$ 208,190	*	*	\$ 1,032,423
City of Gresham	\$ 13,479,291	\$ 5,153,608	9,933	\$ 519	\$ 8,325,683
Multnomah County, Maywood, Wood Village	\$ 11,620,010	\$ 4,979,686	4,111	\$ 1,211	\$ 6,640,324
City of Portland	\$ 105,478,285	\$ 37,440,000	91,400	\$ 410	\$ 68,038,285
City of Troutdale	\$ 2,911,228	\$ 527,691	1,343	\$ 393	\$ 2,383,537
<b>TOTALS</b>	<b>\$ 134,729,427</b>	<b>\$ 48,309,175</b>	<b>106,787</b>	<b>\$ 452</b>	<b>\$ 86,420,252</b>
Portion of Law Enforcement Subsystem Dedicated to Serious Adult Criminal Offenses. **	\$ 46,885,841	\$ 16,811,593	37,162	\$ 452	\$ 30,074,248

\* Note: Although we include a cost worksheet for the City of Fairview, since offenses for the City are not reported separately from Multnomah County, we have included it with the County in this summary table.

\*\* Note: We have used an estimator of 34.8% of the law enforcement cost environment dedicated to serious adult crimes. This estimator resulted from a combining of a State report of crime committed by age with a report of criminal offenses by type in Multnomah County in 1999.

\*\*\* Note: We have not included Portland Airport P.D. in this table. The exclusion of criminal offenses reported by this agency represents less than 1% of the County total.



**Appendix B.2.1 City of Fairview Law Enforcement Cost Environment.**

Cost Elements		Total Cost Environment	Transactional Cost Subenvironment	Institutional Cost Subenvironment
<b>Direct Expenses</b>				
1. Public Safety Department		1,040,952	208,190	832,762
	<b>Subtotals</b>	<b>1,040,952</b>	<b>208,190</b>	<b>832,762</b>
<b>Indirect Expenses</b>				
2. Administrative		192,287	-	192,287
	<b>Subtotals</b>	<b>192,287</b>	<b>-</b>	<b>192,287</b>
<b>Capital Allocation</b>				
3. Fixed Assets		7,374	-	7,374
	<b>Subtotals</b>	<b>7,374</b>	<b>-</b>	<b>7,374</b>
	<b>TOTALS</b>	<b>\$ 1,240,613</b>	<b>\$ 208,190</b>	<b>\$ 1,032,423</b>
<b>4. Portion of Law Enforcement Subsystem dedicated to adult crime.</b>		<b>\$ 431,733</b>	<b>\$ 72,450</b>	<b>359,283</b>

## **Appendix B.2.2 Line Descriptions for City of Fairview Law Enforcement Cost Environment.**

- Line 1. The Fairview Public Safety Department is considered to be primarily dedicated to “frontline” police activities. As a result, we have utilized our assumption that 20% of such resources are available for “active law enforcement” and allocated 20% of the total budget for this organizational unit, or \$208,190, to the total cost environment and transactional cost subenvironment. (Fairview Budget, p. 8)
- Line 2. The Fairview Public Safety Department represents 26.2% of the City’s total general fund budget. As a result, we have allocated 26.2% or \$192,287 of the Administrative Department to the total cost environment and institutional cost subenvironment. (Fairview Budget, p. 5)
- Line 3. The amount of \$7,374 indicated as the total and institutional cost for fixed assets that should be allocated to the Fairview Public Safety Department is an estimate based on the City of Troutdale’s CAFR, as discussed in Appendix B.6.2, below. The amount is based on the population of Fairview as compared to Troutdale (44.2%).
- Line 4. We used the routine described in section 4.1.3 of the report and in Appendix B.1 to estimate the cost consequences of reported serious adult offenses.

**Appendix B.3.1 City of Gresham Law Enforcement Cost Environment.**

Cost Elements		Total Cost Environment	Transactional Cost Subenvironment	Institutional Cost Subenvironment
<b>Direct Expenses</b>				
1. Field Operations		9,223,343	1,844,699	7,378,644
2. Investigations		3,308,909	3,308,909	-
<b>Subtotals</b>		<b>12,532,252</b>	<b>5,153,608</b>	<b>7,378,644</b>
<b>Indirect Expenses</b>				
3. Records, Communications, Admin, etc.		883,670	-	883,670
<b>Subtotals</b>		<b>883,670</b>	<b>-</b>	<b>883,670</b>
<b>Capital Allocation</b>				
4. Fixed Assets		63,369	-	63,369
<b>Subtotals</b>		<b>63,369</b>	<b>-</b>	<b>63,369</b>
<b>TOTALS</b>		<b>\$ 13,479,291</b>	<b>\$ 5,153,608</b>	<b>\$ 8,325,683</b>
5. Portion of Law Enforcement Subsystem dedicated to adult crime.		\$ 4,690,793	\$ 1,793,456	2,897,338
<b>Total Transactions:</b>	<b>9,933</b>			
<b>Cost Per Transaction:</b>	<b>\$ 519</b>			
<b>Est. Serious Adult Crime Transactions</b>	<b>3,457</b>			

## Appendix B.3.2 Line Descriptions for City of Gresham Law Enforcement Cost Environment.

- Line 1. The Gresham Police Department's (GPD) Field Operations Division is primarily responsible for the initial response to calls for police services. Service provided by this division include patrol, traffic enforcement, canine support, special emergency response, among other activities. The total cost environment of this operating unit for FY 1999-2000 was \$9,223,343. Based upon our research noted in section 4.1.2(c), above, we assume that 20% of Field Operations resources are available for what we refer to as "active law enforcement" that can be applied to response to reported criminal offenses. This defines our transactional resource. As a result, we have converted the total cost environment to a transactional cost environment of \$1,844,699. We consider the balance of \$7,378,644 to be the institutional cost subenvironment. (Gresham Budget, p. 229)
- Line 2. Among its other responsibilities, the GPD Investigations Division supports the Field Operations Division in follow-up investigations for crimes against persons and property. Since we consider the entire resource base of this operation to be dedicated to response to reported criminal offenses, we allocate the entire budget for the Investigation Division of \$3,308,909 to the total cost environment and to the transactional cost subenvironment. (Gresham Budget, p. 229)
- Line 3. 32.3% of the total GDP cost environment is committed to the Field Operations and Investigations Division transactional cost subenvironment. Therefore, we assume that 32.3% of the records and communications, other administrative and support resources of GDP should be considered to be supportive of the Department's transactional resources. To this end, we have assigned \$883,670 of the budget for these administrative and support activities to the total cost subenvironment. Since these resources are not directly applied in law enforcement transactions, they have been allocated to the institutional cost subenvironment in their entirety. (Gresham Budget, p. 229)
- Line 4. In the fixed assets group of the City of Gresham's CAFR dated June 30, 2000 a total of \$1,793,424 was assigned to "police protection." We have allocated 32.3% of this amount prorated over 10 years and shown the resultant amount of \$57,699 in the total cost environment and the institutional cost environment. (Gresham CAFR, p. 157)
- Line 5. We used the routine described in section 4.1.3 of the report and in Appendix B.1 to estimate the cost consequences of reported serious adult offenses.
- Note: The City of Gresham budgets an administrative service charge in for its operating departments that covers the costs of the City Council, Office of the City Manager, City Attorney's Office, Human Resources, and Finance/Information Technology.

**Appendix B.4.1 Multnomah County (Including Maywood Park and Wood Village) Law Enforcement Cost Environment.**

Cost Elements		Total Cost Environment	Transactional Subenvironment	Institutional Subenvironment
<b>Direct Expenses</b>				
	1. Investigations Administration	119,797	119,797	-
	2. Investigations	1,524,305	1,524,305	-
	3. Special Investigations	905,141	905,141	-
	4. Operations Administration	215,892	-	215,892
	5. Patrol	3,373,531	674,706	2,698,825
	6. River Patrol	1,704,709	340,942	1,363,767
	7. Warrant and Detention Records	1,414,795	1,414,795	-
	<b>Subtotals</b>	<b>9,258,170</b>	<b>4,979,686</b>	<b>4,278,484</b>
<b>Indirect Enforcement Division Expenses</b>				
	8. Enforcement Division Management	255,746	-	255,746
	9. Corrections Division Management	43,429	-	112,803
	<b>Subtotals</b>	<b>299,175</b>	<b>-</b>	<b>299,175</b>
<b>Multnomah County Sheriff's Office Prorations</b>				
	10. Executive Office	36,769	-	36,769
	11. Administrative Support	514,008	-	514,008
	<b>Subtotals</b>	<b>550,777</b>	<b>-</b>	<b>550,777</b>
<b>General Government Prorations</b>				
	12. Nondepartmental	342,629	-	342,629
	13. Support Services	296,695	-	296,695
	14. Environmental Services	273,874	-	273,874
	<b>Subtotals</b>	<b>913,198</b>	<b>-</b>	<b>913,198</b>
<b>Capital Allocation</b>				
	15. Fixed Assets	598,690	-	598,690
	<b>Subtotals</b>	<b>598,690</b>	<b>-</b>	<b>598,690</b>
	<b>TOTALS</b>	<b>\$ 11,620,010</b>	<b>\$ 4,979,686</b>	<b>\$ 6,640,324</b>
16. Portion of Law Enforcement Subsystem dedicated to adult crime.		\$ 4,043,765	\$ 1,732,932	2,310,324
<b>Total Transactions:</b>	<b>4,111</b>			
<b>Cost Per Transaction</b>	<b>\$ 1,211</b>			
<b>Est. Serious Adult Crime Transactions</b>	<b>1,431</b>			

## Appendix B.4.2 Line Descriptions for Multnomah County Sheriff's Office Law Enforcement Cost Environment.

- Line 1. One of our continuing assumptions is that all investigatory resources should be considered supportive of our definition of law enforcement transactions. As a result, we have assigned the total MCSO Investigations Administration budget of \$119,797 to the total cost environment and to the transactional cost subenvironment. (MC Budget Narrative, MCSO 22)
- Lines 2.,3. As indicated in the description for line 1., consistent with our overall approach, we have assigned the Investigations budget of \$1,524,305 and Special Investigations budget of \$905,141 to the total cost environment and to the transactional cost subenvironment. (MC Budget Narrative, MCSO 22)
- Line 4. Operations Administration is responsible for the direction of all organizational units within the Operations Section, including Patrol, School Resource Officers, among others. Since the mission of this organizational unit is support of the law enforcement transactional cost subenvironment, we have assigned its total budget of \$215,892 to total cost environment. However, since we assume that the institutional commitment to operations administration will remain regardless of the level of reported criminal offenses, we have allocated this budget to the institutional cost subenvironment. (MC Budget Narrative, MCSO 22)
- Lines 5.,6. The Patrol Program is responsible for providing law enforcement services to unincorporated Multnomah County, Maywood Park, and Wood Village. The River Patrol Program is responsible for law enforcement, emergency assistance, dive/rescue, fire suppression, marine safety education and crime prevention on 97 miles of waterway within Multnomah County. Consistent with our approach to "front line" police resources in this model, wherein we assume that 20% of such resources are committed to "active law enforcement," we have allocated 20% of the budget for these operating units - \$674,706 for Patrol and \$340,942 to River Patrol - to the transactional cost subenvironment. (MC Budget Narrative, MCSO 22)
- Line 7. We have allocated 38.5% (20 out of 52 staff members), or \$1,414,795 of the Warrant and Detention Records Unit of MCSO's Corrections Facilities Division to the total cost environment and transactional cost subenvironment of the law enforcement subsystem. (MC Budget Narrative, MCSO 31)
- Line 8. The portions of the Enforcement Division that we have allocated to the transactional cost subenvironment represent 16.6% of the total financial resources managed within the Enforcement Division. As a result, we have allocated 16.6% or \$255,746 of the Enforcement Division Management budget to the total cost environment and the institutional cost subenvironment. (MC Budget Narrative, MCSO 22)

- Line 9. The portion of Warrants and Records allocated to this subsystem represents 2.8% of the total Corrections Facilities Division budget. As a result, we have allocated 2.8% or \$43,429 of the Facilities Division Administration budget to the total cost environment and the institutional cost subenvironment. (MC Budget Narrative, MCSO 32)
- Lines 10.,11. The transactional costs of the Enforcement and Corrections Facilities Division units committed to the law enforcement subsystem represent 5.9% of the total budget of Multnomah County Sheriff's Office. As a result, we have allocated 5.9% or \$36,769 of the Executive Office and \$514,008 of the Administrative Support Division budgets to the total cost environment and institutional cost subenvironment. (MC Budget Narrative, MCSO 15)
- Lines 12.-14. The transactional costs of the Enforcement and Corrections Facilities Division units committed to the law enforcement subsystem represent 2.5% of the total General Fund budget of Multnomah County Government. As a result, we have allocated 2.5% or \$342,629 of the Nondepartmental, \$296,695 of the Support Services, and \$273,874 of the Environmental Services budgets to the total cost environment and institutional cost subenvironment. (MC Budget Narrative, p. Summaries 24)
- Line 15. In the June 30, 2000 Multnomah County Comprehensive Annual Financial Report \$104,681,000 was charged in the schedule of fixed assets for "law enforcement". We have allocated 5.9% (the percentage that the transactional cost subenvironment represents of the MCSO total cost environment) prorated over ten years or \$598,690 in the total cost environment and institutional cost subenvironment. (MC CAFR, p. 118)
- Line 16. We used the routine described in section 4.1.3 of the report and in Appendix B.1 to estimate the cost consequences of reported serious adult offenses.

**Appendix B.5.1 City of Portland Law Enforcement Cost Environment.**

Cost Elements		Total Cost Environment	Transactional Cost Subenvironment	Institutional Cost Subenvironment
<b>Direct Expenses</b>				
1. Patrol		64,200,000	12,840,000	51,360,000
2. Investigations		24,600,000	24,600,000	-
	<b>Subtotals</b>	<b>88,800,000</b>	<b>37,440,000</b>	<b>51,360,000</b>
<b>Indirect Police Expenses</b>				
3. Support Services		5,877,604	-	5,877,604
4. Retirement, Disability		9,376,988	-	9,376,988
	<b>Subtotals</b>	<b>15,254,592</b>	<b>-</b>	<b>15,254,592</b>
<b>Other Indirect Expenses</b>				
5. Allocated Overhead Costs		1,104,929	-	1,104,929
	<b>Subtotals</b>	<b>1,104,929</b>	<b>-</b>	<b>1,104,929</b>
<b>Capital Allocation</b>				
6. Fixed Assets		318,764	-	318,764
	<b>Subtotals</b>	<b>318,764</b>	<b>-</b>	<b>318,764</b>
	<b>TOTALS</b>	<b>\$ 105,478,285</b>	<b>\$ 37,440,000</b>	<b>\$ 68,038,285</b>
7. Portion of Law Enforcement Subsystem dedicated to adult crime.		\$ 36,706,443	\$ 13,029,120	23,677,323
<b>Total Transactions:</b>	<b>91,400</b>			
<b>Cost Per Transaction</b>	<b>\$ 410</b>			
<b>Est. Serious Adult Crime Transactions</b>	<b>31,807</b>			



## Appendix B.5.2 Line Descriptions for City of Portland Law Enforcement Cost Subenvironment.

- Note: Lines 1. through 4. were based upon spending and staffing information found in the City of Portland's *Service Efforts and Accomplishments: 1998 – 1999*. Although FY 1998 – 1999 is the base year for this information, since this information was available in such an accessible form and the budget changed relatively little between FY 1998-1999 and FY 1999 – 2000, we believe that it is reasonable to use it. (Portland Service Efforts, p. 14)
- Line 1. What the *Services and Efforts* report describes as “Patrol” services are budgeted in the Portland Police Bureau’s (PPB) Operations Branch budget. The Operations Branch is composed of five precincts, traffic enforcement, and Tri-met contracted services. Based upon the approach indicated above wherein we assume that 20% of patrol resources are committed to “active law enforcement,” in accordance with the *Services and Efforts* report we have shown \$64,200,000 in the total cost environment, while we have shown 20% or \$12,840,000 in the transactional cost subenvironment. The balance, \$51,360,000 is shown in the institutional cost subenvironment. (Portland Service Efforts, p. 14, Portland Budget, p. 122)
- Line 2. Investigations services identified in the *Services and Efforts* report corresponds with the Investigations Division of PPB. According to the City’s budget (1999) “The investigative branch of the bureau includes the Detective, Drug and Vice, and Forensic Evidence Divisions, which provide investigative services for major crimes. The Tactical Operations Division includes SERT, Explosive Disposal, YGAT and GET Units . . . The Family Services Division provides investigative services in support of family issues and problems . . .” Based upon the rationale described above, wherein we allocate 100% of investigatory services to the transactional cost subenvironment, we have included the entire total cost environment for Investigations of \$24,600,000 in the transactional cost subenvironment. (Portland Service Efforts, p. 14, Portland Budget, p. 122)
- Line 3. The *Services and Efforts* report identifies \$21,400,000 in intradepartmental support costs for PPB. Since the transactional cost subenvironment of patrol activities represents 11.7% of the total police budget, we have allocated 11.7% or \$2,015,717 of such costs in support of the patrol activities in the total cost environment and institutional cost subenvironment. Since the transactional cost subenvironment of investigation activities represents 22.3% of the total police budget, we have allocated 22.3% or \$3,861,887 of support costs associated with investigation activities in the total cost environment and institutional cost subenvironment. (Portland Service Efforts, p. 14)
- Line 4. The *Services and Efforts* report identifies \$27,600,000 in retirement and disability costs for PPB. Since the transactional cost subenvironment of patrol activities represents 11.7% of the total police budget, we have allocated 11.7% or \$3,215,826 of retirement and disability costs in the total cost environment and institutional cost subenvironment.

Since the transactional cost subenvironment of investigation activities represents 22.3% of the total police budget, we have allocated 22.3% or \$6,161,162 of retirement and disability costs associated with investigation activities in the total cost environment and institutional cost subenvironment. (Portland Service Efforts, p. 14)

Line 5. In the FY 1999-2000 operating budget \$3,252,223 is allocated to the PPB for City overhead costs. Since the transactional cost subenvironment of patrol activities represents 11.7% of the PPB budget, we have allocated 11.7% or \$378,934 of City overhead costs assigned to PPB to the patrol total cost environment and the institutional cost subenvironment. Since the transactional cost subenvironment of investigation activities represents 22.3% of the PPB budget, we have allocated 22.3% or \$725,995 of City overhead costs assigned to PPB to the investigations total cost environment and the institutional cost subenvironment. (Portland Budget, p. 122)

Line 6. In the June 30, 1999 City of Portland's Comprehensive Annual Financial Report \$9,375,419 is charged in the schedule of fixed assets for "police protection." Since we have identified 34.0% of the total PPB budget to be allocated to the transactional cost subenvironment of the law enforcement subsystem, we have allocated 34.0% of the amount identified in the City of Portland's CAFR, prorated over ten years, or \$318,764, to the total cost environment and the institutional cost subenvironment. (Portland CAFR, Schedule of General Fixed Assets).

Line 7. We used the routine described in section 4.1.3 of the report and in Appendix B.1 to estimate the cost consequences of reported serious adult offenses.

**Appendix B.6.1 City of Troutdale Law Enforcement Cost Environment.**

Cost Elements		Total Cost Environment	Transactional Cost Subenvironment	Institutional Cost Subenvironment
<b>Direct Expenses</b>				
1. Police Operations - General Fund		1,776,781	355,356	1,421,425
2. Police Operations - Local Option Fund		861,676	172,335	689,341
<b>Subtotals</b>		<b>2,638,457</b>	<b>527,691</b>	<b>2,110,766</b>
<b>Indirect Police Expenses</b>				
3. Police Management		57,009	-	57,009
<b>Subtotals</b>		<b>57,009</b>	<b>-</b>	<b>57,009</b>
<b>Other Indirect Expenses</b>				
4. Legislative		5,739	-	5,739
5. Judicial		11,529	-	11,529
6. Legal		11,975	-	11,975
7. General Government		41,974	-	41,974
8. Administration		68,440	-	68,440
9. Data Processing		46,358	-	46,358
10. Finance		13,077	-	13,077
<b>Subtotals</b>		<b>199,092</b>	<b>-</b>	<b>199,092</b>
<b>Capital Allocation</b>				
11. Fixed Assets		16,670	-	16,670
<b>Subtotals</b>		<b>16,670</b>	<b>-</b>	<b>16,670</b>
<b>TOTALS</b>		<b>2,911,228</b>	<b>527,691</b>	<b>2,383,537</b>
12. Portion of Law Enforcement Subsystem dedicated to adult crime.		\$ 1,013,107	\$ 183,637	829,471
<b>Total Transactions:</b>	<b>1,343</b>			
<b>Cost Per Transaction</b>	<b>\$ 393</b>			
<b>Est. Serious Adult Crime Transactions</b>	<b>467</b>			

## Appendix B.6.2 Line Descriptions for City of Troutdale Law Enforcement Cost Subenvironment.

- Lines 1.,2. The Troutdale Police Department's (TPD) Operations Division is primarily responsible for calls for police services. In FY 1999-2000 the total cost environment of this operating unit was \$2,638,457 (\$1,776,781 from General Fund and \$861,676 from Police Local Option Fund). Based upon our research noted in section 4.1.2(c), above, we assume that 20% of patrol time sources are available for what we refer to as "active law enforcement" that can be applied to reported criminal offenses. As a result, we have allocated 20% or \$527,691 of the Operations Division budget to the transactional cost subenvironment. The balance of \$2,110,766 is allocated to the institutional cost subenvironment. (Troutdale Budget, pp. 26 and 69)
- Line 3. Since we assume that 20% of the resources budgeted for the Operations Division should be allocated to the transactional cost subenvironment, we have allocated 20% or \$57,009 of the police management budget to the total cost environment and institutional cost subenvironment. (Troutdale Budget, p. 25)
- Lines 4.-10. The law enforcement transactional subenvironment represents approximately 1.3% of the total cost environment for the City of Troutdale. Therefore, we assume that 1.3% of the resources budgeted for legislative, judicial, legal, general government, administration, data processing, and finance cost centers should be allocated to the total cost environment and institutional cost subenvironment. (Troutdale Budget, pp. 14, 15, 16, 17, 18, 21, and 24)
- Line 11. The City of Troutdale's CAFR dated June 30, 2000 identifies \$833,499 in the Schedule of Changes in General Fixed Assets – By Function and Activity as allocated to "Public Safety." Based upon the rationale identified for Lines 1., 2., and 3., above, we have allocated 20% of this amount, prorated over 10 years, or \$16,670, to the total cost environment and institutional cost subenvironment. (Troutdale CAFR, p. 67)
- Line 12. We used the routine described in section 4.1.3 of the report and in Appendix B.1 to estimate the cost consequences of reported serious adult offenses.

**Appendix C.1 Analysis of Booking Subsystem Total Cost Environment, and Transactional and Institutional Cost Subenvironments Associated with Serious Adult Crimes.**

Cost Elements		Total Cost Environment	Transactional Cost Subenvironment	Institutional Cost Subenvironment
<b>Mult Co Sheriff's Office</b>				
	1. Booking and Release	5,229,215	5,229,215	-
	2. Facility Security	224,776	224,776	
	3. Warrant and Detention Records	1,768,493	1,768,493	
	4. Corrections Facilities Division Management	351,316	-	351,316
	5. Law Enforcement Division Management	16,125		16,125
	6. MCSO Management/Support	731,537	-	731,537
	<b>Subtotals</b>	<b>8,321,462</b>	<b>7,222,484</b>	<b>1,098,978</b>
<b>Multnomah County Health Department</b>				
	7. Corrections Health Division	357,500	357,500	-
	8. Health Department Director's Office Proration	15,275	-	15,275
	<b>Subtotals</b>	<b>372,775</b>	<b>357,500</b>	<b>15,275</b>
<b>General Government Prorations</b>				
	9. Nondepartmental	514,938	-	514,938
	10. Support Services	445,905	-	445,905
	11. Environmental Services	411,606	-	411,606
	<b>Subtotals</b>	<b>1,372,449</b>	<b>-</b>	<b>1,372,449</b>
<b>Capital Allocation - Fixed Assets</b>				
	12. Law Enforcement	773,733	-	773,733
	13. Proration of general government	133,890	-	133,890
	<b>Subtotals</b>	<b>907,622</b>	<b>-</b>	<b>907,622</b>
	<b>TOTALS</b>	<b>\$ 10,974,308</b>	<b>\$ 7,579,984</b>	<b>\$ 3,394,324</b>
Transactions:				<b>36,808</b>
Cost Per Transaction:				<b>\$ 206</b>

## Appendix C.2 Line Descriptions for Booking Subsystem Total Cost Environment, and Transactional and Institutional Cost Subenvironments.

- Line 1. We have assumed that Corrections Facilities Division's Booking and Release Unit employees are most directly connected to booking transactions. As a result, we show the total budget of \$5,229,215 for this unit in the total cost environment and transactional cost subenvironment for the booking subsystem. (MC Budget Narrative, MCSO 32)
- Line 2. The Facility Security Unit ensures the safety and security of designated County facilities including the Justice Center, MCIJ, and Multnomah County Courthouse. According to MCSO staff, 5.5 FTE or 7.8% of this organizational unit is dedicated to the booking subsystem. These resources are directly related to the transactional workload of the subsystem. As a result, we have allocated 7.8% or \$224,776 of the Facility Security Unit budget to the total cost environment and transactional cost subenvironment. (MC Budget Narrative, p. MCSO 22)
- Line 3. We have allocated 41.5% (20 out of 52 staff members), or \$1,768,493 of the Warrant and Detention Records Unit of MCSO's Corrections Facilities Division to the total cost environment and transactional cost subenvironment of the law enforcement subsystem. (MC Budget Narrative, MCSO 31)
- Line 4. The Booking and Release and Warrants and Detention Records Units represented 13.9% of the budgeted resources managed by Corrections Facilities Division Administration. As a result, we have designated 13.9% or \$351,316 of the total Corrections Facilities Division Administration budget in the total cost environment and institutional cost subenvironment. (MC Budget Narrative, MCSO 32)
- Line 5. The portion of Facility Security allocated to this subsystem represents 1.0% of the total Law Enforcement Division budget. As a result, we have allocated 1.0% or \$16,125 of the Enforcement Division Management budget in total cost environment and the institutional cost subenvironment. (MC Budget Narrative, p. MCSO 32)
- Line 6. The Booking and Release, Facilities Security, and Warrant and Detention Records Units represented 7.9% of the budgeted resources included within MCSO. As a result, we have designated 7.9% or \$731,537 of the total Executive Office and Administrative Support budgets in the total cost environment and institutional cost subenvironment.
- Line 7. The Corrections Health Division of the Multnomah County Health Department provides health screening services in conjunction with the booking subsystem. According to Jane Spence of Corrections Health, 6.5 FTE are provided at \$55,000 per FTE. Since these resources are directly consumed in relation to the bookings workload, we have allocated the entire \$357,500 to the total cost environment and transactional cost subenvironment.

- Line 8. The Corrections Health Division resources dedicated to bookings represented 4.4% of the budgeted resources administered in the Health Department in FY 1999-2000. As a result, we have allocated 4.4% or \$15,275 of the Director's Office budget to the total cost environment and institutional cost subenvironment. (MC Budget Narrative, Health 13)
- Lines 9-11. The transactional cost subenvironment dedicated to bookings represented 3.8% of Multnomah County's total budgeted resources in FY 1999-2000. As a result, we have allocated 3.8% or \$514,938 of the Nondepartmental, \$445,905 of the Support Services, and \$411,606 of the Environmental Services budgets in the total cost environment and institutional cost subenvironment. (MC Budget Narrative, Summaries 24)
- Line 12. The organizational units of MCSO included in this subsystem represent 7.4% of its total budget. Therefore, we have allocated 7.4% prorated over 10 years or \$773,733 of "law enforcement" in the schedule of fixed assets in the June 30, 2000 Comprehensive Annual Financial Report in the total cost environment and institutional subenvironment. (MC CAFR, p. 118)
- Line 13. The organizational units included in this subsystem represent 3.8% of the total Multnomah County operating budget. As a result, we have allocated 3.8% prorated over 10 years or \$133,890 of "general government" in the schedule of fixed assets in the June 30, 2000 Comprehensive Annual Financial Report in the total cost environment and institutional subenvironment. (MC CAFR, p. 118)

**Appendix D.1 Analysis of Adult Prosecution Subsystem Total Cost Environment, and Transactional and Institutional Cost Subenvironments Associated with Serious Adult Crimes.**

Cost Elements		Total Cost Environment	Transactional Cost Subenvironment	Institutional Cost Subenvironment
<b>District Attorney Prosecutorial Activities</b>				
	1. Felony Court Teams	6,787,547	6,787,547	-
	2. Family Justice	2,611,665	2,611,665	-
	<b>Subtotals</b>	<b>9,399,212</b>	<b>9,399,212</b>	<b>-</b>
<b>Adult Community Justice</b>				
	3. Pre-sentence Investigation	711,215	711,215	-
	<b>Subtotals</b>	<b>711,215</b>	<b>711,215</b>	<b>-</b>
<b>Indirect Expenses</b>				
	4. District Attorney Office Admin	1,601,092	-	1,601,092
	5. Adult Community Justice Mgt	18,334	-	18,334
	6. Community Justice Director's Office	83,926	-	83,926
	7. Building Space for Oregon Circuit Court	3,048,202	-	3,048,202
	8. Facility Security	925,039	925,039	-
	9. Corrections Facilities Division Admin	46,499	-	46,499
	<b>Subtotals</b>	<b>5,723,092</b>	<b>925,039</b>	<b>4,798,053</b>
<b>General Government Prorations</b>				
	10. Nondepartmental	649,260	-	649,260
	11. Support Services	562,219	-	562,219
	12. Environmental Services	518,973	-	518,973
	<b>Subtotals</b>	<b>1,730,452</b>	<b>-</b>	<b>1,730,452</b>
<b>Capital Allocation - Fixed Assets</b>				
	13. Justice	230,500	-	230,500
	14. Proration of general government	168,815	-	168,815
	<b>Subtotals</b>	<b>399,315</b>	<b>-</b>	<b>399,315</b>
	<b>TOTALS</b>	<b>\$ 17,963,286</b>	<b>\$ 11,035,466</b>	<b>\$ 6,927,820</b>
<b>Transactions:</b>	<b>13,224</b>			
<b>Cost Per Transaction:</b>	<b>\$ 835</b>			



## Appendix D.2 Line Descriptions for Prosecution Subsystem Total Cost Environment, and Transactional and Institutional Cost Subenvironments.

- Line 1. The Felony Court Division of the District Attorney's Office includes the Circuit Court Felony Trial Teams and the Civil Forfeiture Unit. The Circuit Court Felony Trial Teams review, file and prosecute felony criminal cases. The Civil Forfeiture Unit is responsible for processing seized and forfeited property related to the violation of state drug laws. As a result, we have allocated the total budgets for these work units within the Felony Court Division of \$6,787,547 to the total cost environment and transactional cost subenvironment of the prosecution subsystem. (MC Budget Narrative, p. DA 13)
- Line 2. Because of their direct relationship with transactional cases, the budgets totaling \$2,611,655 of three units within the District Attorney's Family Justice Division have been allocated to the total cost environment and transactional cost subenvironment: Domestic Violence, Victim's Assistance Program, and Child Abuse Team. (MC Budget Narrative, p. DA 20)
- Line 3. The Pre-sentence Investigations Unit of Adult Community Justice assists the court by providing full written investigations of the circumstances of criminal offenses, defendants' criminal records, social histories, and present conditions and environments. Such reports assist sentencing decisions. This service is integral to the transactional definition and, as a result, we have allocated the total budget of \$711,215 for this organizational unit to the total cost environment and transactional subenvironment of this subsystem. (MC Budget Narrative, p. DCJ 36)
- Line 4. The Felony Court and Family Justice cost elements that we have allocated to the total cost environment and transactional subenvironment of this subsystem represent 49.4% of the total resources budgeted for the District Attorney's Office. As a result, we have allocated 49.4% or \$1,601,092 of the District Attorney Office Administration to the total cost environment and institutional subenvironment. (MC Budget Narrative, p. DA 7)
- Line 5. The Pre-sentence Investigations Unit represents 2.1% of the total resources budgeted for Adult Community Justice. As result, we have allocated 2.1% or \$18,334 of Adult Community Justice Management to the total cost environment and institutional cost subenvironment. (MC Budget Narrative, p. DCJ 33)
- Line 6. The Pre-sentence Investigations Unit represents 1.0% of the total resources budgeted for the Department of Community Justice. As result, we have allocated 1.0% or \$83,926 of the Director's Office, Resource Management, and Information Services to the total cost environment and institutional cost subenvironment. (MC Budget Narrative, p. DCJ 16)
- Line 7. Multnomah County provides building space for the Circuit Court of the State of Oregon. The total cost environment for this function of \$3,048,202 is budgeted in the Building Space for State-Required Functions Program in the County's Nondepartmental

operating budget. We assume that this cost would be incurred regardless of the level of crime activity. As a result, the entire amount is allocated under institutional cost subenvironment. (MC Budget Narrative, Nond 25)

Line 8. The Facility Security Unit ensures the safety and security of designated County facilities including the Justice Center, MCIJ, and Multnomah County Courthouse. According to MCSO staff, 22.4 FTE or 32.1% of this organizational unit is dedicated to the prosecution subsystem. These resources are directly related to the transactional workload of the subsystem. As a result, we have allocated 32.1% or \$925,039 of the Facility Security Unit budget to the total cost environment and transactional cost subenvironment. (MC Budget Narrative, p. MCSO 22)

Line 9. Facility Security represents 1.8% of the total Law Enforcement Division budget. As a result, we have allocated 1.8% or \$46,499 of the Enforcement Division Management budget in total cost environment and the institutional cost subenvironment. (MC Budget Narrative, p. MCSO 32)

Lines 10.-12 The transactional cost environment of this subsystem represents 4.7% of the total County General Fund budget. Therefore, we have allocated 4.7% or \$649,260 of Nondepartmental resources, \$562,219 of Support Services, and \$518,973 of Environmental Services to the total cost environment and institutional cost subenvironment. ( MC Budget Narrative, p. Summaries 24)

Line 13. There is little correspondence between the organizational units included in this subsystem and the schedule of fixed assets included in the June 30, 1999 Multnomah County Comprehensive Annual Financial Report. Therefore, based upon our assessment of the impact of the organizational units included in this subsystem, we have prorated over ten years 50% or \$230,500 of the amount charged to “justice” in the schedule of fixed assets and included this amount in the total cost environment and transactional cost environment. (MC CAFR, p. 118)

Line 14. The transactional cost environment of this subsystem represents 4.7% of the total County General Fund budget. As a result, we have allocated to the total cost environment and institutional cost subenvironment 4.7% prorated over ten years or \$168,815 of the amount shown for “general government” shown in the schedule of fixed assets in the June 30, 1999 County CAFR. (MC CAFR, p. 118)

**Appendix E.1 Analysis of Adult Incarceration Subsystem Total Cost Environment, and Transactional and Institutional Cost Subenvironments Associated with Serious Adult Crimes.**

Cost Elements		Total Cost Environment	Transaction Cost Subenvironment	Institutional Cost Subenvironment
<b>Corrections Security Activities</b>				
	1. Facility Security	1,181,514	1,181,514	
	2. Court Security	2,144,566	2,144,566	-
	3. Transport	1,864,384	1,864,384	-
	4. Warrants and Detention Records	495,178	495,178	
	5. Hospital Security Unit	555,758	555,758	-
	6. Court Services Administration	112,881	-	112,881
	7. Enforcement Division Management	380,462	-	380,462
	8. Facility Division Management	52,491	-	52,491
	<b>Subtotals</b>	<b>6,787,234</b>	<b>6,241,400</b>	<b>545,834</b>
<b>Corrections Facilities</b>				
	9. Detention Center	13,567,690	13,567,690	-
	10. Correctional Facility	2,638,992	2,638,992	-
	11. Inverness Jail	18,462,819	18,462,819	-
	12. Inmate Work Crews	1,375,984	1,375,984	-
	13. Classification	2,194,869	2,194,869	-
	14. Corrections Programs	15,651,582	15,651,582	-
	15. Courthouse Jail	1,321,319	1,321,319	-
	16. Facilities Division Management	1,921,393	-	1,921,393
	17. Enforcement Division Management	94,729		94,729
	<b>Subtotals</b>	<b>57,229,377</b>	<b>55,213,255</b>	<b>2,016,122</b>
<b>Indirect Expenses</b>				
	18. Health Dept - Corrections Health Division	10,706,443	10,706,443	-
	19. Health Dept Office of Director	669,380	-	669,380
	20. MCSO Executive Office /Admin Support	6,093,055	-	6,093,055
	<b>Subtotals</b>	<b>17,468,878</b>	<b>10,706,443</b>	<b>6,762,435</b>
<b>General Government Prorations</b>				
	21. Nondepartmental	4,146,874	-	4,146,874
	22. Support Services	3,590,939	-	3,590,939
	23. Environmental Services	3,314,722	-	3,314,722
	<b>Subtotals</b>	<b>11,052,535</b>	<b>-</b>	<b>11,052,535</b>
<b>Capital Allocation - Fixed Assets</b>				
	24. Law Enforcement	6,888,010	-	6,888,010
	25. Health	279,198	-	279,198
	26. Proration of general government	952,670	-	952,670
	<b>Subtotals</b>	<b>8,119,878</b>	<b>-</b>	<b>8,119,878</b>
	<b>TOTALS</b>	<b>\$ 100,657,902</b>	<b>\$ 72,161,098</b>	<b>\$ 28,496,804</b>
<b>Total Cost Per Bed Night</b>		<b>\$ 133.03</b>		
<b>Transactional Cost Per Bed Night</b>		<b>\$ 95.37</b>		
<b>Average Length of Stay (ALS)</b>		<b>17.5</b>		
<b>Cost Per Transaction:</b>		<b>\$ 1,669</b>		

## Appendix E.2 Line Descriptions for Incarceration Subsystem Total Cost Environment, and Transactional and Institutional Cost Subenvironments.

- Line 1. The Facility Security Unit ensures the safety and security of designated County facilities including the Justice Center, MCIJ, and Multnomah County Courthouse. According to MCSO staff, 28.6 FTE or 41.0% of this organizational unit is dedicated to the incarceration subsystem. These resources are directly related to the transactional workload of the subsystem. As a result, we have allocated 41.0% or \$1,181,514 of the Facility Security Unit budget to the total cost environment and transactional cost subenvironment. (MC Budget Narrative, p. MCSO 22)
- Line 2. The Court Security Unit is responsible for maintaining safety and security in County courtrooms, booking of persons remanded to custody by the courts, back-up of Facility Security Officers, and escorting inmates. Because of this direct support for incarceration transactions, we have allocated the total budget of \$2,144,566 for this organizational unit to the total cost environment and transactional cost subenvironment. (MC Budget Narrative, p. MCSO 22)
- Line 3. The Transport Unit is responsible for the transportation of prisoners as required by court transactions, extradition orders, warrants and Governor's warrants. Because of this direct support for incarceration transactions, we have allocated the total budget of \$1,864,384 for this organizational unit to the total cost environment and transactional cost subenvironment. (MC Budget Narrative, p. MCSO 22)
- Line 4. We have allocated 13.5% (7 out of 52 staff members), or \$495,178 of the Warrant and Detention Records Unit of MCSO's Corrections Facilities Division to the total cost environment and transactional cost subenvironment of the law enforcement subsystem. (MC Budget Narrative, MCSO 31)
- Line 5. The Hospital Security Unit provides for corrections deputy supervision of inmates housed at local hospitals. Because of this direct support for incarceration transactions, we have allocated the total budget of \$555,758 for this organizational unit to the total cost environment and transactional cost subenvironment. (MC Budget Narrative, p. MCSO 32)
- Line 6. The Court Services Administration Program provides direction, coordination, and oversight for the Court Services Section. As a result, we have allocated the entire budget for this organizational unit of \$112,881 to the total cost environment and the institutional cost subenvironment. (MC Budget Narrative, p. MCSO 22)
- Line 7. The Court Services Administration, Facility Security, Court Security and Transport Units represent 24.7% of the total Law Enforcement Division budget. As a result, we have allocated 24.7% or \$380,462 of the Enforcement Division Management budget in total cost environment and the institutional cost subenvironment.

- Line 8. The Warrants and Detention Records and Hospital Security Units represent 2.1% of the total Corrections Facility Division budget. As a result, we have allocated 2.1% or \$52,491 of the Facility Division Management budget to the total cost environment and institutional cost subenvironment. (MC Budget Narrative, p. MCSO 32)
- Line 9. The Detention Center is a 676 bed maximum-security adult correctional facility located in the Justice Center in Downtown Portland. The budget for this organizational unit of \$13,567,690 has been allocated in the total cost environment and the transactional cost subenvironment. (MC Budget Narrative, p. MCSO 32)
- Line 10. The Correctional Facility is a 190 bed medium-security adult correctional facility located in Troutdale. The budget for this organizational unit of \$2,638,992 has been allocated in the total cost environment and the transactional cost subenvironment. (MC Budget Narrative, p. MCSO 32)
- Line 11. Inverness Jail is a medium security adult correctional facility located in Northeast Portland. The budget for this organizational unit of \$18,462,819 has been allocated in the total cost environment and the transactional cost subenvironment. (MC Budget Narrative, p. MCSO 32)
- Lines 12. The Inmate Work Crew Unit operates from the Inverness Jail. Inmate crews perform community public work projects, maintain and repair some Multnomah County facilities, provide adult and juvenile corrections laundry services, and provide some services through private contract with other government agencies. The budget for this organizational unit of \$1,375,984 has been allocated in the total cost environment and the transactional subenvironment. (MC Budget Narrative, p. MCSO 32)
- Line 13. The Classification Unit is responsible for assessing inmate risk, controlling inmate movement, providing due process hearings, and complying with state-mandated population release guidelines. The budget for this organizational unit of \$2,194,869 has been allocated in the total cost environment and the transactional cost subenvironment. (MC Budget Narrative, p. MCSO 32)
- Line 14. The Corrections Programs Division assists inmates to prepare for re-entry into the community through the operation of the Restitution Center, Community Supervision, Facility Counselors, Alcohol and Drug Intervention, and Auxiliary Services. The budget for this organizational unit of \$15,651,582 has been allocated in the total cost environment and the transactional cost subenvironment. (MC Budget Narrative, p. MCSO 32)
- Line 15. The Courthouse Jail Program in MCSO's Enforcement Division provides secure housing and supervision of inmates assigned to the 70 bed Courthouse Jail and for over 75 inmates per day who make court appearances. The budget for this organizational unit of \$1,321,319 has been allocated in the total cost environment and the transactional cost subenvironment. (MC Budget Narrative, p. MCSO 32)

- Line 16. The organizational units of the Corrections Facilities Division included in this subsystem represent 76.1% of the total budget for the Division. As a result, we have allocated 76.1% or \$1,921,393 of the Facilities Division Management budget to the total cost environment and institutional cost subenvironment. (MC Budget Narrative, p. MCSO 32)
- Line 17. The Courthouse Jail represents 6.15% of the budget managed in the Enforcement Division. Therefore, we have allocated 6.15% or \$94,729 of the Enforcement Division Management budget to the total cost environment and institutional cost subenvironment. (MC Budget Narrative, p. MCSO 32)
- Line 18. The Corrections Health Division of the Multnomah County Health Department provides medical, mental health and dental services for Multnomah County inmates. The budget of \$10,706,443 for this organizational unit has been allocated in the total cost environment and the transactional cost subenvironment. (MC Budget Narrative, p. Health 27)
- Line 19. The Corrections Health Division represents 18.0% of the Multnomah County Health Department budget. As a result, we have allocated 18.0% or \$669,380 of the Health Department's Office of the Director budget to the total cost environment and institutional cost subenvironment. (MC Budget Narrative, p. Health 15)
- Line 20. The organizational units of MCSO included in this subsystem represent 65.8% of its total budget. Therefore, we have allocated 65.8% or \$6,093,055 of the MCSO Executive Office and Administrative Support budgets in the total cost environment and institutional cost subenvironment. (MC Budget Narrative, p. MCSO 13)
- Lines 21.-23. The transactional elements included in this subsystem represent 29.9% of the total Multnomah County operating budget. As a result, we have allocated 29.9% or \$4,146,874 of Non-departmental, \$3,590,939 of Support Services, and \$3,314,722 of Environmental Services to the total cost environment and institutional cost subenvironment.
- Line 24. The organizational units of MCSO included in this subsystem represent 65.8% of its total budget. Therefore, we have allocated 65.8% prorated over 10 years or \$6,888,010 of law enforcement in the schedule of fixed assets in the June 30, 2000 Comprehensive Annual Financial Report in the total cost environment and institutional subenvironment. (MC CAFR, p. 118)
- Line 25. The Corrections Health Division represents 18.0% of the Multnomah County Health Department budget. As a result, we have allocated 18.0% prorated over 10 years or \$279,198 of health in the schedule of fixed assets in the June 30, 2000 Comprehensive Annual Financial Report in the total cost environment and institutional subenvironment. (MC CAFR, p. 118)
- Line 26. The organizational units included in this subsystem represent 29.9% of the total Multnomah County operating budget. As a result, we have allocated 29.9% prorated

over 10 years or \$952,670 of general government in the schedule of fixed assets in the June 30, 2000 Comprehensive Annual Financial Report in the total cost environment and institutional subenvironment.



**Appendix F.1 Analysis of Adult Supervision, Services, and Sanctions Subsystem Total Cost Environment, and Transactional and Institutional Cost Subenvironments Associated with Serious Adult Crime.**

Cost Elements		Total Cost Environment	Transaction Cost Subenvironment	Institutional Cost Subenvironment
<b>Community and Family Services</b>				
	1. Domestic Violence Program	1,704,227	1,704,227	-
	2. Community Programs, Partnerships Mgt	78,117	-	78,117
	3. Community and Family Services Mgt.	20,013	-	20,013
	<b>Subtotals</b>	<b>1,802,357</b>	<b>1,704,227</b>	<b>98,130</b>
<b>Community Justice</b>				
	4. Centralized Intake	1,299,704	1,299,704	-
	5. Pretrial Services	894,560	894,560	-
	6. Hearings	206,646	206,646	-
	7. Sanctions Tracking	257,744	257,744	-
	8. Local Control	603,976	603,976	-
	9. Supervision	11,951,087	11,951,087	-
	10. Adult Justice Management	392,181	-	392,181
	11. Community Justice Management	144,807	-	144,807
	12. Information Services	519,676	-	519,676
	13. Resource Management Services	1,130,795	-	1,130,795
	<b>Subtotals</b>	<b>17,401,176</b>	<b>15,213,717</b>	<b>2,187,459</b>
<b>Multnomah County Sheriff's Office</b>				
	14. Community Supervision	793,179	793,179	-
	15. Executive Office	3,855	-	3,855
	16. Administrative Support	53,884	-	53,884
	<b>Subtotals</b>	<b>850,917</b>	<b>793,179</b>	<b>57,738</b>
<b>General Government Prorations</b>				
	17. Non-departmental	1,031,282	-	1,031,282
	18. Support Services	893,027	-	893,027
	19. Environmental Services	824,335	-	824,335
	<b>Subtotals</b>	<b>2,748,644</b>	<b>-</b>	<b>2,748,644</b>
<b>Capital Allocation - Fixed Assets</b>				
	20. Social Services	329,730	-	329,730
	21. Proration of general government	267,036	-	267,036
	<b>Subtotals</b>	<b>596,766</b>	<b>-</b>	<b>596,766</b>
	<b>TOTALS</b>	<b>\$ 23,399,861</b>	<b>\$ 17,711,123</b>	<b>\$ 5,688,737</b>
<b>Cases Supervised</b>		<b>9,906</b>		
<b>Cost Per Transaction:</b>		<b>\$ 1,788</b>		



## Appendix F.2 Line Descriptions for Supervision, Services, and Sanctions Total Cost Environment, and Transactional and Institutional Cost Subenvironments.

- Note: *Multnomah County Department of Community Justice’s report titled Adult Community Justice Core Services (1999) identified 77% of its adult caseload as dedicated to the supervision of low, medium, and high-risk felony cases. As a result, we have used this indicator in the calculation of the portion of the cost elements included in this subsystem that are consumed in the support of the subsystem’s transactions. The direct costs associated with such cases are considered to be the “transactional costs” of the supervision, services, and sanctions subsystem.*
- Line 1. The Domestic Violence Program in the Department of Community and Family Services provides contracted services for victims of domestic violence. Given this program’s direct association with the response to the impact of criminal activity, we have allocated its total budget of \$1,704,227 to the total cost environment and the transactional cost subenvironment. (MC Budget Narrative, p. Community and Family Services 29)
- Line 2. The Domestic Violence Program represents 5.5% of the Department of Community and Family Service’s Community Programs and Partnerships Division budget. As a result, we have allocated 5.5% or \$78,117 of the Division Management budget to the total cost environment and institutional cost subenvironment of the subsystem. (MC Budget Narrative, p. Community and Family Services 29)
- Line 3. The Domestic Violence Program represents 1.21% of the Department of Community and Family Services budget. As a result, we have allocated 1.21% or \$20,013 of the Director’s Office budget to the total cost environment and institutional cost subenvironment of the subsystem. (MC Budget Narrative, p. Community and Family Services 19)
- Line 4. The Centralized Intake Unit of Adult Community Justice determines the appropriate supervision levels and placement of offenders, as well as their risk level and needs as they enter the criminal justice system. As a result, we have allocated 77% of its total budget or \$1,299,704 that supports this organizational component to the total cost environment and the transactional cost subenvironment. (MC Budget Narrative, p. DCJ 36)
- Line 5. Pretrial Services conducts pretrial interviews with incarcerated defendants charged with criminal offenses, makes assessments and recommendations regarding release, and supervises those who are released. Given the direct relationship between this organizational unit and the subsystem’s transactional definition, we have allocated 77% of its total budget or \$894,560 to the subsystem’s total cost environment and transactional cost subenvironment. (MC Budget Narrative, p. DCJ 36)
- Line 6. The Hearings Unit of Centralized Processing Services in Adult Community Justice conducts hearings with parolees and probationers accused of violating supervision

conditions. Given the direct relationship between this organizational unit and the subsystem's transactional definition, we have allocated of its total budget or \$206,646 to the subsystem's total cost environment and transactional cost subenvironment. (MC Budget Narrative, p. DCJ 36)

- Line 7. The Sanctions Tracking Unit provides information regarding available sanction services and the requirements of sanction programs to Probation/Parole Officers, Supervisors and Hearings Officers. As in the case of the Hearings Unit, given the direct relationship between this organizational unit and the subsystem's transactional definition, we have allocated 77% of its total budget or \$257,744 to the subsystem's total cost environment and transactional cost subenvironment. (MC Budget Narrative, p. DCJ 36)
- Line 8. The Local Control Unit designates Local Control cases, develops case plans for offenders, directs movement of offenders from jail to community-based sanctions, supervises offenders while they complete their sentences in the community, and monitors the transfer of cases to post prison supervision at the end of their sentences. As with the preceding organizational units, given the direct relationship between this organizational unit and the subsystem's transactional definition, we have allocated 77% of its total budget of \$603,976 to the subsystem's total cost environment and transactional cost subenvironment. (MC Budget Narrative, p. DCJ 36)
- Line 9. The Supervision Division supervises adult offenders who have been sentenced to probation and post-prison supervision. As a result, we have allocated the Division's total budget of \$11,951,087 to the total cost environment and the transactional cost subenvironment. (MC Budget Narrative, p. DCJ 40)
- Line 10. The transactional cost subenvironment of Centralized Intake, Pretrial Services, Hearings, Sanctions Tracking, Local Control, and Supervision represents 44.7% of the total budget of Adult Community Justice. As a result, we have allocated 44.7% or \$392,181 of Adult Justice Management to the total cost environment and institutional cost subenvironment of the subsystem. (MC Budget Narrative, p. DCJ 33)
- Lines 11.-13. The transactional cost subenvironment of Centralized Intake, Pretrial Services, Hearings, Sanctions Tracking, Local Control, and Supervision represents 22.4% of the total budgeted resources managed in the Department of Community Justice. As a result, we have allocated 22.4% or \$144,807 of the Director's Office, \$519,676 of Information Services, and \$1,130,795 of Resource Management Services to the total cost environment and transactional cost subenvironment of the subsystem. (MC Budget Narrative, p. DCJ 16)
- Line 14. The Community Supervision Unit of MCSO's Corrections Program Division provides structured supervision within the community for pretrial and sentenced inmates for the purpose of assuring that clients comply with conditions of release established by the courts and program staff. Given this supervisory responsibility, we have allocated the

Unit's total budget of \$793,179 to the subsystem's total cost environment and transactional cost subenvironment. (MC Budget Narrative, p. MCSO 37)

Lines 15.,16. The transactional cost subenvironment of Community Supervision Unit represents .6% of the total budget of Multnomah County Sheriff's Office. As a result, we have allocated .6% or \$3,855 of the Executive Office and \$53,884 of the Administrative Support Division to the total cost environment and institutional cost subenvironment. (MC Budget Narrative, p. MCSO 13)

Lines 17.-19. The transactional cost subenvironment of this subsystem represents 7.4% of the total County General Fund budget. As a result, we have allocated 7.4% or \$1,031,282 of Nondepartmental, \$893,027 of Support Services, and \$824,335 of Environmental Services to the subsystem's total cost environment and institutional cost subenvironment. (MC Budget Narrative, p. Summaries 24)

Line 20. There is little correspondence between the organizational units included in this subsystem and the schedule of fixed assets included in the June 30, 1999 Multnomah County Comprehensive Annual Financial Report. Therefore, based upon our assessment of the impact of the organizational units included in this subsystem as compared to the overall social services responsibilities of the County, we have prorated over ten years 10% or \$329,730 of the amount charged to "social services" in the schedule of fixed assets and included this amount in the total cost environment and transactional cost subenvironment. (MC CAFR, p. 118)

Line 21. The transactional cost subenvironment of this subsystem represents 7.4% of the total County General Fund budget. As a result, we have allocated to the total cost environment and institutional cost subenvironment 7.4% prorated over ten years or \$267,036 of the amount shown for general government shown in the schedule of fixed assets in the June 30, 1999 County CAFR. (MC CAFR, p. 118)

