A Model for Determining the Incidence of Unemployment Among Offenders

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CHAPTER I

INTRODUCTION

The purpose of this technical assistance guide is to provide prime sponsors with a model for determining the number of offenders in their local jurisdictions and for calculating the incidence of unemployment among these offenders.

The guide has three major sections. Chapter II outlines the type of criminal justice and demographic information sources available to prime sponsors. Chapter III (part one of the model) gives a step-by-step procedure to enable prime sponsors to estimate the size and employment status of the offender population in contact with the criminal justice system during a given year in a given prime sponsor jurisdiction. Chapter IV outlines part two of the methodology; explains a step-by-step procedure for estimating the total offender population in a community at a given time (using arrest rates per population size) and provides a methodology for working forward and backward with demographic population and offender data to project future offender population size and the employment status of that population.

Under the Comprehensive Employment and Training Act (CETA, P.L. 95-524) of 1973, as amended, the Secretary of Labor has a mandate to address the employment needs of offenders and to provide financial assistance to employment and training programs for them.

If the target group--offender--is to be served, its members must be identified accurately. CETA defines an offender as follows:

> The term 'offender' means any adult or juvenile who is or has been subject to any stage of the criminal justice process for whom employment and training services may be beneficial or who requires assistance in overcoming artificial barriers to employment resulting from a record of arrest or conviction.[1]

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[1]Federal Register, Tuesday, May 20, 1980, p. 33857

This definition makes the problem of estimating the size of the offender population difficult because "offender" is so all-encompassing. And although prime sponsors are concerned with persons who meet this definition of offender, the criminal justice system bases its measurements on "defendants" and "suspects." To become a criminal justice statistic, a person must be arrested. A person who is both arrested and convicted is a "criminal." Put another way, by criminal justice interpretation, individuals who are suspected of committing criminal offenses are suspects. After they are arrested they become defendants. If convicted, they become criminals. This approach to crime measurement is further confounded by the legal interpretation of what constitutes a criminal. It is no longer legal for an employer to ask prospective employees whether they have ever been arrested for a crime. It is only proper to inquire whether they have been convicted of a crime.

For the purposes of this guide, "offender" includes individuals, both adult and juvenile, who have been subjected to any stage of the criminal justice process beginning with an arrest, because this contact is the first measurable one in which records are developed. This definition specifically includes those who have been arrested, but not formally charged; those who have been arrested and charged, but not convicted; and those who have been arrested, charged, and convicted, but not incarcerated. Also included are offenders who have been confined to any type of correctional facility, either as a result of a criminal conviction or while awaiting trial or sentencing.

In terms of services to offenders, prime sponsors face a practical problem that must be resolved before they can adequately meet the requirements of the legislation. Nobody knows exactly how many offenders there are in the United States, nor how many there are in the labor force. One estimate suggests that there are between 36 and 40 million offenders in this country, of whom between 26 and 29 million are in the labor force; this estimate, however, is based on extrapolations

from a variety of indirect sources.[2] The same source notes, however, that "No studies exist that report direct observations on labor force participation of persons with criminal records. . . ."[3]

Even if completely reliable nationwide statistics were available, they would be of little use to prime sponsors who must document meeting the employment and training needs of offenders. Before prime sponsors can estimate the costs of serving offenders, they must know how many offenders are in their area and how many are likely to have employment and training needs. Prime sponsors need concrete and reliable data that reflect the particular conditions of their jurisdictions as closely as possible.

This guide, therefore, is intended to provide prime sponsors with a procedure for estimating the incidence of unemployment among offenders within their area.

The methodology for small area estimates on offenders calls for the use of two distinct data systems: (1) demographic data from the Census which provide information relative to population size, according to age, sex, and race. This data source does not supply offender information per se because standardized data on offenders are not available through the censuses of population characteristics or from the current population surveys (CPS's) conducted and tabulated by the Bureau of the Census for the Bureau of Labor Statistics, and (2) data on offenders which must be obtained from the criminal justice system.

The "criminal justice system", as used in this guide, is intended to include the police, the prosecutor, the courts, and the correctional system. The correctional system includes the probation and parole departments. Each of these subsections of the criminal justice system maintains data that measure both the component's function within the overall system and the productivity of the segment of the system on which its own offender population

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[2]Neal Miller, A Study of the Number of Persons with Records of Arrest or Conviction in the Labor Force, Department of Labor Technical Analysis Paper No. 63 (Washington, D.C.: U.S. Government Printing Office, 1979).

[3]Ibid. p. 20.

directly depends. For example, the number of people served by the probation department (as part of a corrections department) depends for its population on the number of individuals convicted by the courts and placed on probation. Similarly, the courts draw their population, for whom they determine guilt or innocence, from among the people the prosecutor formally charges with criminal offenses.

Prime sponsors should be fully aware of the two distinct data systems they work with and of the numerous constraints of these systems. A discussion of some of these follows:

Data Constraints

- Estimations

There is no strict enumeration (count) of every offender, except for those who are in correctional institutions. Most figures are estimates.

- Sampling

Research sampling methods must be used as a basis for projecting the subpopulation (offender population) involved. There is no cost-efficient way to survey or count every offender in the population.

- Projections

Population projections are not exact predictions of what will occur, but only suggest what can occur, based on extrapolation of historical trends.

- Doublecounting

In gathering data on the total number of defendants processed through a specific stage, within a specific time period, one may count a defendant more than once at any specific stage of the process. For example, a prime sponsor attempting to ascertain the total number of arrests within a jurisdiction during a specific period will obtain data from the police department. Police arrest records show the total number of arrests made, they do not note the number of arrests of the same person within that time. Specifically, arrest records of one police department indicate more than 28,700 arrests for

the charge of drunkenness in 1978. Most defendants arrested on this charge serve relatively short sentences; thus, it is conceivable--in fact, likely--that, in some instances, defendants were arrested and either released after they sobered up or sentenced to a few days in jail before being released. Some of these defendants were probably then subject to rearrest after they returned to their community. The statistics available, therefore, do not represent the total number of individuals arrested but, rather, count the total number of arrests made. To avoid doublecounting, part of this guide was expected to present a methodology enabling prime sponsors to estimate the number of multiple arrests within the total arrest figure for a given time period. Specifically, it was thought that by using a random hand-sample of arrest records one could estimate the percentage of total arrests that resulted from one individual being arrested more than once.

However, this proposed methodology could not be used because of the confidentiality of criminal records. Without a court order, it is not possible to have access to the criminal records of arrestees.

It was also proposed to randomly sample arrest records from a specific year in order to estimate the number that contained multiple arrests. This method was also found unworkable. Identification or photo numbers used at the time of arrest are not necessarily in chronological order and, thus, do not facilitate or even permit correlation with a specific time for the arrest. An individual arrested and booked (fingerprinted and photographed) is assigned a number that is used for each subsequent arrest of that person, regardless of the length of time between arrests. Thus, a photo or identification number assigned to an individual in 1978 could also have been used for that same individual in 1972.

Therefore, field-testing showed that there is no presently workable methodology that enables a prime sponsor to estimate the percentage of doublecounting within the number of total arrests over a given period.

To ascertain the status of any other research into the problem of doublecounting, the U.S. Justice Department's Criminal Justice Reference Service, an international clearinghouse of information on law enforcement and criminal justice, was contacted. This agency reported that, although research into doublecounting is now underway, findings are at least 2 years away. For these

reasons, it was determined that, although doublecounting affects the overall accuracy of criminal justice data, the problem cannot be avoided at this time.

- Offender-Based Data

Many States have begun to implement offender-based computerized data systems. This method is one way of addressing the problem of doublecounting in a data system based on crime or arrest statistics. In these new systems, the individual offender is the base unit. The file is keyed to a person: It records an individual's step-by-step transactions with various agencies as a case is processed through and disposed of by the system. Prime sponsors should check with their States to see if an offender-based system is in operation.

- Defendants v Cases

The prime sponsor must relate what specifically is being counted to the information provided by a component of the criminal justice system. As already discussed, arrest statistics obtained from police count the total number of arrests over a given period of time; these data do not necessarily reflect the number of different persons arrested, even though that is the number sought by the prime sponsor. It is not uncommon for the same individual to be arrested several times within a counting period. Police measure the total number of arrests they make, not the number of different people they arrest.

A similar problem exists for prime sponsors gathering court data. Many--but not all--courts count the number of cases disposed of (as opposed to the number of persons who come before them). For example, one individual arrested and charged with writing a series of bad checks could be listed on the court calendar as a different case for each bad check charge. Thus, each different charge may be counted separately.

In reverse, several individuals can be arrested on a single charge, and their court appearances counted as one case. Typically, this situation occurs when the police arrest a group of persons on the same charge, for instance, during a gambling raid. The arrestees appear in court as defendants in a single case.

- Lack of Data

Few criminal justice systems keep records of the number of people charged, not convicted, and returned to the community. Unfortunately, this figure is precisely what prime sponsors need. The prime sponsor can compare total arrests to total number of defendants appearing in court by ascertaining from the courts the total number of defendants who are formally charged. To determine the number of defendants who are not convicted, or who are eliminated from the criminal justice process at this point data should be obtained, again from the courts, on the number of defendants who were convicted. The difference between the total number of defendants charged and the number convicted will be the number who were not convicted and who returned to the community.

- Fiscal Year and Calendar Year

Some agencies within the criminal justice system tabulate their data on a calendar year basis; others, often within the same criminal justice system, tabulate their data on the fiscal or budget year. A prime sponsor who must obtain data from subsections of the criminal justice system that use differing measurement periods must ascertain whether data are for fiscal or calendar years when trying to make direct comparisons between segments of the system.

- Employment and Occupation

Agencies within the criminal justice system often confuse the terms "employment" and "occupation." Some jurisdictions record an offender's usual occupation, regardless of whether an offender is actually employed at the time of arrest. The terms also tend to be interchangeable among subsections of the criminal justice system. At one of the field sites, the police department included a box for information relating to the arrestee's place of occupation at the time of arrest as part of the arrest report. In actuality, however, this box was, for the most part, left blank.

It therefore became necessary to attempt to obtain employment data at another step of the criminal justice process. The county corrections department for this area obtains employment information when defendants enter jail, either to await trial or to serve sentences. A review of

the jail records, however, revealed that rather than recording employment data as of time of arrest, jail personnel recorded the occupation of the offender, not employment status.

As noted in the discussion of arrest and court data, the prime sponsor must fully understand what is being measured. If employment information is unavailable at the point of arrest or at the jail, it is commonly available from probation departments, State correctional agencies, and parole agencies, but it may relate to general occupation, not to position in the work force.

- Local and National Data

Data compiled on a national level are based on, and dependent on, information gathered at the State, county, and city levels. Not all jurisdictions count or even define offenders in the same way. Obtaining an accurate count at the local level, therefore, depends on the prime sponsor's knowing the location of applicable data and being able to interpret that data accurately.

Extrapolating local data from national statistics is difficult; some local jurisdictions submit only a portion of their criminal justice data to national agencies for inclusion in national reports; other local agencies do not submit any data. When a difference exists between local data and statistics published at the State or national level, the prime sponsor should be prepared to obtain the necessary information from the primary source. Local police agencies may forward data only on part I arrests (see Glossary) to the State or national level, but their own records will reflect all the arrests made within their jurisdictions. Similarly, local courts may submit only partial data to the State or Federal Government, but their calendars will reflect the total number of court appearances within a given period.

If significant differences exist between data for a specific jurisdiction obtained at the State or Federal level and those gathered from the primary source, it is far better for the prime sponsor to use the primary source. Data obtained locally are more accurate and more reliable; thus, the prime sponsor should develop close contacts within the local system to assist in the data-gathering process. However, if local statistics are unavailable, the prime sponsor can obtain data from State agencies.

- Boundaries

Some prime sponsors' geographic boundaries vary significantly from those of criminal justice agencies such as police or judicial districts. For example, a prime sponsor may be a consortium of local governments covering a multicounty area. The court system for that State may be divided into several judicial districts, with some counties in one judicial district, and some in another. When tabulating statistics on court dispositions and probation cases, judicial districts may not provide data for each separate county. The prime sponsor will have to adjust the available court data to estimate the offender population flowing through the judicial system within its jurisdiction. The prime sponsor's State criminal justice agency can also provide statistics on the number of offenders flowing through the system at various stages.

A consortium prime sponsor, working with a number of counties and including numerous police jurisdictions, can obtain arrest statistics for the jurisdiction by abstracting data for participating counties from the uniform crime report (UCR) for that particular State. However, the UCR may not have arrest statistics for each balance-of-State prime sponsor jurisdiction. Therefore, estimates must be made based on (1) population data available from the prime sponsor's regular data source and (2) arrest data on a sample of communities in the area, as listed in the UCR for the State. A methodology for adjusting data to balance-of-State jurisdictions is described in chapter III of this guide.

- Juvenile Statistics

Criminal justice agencies tabulating juvenile offenses and juvenile offenders commonly include "status offenses," acts that are not criminal when committed by adults (e.g., truancy, runaways, ungovernability). Additionally, some juveniles are taken into custody for their own protection, because of an unfit home, for instance. The prime sponsor must thus exercise caution in compiling juvenile statistics.

The prime sponsor may find that courts are reluctant to reveal some juvenile statistics in the interest of protecting the confidentiality and privacy of the juvenile.

CHAPTER II

TYPES OF INFORMATION SOURCES

Criminal Justice System

In obtaining data relative to the size of offender populations and the unemployment rate within those populations, prime sponsors can expect both primary and secondary data to be available. Primary data relative to arrests are obtainable from police departments. Usually, this information is in the form of an annual report and indicates the total number of arrests both for adults and juveniles, total arrests by race and by sex, and arrests by type of criminal charge.

The most comprehensive secondary source of arrest data is Uniform Crime Report (UCR), published by the FBI. This document is based on police statistics contributed by 15,000 State and local law enforcement agencies across the Nation. The UCR provides periodic assessments of crime in the United States, as measured by offenses coming to the attention of the law enforcement community. Information from local agencies is forwarded to the national program, usually through State data collection agencies such as State departments of public safety.

Seven offenses, selected because of their seriousness, frequency of occurrence, and likelihood of being reported to police are known as "crime index" offenses: Murder and nonnegligent manslaughter, forcible rape, robbery, aggravated assault, burglary, larceny-theft, and motor vehicle theft. These are known as part I offenses.

Part II offenses exclude traffic violations but include all crimes except those defined as part I. Part II offenses are fraud, embezzlement, stolen property, forgery, narcotics-drug laws, driving under the influence, drunkenness, and the like. Prime sponsors should be aware of the distinctions between part I and part II crimes because, although part I offenses are more serious, the greatest number of arrests are for part II crimes.

The UCR was developed under the auspices of the International Association of Chiefs of Police in 1930. Since the beginning of the program, the FBI has acted as administrator, by congressional mandate, of the program. The UCR program recognizes that individual States also need crime information of interest just to their

particular State and, during the 1960's, funds became available for States to develop their own individual reporting systems.

The UCR also provides arrest data on juveniles. Individual law enforcement agencies are asked to provide data on juveniles (as defined by State statute) that are (1) handled within the department and released; (2) referred to juvenile court or probation department; (3) referred to a welfare agency; (4) referred to another police agency, and (5) referred to criminal or adult court.

Secondary data on arrests are often maintained by criminal justice coordinating commissions within a prime sponsor's jurisdiction, and at the State level, are published by the agency responsible for publishing the State's criminal justice annual report or uniform crime report. Data from these sources are sometimes less accurate than those from primary sources because some police reporting agencies, particularly in rural jurisdictions, only forward statistics on part I crimes to the State agency. Because the volume of arrests for part II crimes greatly outnumbers that for part I, secondary arrest data from State sources thus tend to be appreciably lower.

An additional secondary source for arrest statistics is the National Criminal Justice Information and Statistics Service of the Law Enforcement Assistance Administration, U.S. Department of Justice. Another secondary source for criminal justice statistics (i.e., arrest, prosecution, conviction, sentencing) is the U.S. Justice Department's National Criminal Justice Reference Service. NCJRS is an international clearinghouse of information on law enforcement and criminal justice, which draws on a great variety of sources for its data base.

Primary data relating to the size of the offender population processed at the point of prosecution and court appearances are routinely available from the court clerk's office of both municipal and superior courts within local jurisdictions or from the prosecutor or district attorney's office. As with arrest data, this information is often available in the form of an annual report published by the courts. Typically, these reports contain data on the number of offenders formally charged, the number against whom charges are dismissed, the number ultimately convicted, and the type of sentence imposed on those convicted.

The importance of primary data from these sources is that it provides the only valid measurement within the criminal justice process of the number of individuals who are arrested and then released from custody without being formally charged with any criminal offense. These data are important to prime sponsors because the information reflects the size of the offender population held in custody the shortest length of time before returning to the community. For instance, in 1978, a typical large urban area had an arrest total that exceeded 70,000; 40 percent of those arrested were released without having any formal charges placed against them.

As with secondary arrest data, secondary data relating to prosecutor and court dispositions are usually tabulated and disseminated at the State level. State criminal justice agencies compile and publish this type of data and also forward it to Federal agencies where it becomes an additional secondary source. The problem with this type of data is that, as is the case with arrest data, data compiled at the State and Federal levels tend to be less complete than information gathered locally. For instance, when publishing court disposition statistics, State agencies often eliminate the data relating to part II arrests. Not only do States eliminate this information from their own publications; they also tend to eliminate it from the data forwarded to Federal criminal justice agencies.

Data relating to jail, prison, and probation sentencing are usually included in the court documents mentioned above. These court records are the primary source for sentencing data. Additional primary sources exist for offenders placed on probation or given jail or prison sentences. Probation departments, which operate at either the county or State level, maintain annual data on the number of offenders assigned to their jurisdictions. Additionally, their records reflect the total number of offenders on probation during a given period.

County jails and State prison systems maintain similar primary data on the number of offenders assigned to their jurisdictions. This type of data is usually obtainable from county or State corrections departments. Data from county jails are likely to be limited because these facilities have such a high inmate turnover rate. An offender confined to a local jail often spends only hours in custody. For this reason, local jails will

probably be able to provide only average daily jail population figures. As with most other segments of the criminal justice system, data at this stage are commonly available through published annual reports.

Data relative to the number of offenders on parole are maintained by State parole agencies, which are a part of the State's correctional system. This information is usually published annually, and indicates not only the number of offenders placed on parole during a specific period, but also the number who were already on parole at the beginning of the period and remained in that status during that time. Additional information, relative to the number of offenders removed from parole status during the period of the report, is usually included also.

Data pertaining to employment status at time of arrest are more difficult to obtain and less reliable. In most jurisdictions, the first point within the criminal justice process where prime sponsors can routinely expect to find this information is after a defendant has been formally charged (arraigned) and before trial. Many agencies have a pretrial office, responsible for ascertaining the prearrest employment status of defendants scheduled for trial. Information in these offices is based on personal interviews with the defendants and becomes a matter of record, thus available to prime sponsors.

In some jurisdictions, similar information is available from an agency within the court system that prepares presentence reports for judges. These reports are intended to help the judge decide the type of sentence to impose on a defendant; thus, one routinely asked question addresses the defendant's present employment status. Information obtained by a prime sponsor at this point is from a primary source.

A commonly used secondary source, not only for data relative to prison populations, but also for information on employment status of prison inmates, is published by the U.S. Department of Justice's National Criminal Justice Information and Statistics Service, Profile of State Prison Inmates. However, this source does not break the information down by jurisdiction. Its utility derives from its presentation of national averages of sociodemographic findings, which result from a survey of State prison inmates.

Demographic and Labor Force Data

A number of the problems associated with prime sponsors obtaining data have been addressed if not solved in the last decade. The Department of Labor has enlisted the help of the Bureau of the Census in providing more adequate data, especially on the small-area (micro) basis. The major data sources for estimation and projection of population continue to be the following:

The Decennial Census of Population and Housing

Even though the survey is conducted at 10-year intervals, the statistical reports it generates have many advantages. Most reports include an appendix that discusses the accuracy or problems with the data.

The General Social and Economic Characteristics (PC(1)-C) is the most useful publication for the prime sponsor. The data are compiled for areas of 2,500 population and more, and sample statistics for social and economic items are included. Detailed Characteristics (PC(1)-D) includes statistics for larger areas--States, SMSA's, and large cities.

The County and City Data Book, Bureau of the Census, is also a compact presentation of local data.

Local Population Estimation and Projections

The Census Bureau has expanded its own estimates program. Population estimates and projections in many States have expanded under the Federal-State Cooperative Program. Responsibility for statewide population estimate activities has shifted into the hands of a single agency in each State.

P-25, Population Estimates and Projections, contains estimates of the components of population change and projections of the future population of the United States and individual States. P-26, Federal-State Cooperative Program for Population Estimates, contains population estimates for counties in selected States.

Any number of State and local agencies prepare population estimates and projections. These are listed in a Census Bureau publication: State and Local Agencies Preparing Population Estimates and Projections: Survey of 1975-76, Series P-25.

The Current Population Survey (CPS) provides a large amount of detailed information on the economic and social status of the population of the United States. It is the best source of current estimates of total unemployment and personal characteristics of the labor force. The survey provides monthly statistics, which are analyzed and published by the Bureau of Labor Statistics, Department of Labor. Much information is also tabulated monthly in Employment and Earnings.

Special tabulations, special studies, and unpublished information are available to the public through the Users' Service Staff, Data User Services Division, U.S. Bureau of the Census.

CHAPTER III

ESTIMATING THE NUMBER OF OFFENDERS AND THEIR INCIDENCE OF UNEMPLOYMENT IN A GIVEN YEAR IN A GIVEN PRIME SPONSOR JURISDICTION

This chapter outlines a method (1) for determining the number of offenders in contact with the criminal justice system in a given year for a given geographic area and (2) for determining or estimating the incidence of unemployment of the identified offenders.[1]

The method outlined enables a prime sponsor to obtain a clear picture of the numerical flow of offenders through the criminal justice system in the prime sponsor jurisdiction during a given year. Due to the variations in recordkeeping and data collection among criminal justice agencies, information on the employment status of offenders may be available at one step of the process but not at another, as explained later in this chapter.

As stated in chapter I, the criminal justice system is generally considered to include the police, the prosecution, the courts, and corrections. Offenders introduced into the system must pass through a series of formalized steps. Collectively, the police represent the largest component of the criminal justice system. In addition to the size of their work force, police officers function 24 hours a day, 365 days a year, dictating that they will introduce the greatest number of persons into the criminal justice system.

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[1]This methodology was field-tested at four sites with different types of prime sponsors. One site was a large northern industrial city; another was a rural southern county. A third was a midwestern consortium of eight counties, seven of which are largely rural, and surrounding a central urban area. The fourth was a balance-of-State program. Data were collected from each site for the year 1978. With some adjustments for local conditions, the model proved to be valid for collecting data on local offender populations in contact with the criminal justice system in a given year. At all four sites, it was evident that computerized systems now being implemented will simplify data gathering for prime sponsors in the near future.

Most offenders thus come into the criminal justice system by virtue of their arrests by police. A relatively few are arrested by representatives of other law enforcement agencies, such as the FBI, State or Federal narcotics officers, immigration officers, and so on. Regardless of the particular agency that makes the arrest, the offender will be booked and processed through a jail in the jurisdiction where the arrest took place.

Many offenders are released to the community at each step in the criminal justice process. The method described here enables the prime sponsor to obtain data on the number of offenders at each stage of the criminal justice process, and to measure the "fallout" at each stage of that process.

There are five key steps where numbers of offenders should be determined.

Step 1. Arrests of juveniles and adults

Step 2. Arraigned

Step 3. Released pending trial
Detained pending trial

Step 4. Convicted
Sentenced to probation
Sentenced to prison

Step 5. In prison and jail
On parole

STEP 1

- DETERMINING THE NUMBER OF ARRESTS FOR JUVENILES AND ADULTS

The first step in gathering baseline data for a given year is to determine the number of persons placed in offender status by being arrested in that year. Select a base year to serve as a benchmark, for instance, 1978 or 1979. Obtain statistics from the police as to the number of adult and juvenile offenders arrested and booked during that specific period.

It is important to observe whatever protocol is operating locally for obtaining information from the police. In some cases, a simple phone call to the local commanding officer for the research department may be all that is necessary to get the arrest data; in others, a more personal contact will have to be established first with the office of the chief of police or with the sheriff.

Usually, data on arrests are routinely collected locally, and most are tabulated. In some jurisdictions, the tabulation is done manually; in others, a sophisticated automated or computerized system is operative. The form and level at which automation of data is accomplished will vary from jurisdiction to jurisdiction. Most small communities have a manual system for recording and filing information.

Arrest statistics are generated by the police department and are the primary source for data. The figures are also available from a number of secondary sources. Among these are Government agencies such as departments of justice or public safety. These State agencies produce criminal statistics and undertake criminal analysis. They are usually the agencies that produce the State's uniform crime report. There are also local and State criminal justice coordinating councils, agencies, or planning boards, most of which have research and analysis departments.

The State's uniform crime report is the most comprehensive data base available as a secondary source of information; it is available from the agency responsible for submitting State arrest totals to the FBI for inclusion in the national Uniform Crime Report (UCR). Most State agencies publish such a document, often under the same title. State uniform crime reports include arrest statistics by type of crime for all jurisdictions within the State that have their own police departments. Usually, these State reports include such information as the race and sex of offenders and whether the offenders are adult or juveniles. Most State reports are structured so that the totals for numbers and types of arrests are broken down by arresting jurisdiction within the State; these are listed by county.

If the State does not publish this type of document, arrest figures can be obtained for a particular State from the FBI's Uniform Crime Report. A consortium prime

sponsor, consisting of a number of counties and including numerous police jurisdictions, can obtain arrest statistics for the jurisdiction by abstracting data for particular counties from this national report. In the case of a balance-of-State prime sponsor, the UCR may not have arrest statistics for each jurisdiction. Therefore, estimates must be made based on (1) population data already available from the prime sponsor's regular data source (usually a State planning department) and (2) arrest data on some balance-of-State communities, as listed in the uniform crime report for that State. The simplest and most accurate method for estimating the number of arrests in a balance-of-State program for any particular year is as follows:

1. Determine the total population for the largest and smallest balance-of-State cities identified in the UCR for that year.

2. Determine the total number of arrests for the same cities from the UCR for that year.

3. Divide the total arrests by the total population. This gives the arrest rate. The total arrests for the area can then be calculated by multiplying the arrest rate by the total population for all balance-of-State cities.

This method can be used to obtain both juvenile and adult figures. Example:

Population (20 balance-of-State [10 largest and 10 smallest] cities listed in UCR) = 250,200

Juvenile arrests (same cities) = 3,620

Divide total arrests (3,620) by total population (250,200)

Resulting answer--0.0145--the juvenile arrest rate per person in the balance-of-State.

According to the State department of health, the total population for the balance-of-State program described above is 1,654,530. Multiplying this figure by 0.0145 results in a total of 23,900, which represents the total juvenile arrests for this prime sponsor for the base year selected.

- DETERMINING THE UNEMPLOYMENT RATE

Obtaining unemployment data at this point presents several problems because of the difficulties inherent in estimating the incidence of unemployment among arrestees. Some police departments do not include employment information on the arrest form; others do have a section intended for recording information relative to the arrestee's place of employment and the name of the employer. Some of these forms include the type of employment and the employer's phone number. However, many arresting officers do not fill in this information on a regular basis. Or a prime sponsor may find that employment information is regularly gathered at the arrest stage by the local police department, but not tabulated, usually because this information is not of prime concern to them. Still other arresting officers record occupational data--such as insurance salesman, carpenter, bartender--with no indication as to whether or not the individual was actually employed at the time of arrest.

It may not be possible for the prime sponsor to determine the unemployment rate of the local arrestee population because such information is not collected or, if collected, is not tabulated. Where the police do collect such data, it may be possible to arrange for a hand-sample to be taken of the official records to determine the rate of unemployment of the arrestees. Because police files are especially sensitive in nature, it is unlikely that prime sponsor staff will be allowed to do the sampling, but much will depend on the relationship established with the police departments. If rapport between the police and the prime sponsor is good, police personnel may agree to take a sample. The method for taking a random sample is described in appendix A.

The best data available to the prime sponsor at this stage of the criminal justice process may be police estimates of the employment status of arrestees.

Step 2

- DETERMINING THE NUMBER OF OFFENDERS ARRAIGNED

Using the benchmark year as a reference point, obtain statistics on the number of arrestees formally charged with a criminal offense in that year. Contact the prosecutor's office (or office of the district attorney) or the court clerk's office for the municipal and superior courts. Be sure to ask for data for the particular calendar year.

This step measures the number of offenders brought to court for arraignment. All offenders who are formally charged with a criminal offense must be brought to court for arraignment. This process usually includes the setting of bail, officially informing the defendant of the charge or charges, and inquiring as to whether the arrestee is represented by an attorney. At this point, an offender may be released from custody as charges are dropped.

Of course, not all offenders who are arrested appear in court. In some instances, the prosecutor will decline to file formal charges, and the person will be released from custody before appearing in court; or the case may be disposed of by a citation or a fine.

The number of total arrests (step 1) minus the number of criminal filings (step 2) equals the number of offenders who are released (returned to the community) without court action on their charges.

The primary sources of data for the number of arrestees brought to court are the prosecutor's office or the office of the district attorney and the court clerk's office of the criminal court. If complete data are unavailable from a primary source, contact the State-level agency that collects criminal justice statistics. This agency may be a part of the court or corrections system for the State, or it may be attached to the governor's office.

Many State agencies are in the process of implementing computerized criminal justice data systems. Prime sponsors with multiple jurisdictions may wish to contact the State criminal justice agency rather than several different prosecutors or several different courts.

Information about the disposition of criminal charges involving juveniles is best obtained from the State criminal justice agency, or a local criminal justice agency, if one exists. Court disposition data provide information for juveniles and adults on number of individuals processed by race, age, and sex; by type of offense; by type of disposition; and by county within the State.

- DETERMINING THE UNEMPLOYMENT RATE

Contact the pretrial services division of the criminal court to obtain employment status information on offenders who have been arraigned.

In many areas of the country, pretrial release programs have largely replaced private bail-bonding systems. In these programs, which may be operated by the court itself or by another governmental agency, offenders are interviewed to determine their suitability for release on their own recognizance, for release with some type of supervision, or for detention--whether they should remain in jail pending the outcome of their trials.

At this stage, employment status of the offender is important in evaluating whether or not to recommend pretrial release, so this information is collected by the agency during the pretrial interview. Depending on individual jurisdiction, the employment data may or may not be computerized. In some areas, the pretrial release interview forms may be one of the bases of a statewide, computerized data system of criminal justice statistics. If so, printouts will be readily available on the employment status of this group of offenders: Employed full-time, employed part-time, unemployed or laid off, and not in the labor force. It will also be possible to get a breakdown of this population by age, sex, race, and arresting jurisdiction.

If pretrial interview forms are not tabulated in a given jurisdiction, the prime sponsor should arrange with the court to randomly hand-sample the records, using

the methods outlined in appendix A. The local or State criminal justice agency may prove very valuable at this point, too, by providing information from any previous studies on the arraignment population within the jurisdiction. The results of any recent study can be used to validate the results of any sampling of this data base the prime sponsor may undertake. If the study is recent enough and the methodology sound, the prime sponsor could use those results rather than unemployment figures obtained by sampling or estimating.

At this stage in the model, the prime sponsor has obtained two very important pieces of information in terms of numbers: (1) The number of arrestees and (2) The number of arrestees who were formally charged. The difference between these two numbers is the number of persons who have been released from the criminal justice system and returned to the community.

As stated, it is highly unlikely that the prime sponsor will be able to do more than estimate the unemployment rate at the arrestee stage. For this reason, gaining access to court and arraignment data is essential. It is at the arraignment stage that the criminal justice system is vitally interested in the offender's employment status. The judge has the power to decide whether or not to release an offender pending trial. To make this decision, the judge needs facts about the offender's history, circumstances, and employment status.

Step 3

- DETERMINING THE NUMBER OF OFFENDERS RELEASED PENDING TRIAL

  Contact the pretrial services agency division of the court system for data on the number of persons recommended to the court for release and the number of persons actually released by the court.

Information on the number of offenders released is readily available from the pretrial services division of the court system. It would be helpful, at this point in the model, for the prime sponsor to be thoroughly familiar with and knowledgeable of the jurisdiction's court system. This is most critical if the prime sponsor works

with overlapping civil jurisdictions. Information must be obtained from municipal courts for offenders at the local level, from county courts at the county levels, and from superior courts at the State level. Courts keep very good records, however, and much of the data are published by the court system in annual reports.

- DETERMINING THE NUMBER OF OFFENDERS DETAINED PENDING TRIAL

  Contact your local police department or the local sheriff's office for data on the number of persons in pretrial custody (detention).

Pretrial custody is a critical stage in the criminal justice process for offenders. Those accused of a serious crime can be detained until the final disposition of their cases, which may take days or weeks or sometimes months, depending on such factors as the prosecutor's caseload, the gravity and complexity of the case, and the condition of the calendar in the court where the case will be heard.

This is also the stage where data are hardest to obtain. Recordkeeping in city and county jails is minimal. Hard data are difficult to maintain because of the high turnover of the jail population. An offender may be confined only a matter of hours, or for as much as 6 months. Nonetheless, most local jails can provide average daily jail population figures that can be multiplied by 365 to obtain an estimated average yearly total.

The more sophisticated systems can usually provide data on the average time a person stays in jail pending trial. This figure is indicative of the average time it takes to move from arrest to adjudication.

For the detained group, the very fact of their detention means that they may have employment problems, regardless of their employment status at the time of arrest. Most people are likely to lose their jobs if they remain in custody for 3 to 6 months. Those persons who are unskilled or who have marginal jobs are likely to lose them if they are detained in jail for even 1 or 2 days.

Step 4

- DETERMINING THE NUMBER OF OFFENDERS CONVICTED

Contact the court clerk's office for sentencing data. These data are usually broken down by the number of people sentenced to probation, those receiving a suspended sentence or fined, and those sentenced to prison or halfway houses. Additional information can be obtained from the court probation department and from the State department of corrections.

This step measures the number of offenders who have been convicted. In addition to obtaining data on the number receiving sentences in the base year, the data will give the prime sponsor a measure of system "fall-out" at this point; of the number of offenders brought to trial, some will have had their cases dismissed, some will have been acquitted, and some will have received suspended sentences. The probation department keeps its own records and, thus, can be very helpful by providing data on the number of offenders receiving probation. Data can be cross-checked with the corrections department to see how many offenders it has received during the period from each jurisdiction. States with computerized data systems have printouts and published reports readily available. Data on offenders sentenced to county jails must be obtained from the county sheriff's office.

- DETERMINING THE UNEMPLOYMENT RATE

Contact the court probation department for information on the employment status of offenders on probation. Contact the State department of corrections for information on the employment status of convicted offenders at the time of their arrests.

By definition, offenders serving time in correctional institutions are not employed. However, it is a common practice for a correctional institution to conduct an intake interview with the offender that includes

information on occupational background. A standard question on the intake form is the employment status of the offender at the time of arrest.

Step 5

- DETERMINING THE NUMBER OF OFFENDERS IN PRISON AND JAIL

Contact city, county and State correctional agencies for data on the prison and jail populations.

Data for prison and jail populations can be obtained both from county and State correctional agencies. In most jurisdictions, the statistics relating to defendants confined in State institutions are contained in the correctional system's annual report, which identifies the prison population by jurisdiction from which defendants were sentenced. This same source provides statistics on the number of inmates annually released from custody, either by being placed on parole or by termination of their sentences.

Defendants awaiting trial or sentencing and defendants who have been sentenced for misdemeanor offenses are housed in county jails. Thus, these facilities have a higher inmate turnover rate during a given time period than do State prisons, often resulting in less comprehensive data regarding employment status than those available from State correctional agencies. This problem can be overcome, however, if the prime sponsor obtains permission from the institution's authorities to randomly sample the inmate records to determine the percentage of the population that was unemployed at time of arrest.

- DETERMINING THE NUMBER OF OFFENDERS ON PAROLE

Contact the parole department in the State correctional system for data on the number of offenders placed on parole.

This step measures the number of offenders placed on parole. These data should be available either from

published reports or from internal parole department records within the corrections system.

In theory, parolees are expected to have a job to go to when they are released. In actual practice, many offenders are released from prison without outside employment prospects. Employment status data are available from the parole department.

Prison inmates who are completing their sentences and are to be released from custody without parole supervision are not required to furnish the corrections department with information as to their expected occupations or addresses. It is not unusual for them to simply "disappear" by choice, with no record of whether they are returning to the community from which they were sentenced.

Juveniles

Much the same methodology is applicable to determining the size of the juvenile offender population. Juvenile arrest statistics are compiled by police and published in the same document as are adult arrest statistics. It is less likely, however, that the prime sponsor can successfully obtain employment information relative to juvenile offenders. There appears to be no comprehensive attempt by segments of the criminal justice system to compile this type of data. Rather, the records are more likely to reflect whether or not the juvenile offender was in school.

The courts and the juvenile correctional system do maintain data on the disposition of juvenile offenders. This information is usually compiled in annual reports, much the same as is done with adult offenders. Care must be taken, however, to separate juvenile cases related to criminal offenses from other cases that may be handled by the same court--such as children in need, adoptions, and the like. In analyzing the data, prime sponsors should also look for data categorized as delinquency offenses.

By using police arrest statistics of juveniles, comparing these figures to the number of juveniles processed through the courts, and then obtaining the statistics on the number of juveniles sentenced to some type of confinement, the prime sponsor can determine, at each step,

the number of juveniles who will be returning to their communities.

As with adults, the juvenile courts provide annual data on the number of offenders placed on probation (returned to the community). The juvenile correctional system provides similar data regarding the number of juveniles released from custody annually after completing their sentences.

CHAPTER IV

ESTIMATING THE INCIDENCE OF UNEMPLOYMENT AMONG PAST AND PRESENT OFFENDERS

Thus far, this guide has explained the process of determining the number of current offenders in contact with the criminal justice system in a local jurisdiction and of calculating the incidence of unemployment among them. It has also described the types of data available to prime sponsors to help them identify that population. This section uses a real prime sponsor as a basis for a case study to demonstrate, step-by-step, how you can calculate the size of the total offender population (current and past), and how you can determine the incidence of unemployment. The method is called "proration" and is frequently employed by the Bureau of the Census.

Three separate problems will be solved.

A. Determine the total offender population within the prime sponsor jurisdiction by age, sex, and crime, for the base year (1980).

B. Determine the incidence of unemployment within the prime sponsor's offender population for the base year 1980.

C. Determine a future (1982) level of offenders, by selected crime, age, sex, and employment status.

The basis for this case study is a real prime sponsor, identified here only as "the consortium." (Specific identifying data are omitted where possible.) The consortium covers eight counties in its State, and represents slightly more than 18 percent of the total population in the State. It covers urban and rural areas, and includes the suburbs of a major metropolitan area.

A. Determine the total offender population within the prime sponsor jurisdiction by age, sex, and crime for the base year (1980)

1. Resources

At this time, you, a consortium prime sponsor, have several resources available.

- First, you can obtain a 1978 UCR compilation of arrest figures (offenders), by age, sex, race, and crime. County figures are given in raw form, but do show the rate of arrests per 100,000.

  The UCR data can be obtained for each State from the State criminal justice agency such as the State public safety department, or from UCR headquarters in Washington. The latest figures available for our case study are for 1978.

- Second, because you need to bring the UCR figures up to date, you will need statewide population projections--available from the Bureau of the Census, or from a State agency such as the planning department or the health department. These documents give 5-year population projections, based on present and past trends, which can be used to determine the consortium's percentage of the total State population.

  (If you are not sure what agency in your area prepares population estimates and projections, get a copy of State and Local Agencies Preparing Population Estimates and Projections, Survey of 1975-76, Series P-25, No. 723 from the Bureau of the Census.)

- Third, you will need documentation of crimes committed before 1978. Obtain it from the State criminal justice agency or State public safety department.

- Fourth, obtain a Bureau of the Census document on in- and outmigration. The 1980 document is Current Population Reports, Series P-25, No. 640.

- Fifth, consult the State criminal justice agency to obtain court data on (1) State totals (by county) of arraignees, including the percentage of offenders arraigned, and (2) State totals of convictions resulting in prison sentences.

- Sixth, you need a sample worksheet for calculations; one is included here as figure 1.

2. Methods

Your task as a consortium prime sponsor is to convert your 1978 UCR State figures into up-to-date 1980 arrest

FIGURE 1.--Sample Worksheet

Age

Total all ages
  Male
  Female

19 and under
  Male
  Female

20-24
  Male
  Female

25-29
  Male
  Female

30-34
  Male
  Female

35-39
  Male
  Female

40-44
  Male
  Female

45-49
  Male
  Female

50-54
  Male
  Female

55-59
  Male
  Female

60 and over
  Male
  Female

estimates for the consortium area. These are considered to count your present offenders. Next, calculate the number of past offenders living in the area, and add these to your present offender figures.

To do this, use the following steps.

Collapse (Add Up) UCR Age Classes in Part I and Part Part II Crimes. The UCR does not give total, statewide arrest figures. Rather, it presents totals for two classes of crime, part I and part II. (Part I crimes are generally violent; part II offenses are primarily of lesser severity.) Add them together.

To start, type a sample worksheet (figure 1), make 10 photocopies to use when copying the UCR figures. You can also make four or five copies of the sheets lengthwise, so that more columns (such as classes of crime) can be included without adding an excessive number of continuation sheets. Leave the "table" heading blank so that you can number each figure differently.

The UCR gives several more age classes than are listed here--under 18, 18 and over, individual year totals for ages 18-24, as well as 60-64, and 65 and over. These classes are not all necessary for your purposes, but the basic UCR format should be retained so that your data can be easily verified. For this reason, keep the 5-year groupings as well as the order and names of crimes. This way, your data will always correspond to the standard formats now coming into widespread use.

Collapse the categories 19 and under, 20-24, and 60 and over by adding up the appropriate figures for the total, male, and female columns. Doublecheck to make sure that the male and female entries together equal the total. Do these additions in pencil right on the UCR document, then transfer the totals to your sheet (see table 1, 1978, part I). Be sure also to collapse the totals for each of the crime headings, but do not copy them onto this sheet.

Go to part II in the document and collapse and transfer the totals under the column labeled part II on your sheet. Next, add up the part I and part II totals for each class and enter them in the column labeled 1978 Total.

Calculate the 1980 Factor. In our sample State, the statewide population projection for 1980 is as follows.

TABLE 1.--Total 1980 Arrestees (Offenders)
Projection for State

Age	1978 Part I	+ 1978 Part II	= 1978 Total	x 0.0043	= 1980 Total
Total all ages	18,360	58,501	76,861	331	77,192
Male	14,513	51,362	66,875	283	66,158
Female	3,847	7,139	10,985	47	11,032
19 and under	2,791	8,550	11,341	49	11,390
Male	2,268	7,665	9,933	43	9,976
Female	523	895	1,418	6	1,424
20-24	2,940	14,049	16,989	73	17,062
Male	2,317	12,567	14,884	64	14,948
Female	623	2,462	2,085	9	2,094
25-29	1,376	7,505	8,881	38	8,919
Male	1,042	6,702	7,744	33	7,777
Female	334	803	1,137	5	1,142
30-34	673	4,567	5,240	23	5,263
Male	511	4,061	4,572	20	4,592
Female	162	506	668	3	671
35-39	395	3,086	3,481	15	3,496
Male	288	2,720	3,008	13	3,021
Female	107	366	473	2	475
40-44	291	2,525	2,816	12	2,828
Male	202	2,209	2,411	11	2,422
Female	89	316	405	1	406
45-49	233	2,011	2,244	10	2,254
Male	171	1,782	1,953	8	1,961
Female	62	229	291	2	293
50-54	182	1,658	1,840	8	1,848
Male	130	1,520	1,650	7	1,657
Female	52	138	190	1	191
55-59	123	1,062	1,185	5	1,190
Male	77	978	1,055	4	1,059
Female	46	84	130	1	131
60 and over	238	1,301	1,539	7	1,546
Male	150	1,203	1,353	6	1,359
Female	88	98	186	1	187

1975	2,860,000
1980	2,891,000

Divide 2,860,000 by 2,891,000 to obtain a 5-year population growth rate of 0.0108. This figure can be divided by 5 to arrive at a 1-year growth rate. To make a 2-year projection, multiply this answer by 2. This is done as follows.

Growth factor = Growth per year x (1979 + 1980)

or

Growth factor = $5/\overline{.0108}$ = 0.00215 x 2

= 0.00215 x 2

= 0.0043

Now the individual 1978 total entries can be multiplied by 0.0043 to obtain the 1980 State totals. Put these figures in the fourth column of your worksheet. Add columns 3 and 4 to get column 5--the total state-wide offenders for 1980. Copy column 5 onto a clean worksheet in column 1, as shown in table 2.

Calculate the Area Factor. Assume that the consortium's total share of statewide crime is proportionate to the consortium's size. This may not be true if major growth is taking place, or if the prime sponsor's jurisdiction is clearly not representative of the State as a whole. In that case, the only way to proportionately apply State totals to area totals may be to calculate the local percentage of total crime--using the UCR county totals--and then to calculate the increase based on population growth. Here, though, is the proportion calculated for the case study prime sponsor.

TABLE 2.--Total 1980 Arrestees (Offenders) Projection for Consortium Area

Age	1980 State Total	x 0.1851 =	1980 Area Total
Total all ages	77,192		14,288
Male	66,158		12,246
Female	11,032		2,042
19 and under	11,390		2,111
Male	9,976		1,847
Female	1,424		264
20-24	17,062		3,155
Male	14,948		2,767
Female	2,094		388
25-29	8,919		1,651
Male	7,777		1,440
Female	1,142		211
30-34	5,263		947
Male	4,952		850
Female	671		124
35-39	3,496		647
Male	3,021		559
Female	475		88
40-44	2,828		523
Male	2,422		448
Female	406		75
45-49	2,254		417
Male	1,961		363
Female	293		54
50-54	1,848		342
Male	1,657		307
Female	191		35
55-59	1,190		220
Male	1,059		196
Female	131		24
60 and over	1,546		286
Male	1,359		252
Female	187		34

Area Percentage of total population	=	1975 area population ÷ 1975 State population
		or
Area Percentage of total population	=	529,283 ÷ 2,860,000
	=	0.1851

Now multiply each of the age and sex totals in table 2 by 0.1851 to obtain 1980 area totals.

Calculate Totals for Crimes. Now you want to know the types of crimes with which your offender population was charged. You may need totals for all crimes or just totals for the most prevalent ones. To find the total for all crimes, multiply each crime total (by age) by the State growth factor (0.0043), then by the area factor (0.1851), just as you did to get general totals. This is a massive operation; a 33-x-27 table (crimes x age groups) requires 891 separate calculations. It should be performed by computer.

The most convenient method to use all data, however, is to simply examine the 1978 figures and select those crime categories most prevalent in your jurisdiction. In the consortium's jurisdiction, the UCR shows nine most common crimes.

Part I	Part II
Burglary	Other assault
Larceny	Vandalism
	Narcotics
	Driving under the influence
	Liquor
	Drunkenness

Go back to the UCR and multiply the selected crimes by 0.0043 (the State growth factor). Transfer the resulting 1980 totals to one of your worksheets, leaving a blank column after each entry so that the area portion (0.1851) can be entered. (Although eight columns--four crimes--

will fit on a horizontal sheet, leave yourself workspace and put six columns (three crimes per sheet), as shown in table 3.) When multiplying the figures by 0.1851 or 0.0043, take the following shortcut: Calculate the totals for the age group and males, then subtract to obtain the figure for females. (In most cases, you can do this without a calculator.) Check your figures to make sure that male and female entries add up to the total.

You now have a count for the number of offenders in the consortium's jurisdiction by age, by sex, and by most common crime.

Calculate the Number of Past Offenders. In future years, you will be able to calculate rates for all past offenders with the method you just used to calculate the rates for present offenders. Unfortunately, that cannot be done now, because data are not available by sex, age, and standardized crime reports. However, keep in mind that, with each passing year, your statistics will become more accurate, because the percentage of past offenders divided according to the UCR format will increase. In the consortium's State, only the period 1978-80 can be identified in that way. (Each State is different, however, so be sure to verify with your State criminal justice agency when UCR reporting began.)

The State criminal justice agency does make available the raw numbers of crimes (not arrests) reported in past years, however, and these can be used on a limited scale to derive a total, by year, of crimes committed within the prime sponsor's jurisdiction. This figure, in turn, will yield an estimate of total past arrests for the period preceding the institution of standardized crime reports.

In the consortium's case, the data come from the statistical analysis center of the State office of planning and programming in a published report called Statistical Overview of Crime. This document lists the total number of crimes reported each year since 1960 ("crime index"); thus no figures are available prior to 1960.

If your subsequent research identifies a source of scientific estimates of the offender population before 1960, you may include those figures in your area total. However, you must scrutinize them thoroughly to insure that they are based on reasonable assumptions or valid sampling techniques.

TABLE 3.--Number of Offenders, by Age, Sex, and Most Common Crime

Age	Burglary		Larceny		Other assault	
	Total	Area	Total	Area	Total	Area
Total all ages	3,512	650	11,731	2,171	3,757	695
Male	3,337	618	8,296	1,526	2,780	515
Female	75	32	2,425	635	377	180
19 and under	635	118	1,739	322	381	71
Male	608	113	1,266	234	343	63
Female	27	5	565	158	70	12
20-24	494	92	2,123	393	813	150
Male	472	87	1,269	235	743	138
Female	23	5	565	158	70	12
25-29	169	31	876	162	506	94
Male	160	30	572	106	457	85
Female	9	1	304	56	49	9
30-34	62	11	454	84	283	52
Male	60	11	302	56	251	46
Female	2	0	152	28	32	6
35-39	35	7	268	50	192	36
Male	29	6	170	31	175	32
Female	6	1	98	19	17	4
40-44	15	3	221	41	134	25
Male	15	3	139	26	116	21
Female	0	0	82	15	18	4
45-49	13	3	179	33	79	15
Male	12	3	124	23	66	12
Female	1	0	55	10	13	3
50-54	6	1	153	28	51	9
Male	6	1	104	19	48	8
Female	0	0	48	9	3	1
55-59	5	1	104	19	31	6
Male	3	1	61	11	28	5
Female	2	0	43	8	3	1
60 and over	2	0	222	41	31	6
Male	2	0	134	25	30	6
Female	0	0	81	16	1	0

TABLE 3.--Continued

Age	Vandalism		Narcotics		Driving Under the Influence	
	Total	Area	Total	Area	Total	Area
Total all ages	2,576	477	4,454	824	11,446	2,119
Male	2,384	441	3,864	715	10,576	1,958
Female	192	36	590	109	870	161
19 and under	362	67	1,052	195	1,122	208
Male	348	64	946	175	1,024	190
Female	14	3	106	20	98	18
20-24	314	58	1,269	235	2,926	542
Male	288	53	1,156	214	2,695	499
Female	26	5	113	21	231	143
25-29	142	26	451	83	1,945	360
Male	114	21	403	75	1,828	338
Female	28	5	47	8	117	22
30-34	72	13	117	22	1,279	237
Male	71	13	101	20	1,194	221
Female	1	0	16	2	85	16
35-39	26	5	40	7	962	178
Male	26	5	30	6	889	165
Female	0	0	10	1	73	13
40-44	16	3	19	4	873	162
Male	13	2	14	3	794	147
Female	3	1	5	1	79	15
45-49	18	3	9	2	692	128
Male	13	2	6	1	641	119
Female	5	1	3	1	51	9
50-54	8	1	2	0	555	103
Male	7	1	2	0	513	95
Female	1	0	0	0	42	8
55-59	5	1	1	0	378	70
Male	5	1	1	0	359	66
Female	0	0	0	0	19	4
60 and over	5	1	4	1	437	81
Male	5	1	4	1	411	76
Female	0	0	0	0	26	5

TABLE 3.--Continued

Age	Liquor		Drunkenness	
	Total	Area	Total	Area
Total all ages	4,849	898	12,235	2,265
Male	3,901	722	11,446	2,119
Female	948	176	889	146
19 and under	763	141	1,533	284
Male	895	129	1,423	263
Female	67	12	110	21
20-24	646	120	2,842	526
Male	594	110	2,669	494
Female	52	10	173	28
25-29	167	31	1,757	325
Male	156	29	1,654	306
Female	11	2	103	19
30-34	76	14	1,223	226
Male	71	13	1,154	213
Female	5	1	69	13
35-39	42	8	923	171
Male	35	7	851	158
Female	7	1	72	13
40-44	34	6	808	150
Male	30	5	734	136
Female	4	1	74	14
45-49	30	6	699	129
Male	26	5	647	120
Female	4	1	52	9
50-54	22	4	722	134
Male	17	3	693	128
Female	5	1	29	6
55-59	7	1	447	83
Male	7	1	408	76
Female	0	0	39	7
60 and over	15	3	568	105
Male	15	3	541	100
Female	0	0	27	5

To calculate past offenders, you must take four steps.

- List in columns 1 and 2 the total crimes reported, by year. See table 4.

- You need to know what percentage of reported crimes actually results in arrests. The crime index shows you that, in this consortium in 1978, there were 114,609 crimes, as compared to 76,861 arrests (see table 1). As shown below, 0.67 percent of the reported crimes result in arrests.

Percent of crimes resulting in arrests = 1978 arrests ÷ 1978 crimes

or

Percent of crimes resulting in arrests = 76,861 ÷ 114,609

= 0.67

You can multiply the crime index totals in column 2 by 0.67 to arrive at the State's arrests for each of those years (column 3).

- The State totals in column 3 must be converted to area totals. Multiply the State totals by the area factor of 0.1851 (table 2) to estimate the number of area offenders.

- To obtain the total figure for past offenders, add in the 1978 and 1979 totals. Copy the 1978 totals from table 1 as your second column in table 5. Multiply each of the totals by the area factor of 0.1851 to get the 1978 area figures for column 3.

  To get the 1979 figures, multiply the area figures (column 3) by the 1-year growth factor of 0.00215 (see discussion of table 1).

TABLE 4.--Offenders, 1960-1977

Year	Crime Index x 0.67	State Offenders x 0.1851	Area Offenders
1960	25,725	17,235	3,190
1961	25,321	16,965	3,140
1962	27,230	18,244	3,337
1963	29,198	19,562	3,620
1964	32,588	21,833	4,041
1965	36,181	24,241	4,487
1966	41,699	27,938	5,171
1967	50,997	34,167	6,324
1968	58,959	39,502	7,312
1969	62,624	41,958	7,766
1970	70,793	47,431	8,779
1971	74,925	50,199	9,292
1972	72,990	48,903	9,052
1973	82,330	55,094	10,197
1974	97,460	65,298	12,086
1975	112,494	75,370	13,950
1976	116,504	78,057	14,498
1977	111,275	74,554	13,799
Total			140,031

TABLE 5.--Consortium Offenders, 1978-79

Age	1978 Total	1978 Area Figures x 0.1851 =	1979 Area Figures x 0.00215 =
Total all ages	76,861	14,227	14,258
Male	66,875	12,377	12,404
Female	10,985	2,033	2,037
19 and under	11,341	2,099	2,104
Male	9,933	1,839	1,843
Female	1,418	260	261
20-24	16,989	3,144	3,151
Male	14,884	2,755	2,761
Female	2,085	389	390
25-29	8,881	1,644	1,648
Male	7,744	1,433	1,437
Female	1,137	211	211
30-34	5,240	970	972
Male	4,572	846	848
Female	668	124	124
35-39	3,481	644	645
Male	3,008	557	558
Female	473	87	87
40-44	2,816	521	521
Male	2,411	446	446
Female	405	75	75
45-49	2,244	415	416
Male	1,953	362	363
Female	291	53	53
50-54	1,840	341	341
Male	1,650	305	306
Female	190	36	36
55-59	1,185	219	220
Male	1,055	195	196
Female	130	24	24
60 and over	1,539	285	286
Male	1,353	250	251
Female	186	35	35

The number of offenders is calculated below and should be recorded in table 6.

Past Offenders (1960-77)	+	Past Offenders (1978-79)	+	Present Offenders (1980)	=	Total Offenders
			or			
140,031	+	28,485	+	14,288	=	182,804

Keep in mind that the figure you have obtained is subject to five important adjustments, which you should try to make for your jurisdiction.

1. Deaths among offenders
2. In- and outmigration of offenders
3. Multiple arrests of one offender
4. Juvenile offenders whose records are expurgated at age 18
5. Incarcerated offenders

Some ways for making these adjustments follow:

Deaths

- Obtain from the State vital statistics office (or, as in this case study, from the State planning office) a recent yearly total of deaths within the State. Using the same area factor (0.1851), calculate an area death total. Obtain a figure for your area's population and divide the number of offenders by that population to obtain a percentage. For the consortium, the 1980 area population projection was 535,000, and the number of offenders was 182,804. Some 34 percent of the population were offenders.

- A further refinement can be made to this estimate by obtaining the State mortality rate for persons under 15. Multiply this rate by the area factor. Subtract the answer from your area death total.

TABLE 6.--Total Offenders, 1960 to Present

Past Offenders (1960-77)	+	Past Offenders (1978-79)	+	Present Offenders (1980)	=	Total Offenders
----		----		----	=	Total

In- and Outmigration of Offenders.

- If your State population growth rate is low and your area typical of the whole State, you may wish to make no adjustment.

- You can obtain from the Bureau of the Census an estimate of net in- and outmigration in your State. The bureau calculates this figure on the basis of expected versus actual school enrollments or from Federal income tax returns. (See Current Population Reports, Series P-25, No. 640). When you have a statewide migration figure, reduce it to the area total, in this case, by multiplying by 0.1851. Multiply the resulting figure by the percentage obtained as above. This number can be added (if you gained population) or subtracted (if you lost population) from the total offenders.

Multiple Arrests. At present, there is no meaningful way to calculate a factor for multiple arrests. Several investigations have recently been undertaken and their studies promise to develop such a method within 2 years. Until then, however, there is no way to eliminate this error without supplanting it with another error of an indefinable nature and size. When consulting your State criminal justice agency, inquire as to the existence of a way to account for multiple arrests.

Expurgated Jurvenile Offenders. The record of an offender reaching age 18 is cleared. Obtain the most recent year's number of 17-year-old offenders (from the UCR), and subtract that from the total offender population.

Incarcerated Offenders. Your State criminal justice agency, or the State corrections department can give you a raw percentage of the number of convictions resulting in prison sentences. Subtract this figure from your total.

Multiply this percentage by your 1980 area offender population (in this case, 14,288) to find out how many were incarcerated for that year. Subtract this figure from your total offender population.

3. Summary

You now have an accurate estimate of the total offenders present in the consortium's jurisdiction in 1980. For the period 1978-80, they are identified by sex, age, and crime, as shown in table 3.

B. Determine unemployment among the prime sponsor's total offender population

Unemployment among offenders cannot be estimated accurately except by a direct survey of a statistically valid sample of offenders. A reasonable estimate can be made. To determine unemployment among total offenders, develop an unemployment rate for the current year's offenders (1980) and use that as an estimator for all offenders.

The method for determining current unemployment involves the use of two or three unemployment figures.

1. The latest unemployment statistics for the general population

2. The latest unemployment statistics on arraigned arrestees

3. The latest unemployment statistics on all arrestees, if available.

Figure 2 near the end of this section is a worksheet that shows how to determine unemployment of all offenders in the prime sponsor's jurisdiction. You may wish to review this worksheet before reading on. Use the blank worksheet (figure 3) to record your data.

1. Resources

- The first resource to be used is general unemployment data. The current unemployment data should be as up-to-date as possible. Consult the Bureau of Labor Statistics in your region, your State department of labor, your State employment security agency, or a local manpower planning source to obtain the following:

-- The last full year's unemployment rate for the State as a whole or for the local prime sponsor's jurisdiction

-- The most recent monthly average for the State as a whole or for the local jurisdiction

-- The latest monthly average for an SMSA within your jurisdiction.

In addition, you should consult your State department of labor to receive the latest updates of disaggregated data for the State.

- Your second important resource is the total number of offenders brought to court for arraignment. Arraignees are offenders who have been both arrested and indicted. Depending on the kind of prime sponsor, this information can be obtained from the prosecutor's office (or the office of the district attorney), the court clerk's office for the municipal and superior courts, or from the State criminal justice agency. In the consortium, the information was available from the State criminal justice agency.

  You also need the unemployment rate for arraignees. At the arraignment stage, employment status of the offender is important in evaluating whether or not to recommend pretrial release, so this information is usually collected during pretrial interviews. Depending on the individual jurisdiction, employment data may or may not be computerized. The pretrial services division of the criminal court is the best source for this information or, in the case of multiple jurisdictions, the State criminal justice agency is the best source.

- Third, you should attempt to estimate unemployment among arrestees. There is only one way to get these data--by sampling local police records in each of the counties or independent municipalities within your area. However, there are several roadblocks to this approach:

  -- Many police departments will not allow you to use their files;

  -- Many police departments do not gather employment data; and

  -- Some police departments gather only "occupational" data, which should never be construed as employment data.

  In the consortium's area, sampling required visits to each municipality in the eight-county area.

  Where it is not possible to sample accurately, for any of the above reasons, you must use the only other valid figure--the general unemployment rate for your jurisdiction or for your State. Although this figure is clearly too low, it does allow you to estimate the bare minimum, and to do so accurately.

2. Method

a. Locate the general unemployment rate in your area. In the consortium, the latest yearly State figure is 4.1 percent, for the year 1979. A July 1980 figure was available for the SMSA of which one of the counties is part, but could not be obtained quickly enough for use here. Had this been available, the formula for converting the SMSA and State figures into one statistic would have been as follows.

$$\text{General Unemployment Rate} = \left[\frac{\text{SMSA Portion of Population}}{\text{SMSA Rate}} + \frac{\text{Non-SMSA Portion of Population}}{\text{State Rate}}\right] \div \text{Total Population}$$

Because this rate could not be calculated for the consortium, the State rate of 4.1 percent was used.

b. Locate arraignee unemployment rate. The consortium's statistical analysis center of the State office for planning and programming had a pretrial study

of arraignees--a sample of 2500--which showed the arraignee unemployment rate as 25 percent. This rate is low compared to that in some jurisdictions, but is high when compared to the State's general unemployment rate of 4.1 percent.

c. Locate arrestee arraignment rate. The statistical analysis center of the State office for planning and programming had preprepared figures showing that 20 percent of all arrestees were arraigned in that State.

d. Locate arrestee unemployment rate. It was not possible to gain access to many police records in all eight counties of the consortium area to determine the arrestee unemployment rate. In addition, many had no employment data. Therefore, the general unemployment rate of 4.1 percent had to be used.

e. Use the formula to determine the current offenders unemployment. Now you can use the formula to determine (1) the number of unemployed offenders, and (2) the unemployment rate. To reiterate, the basic formula is as follows.

Unemployed Current (1980) Offenders = (Arraignees x Arraignee Rate + Nonarraignees x General Rate) ÷ Total Arrestees

or

$$= \left[(14{,}288 \times 0.20) + (14{,}288 - (14{,}288 \times 0.20)) \times 0.041\right] \div 14{,}288$$

$$= \left[(14{,}288 \times 0.25) + (14{,}288 - 3{,}572) \times 0.041\right] \div 14{,}288$$

$$= \frac{714 + 469}{14{,}288} = \frac{1{,}182}{14{,}288}$$

$$= 0.083$$

Therefore, the current (1980) unemployed offenders number 1,182 and the unemployment rate for current offenders is 0.083

f. Determine unemployment among total offenders. This can be done in a two-step process.

- Add the unemployed past offenders, calculated as follows.

Unemployed Past Offenders	=	Total Past Offenders	= 168,516
		x	x
		Current Rate	0.083
			13,987

- To get the total number of unemployed offenders, perform the second step.

Total Unemployed Offenders	=	Current Unemployed Offenders
		+
		Past Unemployed Offenders
	=	1,182
		+
		13,987
	=	15,169

3. Summary

Keep in mind that you should always try to identify any special rates of past offenders' unemployment. A university or research group may develop such a rate for your area at some time. If you learn of such a rate, inquire of the researchers how the rate was developed. If you find that it can be applied to the 1960-77 group or to the 1978-79 groups (or local equivalents), use it. But be careful to assess whether it is a reliable figure, and make sure, where doubt exists, that the figure you thus develop will continue to reflect the minimum number of unemployed offenders. Duplication in counting all offenders cannot be eliminated; thus, the bare minimum must be used as the "best estimate" of the true rate of unemployment in the offender population. Also, explain how the rate is calculated when documenting your data.

Figure 2, which follows, summarizes the process by which all the statistics in this section were obtained. A blank form is included as figure 3 for you to use when recording your data.

C. Determine a future (1982) level of offenders by crime, age, group, or employment status

You may wish to make a long-term projection of the number of offenders in your jurisdiction, based on the most recent available data. The future year's total population of offenders can be calculated by finding the percentage of current population who are offenders,

$$182{,}804 \div 535{,}000 = 0.34$$

and multiplying by the future population.

Highly accurate projections, based on the 1980 census, will be available in early 1981. You will also be able to get an up-to-date count of your area percentage of the State's population. Contact the agency in your State or local area that prepares population estimates and projections.

1. Resources

The statistics gathered earlier in this chapter will form the basis for your future projections regarding the consortium population. When you are actually ready to

FIGURE 2.--Completed Worksheet.

ESTIMATED UNEMPLOYMENT
AMONG OFFENDERS

A. Total Offenders

1. Past Offenders

1960-1977	=	140,031
1978 UCR-I + UCR-II	=	14,227
1979 UCR-I + UCR-II	=	14,258
	=	

2. Current Offenders

a. 1980 UCR-I ____ + UCR-II ____ = 14,288

3. Total: Gross Offenders (Lines 1 + 2) 182,804

Adjustments

4. Death

Method (Total Deaths - 15 and under) x Off./Non off. = -

5. Migration

Method School Enrollments - Component II = -

6. Multiple Arrests (Leave Blank) = -

7. Juvenile Offenders Expurgated = -
Subtract age 17

8. Incarcerated Offenders = -
% of Total State

9. Total Adjustments (Add Lines 4-8) = 0

10. Total: Net Offenders (Subtract Line 9 from Line 3) = 182,804

B. Unemployment Rate

11. Percent of Current Offenders Arraigned

Source: Sample of records, 1/80 = 20%

12. Total Arraignees (multiply Line 11 by Line 2) - 2,856

13. Total Nonarraigned (subtract Line 12 from Line 2) = 11,432

14. Arraignees Unemployment Rate = 25%

Source: Pretrial Release Program Study

15. Nonarraignees Unemployment Rate = 4.1%

Police records inadequate, Source: gen. pop. fig. used-- Bureau of Labor Statistics

16. Unemployed Arraignees (multiply Line 14 by Line 12) = 714

17. Unemployed Nonarraignees (multiply Line 15 by Line 13) = 469

18. Total Current Unemployed Offenders (add Lines 16 and 17) = 1,182

19. Current Offenders Unemployment Rate (divide Line 18 by Line 2) = 8.3%

C. Total Unemployed Offenders

20. Total (multiply Line 10 by Line 19) = 15,169

FIGURE 3.--Blank Worksheet.

ESTIMATED UNEMPLOYMENT
AMONG OFFENDERS

A. Total Offenders

1. Past Offenders

_____ = _____

_____ = _____

_____ = _____

_____ = _____

2. Current Offenders

a. _____ UCR-I _____ + UCR-II _____ = _____

3. Total: Gross Offenders (Lines 1 + 2) _____

Adjustments

4. Death

Method _____ = _____

5. Migration

Method _____ = _____

6. Multiple Arrests (Leave Blank) = _____

7. Juvenile Offenders Expurgated = _____

8. Incarcerated Offenders = _____

9. Total Adjustments (Add Lines 4-8) = _____

10. Total: Net Offenders (Subtract Line 9 from Line 3) = _____

B. Unemployment Rate

11. Percent of Current Offenders Arraigned

Source: _____ = _____

12. Total Arraignees (multiply Line 11 by Line 2) = _____

13. Total Nonarraigned (subtract Line 12 from Line 2) = _____

14. Arraignees Unemployment Rate = _____

Source: _____

15. Nonarraignees Unemployment Rate = _____

Source: _____

16. Unemployed Arraignees (multiply Line 14 by Line 12) = _____

17. Unemployed Nonarraignees (multiply Line 15 by Line 13) = _____

18. Total Current Unemployed Offenders (add Lines 16 and 17) = _____

19. Current Offenders Unemployment Rate (divide Line 18 by Line 2) = _____

C. Total Unemployed Offenders

20. Total (multiply Line 10 by Line 19) = _____

make your own projections, more recent data will be available to you from the 1980 census. A worksheet (figure 4) is included with this section to show you how these calculations were made. A blank worksheet (figure 5) is included for you to record your data.

2. Method

Use the 1980 data to project future data and to solve two problems.

a. Select a significant local crime that the program should be geared to, and calculate how many offenders will be in that category in 1982.

b. Identify the age groups that contribute most heavily to this crime, and project their 1982 total.

Significant Local Crime in 1982

1. Identify the largest crime area. According to table 3, the most prevalent crimes in the jurisdiction are

Larceny	2,171
Narcotics	824
Driving under the influence	2,119
Liquor	898
Drunkenness	2,265

It is obvious that no single crime dominates in the area. However, a cluster of crimes--alcohol and drug-related offenses--do dominate the records, accounting for 6,106 arrests out of 14,288 (43 percent). These crimes should probably be reflected in the consortium's program planning, in that outreach to offenders should, perhaps, focus on drug and alcohol rehabilitation programs, driver education programs, and so on.

To calculate the number of offenders in 1982, you first need to calculate the 1982 population. Assuming that the yearly growth rate of 0.00215 per year continues, then 0.0025 x 2 (0.0043), multiplied by the 1980 population (535,000), yields the 1982 figure (537,301). The 1980 total population thus has a percentage of .34 offenders. Assuming that this rate remains constant, the 1982 arrests will be 15,044, which can be used to calculate alcohol and drug offenders for 1982.

1982 New Alcohol and Drug Offenders	=	$\frac{6,106}{14,288}$	= $\frac{X}{15,044}$
	=	14,288x	= 91,858,664
	=	91,858,664 ÷ 14,288	
	=	6,429	

In addition, if it is assumed that 43 percent of all offenders were arrested on these charges, then the total (past and current) drug/alcohol offenders can be calculated for 1982.

As shown earlier, past offenders are

140,031			
+	x	0.43	= 72,461
28,485			
168,516			

1980 Past Alcohol/Drug Offenders	72,461
1980 Present Alcohol/Drug Offenders	6,106
	78,507

Use the same formula that gave the 6,429 figure above.

Total 1982 Alcohol/Drug Offenders	=	$\frac{78,507}{182,804}$	= $\frac{X}{183,590}$
	=	$\frac{(78,507 \times 183,590)}{182,804X}$	
	=	78,840	

Age Groups With Most Offenses in 1982

Table 3 makes it clear that the largest crime rate is in the 19 and under and 20-24 age groups; the largest single group is 20-24. In all but the area of vandalism, the 20-24 age group exceeds the younger group.

The task then is to find the intersection of this age group with the crime group found in the last section. To calculate the 1982 current offenders, use the same formula.

1980 Current Alcohol/ Drug Offenders Age 0-24	=	2,251	÷ 14,288
	=	0.16	

Therefore, the 1982 current offenders is 15,044 x 0.16 or 2,407.

This could not be reliably converted to a percentage of total offenders in 1982. As explained earlier, 1978-82 yearly totals would have to be included, but even this would not yield usable figures. So in planning, decide what your priorities are, and what the statistics will be used for. If you simply need raw projections, as opposed to a minimally accurate figure, use

16% x 183,590 = 46,999

If you need the minimal count, calculate the rate for each year.

3. Summary

The method available to plot projections for the future relies on the data developed earlier in this chapter. You can calculate the unemployment of any group by sex or by crime, simply by assuming that the past offender population corresponds to the population for which you have breakouts. As pointed out, however, this method is very imprecise, and may be desirable only in certain situations. Where precise data are needed,

the best you can do is calculate the minimum figure, shown here to estimate the unemployment for past offenders.

Figure 4 gives you a sample worksheet to let you review how these statistics were gathered. A blank worksheet (figure 5) is included so you can make your own projections.

FIGURE 4.--Completed Worksheet.

PROJECTED LEVELS OF UNEMPLOYMENT
BY SEX, CRIME, AND AGE GROUP IN 1982

A. Projected Population 1982

1.	Present Growth Rate 1980	= .00215
2.	Number of Years (1981 & 1982)	= 2
3.	Total Growth (Multiply Line 1 by Line 2)	= .0043
4.	Present Population 1980	= 535,000
5.	Addition (Multiply Line 3 by Line 4)	= 2,301
6.	Total Population 1982 (Add Lines 4 and 5)	= 537,301

B. Projected Unemployed Offenders 1982

7.	# of Total Offenders 1980	= 182,804
8.	% of Offenders 1980	= 34%
9.	Projected Population 1982	= 537,301
10.	Projected Offenders 1982 (Multiply Line 9 by Line 8)	= 183,590
11.	% Unemployed 1980	= 8.3%
12.	% Unemployed 1982 (Multiply Line 10 by Line 11)	= 15,237

C. Projected Unemployment by Most Common Crimes 1982

13a. Present Most Common Crimes 1980

a.	Narcotics 824	
b.	Driving/Influence 2,119	= "Drug & Alcohol"
c.	Liquor 898	
d.	Drunkenness 2,265	
	Total	= 6,106

13b. % of Total Crimes (Divide Line 7 by Line 13a) = 34%

14. Projected Total 1982 (Multiply Line 13b by Line 10) = 62,420

15. Projected Unemployed (Multiply Line 14 by Line 11) = 5,180

D. Projected Ages of Unemployed Drug & Alcohol Offenders (D&A)

16. Most Common Age Group 1980 (0-24)

a. Narcotics 235 + 195

b. Driving/Inf. 542 + 208

c. Liquor 120 + 141

d. Drunkenness 526 + 284

Total = 2,251

17. Offenders 1980 = 14,288

18. % D&A Category (Divide Line 16 by Line 17) = 16%

19. Projected Current Offenders 1982 (Multiply Line 17 by Line 3 by Line 18) D&A = 2,407

20. Projected Unemployed Current D&A Offenders (Multiply Line 11 by Line 19) = 199

E. Projected Sex of Unemployed D&A Offenders (0-24)

21. Male Offenders 1980

a. Narcotics 175 + 214

b. Driving/Inf. 190 + 499

c. Liquor 129 + 110

d. Drunkenness 263 + 494

Total = 2,074

22. % Male (Divide Line 21 by Line 16) = 92%

23. % Female (Subtract Line 22 from 100) = 8%

24. # Male D&A Offenders 1982 (Multiply Line 17 by Line 21) = 27,024

25. # Female D&A Offenders (Multiply Line 17 by Line 22) = 2,350

26. Female D&A Offenders Unemployed (Multiply Line 11 by Line 24) 1982 = 195

27. Male D&A Offenders Unemployed (Multiply Line 11 by Line 23) 1982 = 2,242

FIGURE 5.--Blank Worksheet.

PROJECTED LEVELS OF UNEMPLOYMENT
BY SEX, CRIME, AND AGE GROUP IN _____

A. Projected Population _____

1. Present Growth Rate ____ = _____

2. Number of Years ( ) = _____

3. Total Growth (Multiply Line 1 by Line 2) = _____

4. Present Population ____ = _____

5. Addition (Multiply Line 3 by Line 4) = _____

6. Total Population ____ (Add Lines 4 and 5) = _____

B. Projected Unemployed Offenders ____

7. # of Total Offenders ____ = _____

8. % of Offenders ____ = _____

9. Projected Population ____ = _____

10. Projected Offenders ____ (Multiply Line 9 by Line 8) = _____

11. % Unemployed ____ = _____

12. % Unemployed ____ (Multiply Line 10 by Line 11) = _____

C. Projected Unemployment by Most Common Crimes ____

13a. Present Most Common Crimes ____

a. _____

b. _____

c. _____

d. _____

Total = _____

13b. % of Total Crimes (Divide Line 7 by Line 13a) = _____

14. Projected Total ____ (Multiply Line 13b by Line 10) = _____

15. Projected Unemployed (Multiply Line 14 by Line 11) = _____

D. Projected Ages of Unemployed _____ Offenders

16. Most Common Age Group ____

a. _____

b. _____

c. _____

d. _____

Total = _____

17. Offenders ____ = _____

18. % _____ Category (Divide Line 16 by Line 17) = _____

19. Projected Current Offenders ____ (Multiply Line 17 by Line 3 by Line 18) = _____

20. Projected Unemployed Current _____ Offenders (Multiply Line 11 by Line 19) = _____

E. Projected Sex of Unemployed _____ Offenders

21. Male Offenders ____

a. _____

b. _____

c. _____

d. _____

Total = _____

22. % Male (Divide Line 21 by Line 16) = _____

23. % Female (Subtract Line 22 from 100) = _____

24. # Male _____ Offenders 1982 (Multiply Line 17 by Line 21) = _____

25. # Female _____ Offenders (Multiply Line 17 by Line 22) = _____

26. Female _____ Offenders Unemployed (Multiply Line 11 by Line 24) = _____

27. Male _____ Offenders Unemployed (Multiply Line 11 by Line 23) = _____

APPENDIX A

SAMPLING PROCEDURE

Part One of the model for determining the incidence of unemployment among offenders is designed to ascertain the employment status of offenders at any point of contact with the criminal justice system. Prime sponsors need to know how to take a sample on a continuing basis (year-to-year) so that they can periodically collect data on the employment status of offenders. There are some important considerations to be noted.

Condition of the Files

Data stored in files are arranged either alphabetically, by last name, or by some numerical system other than by year. The objective of this methodology is to present a procedure that allows you access to data regarding a specific year although the files might not be organized in terms of years; i.e., a given year in which you are interested might be interspersed within the file--instead of being grouped in a mutually exclusive manner.

The Universe or Population

The term universe (population) refers to the total number of cases in the file drawer or drawers. The file drawer contains data for the year you are interested in, as well as data for years you do not presently need. The task is to estimate this number, then to select a sample of that total so that you can examine and record data from the year in which you are interested.

Rationale for Sampling

Sample size is determined by two considerations: Expense and error. One attempts to minimize cost and minimize error "Error" here means the degree to which the estimate from the sample differs or varies from what you would obtain if you took a complete count rather than a sample. An example is the comparison of what the polls estimate before an election (based on sampling) and the total vote a candidate receives on election day (based on a complete count). The difference is referred to as "sampling error."

The Method

This section presents a step-by-step procedure for selecting cases from the file drawer.

General Assumptions. Assume you are interested in cases that occurred in a specific year, for instance, 1978. The file drawer contains cases for 1978 as well as for other years, 1970-80, filed in alphabetical order. Assume that there are four file cabinets of four drawers each. Each drawer is 24 inches deep.

Parameters. "Parameter" means the number or element you are attempting to estimate. For example, pollsters taking samples before an election are trying to estimate the votes a candidate will receive at the time of the election (which is in the future). That total vote is their parameter.

In regard to this study, the parameter is the total number of unemployed offenders in a given year, 1978. That figure is unknown. To know it, you would have to pull out each 1978 folder from the file drawers and obtain the information from each folder. A more economical way is to take a sample. (For pollsters to know how many votes a candidate will receive, they would have to wait until the election and then count. A substitute procedure is to take a sample before the election.)

Essentially, this task involves a two-step process: First, estimate the number of DSU's (designated sampling units) in the file drawer, i.e., the number of offenders filed under the year 1978; and second, sample from that estimated universe.

How To Proceed

Step 1. A Random Selection of Drawers

Count the number of drawers containing DSU's, i.e., cases pertaining to 1978. Number the drawers serially from 1 to 16 (first to last, four cabinets of four drawers each). Begin with the first cabinet and give the top drawer the number 1; the next drawer, the number 2; and so on until the 16 drawers have been numbered.

Go to a table of random numbers (available at the back of any statistics text) and, pointing with a pencil, randomly select, without looking at the table, a number

on one of the pages. If that number is a number from 1 to 16, use it. If not move down (or up) the column until you reach a number from 1 to 16. Use that number. Pretend it was 4. Use that drawer as the one from which to select the sample.

Use of Table of Random Numbers. A table of random numbers is a collection of numbers that appears with equal probability; that is, there are only 10 digits in the numbering system and each number 0-9 appears approximately 1/10 of the time. (One-tenth of the numbers are zeroes, 1/10 are ones, and so on.) Further, these numbers have been selected in a random, (nonarbitrary) manner. It is equivalent to your being blindfolded, selecting numbers from a hat, and replacing each number selected before you select again.

Step 2. Dividing the Drawer, Forming Clusters

a. Form clusters. Divide the drawer into small parts--thirds, fourths, fifths, depending on the size of the drawer, by taking a ruler and measuring the drawer. A cluster is an arrangement of heterogeneous elements. In this case, it is a number of file folders of several different years. A stratum is an arrangement of homogeneous elements or a number of file folders of the same year, say 1978.

b. Using 4th's. From the front or back, measure 6 inches of drawer and place a sheet of legal-size yellow paper behind the folder at this 6-inch position.

c. From this marker, measure 6 inches more. Place another legal-size yellow paper at this point. Place the paper so that its upper part can be seen.

d. From this marker, measure 6 inches more. Place another marker. You have now divided the drawer into fourths (a 24-inch drawer with four 6-inch clusters).

e. Go to a table of random numbers and randomly select a number from 1 to 4.

f. Return to the drawer, find that cluster and count the number of 1978 cases in it. Estimate the total number of 1978 cases in the drawer by multiplying the total of 1978 cases in the cluster by the number of clusters, e.g., 3 cases x 4 clusters = 12 1978 cases.

g. Count the total number of cases in the cluster. To estimate the total number of cases in the drawer, multiply the total number of cases by the number of clusters, e.g., 25 cases x 4 clusters = 100 cases.

h. The ratio of 1978 cases to the total number of cases in the cluster is the estimate of the total number of 1978 cases in that drawer.

Suppose that the ratio is 1/8 or 1 in 8. Then, the estimate for the drawer is that there is one 1978 case for every 8 cases in the drawer. Therefore, if there are 100 folders in the drawer, there are 12 1978 folders, and that sampling interval should be used.

i. Go to a table of random numbers and select a number between 1 and 8. Suppose this number is 4. This is the random start, or first folder, to pull.

j. Pull folder number 4. As expected, it is a 1978 case. If not, replace it in the files.

k. Pull folder 12 (4 + 8). As expected, this is a 1978 case. If not, replace it.

l. Continue to pull every eighth case until the file drawer is exhausted. Examine the 1978 cases pulled. Record the information from these folders.

m. The information obtained from the sample is an estimate of the total number of unemployed offenders for 1978, even though some of the cases pulled might not have been 1978 cases. For example, suppose 12 folders are pulled and only 6 are 1978 cases. Whatever information is obtained from the folders should be multiplied by 2 (12/6 = 2).

n. Select either (1) or (2) below.

(1) Whatever information is obtained from this drawer, assume that to be typical of the file cabinet--that is, if 50 percent of the folders in the drawer contain employed offenders, assume that to be true for the other three drawers.

(2) Go to drawer 2 and carry out the same procedure as you did for the first drawer. Then check the other drawers.

o. Record the information. The result is the data for the universe of 1978 cases.

Sampling 1978 Cases

Condition of the Files. In this case, the assumption is that the files contain only 1978 cases. The order in which these cases appear in the files might be alphabetically by last name, by identification number, or by some other characteristic.

Sampling Objective. The objective of this procedure is to select a sample that gives a cross section of the cases that appear in the file cabinets. A sample that satisfies this criterion is referred to as a "fair," or an "efficient," sample. This, of course, is a matter of degree. Samples may be fair or fairer, efficient or more efficient. Two conditions determine the degree of fairness or efficiency of the sample: (a) Size of the sample and (b) type of sampling plan used. The most efficient type of sample is the stratified random sample. As for size, other things being equal, the larger the size of the sample, the greater the efficiency of the sample.

Efficiency is obtained at a price. Cost increases as efficiency rises. The obverse is also true; as efficiency decreases, cost decreases. Increasing sample size only minimally will not affect efficiency. For example, to double the efficiency of a sample of 400 (error = 5 percent) a sample of 1,600 must be taken (error of 2 1/2 percent). In other words, to reduce error by one-half, the sample size must be multiplied by four. (This is true because the error of a sample is equal to the square root of the ratio of pq to sample size. In this case, p refers to the proportion of offenders employed, and, q refers to the proportion unemployed.)

Type of Sampling Plan. A stratified sample renders the greatest efficiency under ordinary conditions (no strange elements in the universe). In this case, a strange element would be one that yielded many unemployed cases in a particular part of the file cabinet. Little efficiency is lost if a systematic sample is used. Moreover, a systematic sample is not as costly and, thus, is easier to carry out. Stratification, in most instances, requires special knowledge and technique. Systematic sampling requires special knowledge and technique also, but less.

Sample Size. A sample of 400 will yield a sampling error (at the 95 percent level of confidence) of 5 percent. Thus, if a sample taken from the 1978 files reveals that 40 percent of the offenders were unemployed, the 95 percent confidence level and 5 percent error mean that it is almost certain that the actual proportion of offenders in the whole universe of 1978 cases who were unemployed does not fall below 35 percent, nor exceed 45 percent. If the level of confidence were 100 percent, the statement could be made with absolute certainty. It is similar to the meteorologist's statement that "there is a 95 percent chance of rain." An increase in level of confidence imposes an increase in error. Thus, 99 percent confidence yields a 15 percent error (3 x 0.05).

A sample size of 100 cases will yield a sampling error of 10 percent at the 95 percent level of confidence (referred to as the 2 sigma level). The statement now becomes (using the 40 percent unemployed as above) "it is almost certain that the actual proportion of offenders in the whole universe of 1978 cases who were unemployed does not fall below 30 percent, nor exceed 50 percent."

A sample size of 1,600 cases reduces the error to 2.5 percent. The statement would be "it is almost certain that the actual proportion of offenders in the whole universe of 1978 cases who were unemployed does not fall below 37.5 percent, nor exceed 42.5 percent."

Step-By-Step Procedure

Assumptions. Assume one file cabinet, 24 inches deep, of four drawers. Each drawer can store folders either 8 1/2" x 11" or 8 1/2" x 14". Assume one, and only one, folder per offender. The file folders may vary in thickness. If each folder were 1-inch thick, the file cabinet could hold 96 folders, or data on 96 offenders. A folder containing a 10-page report would require about 1/8 inch. Thus a 24-inch file drawer could store 192 folders. A file cabinet of four drawers could store 768 folders, or data on 768 offenders. This 768, therefore, is the universe, labeled "N."

Periodicities. Assume that there are no periodicities in the file cabinet: That is, no pattern, referred to as the sampling frame, in the way the folders are stored. A periodicity is a recurring phenomenon, such as all folders for unemployed are confined to the

front end of the drawer or front and rear extremes. In other words, assume that unemployed offenders are randomly distributed throughout the file drawer in no recurring pattern.

Sample Size, Level of Confidence, and Sampling Error. For a procedure of this nature, a 10 percent error can be tolerated. A sample of 100 will yield less than a 10 percent error and give 95 percent confidence in the result. Ordinarily, a sample of 100 (n = 100) will yield a 10 percent sampling error, but the universe of 768 indicates that the ratio of universe to sample is large; thus the actual sampling error will be lower than 100 percent. Calculation of the correction (the finite population) is complicated, however, so we will assume that our error is 10 percent.

Recapitulation. An n of 100 is being selected from an N of 768. The setting of the universe of 768 is a file cabinet containing four drawers, each drawer being 24 inches deep and capable of storing file folders that are either 8 1/2" x 11" or 8 1/2" x 14". Each file folder contains data on one, and only on one, offender. In each folder are 10 sheets of paper on which data are recorded concerning the offender. These data refer to 1978 and only to 1978. There are 192 folders in each drawer. There are no periodicities. A systematic sample will be taken.

Procedure for Taking Systematic Sample. The procedure for taking a systematic sample is as follows.

1. List each item in the universe; that is, assign numbers serially to each folder (offender) beginning with the first (no. 1) and ending with the last (768). NOTE: This step is essential. It cannot be avoided or bypassed.

2. Compute k which equals the sampling interval.

$$k = N/n$$

$$k = \frac{768}{100} = 7.68$$

3. Select a number between 1 and 7 from the table of random numbers. (If 8 is used, it will yield a sample of 96. If 7 is used, it will yield a sample of 109.) Assume that number is 7.

4. Beginning with the number you selected in step 3, select every seventh folder (offender) in the file cabinet. The sample is therefore: 7, 14, 21, 28, 35, 42, 49, 56, 63, 70, to number 763. This yields a sample of 109.

5. Count the number of unemployed offenders. The ratio of the number unemployed to the total, 109, is an estimate of the proportion unemployed in the universe of 768 cases.

GLOSSARY

Adjudication: The determination of guilt or innocence by a trial court.

Arraignment: The process in which defendants are brought before a court and told their rights and the charges pending against them. At this point, defendants are asked to enter a plea to the charges.

Arrest: The physical taking of a person into custody on the grounds that it is believed that that individual has committed a criminal offense.

Bail: A method used to bring about the pretrial release of an accused person, usually through the posting of financial security to insure that person's appearance in court.

Booking: An administrative process in which the facts relating to an arrest are recorded, usually in the police station, with the suspect physically present.

Clearance Rate: The percentage of crimes known to the police that they believe they have "solved," by arrest or by identification of the person responsible.

Component Method II: Used by the Bureau of the Census during the last 25 years. In it, net migration is estimated on the basis of school enrollment or school census data, from the difference between the actual population of elementary school age and the population of school age expected on the basis of the most recent census and births since the census. In a recent variation, individual Federal income tax returns for 2 reporting years are matched to estimate migration.

Defendant: A person who has been arrested and formally charged with the commission of a criminal offense.

Felony: A serious crime, usually punishable by incarceration for more than 1 year.

Jails-Prisons: Jails are defined as confinement facilities administered by a local law enforcement agency, usually a county, intended for adults but sometimes also containing juveniles, which hold persons detained pending adjudication, and persons committed after adjudication for sentences usually of 1 year or less. Prisons

are defined as correctional institutions for defendants sentenced by the court to serve sentences usually longer than 1 year. Prisons are operated by either the State or Federal Government.

Misdemeanor: An offense less serious than a felony and usually punishable by less than 1 year's incarceration.

Parole: A correctional alternative in which the offender lives in society under supervision after serving a portion of a sentence.

Part I Crimes: Refers to those criminal offenses that are considered most serious; includes the crimes of murder, robbery, forcible rape, aggravated assault, burglary, larceny, and motor vehicle theft.

Part II Crimes: Includes all criminal offenses not classified as part I crimes; generally less.

Preliminary Hearing: A court proceeding used to determine if there is probable cause to believe that a defendant committed a crime and therefore should be held to await trial. It is used extensively in those States that charge through an "information," without action by grand jury.

Presentence Investigation: An investigation and summary report into the background of a convicted offender, used to aid the judge in sentencing.

Pretrial Services: An agency within the court structure that gathers data on criminal defendants to aid the court in making decisions as to type of charge to place against a defendant, as to whether a defendant is a good risk to release from custody pending trial, and as to whether the defendant is financially unable to retain an attorney.

Probation: A correctional alternative allowing the convicted offender to serve a sentence in the community under supervision of the court.

Proration Method: Involves the distribution of an estimated total for some large area among the constituent parts. This procedure implicitly assumes that the population of the United States is currently goegraphically distributed in the same proportion as at the last census.

Reintegration: A model of corrections that aims at assisting the offender's reentry into society. This approach emphasizes use of community resources so offenders and the citizenry have contact.

Release on Own Recognizance: Pretrial release without the necessity of posting bail bond. Increasingly, it is being used if the court feels that the defendant's position and ties to the community will insure appearance in court when required.

Sentence: A determination by a court of the type of punishment to impose on a convicted person.

Suspect: A person who is believed to be responsible for a criminal offense, but who, either because of insufficient evidence or because the person cannot be located, has not been arrested.

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