

## Part One

### A Conceptual Framework for the Costing of Juvenile Justice

#### A Social Cost Perspective: Crime and Crime Prevention

The cost aspect of juvenile justice can be examined at four different levels. First, and most broadly, one can examine the costs of juvenile crime from a social perspective. This approach combines data on the cost of crime and the costs of preventing crime. For many purposes this is the most appropriate level of analysis as it potentially reveals the aggregate cost of crime to Australian society. At this level of analysis the costs of juvenile crime include all relevant gross government expenditures<sup>1</sup>; other governmental costs which may not be carried on particular agency budgets or, indeed, appear directly on any budget; private sector expenditures on prevention and policing; victim costs including pain, suffering and fear; family costs; and property loss and damage. Part Two examines some of these costs for Australia, for example the cost of arson, vandalism and household burglary. It must be remembered that all government expenditures are ultimately borne by private individuals either via taxation or deficits (deferred taxation).

Government budgetary costs cover a wide range of activities, including prevention, investigation, detection, apprehension, prosecuting, diversion, adjudication, detention, supervision and post-release supervision. However, although government budgetary costs are significant, they are only one component of the total social costs of juvenile crime. It must be remembered that the total costs of juvenile crime are borne very broadly. Further, many of the non-governmental costs are likely to be carried in budgets that do not easily show their relationship to crime - such as the expenses of private firms and households. For example, it has been estimated that in the United States approximately \$22 billion is spent by firms and institutions on such items as burglar alarms and private security forces (Cohen 1988) as against \$35 billion for police, defence counsel and prisons etc. Other costs include increased retail prices, witness time and insurance payments (Smith, Alexander & Thalheimer 1980). This does not include the expenditures of private households on alarms and locks (Zedlewski 1985) or the decrease in residential property values (Minnesota 1977). Additionally, at least three important categories of costs are not 'monetized' in most circumstances. Using United States data, Cohen (1988) argues that the 'pain and suffering' victim costs may exceed more direct victim costs such as lost wages and medical bills. Further he estimates that loss of life costs (in the USA) may exceed both

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<sup>1</sup> Commonwealth documents frequently provide net aggregate state expenditure figures, that is gross expenditures **minus** criminal justice receipts, such as fines. From a social cost perspective it is appropriate to include **either** gross expenditures **or** net expenditures plus such receipts. From a convenience perspective it is usually easier to utilise gross budgetary expenditures. From an analytic perspective net expenditures plus receipts has the advantage that it reminds one that even the costs borne by offenders are a component of social cost.

of the preceding costs (*see also* Smith, Alexander & Thalheimer 1980). Gray (1979) has surveyed the costs associated with changing behaviour to avoid becoming a victim.

We must further keep in mind that only those costs which actually result from juvenile crime should be included in juvenile crime costs. For example, Zimring and Hawkins (1988), among others (Niederhoffer 1969), have pointed out that crime prevention is only one of many police functions, including traffic control and domestic dispute intervention.

Many governmental and non-governmental budgetary items in the criminal justice arena are devoted to the prevention and processing of both adult and juvenile crime; the police and the courts are perhaps the primary examples in this category. This raises the difficult question of deciding which of these 'shared' crime costs should be appropriately attributed to juvenile crime. Of course, if such costs are truly joint any such allocation between adults and juveniles will be essentially arbitrary. If, on the other hand, one can reasonably assume that most of these expenditures would have occurred in the absence of juvenile crime the real social cost (that is, the marginal cost) attributable to juvenile crime will probably be low.

Costs, from this broad social perspective, are summarised in Figure 1.

Even at this early stage of this report we should emphasise that cataloguing such costs should not be seen as implying that it is possible, necessary, or even desirable, to collect monetary values of, or quantify, all of these costs. Extensive experience has shown that it is virtually impossible to use data at this level of analysis to make aggregate budget allocation decisions between governmental departments (*see* the experience of the President's Commission on Law Enforcement and Administration of Justice 1967, and *see* Weimer & Vining 1989 for a discussion and review of this issue at a more theoretical level).

**FIGURE 1**

Costs of Juvenile Crime and Juvenile Crime Prevention	=	government budgetary costs + non-government budgetary costs + private sector costs (prevention, 'policing', losses, etc.) + victim costs + family costs + property loss and damage costs - non-opportunity cost items
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### **A Social Cost Perspective: Crime Reduction**

A second (narrower) cost focus is upon the social costs of preventing crime - that is the costs involved in attempting to control or reduce the level of crime in the community. These costs can be broadly divided into prevention costs and treatment costs. If one adopts either a deterrence or a rehabilitation perspective, treatment costs are one sub-set of prevention costs because presumably treatment effects the probability of re-offending.

The major budgetary costs are police patrol, investigation, arrests and detention; court processing (including prosecution and defence services) and 'treatment' (including institutional treatment, probation and other programs).

Typically, these are costs which go to maintaining and servicing the criminal justice system as well as components of the child welfare system. Additionally many costs borne by governments are not 'captured' in budgets (for example lost taxes on wages not earned during institutionalisation or welfare payments to dependents (Maine State Bar Assoc. 1977). Other expenditures may be found in budgets not normally associated with the juvenile justice system, such as the federal Department of Health which is spending many millions of dollars on the task of educating the public about the harmful effects of drugs (the Drug Offensive).

Again this perspective still includes most non-governmental expenditures, but would exclude other costs which result directly from crime such as victim costs, family costs and property loss costs. This second more restricted definition of cost is summarised in Figure 2.

**FIGURE 2**

Cost of=	government budgetary costs +
Juvenile	government non-budgetary costs +
Crime	private sector (prevention and
Prevention	policing) costs - non-incremental
	budgetary and other costs

### **A Government Cost Perspective**

A third, even more restricted, definition of cost looks only at the *governmental* costs of crime *prevention*. In practice, this usually means the budgetary costs, but conceptually it can, and should, include costs that are sometimes not included in agency budgets such as the opportunity cost of the land used for juvenile justice purposes. This version of cost is summarised in Figure 3.

**FIGURE 3**

Governmental Cost =	Government budgetary costs +
of Crime	government non-budgetary costs -
Prevention	non-incremental costs

In Part Two most of the cost estimates relating to the juvenile justice system are based on a government cost perspective, and are further restricted to budgetary items.

## A Program Cost Perspective

A fourth, and final version of cost is to examine the cost of particular prevention or treatment juvenile justice programs. This clearly is the most 'micro' level of cost analysis and, typically, the level at which it is possible (although still not simple) to present policy prescription. Here one examines the (marginal) cost of particular government programs. These costs typically focus on government budgetary costs, but once again the more conceptually correct approach is to include all costs (*see* Long, Mallar & Thornton 1981 for an excellent example of such costing).

FIGURE 4

Cost of Particular Prevention or Treatments Program (marginal)	=	Government budgetary costs
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## Cost Minimisation

If we look at this question from the social cost perspective the objective is to minimise total social costs. The problem for a rational government (that is, one acting in the interests of all citizens), then, is to minimise the aggregate costs of crime and crime prevention. Up to a point the more resources we put into crime prevention the less crime we will have; it is clear that, over at least some ranges, crime costs and crime prevention costs are inversely related to each other. We face a trade-off: as public and/or private expenditures on crime prevention increase the incidence and costs of crime go down. However, we face diminishing returns as we continue to increase expenditure on crime prevention. Therefore, we are searching for the combination of crime costs and crime prevention costs that minimises total social costs. This focus is by no means unique to juvenile justice. For example, the major benefit of health care is avoided illnesses and delayed death.

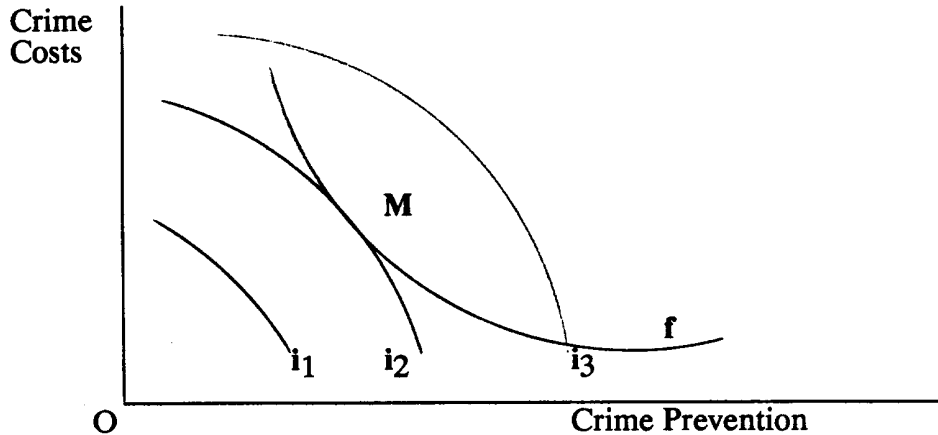
Economists represent such problems in terms of a set of indifference curves between the relevant 'goods' (crime and crime prevention costs). These curves represent various levels at which we would be indifferent between a unit of crime and a unit of crime prevention costs: thus they represent our preferences for 'trading-off' crime and crime prevention cost. Such a set of indifference curves *i* are shown in Figure 5.<sup>2</sup> In this case we are interested in minimising *disutility* because individuals do not gain utility from either crime or crime prevention. Government can 'consume' different combinations of crime and crime prevention for a given budget. This trade-off is shown by the curve *f*.<sup>3</sup>

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<sup>2</sup> We assume that these indifference curves are concave to the origin **O** (the normal assumption when dealing with this kind of problem).

<sup>3</sup> This curve is shown as convex to the origin because it is assumed that there are diminishing marginal costs of consumption.

FIGURE 5



### Costs

Given this, the government reaches a minimum level of disutility by consuming at point **M**. To repeat, the crucial point of this simple analysis (and this point can be lost at more restricted levels of analysis that focus on crime prevention expenditures) is that it should not be the purpose of government to minimise crime prevention costs, or government budgetary costs.

### A Conceptual Framework for Understanding the Benefits of Juvenile Crime and Delinquency Avoidance

Given that there are few benefits of crime itself<sup>1</sup> we are primarily concerned with the benefits of crime avoidance. Assessing the benefits of any public intervention is one of the most complex and difficult tasks in public policy analysis. Assessing benefits in the criminal justice arena is more difficult than average as the primary benefits of criminal justice programs are avoided costs (that is the costs of crime). As we have already demonstrated many, of these costs are extremely difficult to measure - in monetary, or even quantitative, terms.

Arguably, assessing the benefits of juvenile crime and delinquency programs is one of the most difficult tasks within criminal justice applied

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<sup>4</sup> For further refinements to such a model see C. Smith, P. Alexander and D. Thalheimer *A National Assessment of Serious Juvenile Crime and The Juvenile Justice System: The Need for a Rational Response*, v. IV, Washington D.C.: U.S. Dept. of Justice, 1980.

<sup>1</sup> Crime can sometimes be viewed as necessary or even desirable in certain circumstances, particularly if a Durkheimian perspective is adopted. The Function of crime in society is to maintain the moral boundaries of the community - it assists in maintaining the social structure through the collective conscience of the community.

research. Avoided costs (benefits) are likely to accrue over a long period, to be non-linear (that is avoided costs in 'outyears' may be greater than immediately [holding constant the issue of discounting such costs]), to be broadly spread throughout the community and intrinsically difficult to measure. It should also be remembered that social benefits may accrue outside the criminal justice system (that is, 'crimes avoided' are not the only benefit). These benefits are often not considered. For example, programs that increase employment, raise the level of education, teach skills, improve health and reduce unwanted pregnancy, even if they do not reduce recidivism, generate social benefits.

Given the inadequacy of cost data, it has proved almost impossible to assess the benefits of 'macro' allocations, for example allocations to the police versus the courts. In practice the attempt to relate costs to benefits (broadly defined) have examined the costs and benefits of particular prevention and treatment programs.

We define prevention programs as being aimed at either the general juvenile population, 'at-risk' populations, or 'at-risk' individuals, while treatment programs are defined as being related to those *individuals* who have been convicted, or at least formally identified, as being juvenile delinquents.

### A Social Perspective on Benefits (and Costs)

Three broad methodologies have been employed in studies that have attempted methodological rigour. Most rigorous, and most difficult to achieve, are those evaluations which compare all marginal costs (governmental and otherwise) to the total social benefits of the program (that is cost-benefit analysis). Thus benefits include not only avoided governmental costs but also other social costs. This type of evaluation is summarised in Figure 6. Clearly, to accurately determine what such avoided costs are, one needs good estimates of total social costs (*see* Figure 1). Very few (perhaps only one) studies have achieved this level of sophistication. Such a study attempts to reduce *all* the impacts of a proposed, or experimental, program to dollar impacts.

FIGURE 6

Cost of	<	Benefits	=	<u>avoided</u> Government budgetary
Particular				costs + <u>avoided</u> non
				-government
Treatment				budgetary costs + <u>avoided</u>
or				private sector prevention
Prevention				costs + <u>avoided</u> private sector
Program				'policing' costs + <u>avoided</u>
				victim costs + <u>avoided</u> family
				costs + <u>avoided</u> property loss
				and damage costs - non-
				opportunity cost items

## Cost-Effectiveness Approaches

A more typical evaluation strategy is to compare the cost of a particular (usually experimental) program to the costs of alternative programs, most particularly the status quo program. Here a frequent assumption is that the benefits of such programs are equivalent (that is no differences can be identified). This approach is summarised in Figure 7.

**FIGURE 7**

Cost of Program	<	Other governments' programs that achieve (or do not) the same benefits
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Finally the particular program may be compared on some quantitative, but non-monetised, measure to other programs. This can be useful if the costs of the alternative programs are approximately similar. This approach is summarised in Figure 8.

**FIGURE 8**

Quantitative Measure (benefits) of Program	<	Quantitative measure of costs of status quo program or other alternatives
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These latter two approaches are cost-effectiveness methods of assessing program worth. They have been quite commonly used in criminal justice and juvenile justice research. Such approaches help one to determine whether particular programs are preferable to existing programs and policies. However it cannot help policy-makers determine whether the program is socially desirable (compare with Figure 6).

This cost review suggests one clear cautionary note when thinking about the costs and benefits of such programs: costs tend to be both immediate and budgetary, while the majority of benefits are deferred (often a long time in the future) and have a large non-budgetary component. The fact that such benefits are in the future should be appropriately recognised (by the utilisation of the social discount rate), but this does not mean these benefits should be ignored.

The next section of this report examines some costs in the Australian context. First, we focus on some direct costs of juvenile crime, then on some crime prevention cost (as per Figures 1 and 2 above), with particular emphasis on the governmental cost perspective (Figure 3). As a preamble the report examines two issues (1) identification of the juvenile offender; (2) identification of the extent of juvenile crime.