

# **LEGAL AID FOR COMMITTALS**

an evaluation of the impact of the  
centralised committals Scheme

Ann Eyland, Natalina Nheu, Ted Wright

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# Introduction

## **Purpose of the report**

- 1 The Justice Research Centre was commissioned by the Legal Aid Commission of New South Wales (the LAC) to evaluate the impact of the Centralised Committals Scheme (the Scheme). Before the Scheme, legal aid was only available to defendants at committals for murder cases. Under the Scheme, legal aid is provided in all committal proceedings.
- 2 The Scheme was introduced across the State in three stages. Initially piloted in April 1998, the Scheme applied to offenders appearing at the inner metropolitan local courts which feed into the Sydney District Court. These are the local courts at Balmain, Central, Downing Centre, Kogarah, Newtown, North Sydney, Redfern, and Waverley. It was then extended from 1 February 1999 to the Hornsby and Manly local courts and to the local courts feeding into the Sydney West District Courts, that is, the courts at Bankstown, Blacktown, Burwood, Campbelltown, Fairfield, Lidcombe, Liverpool, Parramatta, Penrith, Ryde, Sutherland and Windsor. The LAC then received funding of \$1.965m in the 1999–2000 State Budget to extend the pilot statewide. To streamline the allocation of prosecution and defence resources, committals were listed at a ‘central’ Local Court according to District Court Registry. In the metropolitan regions, there were 2 ‘central’ Local Courts for each region.
- 3 The primary expected effect of the Scheme was to reduce the number of matters committed to the District Court for trial, by increasing the number of cases finally disposed of in the Local Court, and by

increasing the proportion of committals to the District Court for sentence only. The ultimate objective of the Scheme was to reduce the backlog of criminal cases—and hence delays—in the District Court.

- 4 The first aim, then, of this evaluation was to verify whether committals for trial to the District Court have decreased, and to assess the extent to which this can be attributed to the Scheme. The second aim of the evaluation was to quantify the benefit in money terms. This has been done by translating reductions in the District Court's caseload attributable to the Scheme, into the cost of additional resources which otherwise would have been required to achieve an equivalent result.

## **The scope of the research**

- 5 The approach we adopted to quantifying the benefits of the Scheme will possibly seem rather narrow, and is therefore in need of some explication. This approach addressed (according to our brief) the policy priorities of Government and overcame a number of the practical and conceptual difficulties in assessing the Scheme both retrospectively and after a comparatively short time of operation.
- 6 Given the expected primary effects of the Scheme, it could well be expected to result in cost savings in each of the agencies involved in the criminal trial process. Broadly three suggestions can be made about how providing legal aid at committals might produce 'downstream' savings in the Legal Aid Commission (LAC), the Office of the Director of Public Prosecutions (ODPP) and in the Police—
  - The 'inputs' (time of solicitors and officers, and disbursements for counsel and such like) involved in preparing a matter which is committed for sentence only are very probably significantly less than those for a case which is committed for trial but ultimately resolved as a plea. (In other words the resources put in

by the LAC and the ODPP on the ‘front end’ are partly offset by resource savings – in those agencies and the Police – on the ‘back end’ of the process).

- The ‘inputs’ which would have gone into a matter committed to the District Court are saved when it is dealt with instead in the Local Court (although, of course, there may be additional inputs involved at the Local Court level).
- In the case of the LAC, continuity itself may result in some savings, that is some of the preparation time put in at the committal stage would otherwise have to be put in at the District Court stage.

- 7 However, collecting the data required to measure these possible effects accurately would have required, at best, an extended period of time and been difficult and costly. In the case of the ‘continuity effect’ on LAC inputs, the task would have been impossible, because we were asked to evaluate the Scheme retrospectively.
- 8 The potential effects of the Scheme on the resources of the Local Courts and Corrective Services are perhaps more speculative and, in any event, extremely difficult to measure. An intended effect of the Scheme is to increase the number of matters that are dealt with summarily in the Local Court. It may be suggested that most of the additional matters dealt with summarily would be guilty pleas, and therefore that the effect will most often be to substitute a sentence hearing for a committal. But the impact of this would be difficult to assess.
- 9 Our brief indicated that the Government’s expectation was that the Scheme should have resulted in demonstrable cost benefits in the District Court. However, it is one thing to conclude that the Scheme is reducing the number of matters committed for trial to the District Court, and another to estimate what effect this reduction may be having on District Court resources—meaning, of course, ‘Judge time’.



- 10 A number of suggestions can be made about how providing Legal Aid in committals might affect the use of Judge time—
- Matters which otherwise have necessitated a trial before a Judge in the District Court might be resolved by a plea of guilty or be finalised in the Local Court.
  - Trials might, on average, be shortened.
  - Judge time might be more effectively utilised, for example through improvements in listing resulting from a reduction of ‘pleas at the door’.
- 11 The first-nominated effect seems to be the most obvious ‘resource-saving’ effect — but only at first blush. On reflection, there appears to be no reason to suppose that matters (or, at least, many matters) that would otherwise *have ended* in a trial in the District Court would not do so because Legal Aid was provided at an earlier stage of the proceedings. But more to the point, at least for our purposes, were the considerable practical difficulties in detecting this effect and measuring its impact, so early in the life of the Scheme. Comparatively few of the ‘Scheme’ cases committed to the Court and in fact destined for trial would have actually reached that stage when our evaluation was undertaken. Similar objections could be raised about trying to measure either of the other two effects.
- 12 The approach we adopted addresses the policy objectives of the Scheme, and its effect on Court resources, in a very direct way. It rests on the simple proposition that a court’s ‘throughput’ (rate of finalisations per Judge) is as much a function of the number of cases that must be *listed* as trials, as it is a function of the number which must be *tried*. Thus, reducing the number of matters committed for trial to the District Court will have the effect of significantly reducing the Court’s workload, even though matters otherwise committed for trial would in all likelihood have changed to pleas of guilty later in the process. (It may well have other effects tending to increase the efficient utilisation of Judge-time.) The impact on the Court’s workload can be readily translated into an equivalent

‘saving’ of additional resources required to achieve the same effect on the Court’s backlog.

- 13 Our intuitive analysis is that the Scheme also generates offsetting savings in the ODPP, LAC and Police, and its effects on the Local Courts (subject to the comments in paragraph 8) and Corrective Services can most probably be assumed to be cost-neutral. Given that the Scheme can be expected to enhance the quality of justice in other ways, in addition to, eventually, reducing delays in the District Court, an evaluation which demonstrated that providing Legal Aid at committals was at least as efficient a way of reducing the backlog as simply adding Judicial resources would wholly justify the Scheme’s cost.

## **Overview of the criminal court process**

- 14 As this report may be of interest to some readers who are not wholly familiar with the criminal court process, it is desirable to provide a summary description.
- 15 In New South Wales (in common with all jurisdictions in Australia) criminal offences are classified into two types—‘summary’ and ‘indictable’ offences. This classification refers to the procedure by which offences are prosecuted but, fundamentally, it relates to seriousness. The more serious crimes are prosecuted by way of ‘indictment’ in the higher courts (the District and Supreme Court, depending on the offence), and tried by a jury. Minor offences are dealt with by ‘summary process’ in the Local (or Magistrates) Courts.
- 16 There is a sub-category of indictable offences which, in effect, make up an intermediate category. These are offences that can be tried on indictment in a higher court or dealt with summarily in the Local Court. Colloquially these are sometimes called ‘hybrid’ offences, for obvious reasons. In New South Wales, these offences are further

divided into ‘Table 1’ and ‘Table 2’ offences, referring to Schedule 1 of the *Criminal Procedure Act 1986* in which they are listed. Table 1 offences are dealt with summarily unless either the accused or the prosecution elects to proceed by indictment. Table 2 offences are dealt with summarily unless the prosecution elects to proceed by indictment.

- 17 In all cases involving indictable offences which are not dealt with summarily, there is a preliminary hearing—more generally known as a ‘committal’ hearing—before a Magistrate in the Local Court, at which the prosecution case is presented and the defendant may exercise some rights (now strictly defined)<sup>1</sup> to cross-examine prosecution witnesses. If, at the conclusion of the preliminary hearing the Magistrate is satisfied on the case presented that ‘there is a reasonable prospect that a jury would convict the defendant of an indictable offence’, then the Magistrate will commit the defendant to a higher court for trial.<sup>2</sup>
- 18 At this point, the defendant will be given the opportunity to elect to plead either guilty or not guilty to the offence. If the defendant elects to plead guilty at this stage, he or she will be committed ‘for sentence only’ in the higher court, on a specified date. Matters committed for sentence require very little additional preparation, and can be easily scheduled for an early sentence hearing, usually involving a half-day or less. If the defendant elects to plead not guilty or not to plead (‘reserves plea’), he or she will be committed for trial in the higher court. In this event, the prosecution will prepare the case fully for trial, and the case will have to wait for some time before it can be scheduled for a hearing, requiring on average about 5 available Judge days.

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1 *Justices Act 1902* (NSW) s.48E and 41(10).

2 *Justices Act 1902* (NSW) s.41(6)a. If the Magistrate is not of the opinion, ‘having regard to all the evidence before the Justice or Justices, the evidence is capable of satisfying a jury beyond reasonable doubt that the defendant has committed an indictable offence’, then the Magistrate will forthwith order the defendant to be discharged (*Justices Act 1902* s.41(2)). Further proceedings will only be taken if the Director of Public Prosecutions elects to indict the defendant notwithstanding the discharge. This is a relatively rare occurrence.

- 19 Not all committal proceedings end in committal hearings. In some (often by negotiation between the prosecution and defence representatives) the charges may be changed, so that a charge which can be dealt with summarily is substituted for one which must be proceeded with by indictment. Changes of this kind may also affect the defendant's willingness to plead guilty, so that it is not unusual for a committal proceeding to be finalised by a plea of guilty to offences heard in the Local Court.
- 20 When an accused is committed<sup>3</sup> to a higher court, shortly afterwards the prosecution prepares a formal document setting out the charges which the accused must answer. This is the indictment, and the charges may or may not be the same as those on which the accused was committed. The indictment is 'presented' and the accused is 'arraigned' (formally enters a plea) at an arraignment hearing. Some accused committed for trial will elect at this point to enter a plea of guilty but a far greater number wait until the actual day of their trial to change their pleas to guilty. Only about one-third of persons committed for trial actually have their cases tried before a jury.
- 21 Before the introduction of the Scheme, for various reasons the policy evolved generally of not providing Legal Aid to defendants in committal proceedings. Sometimes this meant that the defendant would appear at the committal hearing unrepresented. More often it meant that the defendant's representative would change after the committal, when Legal Aid was granted. In any event, it came to be realised, that the committal process was less effective than it might be. Very few proceedings ended in a discharge. Very few defendants elected to plead guilty at this stage (and most waited until the scheduled day of their trial before doing so). And, it seemed, many defendants were committed to the higher courts who might have been appropriately charged with offences that could have been finalised in the Local Courts.

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3 At the committal stage the alleged offender is known as the 'defendant'. After committal, he or she becomes the 'accused'. The reasons for this bit of legal arcania are not known to us.

- 22 Essentially, the reason the LAC had a policy of not funding committal proceedings was because it was believed that the committal process was not a critical process. And so long as this was the way it was seen within the legal ‘culture’, it was not ever likely to be a critical process. The objective in introducing the Scheme was to change this culture, and to support the committals process as opportunity to finalise, in effect, in the Local Courts a high proportion of cases which previously were committed to the higher courts as trials.

## **Overview of Report**

- 23 Our evaluation uses two independent data sources—
- monthly registrations, disposals, and pending caseload by type at each registry of the District Court from 1997 to 1999;
  - records for each matter referred to the Office of the Director of Public Prosecutions (ODPP) between 1 January 1997 to 31 December 1999 and recorded in the ODPP CASES database.
- 24 The analysis based on the District Court data is reported in chapter 2, and the analysis based on the ODPP data in chapter 3. The District Court data analysis enabled us to establish the primary effects of the Scheme, to estimate the reduction in backlog attributable to the Scheme, and hence to calculate the cost savings attributable to the Scheme. The ODPP data analysis enabled us to estimate the changes attributable to the Scheme in—
- the likelihood of committal to a higher court; and
  - the likelihood of committal for trial given that committal had occurred.

- 25 Using both sources of data, we calculated the estimated reduction in workload and hence the likely reduction in cost savings attributable to the Scheme. Both analyses led to similar conclusions about the effects of the Scheme. This has made us reasonably confident about our assessment, notwithstanding some troublesome features in the available data.
- 26 The estimated cost savings are set out in chapter 4. We conclude that the effect of the Scheme on the District Court's caseload has been equivalent to increasing the judiciary by 2.4—5 Judges. The cost of appointing this many additional Judges would be from \$3.8 million to \$8.0 million.
- 27 Our analysis has not (in accordance with our brief) considered the potential costs of the Scheme on other sectors of the justice system. We were told, informally by a representative of the Local Court, that the Scheme has resulted in a significantly increased workload in the Local Courts. The Scheme was intended to, and has, led to more cases being finally dealt with in the Local Court. The resource implications of this for the Local Court are not entirely clear. It may be desirable to undertake further research to assess the extent to which benefits in the District Court have resulted in additional costs in the Local Courts.



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## The NSW District Court Data

28 In this chapter, we present the results of an analysis which verifies that the Scheme has had the primary effect of increasing the proportion of committals for sentence to the District Court. While the analysis finds a reduction in the number of committals for trial, this reduction cannot be confidently attributed to the Scheme. However further analysis establishes that there has been a reduction in the pending caseload of the District Court which can be attributed to the Scheme.

### **Method**

29 Information on the following was available from the District Court database for each District Court registry—

- number of committals for trial and for sentence registered per month;
- number of committals by type disposed of per month by method of disposal;
- number of committals by type and Local Court appeals, pending per month;
- number of Judge hours sat per month on criminal cases.



30 To assess the primary effect of the Scheme, the number of committals for trial and sentence from the Local Court before the Scheme began were compared with the number after the introduction of the Scheme.<sup>4</sup> As the Scheme was introduced across the State in three stages, the comparison periods for the three registries (or groups of registries) were necessarily different. On the basis of the finding from the ODPP data that cases take about 8 weeks to get to the District Court, the impact of the Scheme may not be fully felt immediately. However, for the purposes of examining changes in the workload going into the District Court, the various comparison periods were—

- Sydney Registry: since the Scheme commenced in April 1998, the periods which were compared were January 1997 to March 1998 and April 1998 to December 1999;
- Sydney West Registry: since the Scheme commenced in February 1999, the periods which were compared were January 1997 to January 1999 and February 1999 to December 1999;
- Country Registries: since the Scheme commenced in July 1999, the periods which were compared were January 1997 to June 1999 and July 1999 to December 1999.

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4 Since these variables were autocorrelated (the value at any one time is highly correlated with the value immediately before it in time) the independence of the observations could not be assumed. In such cases comparisons were made using the median test. The median test assumes that the two groups are measured at the very least on an ordinal scale, and tests the null hypothesis that two independent samples have been drawn from a population with the same central tendency (median). If the assumption of independence was reasonable, comparisons were made using the Mann-Whitney test.

## Results

### *The effect of the Scheme on committals to the District Court*

- 31 Figures 1 to 3 show the overall number of committals per month to the District Court over the period 1997 to 1999. Figure 1 refers to the Sydney Registry, Figure 2 to Sydney West and Figure 3 to Country Registries. A vertical line in the graphs indicates when the Scheme was introduced in each registry.
- 32 When the trend in the number of committals registered per month is examined, there has been no apparent effect of the Scheme. The number of committals registered per month in the Sydney Registry and Country Registries were relatively stable, not changing significantly after the introduction of the Scheme. In Sydney West the committals registered per month declined noticeably before the implementation of the Scheme, from May 1998. A comparison of pre- and post-Scheme periods in this registry indicates that the number of committals being registered declined significantly after the Scheme had been introduced<sup>5</sup>, as had the number of committals for trial.<sup>6</sup> Against the backdrop of an early decline evident from May 1998 in this registry, the decline in the number of committals for trial cannot be directly attributed to the Scheme. It is more likely that other factors occurring at or around May 1998 are at play (although our analysis of pending caseload, presented below, demonstrates that the Scheme has made an independent contribution to reducing the Court's pending caseload).
- 33 When we consider the distribution of committal type, the effect of the Scheme on the mix of committals entering the Sydney Registry becomes clearly evident. As figure 4 shows, the proportion of committals for sentence increased significantly by 7 percentage

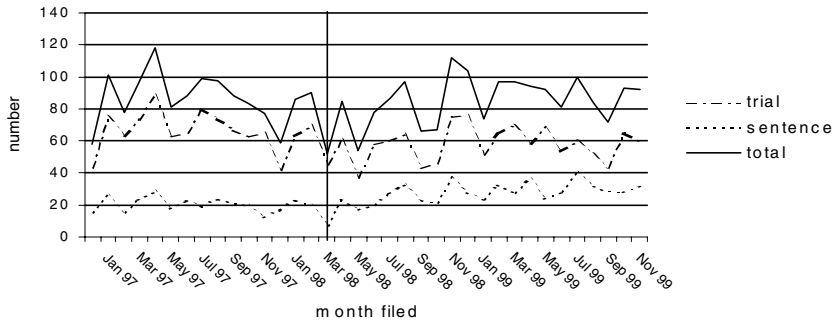
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5  $\chi^2(1)$  5.36, p-value .021; Fisher's exact test p-value .031.

6  $\chi^2(1)$  10.604, p-value .001; Fisher's exact test p-value .003.

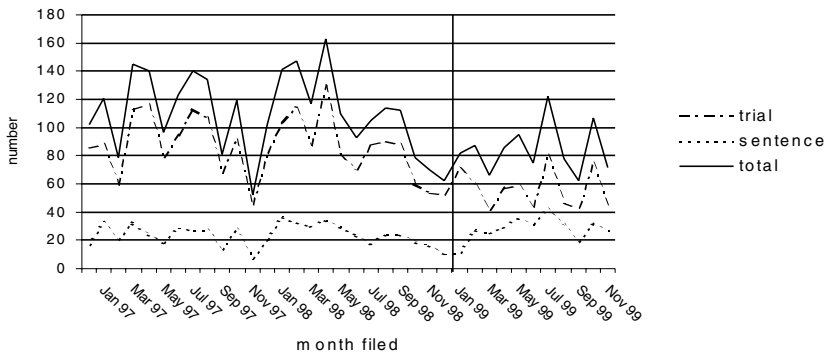
**Figure 1 Nature of committals - frequency**

**Sydney Registry**



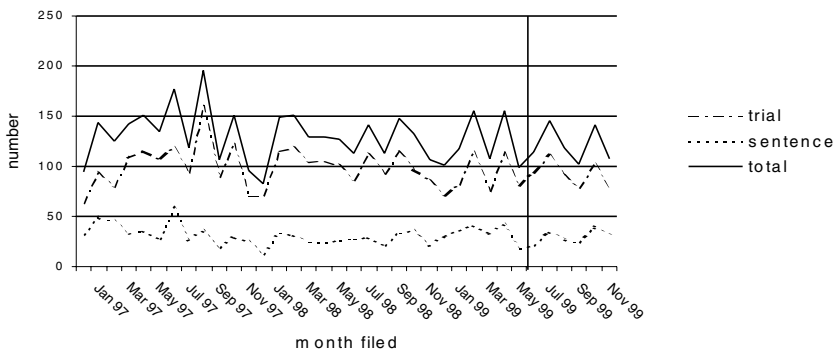
**Figure 2 Nature of committals - frequency**

**Sydney West Registry**

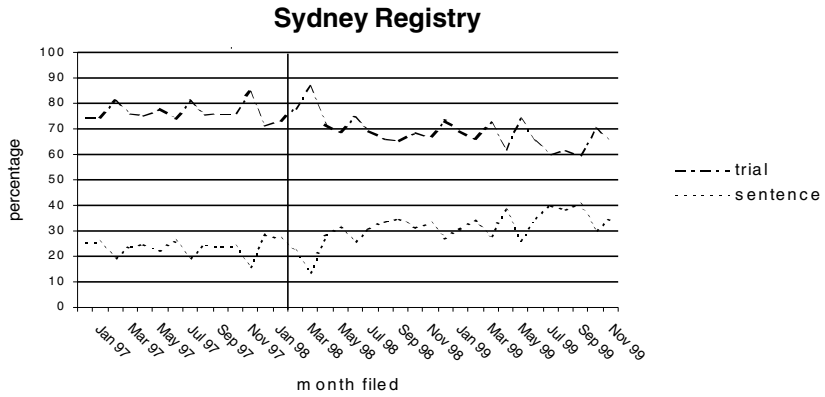


**Figure 3 Nature of committals - frequency**

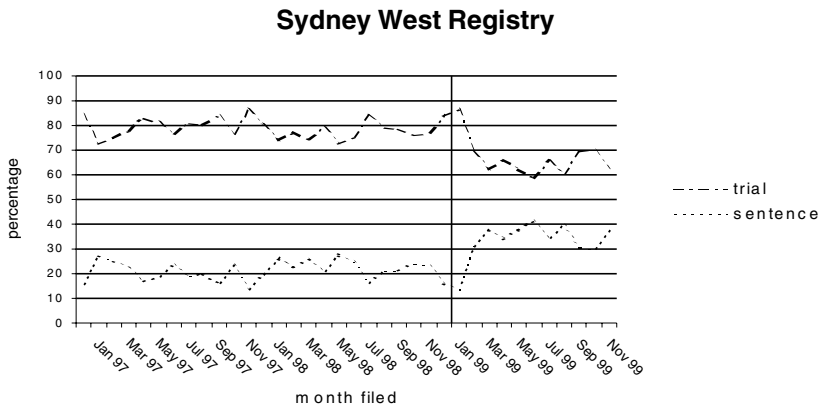
**Country Registries**



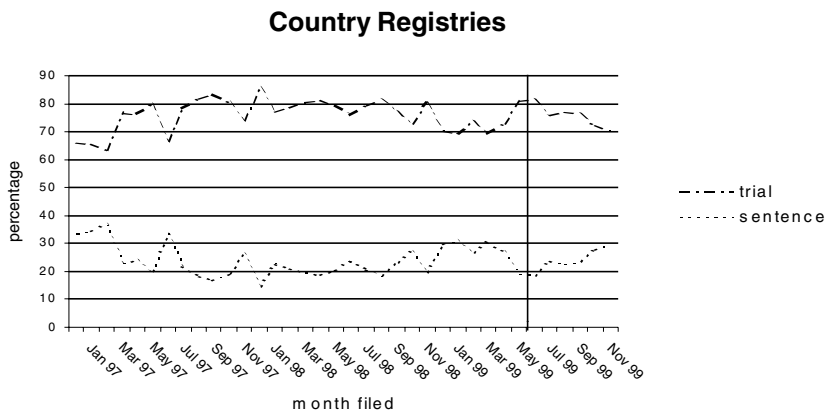
**Figure 4 Nature of committals - percentage**



**Figure 5 Nature of committals - percentage**



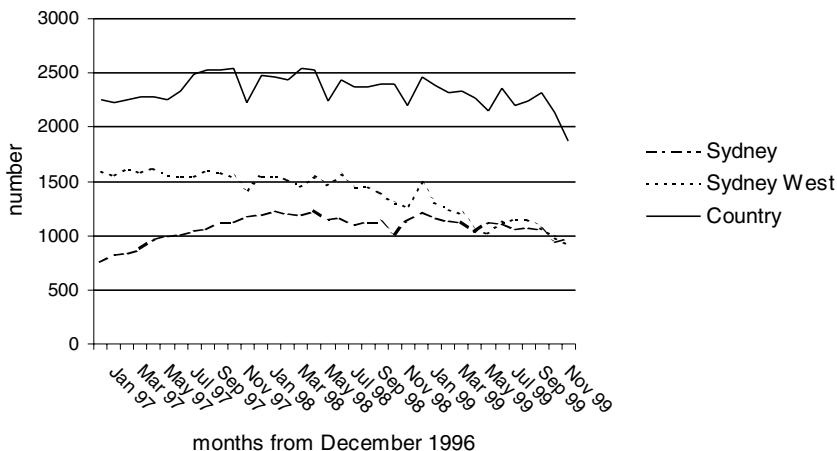
**Figure 6 Nature of committals - percentage**



points, from a median percentage of 24.1% before the Scheme to a median percentage of 31.5% following the Scheme.<sup>7</sup>

- 34 The change in the mix of sentences and trials in Sydney West demonstrates an even stronger effect of the Scheme. As Figure 5 shows, the proportion of committals for sentence increased significantly from a median percentage of 22.4% in the period predating the Scheme to a median percentage of 34.4% in the period following its introduction.<sup>8</sup> This is an increase of 13 percentage points, nearly twice that found in Sydney.
- 35 As is evident in figure 6, the proportion of committals for sentence did not differ significantly in the periods before and after the introduction of the Scheme in the Country Registries. However, the Scheme had only been operating in these registries for the last six months of the period covered by our data.

**Figure 7 Trends in pending caseload (unweighted)**



7  $\chi^2(1)$  19.314, p-value .000; Fisher's exact test p-value .000.

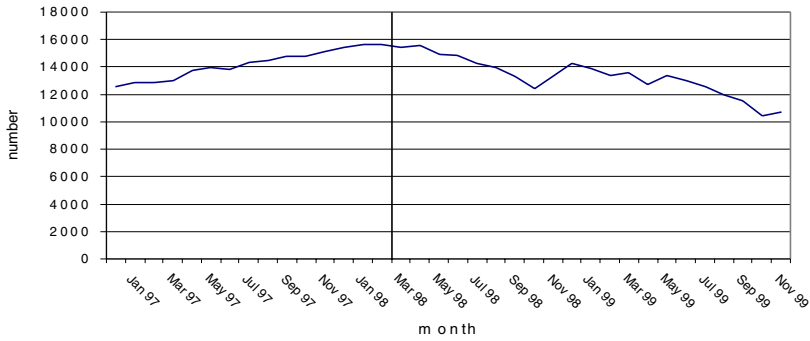
8  $\chi^2(1)$  10.604, p-value .001; Fisher's exact test p-value .003.

*The effect of the Scheme on the pending caseload of the District Court*

- 36 Figure 7 is a graph of the total pending caseload in the Sydney, Sydney West and Country Registries. There is no clear effect of the Scheme evident. Instead, there appears to have been a decline in all three registries from May 1998 (month 16) onwards.
- 37 Analysing the pending caseload as a simple unweighted sum of the number of local court appeals, sentences, and trials, may give a misleading picture of changes in resource demands on the Court. Since different case types pending in the Court's caseload are expected to place different demands on court time, we weighted each pending case type to form a weighted pending caseload. The weights represent the expected court time demanded by each case type for its disposal. The method we used to weight the pending caseload is set out in Appendix A.
- 38 Figures 8–10 graph the number of cases pending, suitably weighted, in the District Court for the three registries. Each unit of the y-axis represents the workload equivalent of one half hour of Court time. A cursory inspection of the three graphs again indicates that there was a downward trend in pending caseload which appears to have started statewide in May 1998 (month 16).
- 39 This statewide reduction, coinciding as it does with the implementation of the Scheme in Sydney, does not mean that the Scheme has had no effect in that registry. The coincidence of timing, however, makes it impossible to isolate the independent contribution of the Scheme in this registry.

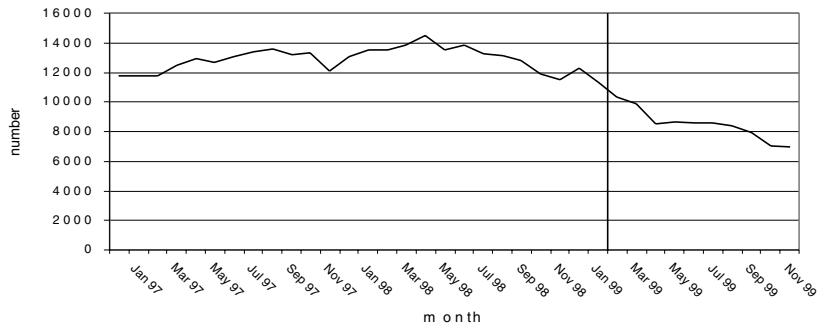
**Figure 8 Pending caseload (weighted)**

**Sydney Registry**



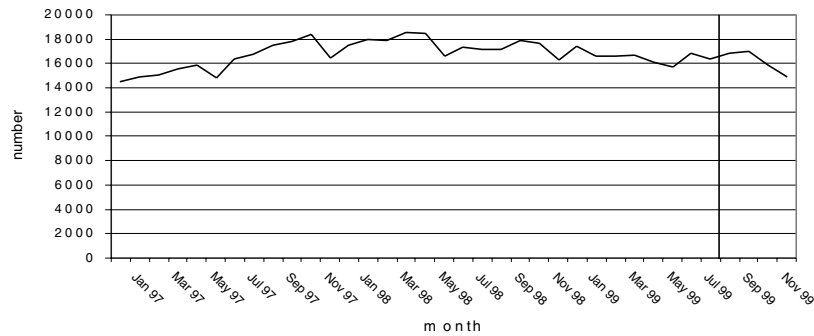
**Figure 9 Pending caseload (weighted)**

**Sydney West Registry**



**Figure 10 Pending caseload (weighted)**

**Country Registries**



- 40 An inspection of the trend in the Country registries (Figure 10) suggests a similar trend—an increase until May 1998,<sup>9</sup> after which there was also a significant decline.<sup>10</sup> Because of the small number of available data points following the introduction of the Scheme in the Country registries we were also unable to isolate any independent contribution of the Scheme to pending caseload reductions in these registries.
- 41 The weighted pending caseload in Sydney West (see Figure 9) shows a similar trend to that in Sydney. There the weighted pending caseload appeared to rise steadily until May 1998,<sup>11</sup> after which it then declined, and continued to do so after the Scheme had been introduced.<sup>12</sup>
- 42 In the case of Sydney West, however, we were able to isolate the independent contribution of the Scheme on reductions in the backlog, by fitting an autoregression model to the pending caseload in that registry.
- 43 By definition pending caseload at the end of any given month is equal to pending caseload at the end of the previous month, plus the inputs<sup>13</sup> minus the outputs<sup>14</sup> during the month, suitably weighted. Hence the series is autoregressive. To determine the contributions of other factors which could potentially explain reductions in pending caseload, a stepwise autoregressive analysis was

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9 Until May 1998, Kendall's rank order correlation  $\tau$  +0.783, p-value .000.

10 After May 1998 Kendall's rank order correlation  $\tau$  -0.432, p-value .008.

11 Before May 1998, Kendall's rank order correlation between time and weighted backlog  $\tau$  +0.617, p-value .001.

12 After May 1998 but before Scheme would have had an effect (March 1999), Kendall's rank order correlation  $\tau$  -0.867, p-value .000; after the Scheme, Kendall's rank order correlation  $\tau$  -0.822, p-value .001.

13 The number of committals (for sentence and trial) and local court appeals registered.

14 The number of committals (for sentence and trial) and local court appeals disposed of.



**Table 1 Autoregressive model predicting pending caseload in Sydney West**

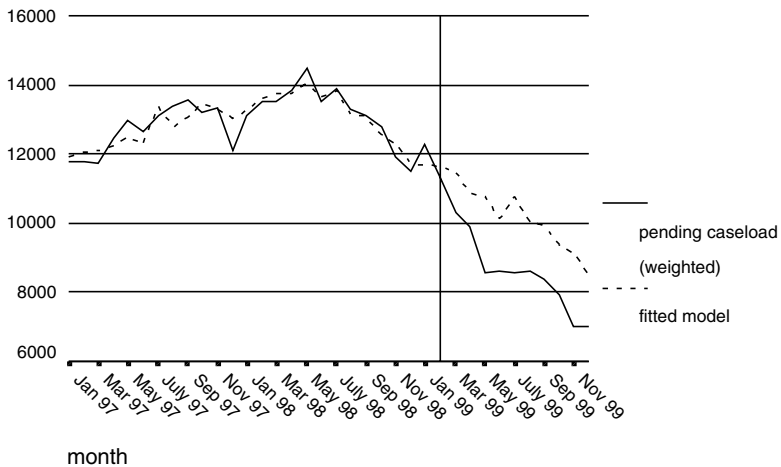
	Coefficient B	Approx p-value
AR1	-0.09	.652
Time (Months)	115.39	.000
May 1998	6998.58	.000
0=before, 1=on/after		
May 1998 x Time	-402.46	.000
Scheme	-1438.49	.001
0=before Mar 1999		
1=on/after Mar 1999		
Hours sat in court	1.02	.011
Seasonal component	784.12	.020
1=Jan or July		
0=other months		
Constant	10896.52	.000

Std Error = 413.10

AIC = 543.88

SBC = 556.54

**Figure 11 Pending caseload (weighted)  
Sydney West Registry**



undertaken. This analysis used the following variables: Scheme,<sup>15</sup> an intervention variable to model the May 1998 downturn, number of judge hours sat in criminal cases, and a six monthly seasonal component reflecting the reduced activity of the Court in January and July each year.

- 44 As shown in Table 1, the Scheme was found to contribute significantly to reducing weighted pending caseload. This was in addition to and independent of the "May 1998 variable".<sup>16</sup> Other significant predictors were the seasonal component<sup>17</sup> and the number of hours judges spent in Court on criminal cases.<sup>18</sup>
- 45 The model generated by the autoregression analysis can be used to provide an estimate of the reduction in pending caseload in Sydney West that is contributed by the Scheme alone. Figure 11 shows the pending caseload and the projected pending caseload, had the Scheme not been implemented (fitted model). A comparison of the fitted model to the actual pending caseload provides a means of calculating the independent contribution the Scheme made in reducing the Court's pending caseload. On the basis of this comparison, the effect of the Scheme has been to increase the throughput in the Sydney West registry by 12% over one year of implementing the Scheme. Detailed calculations are presented in Appendix B.

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15 Expressed as a dichotomous variable, with 0 being the period before the Scheme, and 1 being the period after the Scheme. On the basis of the finding from the ODPP data that cases take about 8 weeks to get to the District Court, this meant that the Scheme was factored in the Sydney West registry from the end of March 1999 onwards.

16 B -1438.49, p-value .0007.

17 As one would expect, this is a positive coefficient. Months of January and July, when the Court is in 'recess', see an increase in pending caseload.

18 The positive coefficient between number of hours sat and pending caseload suggests an increase in judge hours alongside increases in pending caseload.

- 46 This is a conservative estimate for various reasons. In assigning weights to committals for trial, median trial lengths were used as the expected time required to dispose of full hearings. As a measure of central tendency, the median represents the point that divides the distribution in half. Unlike the average, this statistic is unaffected by extreme scores and so is a conservative indicator of the expected court time required to dispose of committals for trial. Secondly the weights assigned to committals for trial were derived using the probabilities of the final resolution method (e.g. sentence or trial) and the estimated time required for that resolution type. This assumes both full utilisation of court time by maximum overlisting, and that a matter, listed as a trial but resolved as a sentence, uses only the time required to dispose of a matter listed for sentences only.
- 47 This analysis is predicated on the assumption that court productivity remains relatively constant throughout the relevant period. Court productivity is defined as the rate that cases, weighted accordingly, were disposed of per hour each month. As can be seen in Appendix C, court productivity in all three registries in effect remained relatively constant throughout the period of our analysis.
- 48 Our comments on extrapolating the Sydney-West result to other registries are set out in the conclusion of this report.

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## The CASES Database —

### Office of the Director of Public Prosecutions

- 49 The analyses of the District Court data show reductions in the proportion of committals for trial and in the pending caseload across the three regions. These changes in Sydney and Sydney West are consistent with the primary objective of the Scheme viz to reduce the number of committals to a higher court, to increase the number of matters finalised at the Local Court and to reduce the proportion of committals which are for trial. However, the changes in Sydney in the second half of 1998 after introduction of the Scheme were paralleled by similar changes in Sydney West where the Scheme had not been introduced. This raises a question of attribution. What else happened which affected Sydney West? Should the changes in Sydney not be attributed to the Scheme but to other factors such as the nature of offences charged and police clear-up rates?
- 50 The District Court data had a serious deficiency for the purposes of this study. In any month, the registrations at a given District Court are a mix of matters that began at different times and at different Local Courts. Registrations which were processed under the Scheme have not been identified. We were able to overcome this problem (more or less) by using data from the Office of the Director of Public Prosecutions.
- 51 The Directorate's CASES database covers all potentially indictable matters. With these data, we could track matters through the legal process from the start of committal to finalisation either at the Local Court or at a higher Court. The important feature for this study is that these data allowed us to identify (reasonably precisely) individual matters processed under the Scheme. As well, we can identify

features of each matter which may affect its progress through the Courts. In particular, the database provides details of charges, applications for bail, hearings and other proceedings for each case.

52 In this chapter, we describe the data source and report the results of our analysis of data from the CASES database as follows—

- The dataset – source, sampling, variables and description;
- Results 1 – the committal process;
- Results 2 – explanatory variables of committal outcome;
- Results 3 – statistical models for the pre-Scheme period and for the period when the Scheme was only operating in the inner metropolitan area of Sydney;
- Results 4 – estimates of the impact of the Scheme on outcomes from the committal process.

### **The dataset — source, sampling, variables and description**

53 We begin by describing the CASES database and the sample selected from the database. Sampling was necessary because of time constraints as considerable work was entailed in deriving the values of the variables for each matter and in identifying duplicate and incomplete matters.

#### *The source*

54 The database covers all cases referred to the ODPP. Each CASES record is referred to as a “matter”. A matter is the ODPP electronic record arising out of an individual Police investigation that has concluded with the Police determining that criminal proceedings should be commenced. Some matters are opened as a result of police referral for advice, but most are opened when the committal procedure commences at the Local Court by the charging of an accused person or persons. There may be more than one defendant

per matter and more than one charge per matter. The database is updated every time something happens. It includes essentially all indictable matters before the Courts, both those dealt with summarily and those committed to the District or Supreme Courts.

55 There are 6 types of entries — charge, event, listing, result, state and venue. Each entry is dated. Examples for each of these categories are —

- *Charge*: the type of charge e.g. ‘dangerous driving occasioning death’, the number of charges of a given kind, the manner by which the charge has been inactivated;
- *Event*: the execution of warrants, lodging of an appeal, changing the grounds of an appeal, finding a bill, changing venue, and actions taken by the Crown Prosecutor or the defence in relation to determining no further proceedings etc, cloning of a matter with more than one defendant when legal procedures differ for the defendants, merging (reversal of cloning), closure;
- *Listing*: for trial, arraignment, sentence, interlocutory hearings, call-over etc;
- *Result*: of hearings, applications for bail, appeals;
- *State*: where the matter is in the legal process e.g. Local Court committal, committed for sentence to the District Court;
- *Venue*: where events occur and in particular where committals occur and results are given.

56 We were provided with most of the details of all indictable matters entered between 1 January 1997 and 31 December 1999. The files were downloaded in late March 2000, the cut-off date being 15 March.

### *Selection of the sample*

57 Because of the time required for extracting relevant information, we selected a sample from the original data.

58 Matters before the Children’s Court or St James Court (Commonwealth matters), and matters transferred to the Drug Court were excluded, as were matters entered on the database before 1 June 1997 or after 30 November 1999. A systematic 1 in 3 sample was selected by arranging the remaining records in order of matter number and taking every third matter. Matters were deleted from the selected records if they—

- had been entered in error;
- were duplicates of other cases;
- had been merged with or cloned from other matters at the committal stage;
- had ended at the police advice stage;
- had a first Court appearance before 1 June 1997 or after 30 November 2000.

### *The variables measured*

59 For the sampled matters, we recorded details of the committal or Local Court stage and, if applicable, details of the higher Court stage. These included date and place of committal, date, place and nature of disposal, charges, listing for s.48E hearing (requesting attendance of a witness in person at the committal hearing), application for bail and its outcome. For matters committed for trial to the District Court, we recorded whether a plea was entered and whether or not the plea was entered before or after listing for trial.

60 To test whether the Scheme made a difference, the matters were grouped into regions and time periods. This was necessary because of the staging of the Scheme and because of experimental policing strategies which were implemented in different regions.

61 The regions represent the “catchment” areas for the Sydney, Sydney West and Country registries of the District Court. These do not define fully discrete catchments because a Local Court does not always commit to the same District Court and because the Local

Court in which proceedings are finalised is not always the one in which they began. But there is a very high probability that a matter which starts in a Local Court of a given registry will be committed to a Court under that registry.

- 62 The time periods indicate when a matter began in relation to the stages of the Scheme. Period 1 is from 1 June 1997 to 31 March 1998, (pre-Scheme), period 2 from 1 April 1998 to 31 January 1999, (the pilot period in Sydney), and period 3 from 1 February 1999 to 30 November 1999, (extension to Sydney West and some Country regions). Each period is of ten months duration and was defined in this way because the time between the introduction of the Scheme in Sydney and its introduction in Sydney West was 10 months.
- 63 A matter was classified as a Scheme matter if it was processed at a ‘central’ Local Court during a period when the Scheme was in operation. This centralisation of matters under *the Scheme* at a small number of Courts was necessary for the effective operation of the Scheme. The Sydney region central Courts were the Central Local Court and the Downing Centre Local Court. The Sydney West region central Courts were Burwood and Penrith Local Courts, The Country central Courts were the Lismore, Newcastle, Wagga and Wollongong Local Courts. But matters may have moved between courts. Hence —
- For matters which had finished the committal stage, Scheme membership was determined by the Local Court where the committal process was finalised and whether the first court appearance had occurred in a relevant time period. If the final court was one of the ‘central’ courts for the given region, then it was defined as having come under the Scheme.
  - For matters which had not completed the committal stage, *Scheme* membership was determined by the Local Court where the committal stage began. If a matter began in a ‘central’ court during an appropriate time period and was still in the Local Court stage, it was defined as a Scheme matter.



- 64 This definition does not take into account the means test requirement because we did not have any information about an offender’s means. The definition above which depends only on venue and starting time is inclusive. It is assumed that only a small proportion of matters were not covered by Legal Aid.
- 65 It also does not apply to Sydney in the pilot period, for when the Scheme was first introduced in Sydney, only matters listed initially at the inner metropolitan Local Courts were eligible for *the Scheme*. This means that in the pilot period, matters commencing at Manly and Hornsby Local Courts were ineligible for legal aid.
- 66 Operational definitions for region, period and Scheme are given in Appendix D.
- 67 The disposal type for the committal stage was classified as follows—
- Committed for trial
    - (i) to the Supreme Court
    - (ii) to the District Court
  - Committed for sentence
    - (iii) to the Supreme Court
    - (iv) to the District Court
  - Summarily dealt with
    - (v) by hearing
    - (vi) by plea
    - (vii) by dismissal
  - Discontinued because
    - (viii) accused deceased
    - (ix) case discontinued or withdrawn
    - (x) no further proceedings
    - (xi) case returned to police for prosecution
  - Discontinued for time being
    - (xii) bench warrant issued<sup>19</sup>

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19 In Court statistics, issuing of a bench warrant is treated as a disposal.

*Description of the sample*

68 The number of matters coded was 2506. Of these, 30 (1.2%) were excluded leaving a sample of size 2476. Fourteen deletions were made because the matter had been merged with or cloned from another matter—9 came from the police for advice and were returned, 5 were duplicates, 1 was out of range and 1 had been entered in error. The number of matters for each region in each time period classified by *Scheme* is given in Table 2.

**Table 2 Description of the sample**

<b>Region</b>	<b>Period 1</b>	<b>Period 2</b>	<b>Period 3</b>	<b>All</b>
<b>Sydney</b>				
Scheme		115	150	265
not Scheme	251	37	15	303
total	251	152	165	568
<b>Sydney West</b>				
Scheme			126	126
not Scheme	359	288	122	769
total	359	288	248	895
<b>Country</b>				
Scheme			28	28
not Scheme	389	331	265	985
total	389	331	293	1013
<b>All</b>				
Scheme		115	304	419
not Scheme	999	656	402	2057
total	999	771	706	2476

- 69 One hundred and sixty-four matters had not completed the committal stage by the date in mid March when the data was downloaded—one from period 1, 12 from period 2 and 151 from period 3. In period 3, the percentage not finalised differed by region—25% in Sydney and Sydney West and 17% in Country.
- 70 Of the 2312 matters which had completed the committal stage, 468 were processed under *the Scheme*. Of the 164 unfinished matters, *the Scheme* status of 26 was well defined either because the matter began out of a relevant time period or because the venue for the committal hearing was known. The remaining 138 matters were classified according to the first Local Court where committal proceedings began. This introduces a potential bias although not as substantial as may first appear. We calculate that the misclassification rate is 0.5% in Sydney, 1% in Sydney West and 0.5% in Country. Details are given in Appendix D.

## **Results 1 — the committal process**

- 71 In this section, we answer four questions—
- Did the number of indictable matters before the Courts change over time?
  - Before the introduction of *the Scheme* in Sydney, were there differences between regions with respect to the distribution of results from the committal stage?
  - Did the distribution of outcomes from the committal Scheme change in Sydney from period 1 to period 2?
  - Did the distributions of outcomes in the two periods in Sydney differ from the distributions in the other regions?

72 Disposal types from the committal stage were grouped into 3 categories as follows —

- *Trial*: committal for trial to a higher Court.
- *Sentence*: committal for sentence to a higher Court.
- *Local Court*: dealt with summarily or discontinued or bench warrant issued.

*Did the number of indictable matters before the courts change over time?*

73 Since the sample was a 1 in 3 systematic sample, population estimates of the numbers of registrations in each region and period were found by multiplying the sample numbers by 3. The estimated numbers of registrations by region and period are given in Table 3.

**Table 3** Description of the population

Region	Sydney	Sydney West	Country	All
Period 1	753	1077	1167	2997
Period 2	456	864	993	2313
Period 3	495	744	879	2118
Total	1704	2685	3039	7428

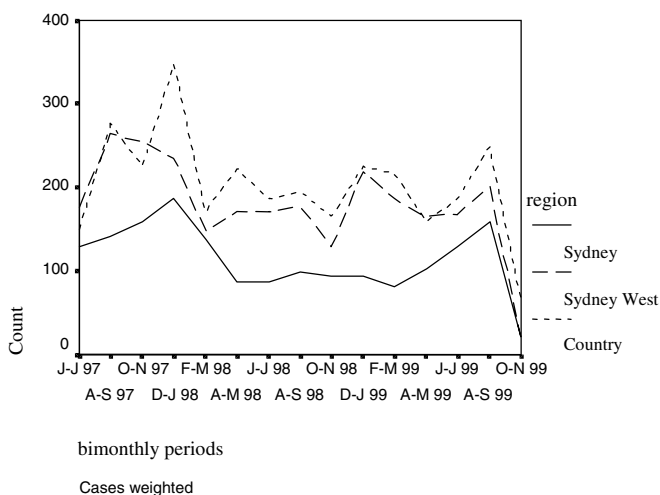
74 In each region, there was a decrease in the number of matters entered in the CASES database from period 1 to period 3. The overall decrease was 29% with higher decreases in the two metropolitan regions than in the country region (Sydney 34%, Sydney West 31% and Country 25%).

75 This is illustrated in Figure 12, which shows the number of matters by date of registration with dates grouped in bi-monthly intervals. The graph shows that the decline occurred in each region at about the

same time viz in February/March 1998. (The sharp decline at the end of 1999 did not continue. In December 1999, the estimated number of registrations was 261.)

- 76 The significance of this is that the decline in the number of indictable offences leads to a decline in the number of registrations at the District Court. This is consistent with the observed changes in pending caseload in the Court statistical series discussed in Chapter 2. These changes cannot be attributed to the introduction of the Scheme. Other factors have been at play reducing the number of matters before the Courts. A likely factor would be new policing strategies introduced at the beginning of 1998.<sup>20</sup> However most of these initiatives began in the first half of 1998 and hence were too close in time to the observed changes to explain fully the reduction. Further investigation is required to explain adequately the substantial drop in the number of indictable matters in 1998.

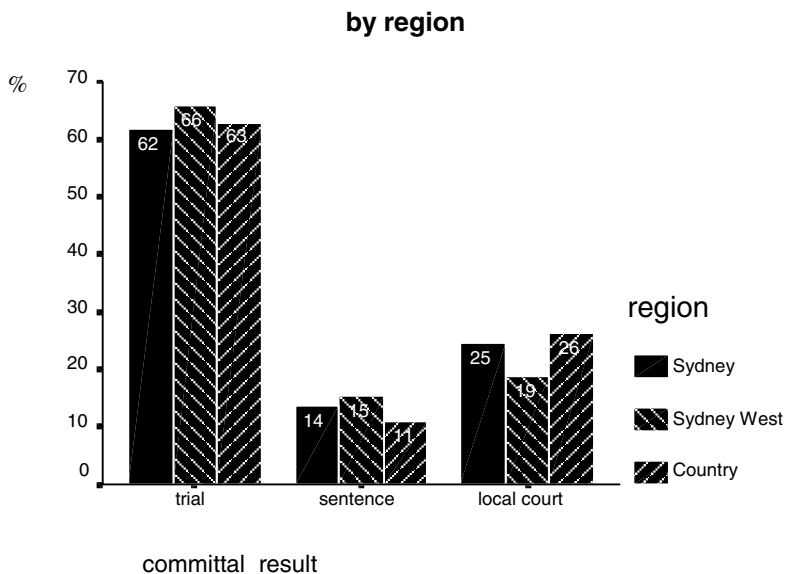
**Figure 12 Number of indictable matters**



*Before the introduction of the Scheme in Sydney, were there differences between regions with respect to the distribution of results from the committal stage?*

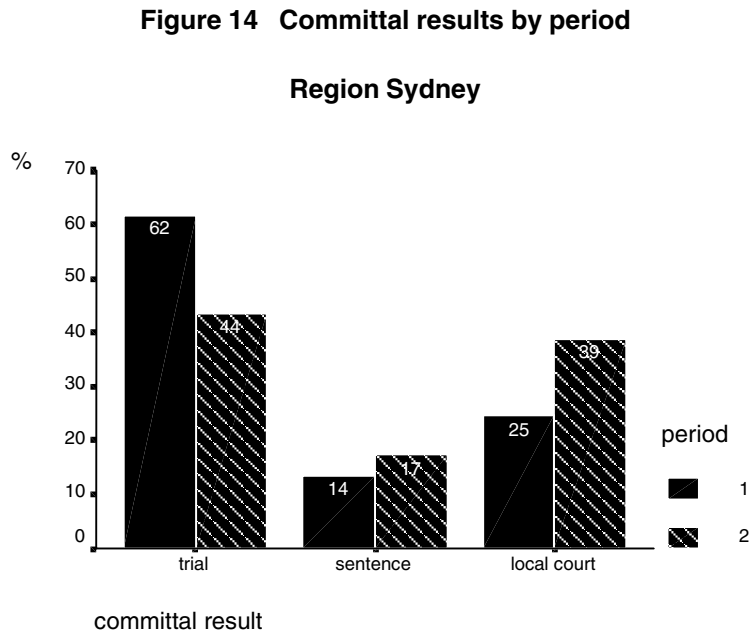
- 77 Data from period 1, the period from 1 June 1997 to 31 March 1998, provides a baseline for comparing the impact of the Scheme in the different regions. Figure 13 shows the percentage of different committal outcomes by region for this period. (One unfinished matter was excluded.)
- 78 Similar profiles were found in each region. The percentage of matters committed for trial to a higher Court was 64% overall — 62% in Sydney, 66% Sydney West and 63% Country. The percentage of matters committed for sentence to a higher Court was 13% overall — 14% in Sydney, 15% Sydney West and 11% Country. The percentage of matters not committed to a higher Court was 23% overall — 25% in Sydney, 19% Sydney West and 26% Country. This means that before the introduction of the Scheme, regional differences were slight.

**Figure 13 Committal results period 1**



*Did the distributions of outcomes from the committal Scheme change in Sydney from period 1 to period 2?*

79 Since the pilot Scheme commenced in Sydney at the start of period 2, we compared the outcomes for Sydney for the two periods. See Figure 14. The percentage of committals for trial decreased from 62% in period 1 to 44% in period 2. The percentage of committals for sentence increased from 14% to 17% and the percentage of matters finalised at the Local Court increased from 25% to 39%.<sup>21</sup>



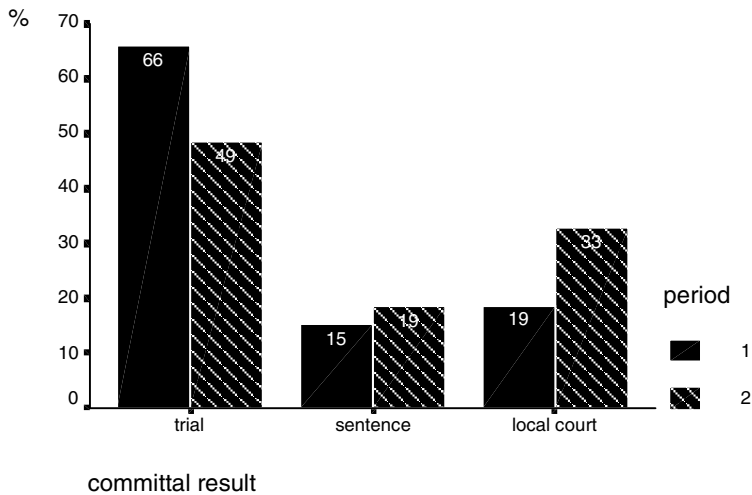
21  $\chi^2$  12.8, p-value 0.002

*Did the distributions of outcomes in the two periods in Sydney differ from the distributions in the other regions?*

80 There was a similar pattern in Sydney West (cf Figure 15) where the significant percentage of committals for trial decreased from 66% to 49%, the percentage of committals for sentence increased from 15% to 19% and the percentage of matters finalised in the Local Court increased from 19% to 33%.<sup>22</sup> In the Country region, the difference between periods was not significant (cf Figure 16).<sup>23</sup>

**Figure 15 Committal results by period**

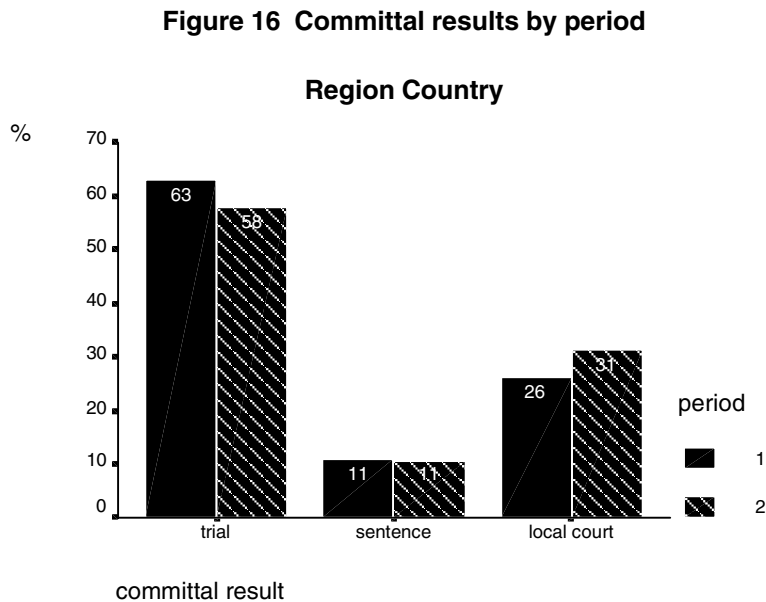
**Region Sydney West**



22  $\chi^2$  21.7, p-value 0.000

23  $\chi^2$  2.33, p-value 0.312





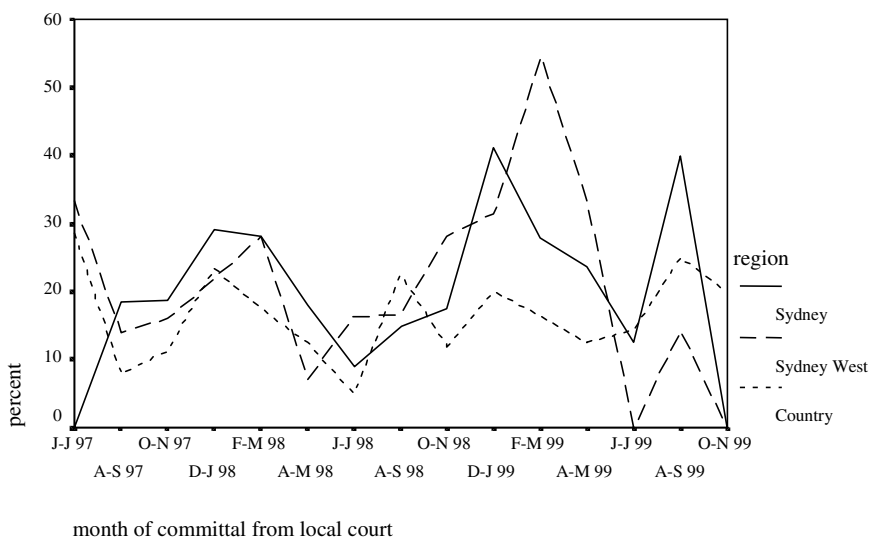
- 81 A more detailed analysis by month of completion at the Local Court is illustrated in Figure 17. This shows the percentage of committals for sentence by period of filing (periods each of two months).<sup>24</sup> We note the strong similarity between the graphs for Sydney and Sydney West where there appears to have been an increase in the percentage of committals for sentence from mid 1998 even though the Scheme was not introduced in Sydney West until early in 1999.

<sup>24</sup> This data does not provide reliable estimates of the number of monthly registrations in the District Court for each of the regions, because the data does not include matters which began before 1 June 1997. The median time for finalisation of matters at the Local Court differs according to outcome.

*Summary*

- 82 These results match the data from the Courts. In particular, we note that the percentage of committals for sentence shows similar increases in both Sydney and Sydney West from the time of the intervention in Sydney. The analysis has also shown a decrease in the overall committal rate in both Sydney and Sydney West.
- 83 Because the nature of the changes in committal outcomes observed in Sydney after the introduction of the Scheme was not unique to Sydney (compare with the outcomes in Sydney West during the same period), we cannot at this point conclude with certainty that the outcomes in Sydney were due to the introduction of the Scheme. There must be other reasons for the changes occurring in the number and mix of committals to the District Court apart from the introduction of the Scheme.

**Figure 17 Percentage of committals for sentence**



## **Results 2 — explanatory variables of committal outcome**

- 84 What other reasons are there for the observed changes in the number and mix of new registrations at the District Court and therefore in the Court's pending caseload? We suggest the following —
- a decrease in the number of indictable offences;
  - a change in the mix of charges;
  - a change in the percentage of offenders held in custody;
  - a change in the percentage of matters in which the evidence is tested by cross examination of a witness.
- 85 We know that there was a reduction in the number of indictable offences (cf Figure 12) but not why this occurred. By definition, this change must have resulted from factors external to the Court system. The Scheme itself directly affects the committal process, a component of the Court system. Certainly, though, the overall reduction in indictable matters in the early part of 1998 is the likely explanation of the statewide reduction in pending caseload in mid 1998.
- 86 The mix of charges will only affect the number and mix of committals if the proportion of committals for trial and the proportion of committals for sentence are related to the type of offence. To test this hypothesis, we investigated whether different types of charges have different rates of committal. Charges were classified by nature and severity into 13 categories based on the broad classification used by the Bureau of Crime Statistics. For severity we used whether or not the offence was a "table" offence. We know that in the case of "table" offences, the prosecutor and/or defendant may elect to have a "table" offence heard in the Local Court. Hence an increase in the incidence of "table" offences may increase the number of matters resolved in the Local Court i.e. reduce the percentage of committals.

- 87 A similar argument applies to changes in the number of offenders held in custody. It is known from Court statistics that offenders in custody are more likely to be committed for trial than those not in custody. Therefore, if the percentage of matters for which the offender or offenders are held in custody decreases, there will be a decrease in the number of committals for trial, at least initially.
- 88 Why do we postulate that matters for which a witness is brought in for cross examination are likely to have a different committal rate than other matters? We suggest that it indicates a potential weakness in the prosecution case and hence that there is a greater probability that the matter will not be committed.
- 89 In the remainder of this section we present the evidence from periods 1 and 2 about the incidence and rate of committal for different charge types, “table” offences, bail applications and applications for s.48E hearings ie. for cross examination of a witness.

### *Charges*

- 90 Charges were classified by nature and severity. To classify nature, 13 categories were used. Each matter could have more than one charge and sometimes the charge records were duplicated. Some charges were withdrawn. Usually, the withdrawn charges had been replaced with charges of the same type. A matter was said to have a charge of a given type if there was at least one charge of that type listed against the matter and the charge had not been withdrawn. The incidence of these charges for all the data and the distribution of committal outcomes for each charge type in periods 1 & 2 are reported in Table 4.

**Table 4 Charge types: incidence and Committal outcomes for periods 1&2**

	Frequency n	Incidence %	Trial %	Sentence %	Local Court %
<b>Period 1</b>					
1 Homicide	64	6.4	80	8	12
2 Assault	265	26.5	68	6	26
3 Sexual offences	278	27.8	70	9	21
4 Abduction & kidnapping	32	3.2	78	3	19
5 Robbery	142	14.2	63	21	16
6 Theft	337	33.7	61	20	19
7 Demanding money with menaces	26	2.6	54	15	31
8 Extortion or blackmail	2	0.2			
9 Arson	0	0.0			
10 Malicious damage to property	45	4.5	64	0	36
11 Drug offences	158	15.8	65	16	19
12 Offensive behaviour	208	20.8	62	7	31
13 Driving offences	63	6.3	75	5	21
All completed matters	999		64	13	23
<b>Period 2</b>					
1 Homicide	20	2.6	74	16	11
2 Assault	195	25.3	50	13	36
3 Sexual offences	173	22.5	64	5	31
4 Abduction & kidnapping	22	2.9	68	5	27
5 Robbery	189	24.5	50	27	23
6 Theft	252	32.7	43	17	39
7 Demanding money with menaces	10	1.3	60	10	30
8 Extortion or blackmail	2	0.3			
9 Arson	0	0.0			
10 Malicious damage to property	38	4.9	50	3	47
11 Drug offences	120	15.6	57	16	25
12 Offensive behaviour	159	20.6	41	15	44
13 Driving offences	56	7.3	54	13	34
All completed matters	771		52	15	33

- 91 Over the two periods, the most commonly occurring charge type was theft (type 6) (33%) followed by assault (type 2) (26%) and sexual offences (type 3) (23%).
- 92 In a majority of matters, only one charge type had been recorded. The percentage of single charge type or ‘simple’ matters in the Country was significantly higher than in the two metropolitan regions — 67% in Country, 57% in Sydney and 53% in Sydney West. The Country region differed from the metropolitan regions in each time period, and there were no significant differences between time periods within regions.
- 93 In period 1, the percentage of committals for trial ranged from 54% to 80%, the overall value being 64%, and the percentage of committals disposed of at the Local Court ranged from 12% to 36%, the overall value being 23%. In period 2, the percentage of committals for trial ranged from 41% to 74%, the overall value being 52%, and the percentage of committals disposed of at the Local Court ranged from 11% to 47%, the overall value being 33%.
- 94 The mix of charges differed between regions and periods, between periods within regions and between regions within periods—
- In *Sydney*, the incidence of homicide, abduction & kidnapping and robbery differed between periods. The largest difference was for robbery (17% in period 1 to 28% in period 2).
  - In *Sydney West*, the incidence of homicide, assault, abduction & kidnapping, robbery and demanding money with menaces differed between periods. The largest differences were for sexual offences (26% in period 1 to 18% in period 2) and robbery (17% in period 1 to 30% in period 2).
  - In *Country*, the incidence of robbery increased from 10% in period 1 to 18% in period 2.
  - In *period 1*, the incidence of sexual offences, robbery, theft, demanding money with menaces, drug offences and driving offences differed between regions. In the case of sexual

offences, the incidence was higher in the Country than in the metropolitan regions. In the case of all other offences, this pattern was reversed.

- In *period 2*, the incidence of sexual offences, robbery, theft, drug offences, offensive behaviour and driving offences differed significantly between regions, the differences being similar to those in period 1.

95 The distribution of Committal outcomes for individual charge types differed between charge types. Details are given in Table 5. We found in the Sydney region that for assault, sexual offences, robbery and offensive behaviour the percentage of committals for trial had declined sharply from period 1 to period 2. However, similar changes also occurred in Sydney West in the case of assault, theft, drug offences and offensive behaviour. There were no significant changes in the Country region. Changes were expected in the Sydney region because of the introduction of the pilot Scheme ahead of its introduction in Sydney West and Country. But the changes in Sydney West were not expected.

**Table 5 Percentage of Committals for trial for selected<sup>1</sup> charges periods 1 & 2**

period	Sydney		Sydney West	
	1	2	1	2
2 Assault	67%	38%	68%	42%
3 Sexual Offences	66%	38%		
5 Robbery	78%	38%		
6 Theft	57%	40%	61%	38%
11 Drug offences	74%	46%		
12 Offensive behaviour	62%	37%	65%	41%
All completed matters	62%	44%	66%	49%

1 Only the results for charges which show a significant difference in the percentage of matters committed for trial from period 1 to period 2 are recorded.

- 96 This means that we must take into account charge mix if we are to isolate the effect of the Scheme. For example, one of the contributing factors to the decrease in the percentage of committals for trial in Sydney and Sydney West from period 1 to period 2 could be the increased incidence of charges for robbery. Similarly the higher percentage of committals for trial in the Country region may be associated with the higher incidence of sexual offences which have a higher trial rate than most other charge types.

*“Table” offences*

- 97 There are two kinds of “table” offences.<sup>25</sup> In the case of “Table 1” offences, the defendant maintains the right to trial by jury but may elect to have their case dealt with summarily if the prosecution also agrees. “Table 2” offences differ from “Table 1” offences in that the offence is dealt with summarily unless the prosecution elects to deal with it on indictment. It appears that the percentage of matters disposed of at the Local Court may be related to the incidence of “Table 1” and “Table 2” offences.
- 98 The incidence of “Table 1” and “Table2” offences are given in Table 6 and the Local Court disposal rates in Table 7. Both incidence and Local Court rate differed between periods and regions. In each type of “table” offence, incidence increased significantly from period 1 to period 2, but the observed differences between regions were not statistically significant. Similarly, there was a significant increase in the Local Court disposal rate but the regional differences were not statistically significant. These results suggest that the reduction in the overall committal rate in each region is in part explained by an increase in the incidence of “table” offences and by an increase in the likelihood of such offences being finalised at the Local Court. Because these changes occurred in each region, we postulate that the size of this effect is approximately the same as the reduction observed in the Country region.

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<sup>25</sup> Criminal Procedure Act NSW 1986 Schedule 1



**Table 6 Incidence of “Table 1” and “Table 2” offences**

period	Sydney		Sydney West		Country	
	1	2	1	2	1	2
“Table 1”	7%	23%	5%	30%	6%	30%
“Table 2”	6%	22%	4%	27%	4%	25%
“Table 1” or “Table 2”	11%	38%	8%	47%	9%	43%
Only “Table 1” or “Table 2”	0%	8%	0%	9%	0%	11%

**Table 7 Percentage of Local Court disposals for “Table 1” and “Table 2” offences**

period	1	2
“Table 1”	13%	33%
“Table 2”	14%	42%
“Table 1” or “Table 2”	14%	39%
Only “Table 1” or “Table 2”	N/A	51%

*Bail matters*

99 From the CASES database, we could only determine whether one or more bail applications had been made in each matter. This told us that the defendant had been in custody at some stage. The defendants in matters without a bail application may or may not have been in custody. The bail variable does not identify all matters in which the defendants were in custody. Nevertheless it proved to be a useful explanatory variable.<sup>26</sup>

100 In Table 8, we present for each region the incidence and Local Court outcomes for bail matters and in Table 9, the same information for non bail matters.

26 Information about custody at the start of the committal stage is kept on the CASES database, but was not downloaded, its significance being appreciated too late in the study.

**Table 8 Incidence and Local Court outcomes for bail matters**

period	Sydney		Sydney West		Country	
	1	2	1	2	1	2
Trial	74%	55%	84%	74%	83%	73%
Sentence	10%	15%	9%	9%	9%	5%
Local Court	16%	30%	7%	17%	8%	23%
number	58	20	85	23	53	25
incidence	23%	13%	24%	8%	14%	8%

**Table 9 Incidence and Local Court outcomes for non bail matters**

period	Sydney		Sydney West		Country	
	1	2	1	2	1	2
Trial	58%	42%	61%	46%	60%	57%
Sentence	15%	18%	17%	20%	11%	11%
Local Court	28%	40%	22%	34%	29%	32%
number	193	132	274	265	336	306
incidence	77%	87%	76%	92%	86%	92%

101 We note that the metropolitan regions differ from the Country in period 1 with higher incidences of bail matters. In period 2, the incidence of bail matters does not vary between regions.

102 The distributions of Local Court outcomes differ between bail and non bail matters. In each region, the percentage of committals for trial is higher for bail matters than for non bail matters. In Sydney, the percentage of committals for trial decreased from period 1 to period 2 by 19% for bail matters and 16% for non bail matters. In Sydney West the corresponding percentages are 10% and 15%, and in Country 10% for bail matters and 3% for non bail matters.

*s.48E Matters*

103 In these matters, an application had been lodged for a witness to be brought in for cross examination. In Table 10, we present data about the incidence of such applications and the association between s.48E matters and Local Court outcomes.

104 There is a higher incidence of s.48E matters in Sydney than in the other two regions. These differences are statistically significant in both periods. (Because of small numbers in the sentence category, we combined the committal for trial and committal for sentence categories into one category.) Outcome differed between time periods in Sydney West and Country.

**Table 10 Incidence and Local Court outcomes for s.48E matters**

period	Sydney		Sydney West		Country	
	1	2	1	2	1	2
Trial	75%	65%	83%	64%	58%	82%
Sentence	2%	0%	4%	4%	0%	2%
Local Court	23%	35%	14%	32%	42%	16%
number	57	37	52	28	33	45
incidence	23%	25%	15%	10%	9%	14%

105 The more interesting results were found by comparing the distributions of Local Court outcomes for those matters without a s.48E application between time periods within groups and between groups within time periods. These results are presented in Table 11.

**Table 11 Incidence and Local Court outcomes for non s.48E matters**

period	Sydney		Sydney West		Country	
	1	2	1	2	1	2
Trial	58%	37%	63%	47%	64%	54%
Sentence	17%	23%	17%	20%	12%	12%
Local Court	25%	40%	20%	33%	25%	34%
number	194	112	306	256	356	281
incidence	77%	75%	85%	90%	91%	86%

106 In each region, there was a decrease in the percentage of committals for trial between time periods. In period 1, the differences between regions were not statistically significant, but in period 2, there were sharp differences between regions. What is important here is that we have found a factor which is more common in the Sydney region than in the other regions and which indicates a matter that has a high likelihood of being committed for trial. So adjustment for this factor may help unmask the true effect of the introduction of *the Scheme*.

### Summary

107 The incidence of the various charges differed between periods within regions and between regions within periods. The distribution of the outcomes of the committal process differed between charge types and sometimes between periods and regions within charge types. In particular—

- “Table 1” and “Table 2” offences became more common in each region from period 1 to period 2. This might simply have resulted from changes in clerical procedures or might indicate greater use of charge bargaining. Moreover, the change in the percentage of Local Court disposals for the “table” offences increased markedly.

- In the case of bail matters, the higher incidence in the metropolitan regions had disappeared from period 1 to period 2. The drop in the percentage of committals for trial in Sydney bail matters was as great in Sydney West but much smaller in Country.
- The important finding about s.48E matters is that the incidence in Sydney differed from that in the other regions. As well, such matters were highly likely to be committed for trial.

108 Because of these results, we concluded that adjustment for the above variables might help isolate the impact of *the Scheme* on the committal process.

### **Results 3 — statistical models for periods 1 & 2**

109 The information about charges and process variables was used to build models of the committal process. Here we report the results obtained by fitting multinomial logistic regression models to the data for periods 1 and 2. Details are given in Appendix E.

110 The result variable was the outcome from the committal process with 3 categories, committal for trial, *trial*, committal for sentence, *sentence*, and disposal without committal called the local court outcome, *local court*. This third category included disposal summarily at the Local Court, discontinuation initiated by police, DPP or defendant and issuing of a bench warrant. The modelling process led to estimates of the size of the difference between regions in the log-odds of *trial* to *local court*, *sentence* to *local court* and, by deduction, *trial* to *sentence* in each of the three regions. (Log odds is the log of the ratio of the probability of one outcome to the probability of another).

111 The explanatory variables included the more commonly occurring charge types, the table variables, the bail application variable and the

s.48E hearing application variable. The charge types omitted were homicide, abduction & kidnapping, demanding money with menaces, extortion or blackmail, arson and malicious damage to property. They were excluded because of low incidence.

112 We have observed that there was a decline in the percentage of committals for trial, an increase in the percentage of committals for sentence and an increase in the percentage of Local Court disposals in both Sydney and Sydney West (paras 79, 80). The observed changes in the Country region were minor and not statistically significant. We have also observed that the three regions started in period 1 from similar outcome distributions (para 77).

113 The analysis paralleled that reported in Results 1. The value of the logistic analysis was that it allowed us to quantify the differences between regions after adjustment for the explanatory variables of charge type and process. In deciding whether there were differences between regions in period 1 and in period 2, we fitted two models, one of which adjusted for the explanatory variables whereas the other did not.

114 *Models for period 1*

The results for period 1 are given in the appendix Table E1. With or without adjustment for case mix, the observed differences between regions were not statistically significant. We note that in period 1, the chi-squared statistic measuring difference between the regions was 8.53 with 4 degrees of freedom and p-value 0.074 without adjustment for case mix and was 6.60 with 4 degrees of freedom and p-value 0.153 with adjustment for case mix i.e. the adjusted model indicated a closer alignment between regions than the unadjusted model.

115 *Models for period 2*

The results for period 2 are given in the appendix Table E2. With or without adjustment for case mix, the observed differences between regions were statistically significant. However, the nature of the

differences between regions depended on the model. Without adjustment, Sydney differed from Country, but Sydney West did not differ from Sydney or from Country. With adjustment, a clear difference emerged. Sydney was isolated from the other two regions, which were similar to each other. Since the explanatory variables had a significant impact, the adjusted model is the preferred model. The important difference between Sydney and the other two regions was that the probability of a committal for trial was less in Sydney than in Sydney West and Country. This is an important result because it provides evidence that the committal process led to a different distribution of outcomes in the Sydney region from those in the other two regions. The significant difference between Sydney and the other regions during period 2 was the Legal Aid for Committals Scheme.

116 *A model for periods 1 & 2*

After some exploratory work, a reasonable model was found for periods 1 & 2. The results are set out in the appendix Table E3. We forced the equations through the same intercept in period 1 thus taking into account the results showing that the regions did not differ from each other in period 1. We knew that some of the explanatory variables had different outcomes in period 2 from period 1. In particular, Tables 5 and 6 show major differences in outcome and incidence for the “table” variables. Hence we included in the modelling terms which allowed us to test whether these effects were statistically significant. We found that we only needed to account for differences resulting from “table 2” charges. The explanatory variables for the final model were in addition to the charge and process variables –

PERIOD, PERIOD\*REGION and PERIOD\*“table 2”,  
where PERIOD = 1 for period 2 matters  
and 0 for period 1 matters.

117 The results showed that period 2 had different impact on “table 2” matters than on non-“table 2” matters and that the effects were

statewide. For both types of matters, the impact of the regions in period 2 remained although the difference between Sydney and Sydney West had been weakened slightly. (p value increased from 0.038 to 0.055, coefficient changed from  $-0.509$  to  $-0.454$ ). The cut-off for statistical significance is debatable in any case, but particularly because we have used one third of the population.

### *Summary*

118 Underlying the complexity of the results presented in this section, is the important finding that the percentage of committals and of committals for trial in the Sydney region in period 2 was less than in the other two regions. What the analysis did was to remove the effects of different case mixes. Basically, the results tell us that if all three regions had had the same mix of cases with respect to charge type, severity of charge and need for bail and s.48E hearings, then Sydney performed differently from the other two regions. The factor which distinguished Sydney from the other regions during period 2 was the Legal Aid for Committals Scheme.

## **Results 4 — estimates of the impact of the Scheme on outcomes from the committal process**

119 The previous analysis considered only the data from periods 1 and 2. This meant that we only assessed the impact of *the Scheme* in Sydney. To evaluate the impact in Sydney West and Country we must use the period 3 data. As pointed out before, this posed difficulties because of the high percentage of unfinished matters (about 25%).

120 We analysed the data using survival analysis, in particular Cox regression models. These methods are particularly appropriate in modelling time until an event occurs when the study takes place over a specific time period and the time to the given event can take longer than the period of observation. In the present study, we modelled



time until the finalisation of the committal stage, either by committal to a higher court or by disposal at the Local Court over the time period from 1 June 1997 to 15 March 2000. In 165 cases, most of which started in the second half of 1999, finalisation of the committal stage had not yet occurred.

- 121 A complication arose because there were 3 possible outcomes — committal for trial to a higher court, committal for sentence to a higher court and disposal at the Local Court. This called for a competing risks model. The classic situation in which this analysis is used is in the medical sciences, where the outcome is usually death and the interest of the scientist lies in whether death is more likely to result from one cause rather than another. In our study, ‘death’ is equivalent to finalisation of the committal stage. The competing ‘risks’ are whether the committal process is finalised by committal for trial, committal for sentence or disposal at the Local Court. The modelling was carried out using a method of Lunn and McNeil for competing risks under the usual assumptions of the Cox approach, in particular the proportional hazards assumption.<sup>27</sup>
- 122 Two sets of analyses were conducted. In both, the number of outcomes was reduced to two. In the first, the outcomes were committal to a higher court and disposal at the Local Court. In the second, a model for matters that had been committed to a higher court was constructed, the outcomes being committal for trial and committal for sentence. Analyses were made for each region separately.
- 123 Even though we modelled time, the fitted models allowed us to estimate the probability of a particular outcome. We used the models to estimate<sup>28</sup> —

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27 Mary Lunn and Don McNeil *Applying Cox Regression to Competing Risks* Biometrics 51, 524-532, June 1995.

28 Details about the fitting process, the fitted models and the calculations are given in Appendix F.

- the probability of committal to a higher court for matters under the Scheme and for matters not under the Scheme
- the probability of committal for trial given that the matter had been committed to a higher court.

124 As with multinomial logistic regression, we adjusted for confounding variables such as the charge and process variables. The explanatory variables (cf Appendix F) were—

- the study variable: *Scheme*;
- a time variable designed to model the change in Sydney West during period 2;
- the charge type variables: the incidence of homicide, assault, sexual offences, robbery, theft, malicious damage to property, drug offences, offensive behaviour, driving offences; and
- the process variables: the incidence of “Table 1”, “Table 2”, both “Table 1” and “Table 2”, only table offences, bail application and s.48E application.

125 The parameter estimates for Scheme (suitably transformed by an exponential transformation) tell us how the odds of type 1 to type 2 outcomes changed under the Scheme.

### *Probability of committal*

126 The results together with technical details of the modelling are given in Appendix F. In both Sydney and Sydney West, the variable *Scheme* was found to be significant in both analyses.

127 In Sydney, the expected ratio of committals to Local Court disposals under the Scheme is .62% of the pre-Scheme value. The corresponding figure in Sydney West is .56%. We translated this into an estimate of the reduction in the percentage of matters committed to a higher court. An approximate method is demonstrated in Table 12. (A more accurate method would apply these calculations to each subset defined by the explanatory variables and then take a

weighted sum of the changes in probability of committal where the weights are the relative frequencies of occurrence of each subset.)

**Table 12 Impact of Scheme on percentage of committals**

	Sydney	Sydney West
Multiplier due to Scheme (from fitted models) (95% confidence interval)	0.62 (0.56, 0.90)	0.56 (0.36, 0.86)
% committals in pre-Scheme period	75.0%	67.0%
Ratio of committals to disposals	3.0	2.03
Ratio under <i>the Scheme</i> (multiplier*ratio) (95% confidence interval)	1.86 (1.26, 2.70)	1.14 (0.73, 1.75)
Expected committal rate (95% confidence interval)	65.0% (56%, 73%)	53.3% (42%, 64%)
Expected decrease in percentage points (95% confidence interval)	10.0 (2, 19)	13.7 (3, 25)

**Table 13 Impact of Scheme on percentage of committals for trial**

	Sydney	Sydney West	Sydney West
Multiplier due to Scheme (from fitted models)	0.53 (0.37, 0.75)	0.62 (0.39, 0.97)	0.69 (0.20, 0.94)
% committals which are for trial pre-Scheme	82.0%	72.0%	84.0%
Ratio of 'trials' to 'sentences'	4.56	2.57	5.25
Ratio under <i>the Scheme</i> = multiplier*ratio	2.41 (1.68, 3.42)	1.59 (1.00, 2.49)	3.62 (0.41, 1.91)
Expected 'trial' rate	70.7% (63, 77)	61.5% (50, 71)	78.0% (51, 83)
Expected decrease in percentage points	11.3 (5, 19)	10.5 (1, 22)	6.0 (1, 33)

*Probability of committal for trial (conditional on committal)*

128 Similar calculations were made to quantify the impact of the Scheme on the percentage of committals for trial. The fitted models led to estimates of the reduction in the ratio of committals for trial to committals for sentence. The results are presented in Table 13.

*Comment*

129 We have provided confidence interval estimates for the observed changes. Because we have used such a large proportion (1/3) of the population, these estimates of variability are too large. We used the measures of variability and the corresponding p-values to guide the modelling. The spirit of the modelling was to obtain models which were parsimonious and which provided a good fit as measured by the overall score statistic.

*Summary*

130 The percentages of committals for trial, committals for sentence and disposal at the Local Court by region and period showed that changes expected under the Legal Aid for committals Scheme had been realised in the Sydney region. However, the data also showed that similar changes had occurred in Sydney West in period 2 before the introduction of the Scheme in that region. Hence we could not confidently attribute the changes to the introduction of the Scheme. We speculated that if each region had the same mix of cases then a clear difference would emerge in period 2 between the Sydney region and the other two regions. This was demonstrated by modelling outcome in terms of charge and process variables. With this adjustment, the models showed that changes had occurred in all three regions but that the changes in Sydney differed from those in Sydney West and Country and that the results in the non Sydney regions were similar. In Sydney, the probability of committal for trial decreased, and the probability of disposal at the Local Court

increased. This meets the expectations of the proponents of the Scheme.

- 131 Using all the data, matters which had completed the committals stage and matters which had not, we obtained estimates of the impact of the Scheme in each region. The similarity of the parameter estimates for *Scheme* between regions strengthens support for the view that changes in the distribution of committals resulted from the centralised committals Scheme. The finding in Sydney West that the effect of the Scheme is of a magnitude comparable to that in the Sydney region gives confidence to the conclusion that the Scheme has met its objective. It is worth remembering that the methods used to estimate the effect of the Scheme in Sydney West and in Country allowed for a change due to unknown factors during period 2.
- 132 Using the parameter estimates, we confidently claim that the Scheme reduced the percentage of matters committed to a higher court by an amount of the order of 10% and reduced the percentage of committals which were for trial by an amount of the order of 5%. It remains to determine the cost savings of the Scheme. Evaluation of the cost benefits of the Scheme is the subject of the next section.

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## Cost benefits of the centralised committals Scheme

133 In Chapter 2, we concluded from an analysis of the Court data that the Scheme had increased throughput in Sydney West by 12%. In Chapter 3, we concluded from an analysis of the CASES data that the Scheme had reduced the percentage of committals to a higher court by approximately 10% in Sydney and Sydney West. Further, we concluded that the pattern of committal type had changed by reducing the percentage of committals for trial by approximately 5% in all three regions. In both analyses, our conclusions were conservative. We use these results to estimate the consequent savings to the District Court.

### The Court data

134 There were 11.8 EFT (equivalent full time) judges allocated to criminal cases in the Sydney West Registry in 1999.<sup>29</sup> On this basis, the 12% increase in throughput translates into the equivalent of an addition of 1.4 judges in the Sydney West Registry. If the result in Sydney West can be extrapolated statewide, the Scheme has had an effect equivalent to appointing nearly 5 judges.<sup>30</sup>

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29 1999 District Court of NSW Annual Review, page 39.

30 In 1999 there were 38.6 District Court judges allocated state-wide to crime.

- 135 We have reservations about extrapolating the Sydney West result in this way. The profile of the Sydney West caseload clearly differs from that in Sydney and the change in the mix of sentence and trial committals entering the Sydney West registry following the introduction of the Scheme was more marked than that observed in the Sydney registry.<sup>31</sup> However, if a 13 percentage point decrease in trial committals led to a 12% increase in throughput in Sydney West, we can suggest that a 7 percentage point decrease in trial committals in Sydney ought to result in an increase in throughput of about 6%. (Because trials on average are longer in Sydney, it is arguable that the effect of reducing trial numbers is correspondingly greater than in Sydney West.) Crime in the Sydney Registry was allocated the equivalent of 16 full time judges in 1999. A 6% increase in throughput is close to the equivalent of appointing one judge.
- 136 As noted in Chapter 2, the Court data showed no post-Scheme effect on the proportion of committals for trial and sentence in the Country Registries. We suggested that this was due to the short period of operation of the Scheme. Our savings calculation using the Court data does not include any amount for the Country registries. This is plainly conservative. Based on the observed effects in Sydney West and Sydney, it seems very unlikely that there will be no effect in the Country.
- 137 The effect of the Scheme can, using the Court data, conservatively be estimated to have been the equivalent of appointing 2.4 judges to the District Court—1 judge in Sydney and 1.4 judges in Sydney West.
- 138 We conclude that the Centralised Committals Scheme has increased throughput in the District Court equivalent to between 2.4 and 5 judges.

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31 In Sydney West sentence committals increased by 13 percentage points (and trial committals decreased, of course, by a corresponding amount). In Sydney, sentence committals increased by 7 percentage points (and trial committals decreased by the same amount).

## **The CASES data**

- 139 In Chapter 3 we concluded, using the CASES database, that the Scheme has reduced the percentage of committals by 10 percentage points and the percentage of committals for trial by 5 percentage points in the metropolitan regions. This is a conservative view of what has happened in Sydney, in relation to committals for trial, and in Sydney West in relation to both committals and committals for trial. We assume that there has been no reduction in the percentage of committals in the Country region but a decrease of 5 percentage points in the percentage of committals that are for trial.
- 140 The estimated savings in Court time resulting from these effects are shown in Table 14. We assume that there is an input of 100 matters per month. So, pre-Scheme, the number of those expected to be committed to a higher court is the actual observed percentage. This percentage has been reduced under the Scheme by 10 percentage points. Hence in Sydney pre-Scheme, for every 100 matters entering the committal process, 76 were committed to a higher court. The estimated effect of the Scheme is to reduce this number to 66. In Sydney West and Country, the immediate pre-Scheme period is period 2. Hence in Sydney West, the number of committals to a higher Court for every 100 beginning the committal process is 68. The corresponding number in Country is 69.
- 141 We conclude that the Scheme has resulted in reducing the demands on District Court time for crime, by the equivalent of 5 judges. We have calculated our estimates based on one third of the data and on the assumption that a steady state has been reached in the flow of matters into the District Court.
- 142 We note that this method does not allow for the demand resulting from an increase in appeals from the Local Court, which might be expected from an increase in the number of summary dispositions, and is observable in the Court data. This factor is taken into account in the Court data analysis.



**Table 14**      **Estimated time savings**

	Sydney		Sydney West		Country	
	pre	post	pre	post	pre	post
Input per month	100	100	100	100	100	100
# committals	76	66	68	58	69	69
# committals for trial	62	51	49	39	58	55
# committals for sentence	14	15	19	19	11	14
Trial weight cf Appendix 1	1.99	1.99	1.53	1.53	1.39	1.39
Court days needed	130.38	108.99	84.47	69.17	86.12	83.45
% decrease in court days needed		16.4		18.1		3.1
# judges (EFT)		16.0		11.8		10.8
Reduction in judges (EFT)		2.6		2.1		0.3

### *Conclusion*

143 Both methods lead to similar estimates of the number of judicial appointments saved by the Scheme. If the estimate of Sydney West calculated using the Court data were extrapolated to all registries, the Scheme has had an effect equivalent to appointing nearly 5 judges — the same estimate we reach using the CASES database. Adopting a very conservative approach to the estimate yielded using the Court data, we conclude that the Scheme has had an effect equivalent to appointing at least 2.4 judges.

- 144 The Attorney-General's Department has advised that the recurrent annual cost of appointing a District Court judge in crime is \$745,860. There are recurrent additional resulting costs to the Office of the DPP of \$548,677, and to the Legal Aid Commission of \$308,000. There are additional capital costs for the Attorney-General's Department of \$140,000 and for the Office of the DPP of \$96,000.
- 145 Ignoring capital costs, the annual costs of appointing 2.4 additional judges to the District Court are in the order of \$3.8 million. The cost of appointing 5 additional judges is about \$8.0 million.
- 146 We were advised that the cost of the Scheme is \$1.965 million. We conclude that the Scheme has resulted in savings between \$1.8 and \$6.0 million.



## **Appendix A**

Assigning weights to  
pending caseload



- 1 The weights assigned to different case types should reflect the differences in time required for disposal by each type. Some committals for trial go on to full hearings and are resolved by verdict but others are resolved differently, some before the commencement of a hearing, and others on the day of or after commencement of a hearing.
- 2 A court day is 5 sitting hours. The Court does not keep records of the time spent on committals for sentence and Local Court appeals, but estimates provided by the Court Listing Manager indicate that the former take on average roughly half a court day each and the latter 30 minutes (one-tenth of a Court day) at most.
- 3 The Court time required to dispose of committals for trial is more complicated to quantify, because not all trial committals are resolved by a full hearing. The weights that are assigned to committals for trial need to factor in the probability that they may be resolved by methods other than a full hearing.
- 4 District Court data indicates that about 30% of committals for trial go to hearing and are resolved by verdict. The median length of trials is 3-5 days, depending on the registry.<sup>32</sup> About 30% of committals for trial are listed for hearing but then resolve on the day of trial or shortly after its commencement by a plea of guilty or other non-adjudicative means. These cases, according to the District Court data, take up a median of one court day.
- 5 The remaining 40% of committals for trial resolve before hearings commence, either by early pleas<sup>33</sup> (25%) or through other methods such as no bills, bench warrants, the accused being deceased, or changes of venue (15%). The time required to dispose of a committal for trial which becomes an early plea is conservatively estimated to take the same time as for a committal for sentence only (one half-

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32 The median in Sydney is 5 days, in Sydney-West 4 days, and in Country 3 days.

33 Before or after listing of the case for trial.

day). Those disposed of by other methods, such as no bills, are assumed to take no actual court sitting time.

- 6 The weights for committals for trial in the three registries were derived using the probability of each possible type of resolution for a trial committal and the corresponding estimated court time this resolution method requires. Fixing the weight of a Local Court appeal at one unit, the ratio of weights for Local Court appeals, committals for sentence and committals for trial in Sydney is 1:5:19.9. In the Sydney-West registry, the ratio is 1:5:15.3. In the Country registry it is 1:5:13.9. The tables below shows the derivation of these weights.

### Assigning weights to pending case types

#### Sydney

Method of resolving committal for trial	Number	Probability
A. Early pleas before or after listing of trial, but before trial starts	226	0.25
B. Other methods of resolution before trial starts	151	0.17
C. Late pleas, on/after trial starts of resolution on/after trial starts	185	0.20
D. Other non-adjudicative methods of resolution on/after trial starts	58	0.06
E. Verdict	289	0.32
Total	909	1.00

Days required to dispose of committal for trial = [Prob(A) x Court time(A)] + [Prob(B) x Court time(B)] + [Prob(C) x Court time(C)] + [Prob(D) x Court time(D)] + [Prob(E) x Court time(E)]

$$= (0.25 \times 0.5) + (0.17 \times 0) + (0.20 \times 1) + (0.06 \times 1) + (0.32 \times 5) \\ = 1.99$$

Weights of trials: sentences: local court appeals in Court days = 1.99 : 0.5 : 0.1  
 Weights in Local Court appeal units (half hour units) = 19.9 : 5 : 1

**Sydney-West**

Method of resolving committal for trial	Number	Probability
A. Early pleas before or after listing of trial, but before trial starts	484	0.26
B. Other methods of resolution before trial starts	283	0.15
C. Late pleas, on/after trial starts	476	0.25
D. Other non-adjudicative methods of resolution on/after trial starts	129	0.07
E. Verdict	506	0.27
Total	1878	1.00

Days required to dispose of committal for trial = [Prob(A) x Court time(A)] + [Prob(B) x Court time(B)] + [Prob(C) x Court time(C)] + [Prob(D) x Court time(D)] + [Prob(E) x Court time(E)]  
= (0.26 x 0.5) + (0.15 x 0) + (0.25 x 1) + (0.07 x 1) + (0.27 x 4)

= 1.53

Weights of trials: sentences: local court appeals in Court days = 1.53 : 0.5 : 0.1  
Weights in Local Court appeal units (half hour units) = 15.3 : 5 : 1

**Country**

Method of resolving committal for trial	Number	Probability
A. Early pleas before or after listing of trial, but before trial starts	503	0.21
B. Other methods of resolution before trial starts	379	0.16
C. Late pleas, on/after trial starts	570	0.24
D. Other non-adjudicative methods of resolution on /after trial starts	183	0.08
E. Verdict	752	0.32
Total	2387	1.00

Days required to dispose of committal for trial = [Prob(A) x Court time(A)] + [Prob(B) x Court time(B)] + [Prob(C) x Court time(C)] + [Prob(D) x Court time(D)] + [Prob(E) x Court time(E)]

= (0.21 x 0.5) + (0.16 x 0) + (0.24 x 1) + (0.08 x 1) + (0.32 x 3)  
= 1.39

Weights of trials: sentences: local court appeals in Court days = 1.39 : 0.5 : 0.1  
Weights in Local Court appeal units (half hour units) = 13.9 : 5 : 1





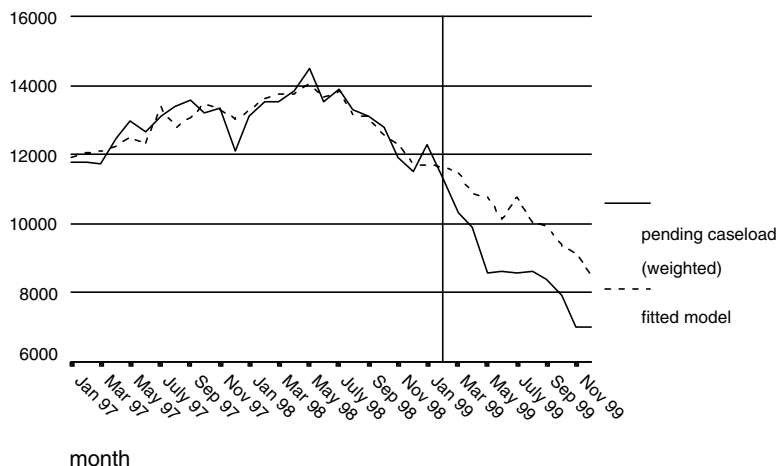
## **Appendix B**

Calculation of Scheme effect  
on throughput



## Pending caseload (weighted)

## Sydney West Registry



- 1 The fitted model was based on significant predictors excluding the Scheme but including 'May 1998 factors', time (number of months since January 1997), interaction of 'May 1998 factors' with time, judge hours sat in criminal cases, and a 6 monthly seasonal component. These predictors were fitted to the pending caseload for the period before the Scheme (January 1997 to February 1999) to project what the pending caseload would have been over the remaining nine months had the Scheme not been implemented. To extend the projection over a full year of operation, throughput values for the extra three months were estimated by using the median of actual monthly throughput from March 1999 to December 1999, and of the fitted model (expected monthly throughput had Scheme not been implemented). \*

\* Actual median monthly input from March 1999 to December 1999 was 315.25. Median monthly input from March 1999 to December 1999 estimated by the model had Scheme not been implemented was 244.8

2 Therefore, increased throughput (weighted) attributable to the Scheme over one year of its operation in the Sydney West registry

= (throughput from March 1999 to March 2000)

– (estimated throughput for same period given Scheme not implemented)

= [backlog<sup>34</sup> (March 1999) – estimate of backlog (March 2000)]

– [Model backlog (March 1999) – Model backlog (March 2000)]

where Model backlog is backlog estimated using the model which does not take into account the Scheme variable.

= [10310.3 – (6988.9 – (3 x 315.25))]

– [(11536.21 – (8460.84 – (3 x 244.8)))]

= 4267.15 – 3809.77

= 457.38

Therefore, percentage increase in throughput over one year of Scheme's operation:

= (457.38 / 3809.77) x 100

= 12%

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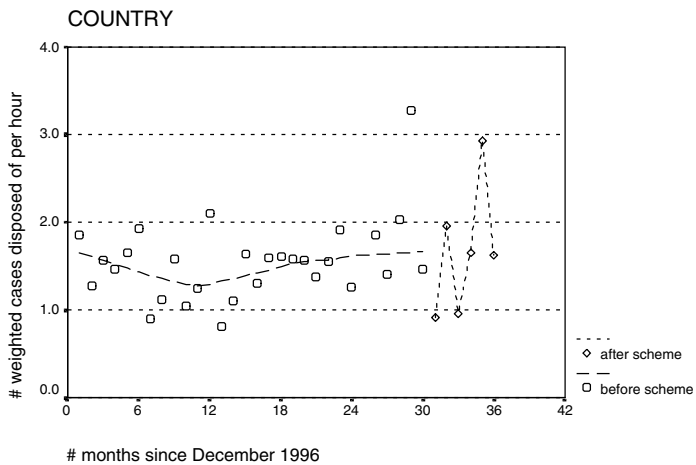
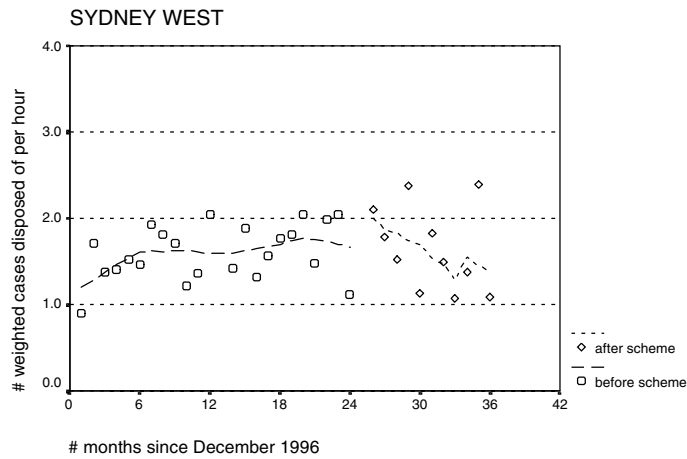
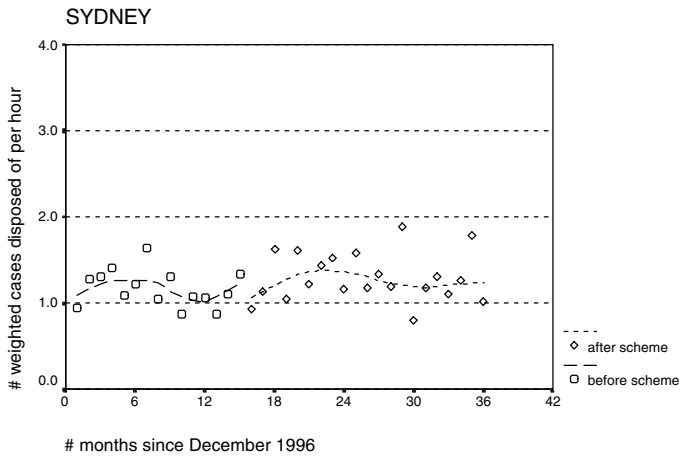
34 Weighted backlog (actual)

## **Appendix C**

### **Monthly throughput in District Court Registries**

(no. of weighted cases disposed of per hour)







**Throughput<sup>35</sup> of criminal cases per hour in the District Court**

<b>Registry</b>		<b>N</b>	<b>Median</b>	<b>Minimum</b>	<b>Maximum<sup>36</sup></b>
		<b>(months)</b>			
Sydney	Before Scheme	15	1.07	0.85	1.61
	After Scheme	21	1.20	0.79	1.84
Sydney West	Before Scheme	25	1.69	0.90	6.09
	After Scheme	11	1.52	1.07	2.38
Country	Before Scheme	30	1.57	0.82	11.86
	After Scheme	6	1.64	0.92	2.95

35 Defined as number of cases (weighted) disposed of per hour.

36 Since the hours spent on criminal cases are seasonal (has a noticeable dip every 6 months), some of these maximum values occur when the court breaks. The scattergraphs do not include these extreme values.

## **Appendix D**

Key Variables – CASES data



## ***Region***

- 1 Matters were grouped in regions using the final local court where the offender appeared at the end of the committal stage. Matters which had not been finalised by the cut-off date for the study, 15 March 2000, were assigned to a region using the Local Court where they first appeared. Local Courts were grouped according to the District Court to which they usually committed matters. The regions were defined as follows —

### **Region**

- 1 *Sydney* local courts which usually commit to the Sydney Registry of the District Court viz Balmain, Central, Downing Centre, Hornsby, Kogarah, Manly, Newtown, North Sydney, Redfern, Waverley local courts
- 2 *Sydney West* local courts which usually commit to the Sydney West Registry of the District Court viz Bankstown, Blacktown, Burwood, Campbelltown, Fairfield, Lidcombe, Liverpool, Parramatta, Penrith, Ryde, Sutherland and Windsor local courts
- 3 *Country* all other local courts

Two Local Courts committed cases to more than one District Court more or less equally viz. Sutherland and Hornsby Local Courts. Sutherland committed 32 out of 54 cases to Campbelltown District Court and the remainder to Sydney District Court. It has been classified in Region 2. Hornsby committed 13 matters to Sydney District Court, 10 to Sydney West and 1 to Gosford District Court. It has been classified in Region 1. From 20 August 1998 to February 1999, Burwood Local Court committed to the Sydney Registry. In fact, during this period, 24 matters from Burwood were committed to the District Court, of which 9 went to Sydney. So Burwood was classified in region 2, Sydney West.

## ***Period***

2 Matters were grouped by time of committal as follows —

### **Period**

- 1 from 1 June 1997 to 31 March 1998
- 2 from 1 April 1998 to 31 January 1999
- 3 from 1 February 1999 to 30 November 1999

Each period is of 10 months duration. The first two periods both include December and January. The Centralised Committal pilot scheme began at the start of period 2 and applied to some Region 1 matters. The extension to Sydney West occurred at the start of period 3 and applied to most Region 1 and some Region 2 matters. The Scheme was extended to Region 3 in July 1999 but only applied to some Region 3 matters begun during this period.

## ***Scheme***

3 In order to operate the Scheme effectively, matters were referred to a 'central' local court. The 'central' courts for Region 1, Sydney, were Central and Downing Centre Local Courts; for Region 2, Sydney West, Burwood and Penrith Local Courts; and for Region 3, Country, Lismore, Newcastle and Wollongong Local Courts. A matter was classified as being under the Scheme if:

- in the case of committals, the court of committal was one of the 'central' local courts and the matter had begun during the relevant time period, and, in the case of a Sydney period 2 matter, it had also begun in one of the 8 courts included in the pilot study; or
- in the case of matters dealt with summarily, the court of finalisation was one of the central local courts and the matter had begun during the relevant time period; or
- if the matter was still active, it had been committed to one of the central local courts during the relevant time period.

### ***Misclassification rate of Scheme***

- 4 In all regions without the Scheme in operation, most (>97%) matters which began in one of the central courts, finished in one of the central courts.

In the Sydney region, the Scheme status of 41 matters was in doubt — 38 of these began at a central Local Court. This means that 38 are highly likely to have been Scheme matters. The remaining 3 non central court matters may have been wrongly classified as non Scheme.

In the Sydney West region, the Scheme status of 61 matters was in doubt — 23 of these began at a central Local Court. This means that 23 are highly likely to have been Scheme matters. But 38 (= 61 - 23) matters, classified as non Scheme may have been wrongly classified. However, when the Scheme was in operation in Sydney West, 99 completed matters began in non central courts. Of these, 18 changed to one of the central courts. Hence we expect that 18% of 38 matters i.e. 8 may have been wrongly classified as non Scheme matters.

In the Country region, the Scheme status of 35 matters was in doubt — 9 of these began in one of the central courts. This means that 9 are highly likely to have been Scheme matters. But 26 (= 35 - 9), classified as non Scheme matters may have been wrongly classified. However, when the Scheme was in operation in the Country region, 193 matters began in non central courts. Of these, 35 changed to one of the central courts. Hence we expect that 18% ( $100 \times 35 / 193$ ) of 26 matters i.e. 5 may have been wrongly classified as non Scheme matters.

In summary, the level of misclassification of matters which had not completed the committal stage is expected to be 3 out of 41 in Sydney (7%), 8 out of 61 in Sydney West (13%) and 5 out of 41 in Country (12%). The overall misclassification rate is 0.5% in Sydney, 1% in Sydney West and 0.5% in Country.



## **Appendix E**

Statistical Models for Periods 1 & 2





## Variables

- 1 The outcome, design, and explanatory variables used in this set of analyses are set out below.

<b>Outcome variable</b>		
<i>Result</i>	1	committal to a higher court for trial
	2	committal to a higher court for sentence
	3	disposal in the Local Court which includes disposal as the result of a summary hearing, discontinuance by the Court, discontinuance due to death, or lack of evidence, bench warrant issued, matter returned to the police for prosecution
<b>Design variables</b>		
REGION	1	Sydney
	2	Sydney West
	3	Country
<i>period</i>	=	1 for period 2 matters; 0 for period 1 matters
<b>Explanatory variables</b>		
<b>Charges</b>		
<i>assault</i>	=	1 if at least one charge was for assault; 0 otherwise
<i>sexual offences</i>	=	1 if at least one charge was for a sexual offence; 0 otherwise
<i>robbery</i>	=	1 if at least one charge was for robbery; 0 otherwise
<i>theft</i>	=	1 if at least one charge was for theft; 0 otherwise
<i>drug offences</i>	=	1 if at least one charge was for a drug offence; 0 otherwise
<i>offensive</i>	=	1 if at least one charge was for offensive behaviour; 0 otherwise
<i>driving offences</i>	=	1 if at least one charge was for a driving offence; 0 otherwise
<b>Process</b>		
<i>table 1</i>	=	1 if at least one charge was a table 1 offence; 0 otherwise
<i>table 2</i>	=	1 if at least one charge was a table 2 offence; 0 otherwise
<i>bail hearing</i>	=	1 if bail hearing application recorded; 0 otherwise
<i>s48E hearing</i>	=	1 if section 48e application recorded; 0 otherwise

## Method of Analysis

- 2 Multinomial logistic regression was used to model the outcome variable *Result* in terms of the explanatory variables. In multinomial logistic regression, the underlying model is the logistic model in which the probability of a matter leading to a particular *Result* follows the logistic form as follows:

$$\text{Let } P(i) = \text{Prob}(\text{Result} = i) \propto \exp(\alpha_{i1}x_1 + \alpha_{i2}x_2 + \alpha_{i3}x_3 + \dots + \alpha_{ik}x_k)$$

where  $i = 1, 2, \text{ or } 3$  and the  $x$ 's are variables, either continuous or dichotomous.

Since  $P(1) + P(2) + P(3) = 1$ , one formulation consistent with the logistic form is

$$\log(P(i)/P(3)) = \beta_{i1}x_1 + \beta_{i2}x_2 + \beta_{i3}x_3 + \dots + \beta_{ik}x_k \text{ where } i = 1, 2$$

If the coefficient of a particular variable is positive, then an increase in that variable increases the chances of being in category  $i$  instead of in the reference category. Similarly a negative coefficient indicates that an increase in the variable decreases the chance of being in category  $i$  instead of in the reference category.

## Strategy

- 3 The analysis parallels the simple analyses in Chapter 3 Results 1.
- a Are there differences between regions in period 1? To answer this question, we used only period 1 data and fitted two models for *Result* using the following explanatory variables
    - i) REGION
    - ii) REGION and the Charge and Process variables

- b Are there differences between regions in period 2? To answer this question we repeated the analysis in (a) using the period 2 data.
- c Are there differences from period 1 to period 2 in all three regions and is the change in Sydney significantly different from the changes in the other two regions? To answer this question, we used all the data from periods 1 & 2, and the results from analyses (a) & (b) to select a set of explanatory variables.

**Analysis 1                      Are there differences between regions before  
introduction of the Scheme ie in period 1?**

- 4 The results are given in Table E1. In both models, the likelihood ratio test for REGION has p-value greater than 0.05 and hence we conclude that there are no statistically significant differences between regions. From Model (ii), we note that the explanatory variables make a significant contribution (cf Likelihood Ratio tests). We also note that only *drug offences* from the charges and *table 1* from the process variables have p-values greater than 0.05 i.e. all except these two explanatory variables have a significant impact on the result of the committal process. This model tells us that we must adjust for charge and process variables if we are to assess the impact of the Scheme.

**Table E1 Multinomial Logistic Regression results period 1**  
**Outcome variable(trial, sentence, Local Court)**  
 Reference category: Local Court disposal

Part (a)		Likelihood ratio tests			
Explanatory variable		Chi-square	df	p-value	
Model (i) <sup>1</sup>	REGION	8.53	4	0.074	
Model (ii) <sup>2</sup>	REGION	6.60	4	0.159	
	Assault	10.87	2	0.004	
	Sexual offences	13.28	2	0.001	
	Robbery	7.29	2	0.026	
	Theft	8.84	2	0.012	
	Drug offences	5.25	2	0.073	
	Offensive behaviour	11.25	2	0.004	
	Driving offences	9.71	2	0.008	
	Table 1	4.75	2	0.093	
	Table 2	11.15	2	0.004	
	s.48E application	21.46	2	0.000	
	Bail application	42.84	2	0.000	
Part (b)		Estimated Parameters for differences between regions			
Regional differences		"Trial" <sup>3</sup>		"Sentence" <sup>4</sup>	
		Model (i)	Model (ii)	Model (i)	Model (ii)
Sydney –	beta	0.040	-0.085	0.287	0.178
Country	s.e.	0.191	0.205	0.281	0.301
	p-value	0.834	0.680	0.308	0.555
Sydney West –	beta	0.383	0.278	0.690	0.623
Country	s.e.	0.182	0.192	0.258	0.273
	p-value	0.035	0.147	0.008	0.023
Sydney –	beta	-0.343	-0.193	-0.403	-0.445
Sydney West	s.e.	0.203	0.217	0.279	0.300
	p-value	0.090	0.373	0.149	0.138

1 Model (i): predictor is REGION

2 Model (ii): predictors are REGION, incidence of assault, sexual offences, robbery, theft, drug offences, offensive behaviour, driving offences, table 1, table 2, s.48E application, bail application.

3 "Trial" = log (prob(committal for trial)/prob(disposal at local court))

4 "Sentence" = log (prob(committal for sentence)/prob(disposal at local court))

**Analysis 2                    Are there differences between regions after the pilot study of the Scheme began i.e in period 2?**

- 5     If the Scheme has had an effect, then we expect that in period 2, Sydney is significantly different from Sydney West and Country and that these two regions are not significantly different from each other. Again we fitted two models:

model (i):    REGION

model (ii):    REGION + charge and process variables.

The results are given in Table E2.

- 6     In both models, the likelihood ratio test for REGION has p-value less than 0.05 and hence we conclude that there are statistically significant differences between regions. From the parameter estimates, we note that regions do not differ significantly for log-odds of sentence to Local Court disposal, “sentence” in either model. However, there are significant differences between regions in both models for log-odds of trial to Local Court disposal, “trial”.

The nature of the difference between regions in Model (i), is:

“trial”(Sydney) < “trial”(Sydney West) < “trial”(Country)

The nature of the difference between regions in Model (ii), is:

“trial”(Sydney) < “trial”(Sydney West) < “trial”(Country)

(the lines join regions which are not significantly different)

- 7     Since the explanatory variables are significant (refer to the Likelihood ratio test results in Table E2), we draw our conclusions about differences between regions from model (ii).

**Table E2 Multinomial Logistic Regression results period 2**  
**Outcome variable (trial, sentence, Local Court)**  
**Reference category: Local Court disposal**

<b>Part (a)</b>		<b>Likelihood ratio tests</b>			
<b>Explanatory variable</b>		<b>Chi-square</b>	<b>df</b>	<b>p-value</b>	
Model (i)	REGION	14.00	4	0.007	
Model (ii)	REGION	12.91	4	0.012	
	Assault	2.72	2	0.257	
	Sexual offences	12.15	2	0.002	
	Robbery	20.66	2	0.000	
	Theft	1.20	2	0.549	
	Drug offences	10.33	2	0.006	
	Offensive behaviour	4.93	2	0.085	
	Driving offences	1.016	2	0.602	
	Table 1	2.50	2	0.287	
	Table 2	6.27	2	0.044	
	s.48E application	27.62	2	0.000	
	Bail application	9.30	2	0.010	

<b>Part (b) Estimated Parameters for differences between regions</b>					
<b>Regional differences</b>		<b>“Trial”</b>		<b>“Sentence”</b>	
		<b>Model (i)</b>	<b>Model (ii)</b>	<b>Model (i)</b>	<b>Model (ii)</b>
Sydney –	beta	-0.503	-0.663	0.267	0.189
Country	s.e.	<i>0.218</i>	<i>0.237</i>	<i>0.307</i>	<i>0.328</i>
	p-value	0.021	0.005	0.384	0.564
Sydney West –	beta	-0.222	-0.154	0.507	0.374
Country	s.e.	<i>0.182</i>	<i>0.194</i>	<i>0.261</i>	<i>0.275</i>
	p-value	0.222	0.427	0.052	0.175
Sydney –	beta	-0.281	-0.509	-0.240	-0.185
Sydney West	s.e.	<i>0.226</i>	<i>0.245</i>	<i>0.319</i>	<i>0.313</i>
	p-value	0.213	0.038	0.452	0.555

1 Model (a): predictor is REGION

2 Model (b): predictors are REGION, incidences of assault, sexual offences, robbery, theft, drug offences, offensive behaviour, driving offences, table 1, table 2, s.48E application, bail application.

3 “Trial” = log (prob(committal for trial)/prob(disposal at local court))

4 “Sentence” = log (prob(committal for sentence)/prob(disposal at local court))

8 First, the model (ii) estimates of differences between regions show that Sydney is different from the other two regions, and that these two regions are similar. Second, we determine the nature of this difference by using the parameter estimates to estimate the probabilities of committal for trial, committal for sentence and disposal at the Local Court in each region for a given set of explanatory variables.

Let  $P(1)$  = probability of committal for trial  
 $P(2)$  = probability of committal for sentence  
 $P(3)$  = probability of disposal at the Local Court

From Table E2, for a particular set of values of charge types and process variables

$$\begin{aligned} E(\log(P(1)/P(3))) &= f(x) - 0.663 && \text{if Sydney;} \\ &= f(x) - 0.154 && \text{if Sydney West;} \\ &= f(x) && \text{if Country.} \end{aligned}$$

where  $E(.)$  stands for ‘expected value of’ and  $f(x)$  is a linear function of the explanatory variables, using the coefficients of the variables under “trial” i.e.  $\log(P(1)/P(3))$ . (They have not been listed in Table E2.)

Similarly for the same set of values of charge types and process variables

$$\begin{aligned} E(\log(P(2)/P(3))) &= g(x) + 0.189 && \text{if Sydney;} \\ &= g(x) + 0.374 && \text{if Sydney West;} \\ &= g(x) && \text{if Country.} \end{aligned}$$

where  $g(x)$  is a linear function of the explanatory variables using the coefficients of the variables being those determined for “sentence”,  $\log(P(2)/P(3))$ . Therefore,

$$\begin{aligned} E(P(1)/(1-P(1))) &= \alpha * \exp(-0.663) / (1 + \beta * \exp(0.189)) && \text{if Sydney;} \\ &= \alpha * \exp(-0.154) / (1 + \beta * \exp(0.374)) && \text{if Sydney West;} \\ &= \alpha / (1 + \beta) && \text{if Country.} \end{aligned}$$

where  $\alpha = \exp(f(x))$  and  $\beta = \exp(g(x))$ .



Therefore,

$$E(P(1))_{\text{Sydney}} < E(P(1))_{\text{Sydney West}} < E(P(1))_{\text{Country}}$$

i.e. the percentage of trials in Sydney is less than in Sydney West which is less than in Country.

The difference between Sydney and Sydney West is significant but the difference between Sydney West and Country is not. This relationship holds for matters with the same values for the explanatory variables in the three regions.

Similar calculations show that on average and after adjustment for the explanatory variables, the likelihood of disposal at the Local Court is higher in Sydney than in the other two regions. The lack of significant differences between regions for “sentence”, indicates that the ratio of the likelihoods of committals for sentence to disposal at the Local Court is similar in the three regions.

- 9 We conclude that the observed variation in the percentage of committals for trial, of committals for sentence and of disposals at the Local Court between the three regions is explained by case mix, frequency of applications for bail and s.48E hearings and by REGION. The effect of region is to separate Sydney from the other two regions. In Sydney, the probability of being committed for trial is less than in the other two regions, and the probability of ending in the Local Court is higher for matters of the same charge type and process. This means that the nature of Court procedures in Sydney has had an impact on the distribution of the outcomes from the committal process. The main difference in Court procedures in Sydney and in the other two regions during period 2 is the Legal Aid for Committals Scheme.
- 10 Further observations can be made. We note that the incidences of sexual offences, robbery, drug offences, s.48E hearing applications and bail hearing applications have p-values less than 0.05. This is a different and smaller list of significant variables from that for period 1. Assault, theft, offensive behaviour and driving offences are

no longer significant, but drug offences is now on the list. We suggest that during period 2, greater consistency between charge and process types in terms of outcome from the committal process has been achieved. The inclusion of drug offences in period 2 but not in period 1 suggests that the nature of these offences may have changed from period 1 to period 2.

**Analysis 3     Are there differences between periods 1 and 2 within each region?**

- 11 In order to estimate the overall reduction which has occurred statewide from period 1 to period 2, we fitted a model to the data from both periods 1 & 2. The two periods were modelled using  
  
PERIOD, PERIOD\*REGION, charge and process variables  
  
Note that REGION on its own is not included. This model ensures that each region starts from the same base in period 1.
- 12 The results are set out in Table E3. We used the charge and process variables as explanatory variables together with two interaction terms — table 1\*PERIOD and table 2\*PERIOD. Only table 2\*PERIOD was significant. The model was refitted without table 1\*PERIOD.
- 13 For matters without a table 2 offence, we see from Table E3 that significant change from period 1 to period 2 has occurred in the log odds of committals for sentence to disposals at the Local Court — a decrease of 0.634. This means that the percentage of committals for sentence has declined, the percentage of disposals at the Local Court

**Table E3 Multinomial Logistic Regression results periods 1&2**  
**Outcome variable (trial, sentence, Local Court)**  
 Reference category: Local Court disposal

<b>Part (a) Likelihood ratio tests</b>				
<b>Explanatory variable</b>		<b>Chi-square</b>	<b>df</b>	<b>p-value</b>
Period <sup>1</sup>		n/a	n/a	n/a
Period*REGION		12.47	4	0.014
Assault		10.71	2	0.005
Sexual offences		24.40	2	0.000
Robbery		32.23	2	0.000
Theft		3.26	2	0.196
Drug offences		15.08	2	0.001
Offensive behaviour		15.51	2	0.000
Driving offences		8.51	2	0.014
Table 1		3.62	2	0.163
Table 2		11.48	2	0.003
s.48E application		47.16	2	0.000
Bail application		49.66	2	0.000
Table 2*period		19.59	2	0.000

<b>Part (b) Estimated Parameters for differences between periods 1&amp;2 and for differences between regions in period 2.</b>				
<b>'Table 2'</b>		<b>"Trial"<sup>2</sup></b>	<b>"Sentence"<sup>3</sup></b>	
Table 2 = 0	beta	-0.187	-0.634	
(not a table 2	s.e.	<i>0.167</i>	<i>0.252</i>	
charge)	p-value	0.262	0.012	
Table 2 = 1	beta	-1.789	0.324	
(a table 2 charge)	s.e.	<i>0.497</i>	<i>1.188</i>	
	p-value	0.000	0.785	
<b>Regional differences in period 2</b>				
Sydney –	beta	-0.635	0.180	
Country	s.e.	<i>0.231</i>	<i>0.323</i>	
	p-value	0.006	0.576	
Sydney West –	beta	-0.181	0.354	
Country	s.e.	<i>0.191</i>	<i>0.273</i>	
	p-value	0.344	0.194	
Sydney – Sydney	beta	-0.454	-0.174	
West	s.e.	<i>0.237</i>	<i>0.300</i>	
	p-value	0.055	0.562	

1 Period = 1 for period 2 matters, 0 for period 1 matters

2 "Trial" = log (prob(committal for trial)/prob(disposal at local court))

3 "Sentence" = log (prob(committal for sentence)/prob(disposal at local court))

has increased and by deduction that the percentage of committals for trial has increased.

- 14 For table 2 matters, the significant change from period 1 to period 2 has been to decrease the log odds of committal for trial to disposal at the Local Court by 1.789. This means that the percentage of committals for trial has declined, the percentage of disposals at the Local Court has increased and by deduction that the percentage of committals for sentence has increased.
- 15 These results allow for adjustment due to REGION and the charge and process variables. So in Sydney, there has been an overall reduction in the percentage of committals for trial and an increase in percentage of disposals at the Local Court from period 1 to period 2. The table 2 effect is an additional effect. In the other regions, there is no significant difference from period 1 to period 2 other than the change apparent in the handling of table 2 charges.
- 16 From the analysis of differences between regions, we note that the term period \* REGION is significant (p-value .014). The difference between Sydney and Country is significant, but the difference between Sydney and Sydney West has p-value .055.



# **Appendix F**

## Survival Analysis



## Variables

Outcome	
<i>Result</i>	<p>1 committal to a higher court for trial</p> <p>2 committal to a higher court for sentence</p> <p>3 disposal in the Local Court which includes disposal as the result of a summary hearing, discontinuance by the Court, discontinuance due to death, lack of evidence, bench warrant issued, matter returned to the police for prosecution</p>
<i>Time</i>	time taken from first entry of the matter in the CASES database as being in Local Court committal state to completion of the local court process
<i>Status</i>	= 1 if Local Court stage finalised; 0 otherwise i.e. observation is censored
Design variables	
<i>Scheme</i>	= 1 if matter processed under the Scheme as defined in Appendix E; 0 otherwise
<i>INT1</i>	= 1 if matter commenced after period 1; 0 otherwise
<i>INT2</i>	= 1 if matter commenced after period 2; 0 otherwise
Explanatory variables	
Charges	
<i>assault</i>	= 1 if at least one charge was for assault; 0 otherwise
<i>sexual offences</i>	= 1 if at least one charge was for a sexual offence; 0 otherwise
<i>robbery</i>	= 1 if at least one charge was for robbery; 0 otherwise
<i>homicide</i>	= 1 if at least one charge was for homicide; 0 otherwise
<i>theft</i>	= 1 if at least one charge was for theft; 0 otherwise
<i>damage</i>	= 1 if at least one charge was for malicious damage to property; 0 otherwise
<i>drug offences</i>	= 1 if at least one charge was for a drug offence; 0 otherwise
<i>offensive</i>	= 1 if at least one charge was for offensive behaviour; 0 otherwise
<i>driving offences</i>	= 1 if at least one charge was for a driving offence; 0 otherwise
Process	
<i>table 1</i>	= 1 if at least one charge was a table 1 offence; 0 otherwise
<i>table 2</i>	= 1 if at least one charge was a table 2 offence; 0 otherwise
<i>'t1ort2'</i>	= 1 if at least one charge was either a table 1 or table 2 offence; 0 otherwise
<i>bail</i>	= 1 if bail hearing application recorded; 0 otherwise
<i>s48E</i>	= 1 if section 48e application recorded; 0 otherwise



## Method of Analysis

- 1 Two sets of analyses were conducted for each region using the method of competing risks modelling set out in Lunn and McNeil.<sup>37</sup> The outcome and dataset for each analysis were as follows:
- 2 Analysis 1. *Result* was categorised as committal to a higher court, outcome type 1, or disposal in the Local Court, outcome type 0. The dataset consisted of all observations for which *result* tabulated by Scheme and Region was as follows:

**Table F1 Data Summary for Analysis 1**

Region	Sydney		Sydney West		Country	
Scheme	No	Yes	No	Yes	No	Yes
1 Committal to higher court	212	142	530	55	650	14
0 Disposal at Local Court	88	82	196	48	290	5
Unfinished	3	41	43	23	45	9
total	303	265	769	126	985	28

- 3 Analysis 2. *Result* was categorised as committal for trial, outcome type 1 or committal for sentence, outcome type 0. The dataset consisted of all committals for which *result* tabulated by Scheme was as follows:

<sup>37</sup> Mary Lunn & Don McNeil *Applying Cox Regression to Competing Risks* Biometrics 51, 524-532, June 1995

**Table F2 Data Summary for Analysis 2**

Region	Sydney		Sydney West		Country	
Scheme	No	Yes	No	Yes	No	Yes
1 Committal for trial	170	89	402	36	544	9
0 Committal for sentence	42	53	128	19	106	5
Total committals	212	142	530	55	650	14

- 4 To use the Lunn and McNeil method, each observation was duplicated, and the replicate censored i.e. the status variable was set to 0, and *result* changed to its converse except for the original censored observations which do not have an outcome. Cox's Proportional Hazards model was fitted using as predictor variables *result*,  $\{x_1, x_2, \dots, x_p\}$ ,  $result*\{x_1, x_2, \dots, x_p\}$ . where the  $x$ 's are selected from the variables listed under Study variable, Period, Charges and Process.
- 5 The aim of the modelling was to select a parsimonious model by reducing the set of interactions with *result* viz.  $result*\{x_1, x_2, \dots, x_p\}$ , to a set in which each interaction term was significant. Variables were removed by the backward-Wald criteria. Because the sample was a 1 in 3 systematic sample, the standard errors and therefore the significance levels produced in the usual way were overestimates. For a variable to be regarded as significant, some degree of subjectivity was used. In general, the significance levels on the assumption of randomness and an infinite population were less than 0.02.
- 6 The purpose of the modelling was to estimate the impact of *Scheme* on the proportion of outcomes of type 1. So in the first analysis, we wished to estimate the change in the proportion of committals under the centralised committals Scheme. In the second analysis, we wished to estimate the change in the proportion of committals for trial under the centralised committals Scheme.

- 7 In the Cox proportional hazards model, the log of the hazard rate is modelled as a linear function of the predictor variables. Therefore, the hazard rate is obtained by taking the exponential of the fitted linear function of the predictor variables. If further it is assumed that the risks of each outcome are proportional to each other, then it follows that  $P_0$ , the probability of outcome type 0, and  $P_1$ , the probability of outcome type 1, satisfy the following equations —

$$P_0 = \exp(f_0) / \{\exp(f_0) + \exp(f_1)\} \text{ and } P_1 = \exp(f_1) / \{\exp(f_0) + \exp(f_1)\}$$

where

$f_0$  = fitted function of the predictors linear in the parameters evaluated at *result* = 0 and

$f_1$  = fitted function of the predictors linear in the parameters evaluated at *result* = 1.

These are functions of the significant explanatory variables.

The functions corresponding to the models which we have fitted can be expressed as

$g_0 + \textit{result} * g_1$  where  $g_0$  and  $g_1$  are functions of the predictors linear in the parameters.

Therefore, for a given set of values for the predictor variables,

$$P_0 = 1 / \{1 + \exp(g_1)\} \text{ and } P_1 = \exp(g_1) / \{1 + \exp(g_1)\}$$

This means that the estimation of the probability of committal and the probability of committal for trial given committal are obtained using only the terms involving *result*.

The impact of the Scheme is determined by the estimated coefficient of *result\*Scheme*. Let the parameter estimate of *result\*Scheme* be

$b_s$ . Then, the corresponding values of  $P_0$  and  $P_1$  are  $P_0^s = 1/\{1 + \exp(b_s)\exp(g_1)\}$  and  $P_1^s = \exp(b_s)\exp(g_1)/\{1 + \exp(b_s)\exp(g_1)\}$

The estimated probability of committal or (committal for trial given committal) without the Scheme, i.e. for *Scheme* = 0, is  $\sum p(x)*P_1(x)$  where  $p(x)$  = the observed frequency of 'x', a realisation of the predictor variables, and where summation is over all realisations of the predictor variables.

Similarly the estimated probability of committal (or committal for trial given committal) under the Scheme i.e. for *Scheme* = 1 is  $\sum p(x)*P_1^s(x)$  where  $p(x)$  = the observed frequency of 'x', a realisation of the predictor variables, and where summation is over all realisations of the predictor variables.

Hence for the purpose of evaluating the impact of the centralised committals Scheme, we need only consider the estimated coefficients of the terms involving *result*.

## Fitted Models

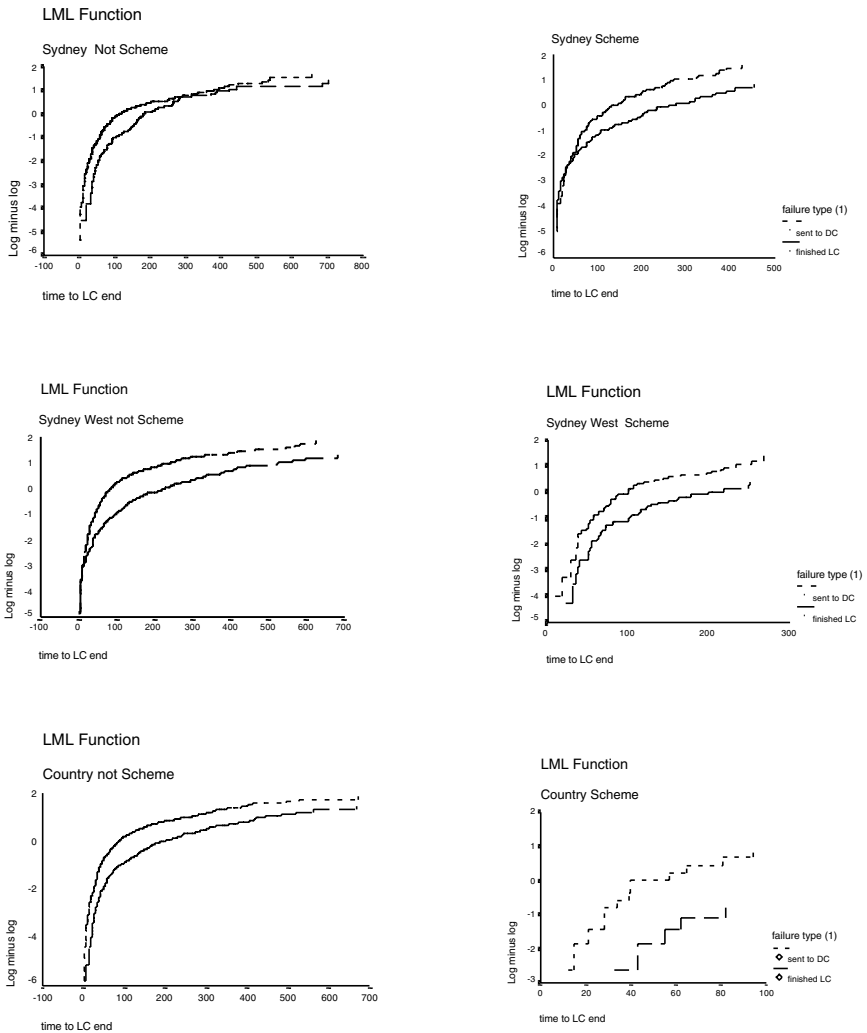
### Analysis 1 Committal to a higher court

8 There were separate analyses for each region. The results for each region are presented in Table F3.

**Table F3** Relevant parameter estimates for Analysis 1  
for *result\** predictor

Sydney	beta	standard error	significance	exp(beta)
<i>constant</i>	0.55	0.164	0.001	1.740
<i>homicide</i>	1.51	0.623	0.017	4.505
<i>robbery</i>	1.20	0.269	0.000	3.309
<i>drug</i>	0.60	0.238	0.012	1.824
<i>offensive</i>	-0.584	0.221	0.009	0.561
<i>bail</i>	0.70	0.277	0.012	2.009
<i>scheme</i>	-0.48	0.193	0.012	0.617
Sydney West				
<i>constant</i>	0.40	0.354	0.257	1.493
<i>sexual</i>	0.50	0.227	0.026	1.656
<i>damage</i>	-1.16	0.327	0.000	0.313
<i>driving</i>	-0.65	0.182	0.000	0.522
<i>bail</i>	1.06	0.264	0.000	2.884
<i>table</i>	0.97	0.321	0.003	2.634
<i>int1</i>	-0.57	0.182	0.002	0.565
<i>scheme</i>	-0.59	0.228	0.010	0.556
Country				
<i>constant</i>	-0.69	0.327	0.034	0.501
<i>homicide</i>	1.21	0.450	0.007	3.345
<i>sexual</i>	0.53	0.168	0.002	1.693
<i>robbery</i>	0.77	0.235	0.001	2.167
<i>drug</i>	0.62	0.236	0.009	1.863
<i>bail</i>	1.23	0.307	0.000	3.423
<i>table</i>	1.22	0.302	0.000	3.372
<i>table1</i>	0.56	0.209	0.007	1.759
<i>int1</i>	-0.34	0.156	0.028	0.710

- 9 The assumptions of proportionality of the hazard functions were checked by graphing the log-minus-log plot (LML) of the baseline survival function for each outcome by region and Scheme. For proportionality, the plots should be essentially parallel.



**Analysis 2 Committal for trial given committal to a higher court**

- 9 The results and graphs of this analysis are available on request.

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# The Law and Justice Foundation of New South Wales

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The Law and Justice Foundation believes that:

- A fair and equitable justice system is essential for a democratic, civil society
- Reform should, where possible, be based on sound research
- People need accurate, understandable information to have equitable access to justice
- Community support agencies and NGOs play a critical role in improving access to justice for disadvantaged people

## **Strategies for 2001-2003**

- Identify legal and access to justice needs, particularly of socially and economically disadvantaged people
- Conduct rigorous, independent research to inform policy development
- Contribute to the availability of understandable legal information
- Support projects and organisations that improve access to justice