No. 180
Police Performance and Activity Measurement

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Traditionally, police performance has been largely assessed in terms of statistics such as crime rates and, more recently, community satisfaction. However, while these major approaches can provide an indication of what police may *spend their time on, they do not directly inform us of what they* do *spend their time on. In October, 1999, at the National Centre for Crime and Justice Statistics Information Day organised by the Australian Bureau of Statistics, South Australia Police (SAPOL) showcased an emerging method by which police time spent on certain activities can be measured.*

Known as "activity measurement", this approach is a significant management information tool. A broad example, using the SAPOL experience, of the type of information that can be elicited from the data is reported in this paper. SAPOL expect that this measurement data will be an important source of performance and budgeting information for the future, and so have trialed an electronic survey method to improve the methods used in this approach.

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In the past, data on reported crime rates and crime clear-up rates were used to justify the establishment of police services and to gain community acceptance of police (Hortz 1996). Such rates were later maintained as critical indicators of performance. It was argued that, due to the nature of policing, police work was difficult to measure and cost by other means. Therefore, these measures have historically constituted the main form of information for evaluating police services, at the expense of more meaningful measures. Such measures of police performance have also suited the traditional interpretation of the police role, which has been narrowly defined in terms of crime and law enforcement-related activities (Bond 1996).

The main limitation of these traditional police performance indicators is that they are essentially social indicators. This means it is difficult to determine the true nature and extent of the impact of police activity on the intended result (Cherrett 1993). As a result, it is often difficult to find consistent "improvement" in police performance using these indicators, as evidenced by the recent experiences of England and Wales (Rhyddrech 1999).

Measuring Police Performance

In measuring police performance, the resources used towards police activities (essentially police time) have commonly been ignored (Bond 1996). However, resources "are the only factor in the equation which can definitely be determined" (Cherrett 1993, p. 42). Furthermore:

> ...being clear about what various resources have done, what activities the police have been involved in, is a far firmer base from which to build indicators about how the police are performing. (Cherrett 1993, p. 42)

Of particular interest is how these resources are committed across proactive and reactive policing programs (White & Perrone 1997).

The literature notes that between 80 and 90 per cent of the budget provided to police services is dedicated to personnel costs (for example, Cherrett 1993; Grabosky 1988; Edwards 1999). Therefore, police officers are clearly the greatest resource available to the police service (Cherrett 1993).

The traditional approach of apportioning these integral resources to relevant activities has been to allocate personnel to particular areas (Cherrett 1993). However, this approach conceals the true utility of these personnel. Therefore, closer monitoring of how these officers are actually employed is the most accurate way of gauging how resources are in fact allocated.

Notably, there has been a growing body of research on what police do, in an attempt to streamline their efforts (Edwards 1999). This research has found that:

> ...whatever measure is made of police activity, it has never been found by any researcher that police are idle: they spend much of their time doing tasks which are not directly related to crime or public order or other core functions, but this time is fully accounted for in carrying out tasks required by somebody. (Edwards 1999, p. 117)

In looking at the activities of police officers, it becomes clear that the amount of time spent on activities relating to traditional policing performance measures (crime or law enforcement activities) is actually relatively small (Bond 1996). Police provide a service role to the community in at least half of their tasks, even though it is precisely these duties which do not relate to core functions, thereby making them appear inefficient (Edwards 1999).

Increasing Police Efficiency and Effectiveness

In the past, to improve the effectiveness of police agencies, the approach has commonly been to boost general resource levels (SCRCSSP 2000). A complication associated with this is that the common arguments for increased police staffing, powers or funds tend to assume a direct linear relationship with a reduction in crime (White & Perrone 1997).

A recent report on police services in England and Wales recognised that more was required than additional police, since solving crime "depends on how police officers are deployed or on the priority which forces give to this work" (Rhydderch 1999, p. 24; see also Grabosky 1988). Interestingly, police experience demonstrates that this is the case, since serious crimes such as murder (which are commonly provided with significant resources compared with some other crimes, such as house-breaking), tend to result in a higher level of successful detection (Sutton 1996).

The problem is that utilisation of human resources in police services commonly lacks measurement and management, despite a "very well researched relationship between utilisation, service delivery and cost effectiveness" (Bourne 1998, p. 22). Furthermore, the broad range of activities of police officers can be considerably difficult to quantify and much of police work has not been effectively recorded or standardised (Cherrett 1993). Another significant issue is that, although the police have "considerable control over how their resources are deployed, they have less control over the work that those resources do, the activities that they either initiate or are called to" (Cherrett 1993, p. 50).

Government Policy Shifts

Over the past few decades there has been an increased focus on performance and value for money from public services, which has arisen from the application of the private sector evaluation approach to public services (Hortz 1996). Under this approach, it has been noted that a constant challenge for State governments and agency managers is posed by priority decisions involving efficiency and effectiveness considerations (SCRCSSP 1999). One of the objectives of government is the provision of services (that is, outputs) for law and order, such as community patrols, in order to achieve particular outcomes (that is, the impact of the outputs on the community) such as crime reduction. Within the constraints of their budget, agency managers must select the most appropriate way in which the available resources (that is, inputs, such as human resources) used to produce the outputs can meet their particular output objectives (SCRCSSP 1999).

Associated with the shift in public sector evaluation, there has been a move towards output-based budgeting processes across Australia (SCRCSSP 1999). This reform enables explicit funding of outputs rather than inputs (Department of Treasury and Finance South Australia 1997) and provides one external impetus for improved performance measurement in South Australia.

Another major external motivation for better performance measurement has been the Review of Commonwealth/State Service Provision (SCRCSSP 2000). The intention of this review is to establish and report on objective, reliable performance data by means of cross-jurisdictional comparison of relevant government agencies, including all police jurisdictions.

What is Activity Measurement?

Essentially, activity measurement is a method by which the allocation of an input (such as staff time) to a range of activities or outputs is monitored so that the links between them become more apparent. Specifically, activity measurement data are used to:

- "assist management in measuring the allocation of the agency's resources to specific outputs;

- cost the outputs of the agency, and assist government in meeting outcomes;
- assist line staff in better understanding how their work contributes to the broader, corporate goals of their organisation; and
- provide the community with information on the range and costs of services that an agency provides." (SCRCSSP 1999, p. 3)

Activity Measurement Instruments

There is more than one approach to activity measurement (SCRCSSP 1999). New Zealand police use an approach involving very detailed and resource-intensive timesheets, and New South Wales police use a generalised roster system.

In all other Australian police jurisdictions where an approach to activity measurement has been established, activity surveys have been implemented (SCRCSSP 1999). Survey periods are generally of one or two weeks' duration, and usually carried out annually or biannually. In this method, staff complete a survey form in which they indicate the amount of time they have spent on particular activities during each shift of the survey period.

In designing and implementing activity surveys, or any form of activity measurement, there are various critical decisions to be made (SCRCSSP 1999). A key issue for all jurisdictions has been to ensure that their system is adequate and sufficiently flexible to meet their continually evolving internal and external reporting requirements, and that existing tools are utilised where available. A further consideration is that there is a trade-off between the cost of the measurement and the resultant detail and precision of the data, which underlies the design and implementation of the system. Notably, most jurisdictions have experienced a range of similar design and implementation issues. (More

detail on the activity measurement issues of all police agencies in Australia and New Zealand is available in SCRCSSP 1999.)

SAPOL's Activity Survey Design

All jurisdictions implementing an activity survey currently use paper survey forms (SCRCSSP 1999). SAPOL's surveys, presently designed in a scannable paper form, have been constructed to collect information regarding the specific activities in which each participant engages. Every 15-minute interval is to be accounted for across each shift during the survey period. The list of activities in SAPOL's survey has been compiled from similar surveys undertaken in other police jurisdictions in Australia. There are as many as 126 activities for generalist policing alone, which provides reasonable flexibility for broader use of the database. However, with greater clarity about SAPOL's national and State measurement needs, the list may be reduced.

SAPOL uses a snapshot survey approach in which not all staff are surveyed at once, rather, they are surveyed on a rolling basis. This system ensures that all staff eligible to be surveyed will be surveyed over time, thereby having some advantages over a census approach. The process occurs over a two-week survey period (that is, 10 shifts per individual) and involves the selection of country and metropolitan service areas for participation in the survey in different seasons or time periods. In this way, the process samples service areas in both typical and atypical periods, and therefore has the potential to take into account the impact of any unusual events as a matter of course.

Only staff who have an operational role in which they directly contribute to multiple outputs (largely, but not entirely, sworn staff) are surveyed, since other staff who contribute to limited outputs are easily entered

onto the system. As non-operational support staff have a largely administrative role within which it is difficult to determine their contribution to specific outputs, they are treated as overheads. Their input is split according to the output distribution of surveyed staff.

Implementation Issues

All police jurisdictions implementing an activity measurement system share the following implementation objectives (SCRCSSP 1999, p. 35):
- "encouraging high response rates;
- encouraging accurate responses;
- collecting high quality data at minimum cost;
- facilitating more effective use of activity information;
- developing a cost-effective data improvement strategy; and
- minimising the full cost of data collection and collation."

There are various common issues and strategies arising from attempts to achieve these objectives by all jurisdictions, which echo the ongoing problems experienced in South Australia (SCRCSSP 1999). The provision of incentives for staff to cooperate in the process is a critical issue. Many jurisdictions have found advantages where processes were put in place to ensure adequate training, confidentiality, burden minimisation and promotion and sharing of the benefits of the exercise. These factors are particularly important as the integrity of the data substantially relies on self-reporting by participants.

Another significant issue is quality assurance (SCRCSSP 1999). Jurisdictions have found that quality assurance improvements strengthen the above incentives and therefore improve the accuracy and relevance of responses from participants. A focus on quality assurance assists the agency to determine the appropriateness of their process of information

collection and provides a means to demonstrate data integrity for the purposes of the system.

A further issue that all jurisdictions faced concerned contracting out various stages of the process (SCRCSSP 1999). South Australia opted to carry out the entire process internally and so has more ongoing opportunity costs than direct costs.

Reporting Issues

In South Australia, the data collected are linked to Output Groups and then classified at the higher level into Output Classes with other related outputs (or services provided by the agency; see Table 1) via the specific, individual activities found in the activity survey. Output Classes are then linked to the national Service Delivery Areas used in national performance measurement. These links, in the current system, are reliant on the interpretations of select staff concerning the definitions of the relevant activities, outputs and Service Delivery Areas. This arrangement does not seem to be unique to South Australia.

This process will also be affected by the individual participants' decision-making process in relation to the

activities. For example, a police officer may be called to an incident in which he or she is potentially undertaking more than one activity at a time, or which may be interpreted by others as a different activity. Therefore, definitions and links need to be clarified and continuously assessed at all levels, both internally and externally.

SAPOL Results

Figure 1 shows the results of four activity surveys conducted during October 1997 and February 1999 in SAPOL, according to Output Classes. During this survey period approximately 85 per cent of SAPOL's operational staff were surveyed. Police staff contributed the bulk of their time to the Output Class of community police services (40%). The crime management Output Class constitutes almost one-third (32%) of police time in South Australia. The traffic services Output Class contributes the next largest amount of police time (13%), followed by criminal justice support (12%), emergency management and coordination (2%) and ministerial support services (1%; which has since

been removed as an output).

These data are used to report nationally on our performance in relation to other States in the Report on Government Services 2000 (SCRCSSP 2000). This report found that:

- South Australia spent a higher proportion of its time on "crime investigation" than other States;
- the Australian Capital Territory spent more on "community safety and support";
- "road safety and traffic management" was highest in Victoria; and
- Western Australia spent the most time on "services to the judicial process".

Notably, it is believed that these discrepancies do not indicate real differences in the activities or performance of the various States. Rather, they are expected to be due to interpretation differences across activities and their linked groups. This issue is presently being explored.

From Paper to Electronic Palm Device

As the SCRCSSP (1999) notes, paper-based instruments can be advantageous as they involve fixed costs which are relatively low when compared with alternate methods, however they become very costly to administer with larger amounts of data. Being much more labour intensive, paper-based surveys tend to involve lower set-up costs but higher operating costs.

For South Australia, although set-up costs associated with an automated data collection process are greater than that of a paper version, the introduction of such a process will ultimately be more cost effective due to the large volume of data generated and processed. It would be further expected that the operating costs of automated approaches should reduce over time, since they generally involve a one-off cost rather than additional costs for every year, as is the case with the paper survey.

Table 1: *Output groupings within each Output Class, according to groupings in the 1998–99 financial year*

Output Class	Output
Community police services	Community patrols Police station services Community programs Information services Event management
Crime management	Targeting crimes against the person Targeting crimes against property Targeting illegal drug activity Targeting other criminal activity
Traffic services	Traffic policing Traffic crash investigation
Emergency response management and coordination	Emergency response management and coordination
Criminal justice support	Services to the criminal justice system Custodial services
Ministerial support services	Ministerial support services

Apart from improved cost efficiency, automated approaches provide a means to address some of the particular problems experienced in the design and implementation of the survey mentioned earlier. Such an approach can dramatically increase the validity of the data and significantly reduce the burden to staff.

SAPOL therefore considered a range of electronic and computing system approaches and devices for the activity survey. Given that general duties police officers do not usually have ongoing access to a personal computer, it was felt that mobile electronic devices provided the unique flexibility required for the survey.

SAPOL recently purchased some hand-held electronic devices in preparation for the next activity survey. Since these devices are mobile, this allows survey participants to enter their activity details at the time they undertake the activity (which can improve accuracy), including when they are out on patrol. The computer program also enables a streamlined design, so participants do not have to look through all the activities in order to find the relevant one. Furthermore, without having to overburden participants with paper, a help option can be embedded into the system.

The burden on survey staff is also significantly reduced since electronic data collection dramatically reduces the turnaround time. The time spent with the paper-based survey on data collation and processing is almost non-existent. This is of particular consequence for the South Australian experience since it eliminates the intensive use of staff resources resulting from an internally supported approach.

There is also the likelihood of greater precision given that built-in auditing devices provide reduced chances for human error, such as the incorporation of input "masks" to ensure that only specific data can be entered.

Figure 1: *Cumulative Activity Survey data from October 1997 to February 1999 showing police time contributions according to Output Classes*

Errors or missing data will be immediately recognised by the program, which will prompt the participant and help to ensure the validity of the data.

Recently SAPOL's Strategic Development Branch (Planning and Evaluation Services) conducted a logistical test of the hand-held devices. The ability to carry the devices around on patrol was noted to be an advantage, and a positive move away from the paper survey. Survey staff also found the turnaround time to be considerably quicker. Comments raised by the trial group proposed some initial minor changes or suggestions which are being considered in preparation for a pilot survey which is planned for this year.
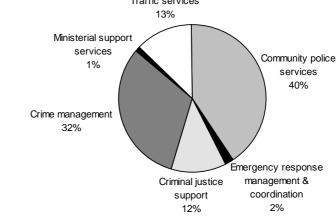
Use of Activity Measurement Data

Currently, the main impetus for the activity measurement data is support for output-based budgeting processes and national performance measurement. However, the data are applicable to and useful for various other functions and projects.

Specifically, in South Australia the activity measurement data inform the corporate planning process and are provided to the managers of local police services for use in local planning and ongoing management decisions. Further, a project is currently planned to identify what drives the key police service outcomes

of crime reduction and community satisfaction. Activity measurement data will be examined in this project, along with other measurement systems, such as crime statistics. The utility of the data in the broad planning context will be considered, particularly in determining how inputs and outputs should be linked in order to achieve policing outcomes.

This year, a police working party was formed in South Australia for the specific purpose of developing performance indicators that would assist in assessing the impact of additional police and civilian staff recently announced by the South Australian Premier. These additional resources were provided to strengthen the operation of SAPOL's Local Service Areas by focusing their efforts on proactive, community-based crime prevention initiatives. The results of activity surveys will be a primary indicator of whether police resources are being directed to the desired initiatives, and the extent to which civilian staff release police officers to perform operational duties. Specifically, activity survey data will be used to monitor changes in the relative percentage of time police devote to proactive and community-based crime prevention activities, and the reduction of time spent on administrative duties by police officers.

Future Directions for Activity Measurement

More efficient use of resources could be achieved by utilising management information systems which are supported by the latest technology and provide ongoing, reliable human resource data that is accessible to senior police (Grabosky 1988). Ultimately, this information could be gathered as a matter of course if traditional data collection mechanisms in policing are broadened and such data considered in their design.

It is critical that police agencies invest significantly in information gathering and data management which will enable police to determine what they have produced as a result of their efforts (Sutton 1996). Importantly, police can only gain from presenting a more realistic picture of what they are doing with limited resources, rather than the unconstructive impression resulting from the crime figures (Cherrett 1993). With this they can also better manipulate and link a range of policing information for use in research and planning and for managerial purposes (Bond 1996).

In the future, it is hoped that activity data will complement a wide range of measures used in determining the performance of police services. Useful measures may include "successful implementation of problem-solving initiatives, trends in repeat calls for service, road safety indicators, and service user satisfaction" (Bond 1996, p. 6).

Conclusion

It is widely recognised that traditional indicators of police performance are insufficient. Therefore, improved knowledge of how police spend their time through activity measurement provides management information that has the potential to support many critical decisions and processes affecting police agencies. Importantly, all police jurisdictions have seen the relative benefits of this information and, as a result, most have begun to collect information on this basis, largely using activity surveys. Police agencies using these approaches are presently experiencing a range of similar design, implementation and reporting issues in undertaking this form of measurement, which provide ongoing concerns.

SAPOL aims to make significant improvements to the activity measurement process and data integrity by shifting to an electronic survey format. It is important that every effort is made to ensure the data are as valid and reliable as possible, due to their critical role in the decision-making processes of both the State and Commonwealth governments and managers in police agencies. Given the likely demand for more detailed, well-validated information in the future, the data provide a useful tool to supplement other forms of management information. In turn, this will strengthen our understanding of police performance and play a critical role in planning and budgeting processes at every level. Perhaps, more profoundly, police organisations that claim to be "community policing"-focused can now point to evidence beyond strategic declarations of their activity in this area.

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