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Performance Monitoring: A Policy Tool or Navel Gazing

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Abstract

In the world of public policy there is an abundance of tools and techniques to base good public policy upon, for example benefit-cost analysis and multi-criteria analysis. However, these techniques tend to be one-off studies, the quality of which depends on the data available. Also, the use of these policy tools tends to be pre-policy formulation. But there is a *complementary* policy tool that is often overlooked in public policy; performance monitoring.

Performance monitoring is an *on-going* program that uses indicators to assess the progress of industry in relation to the government's objectives. However, monitoring the performance of any industry is difficult, especially for those outside it.

The Bureau of Transport Economics (BTE) has been active in the field of performance monitoring. This paper discusses the BTE's performance monitoring work, focusing on the role of *Waterline* in performance monitoring of the Australian waterfront. It is the BTE's experience that, compared to one-off industry studies, on-going performance monitoring can provide a cost-effective means of raising the standard of community debate.

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Introduction[1]

In the world of public policy there is an abundance of tools and techniques to base good public policy upon, for example benefit-cost analysis and multi-criteria analysis. Many of these techniques have been developed to replace the traditional 'seat-of-your-pants' public policy decision making process. However, these techniques tend to be one-off studies, the quality of which depends on the data available. Also, the use of these policy tools tends to be pre-policy formulation. But there is a *complementary* policy tool that is often overlooked in public policy; performance monitoring.

In a public policy sense, performance monitoring is an *on-going* program that uses indicators to assess the progress of industry in relation to the government's objectives. Consequently, the extent of the performance monitoring program and the types of indicators used will reflect the government's objectives. However, monitoring the performance of any industry is difficult, especially for those outside it. Good data are always difficult to obtain and interpretation of the data often depends on the perspective and motivation of the observer, even when there is confidence in the quality of the data. Difficulties can also arise in reaching agreement on common definitions of the items being monitored, the lifespan of the monitoring program, and the continued supply of quality data

As with any data gathering exercise, the private sector is often critical of government requests for data. The cost of supplying data and the release of data that may be commercially sensitive are legitimate concerns of business. Performance monitoring by government must therefore have a genuine public policy motivation and not be undertaken just to satisfy the inquiring minds of bureaucrats.

Despite these difficulties the Bureau of Transport Economics (BTE) has been active in the field of performance monitoring. This paper discusses the BTE's performance monitoring work, focusing on the role of *Waterline* in performance monitoring of the Australian waterfront. The paper concludes with some lessons the BTE has learnt over the years that may be of benefit to other public policy practitioners.

Why monitor?

It is a reasonable question to ask, if it is so difficult to monitor an industry, why do it at all?

The answer comes in two parts:

- to influence behaviour; and
- to keep track of the shareholder's investment.

[1] Some of the material contained in this paper was prepared by Anthony Carlson for an invited paper presented by Clive Hamilton, Executive Director, The Australia Institute (Hamilton 1999). The authors are grateful to Mr Hamilton for the use of the material, however, the focus here is broader than the context of Mr Hamilton's paper.

Performance monitoring is nothing new. In our everyday lives governments constantly monitor our performance. For example, take driving your car. Vehicle inspectors carry out routine checks to monitor the physical attributes of cars to ensure they comply with safety standards. Parking inspectors patrol the streets to monitor the correct use of the potential parking spaces. And while we drive our cars, we are well aware that the police use devices to ensure our driving conforms to the legislated speed limits. In all three cases, the government uses a monitoring program in an attempt to influence our behaviour.

And in the private sector an industry has developed to allow the performance monitoring of publicly listed companies. The stock market and accompanying advisory infrastructure has developed as a private sector response to the needs of shareholders to monitor how their investments are performing. In this respect governments are no different.

Governments have spent large amounts of money to advance microeconomic reform of key industries. This is particularly evident in the waterfront and shipping industries. For example, in the early 1990s the Government contributed $165 million towards redundancies in the stevedoring industry. The industry itself contributed $254 million to the reform process (Bureau of Transport and Communications Economics 1995, p1). In this case, the Government wanted to be sure that the objectives of the reform process were being achieved after such a significant expenditure of public funds. Monitoring of stevedoring performance was one method of measuring the results of reform and assessing if public money had been well spent. In this sense performance monitoring has an accountability aspect to it.

A common theme of reform programs is that reform is a journey, not a destination. To ensure that reform is ongoing requires pressure for reform be maintained. Performance monitoring plays a role in applying the required pressure to ensure industry performs in a manner that will result in the government's desired outcome. If the government's reforms stall, for whatever reason, the publication of performance data illustrating the lack of progress can be a powerful incentive for the industry to lift its game. Finally, a well-structured monitoring program can also provide an indication of where performance might be improved.

Performance monitoring and benchmarking

Often the term benchmarking is used in association with monitoring reform programs. However, benchmarking is not the same as performance monitoring. Benchmarking studies tend to be one-off attempts to measure comparative industry performances through the use of partial indicators. The results of benchmarking studies are usually couched in terms of 'world-best practice' and/or industry averages, either of which are then used as performance goals. That is, benchmarking studies provide an objective to attain but performance monitoring is still required to monitor the progress towards that objective.

BTE performance monitoring

The BTE has an extensive performance monitoring program, of which monitoring of stevedoring performance is a prime example. However, performance monitoring is a relatively new field for the BTE, having commenced only 5 years ago (the BTE has been conducting transport research for over 25 years). Even now, in terms of the BTE's resources, performance monitoring is only a small proportion of the BTE's research program. However, the BTE's monitoring program has proven to be a very cost-effective way of contributing to the transport public policy debate.

The primary medium for disseminating the results of BTE's performance monitoring program is the quarterly publication *Waterline*. In addition to container stevedoring productivity indicators, *Waterline* includes:

- crew-to-berth ratios of Australian merchant ships and off-shore vessels;
- port reliability; and
- the Port Interface Cost Index (a measure of the cost of moving containers between container ships and warehouses in the major Australian container ports).

The BTE also monitors airfares of Australian airlines on a monthly basis. The results of airfares monitoring are reported in the BTE's *Indicators* series published on the BTE's Internet site.

The BTE has also been given the responsibility of monitoring the effectiveness of the Bass Strait Passenger Vehicle Equalisation Scheme. Unlike the BTE's other performance monitoring work, this work is conducted annually and at this stage does not rely on any specific indicators.

Each of the monitoring activities has a specific role and history. However, the rest of the paper will focus on the role of *Waterline* and stevedoring performance monitoring.

Development of *Waterline*

Throughout the 1980s the BTE had played a role in providing governments with expert, independent and balanced analyses on a broad range of maritime issues. However, the BTE faced a dilemma. The relatively small size of the BTE, and the ad hoc nature of the maritime research tasks it had to undertake, meant the BTE maritime research team was more of a jack-of-all-trades, rather than an expert in its own right. This made it difficult for the BTE to establish an ongoing presence in the maritime reform debate. It was believed that this presence was essential to maintain relevant contacts and hence expertise; a prerequisite to providing reliable advice to government.

The solution the BTE decided to try was the production of a regular newsletter called *Waterline*. Designed to provide timely information and analyses, the timing of this new concept was ideal as the BTE had been requested by the House of Representatives

Standing Committee on Transport, Communications and Infrastructure (HORSCOTCI) to produce a six monthly indicator on port interface costs (HORSCOTCI 1992, p. 101). Combined with the task of producing container stevedoring productivity, the BTE could now regularly report on the costs of container ports to users and the productivity of the container terminals in the same publication. That is to say, for the first time in the Australian waterfront reform debate, reliable and independent information and analyses on aspects of the price and quality of waterfront services would be available on a regular basis[2].

This frequency of output had an unexpected benefit. Regular reporting provides the opportunity for interested parties to comment on the usefulness and deficiencies of the indicators. By being flexible and improving the indicators to reflect feedback, the BTE established a reputation of understanding the industry, rather than imposing bureaucratic irrelevance.

Continual learning also provided the BTE with the experience of what type of indicator would work and what would not. This expertise takes time to develop. Other economic research bodies have found it difficult to develop such knowledge in the short timeframe of one-off studies of performance. For example, it took the Productivity Commission[3] two 'one-off' studies on waterfront performance before finally adopting techniques developed by the BTE.

Since July 1994, *Waterline* has developed into the primary source of publicly available information on maritime matters. The topics covered have increased to include regular container port reliability measures and crew-to-berth indicators, as well as feature analyses on other maritime matters. Through *Waterline* the BTE has established itself as one of the most significant voices on performance monitoring in Australia. However, there have been mistakes and there are still many important areas of the maritime industry that could be, and perhaps should be, monitored. Nevertheless, the BTE's experience in this area provides a number of useful lessons that others considering taking on the task of regular performance monitoring may find useful.

Has *Waterline* been successful?

By any objective measure, the answer to the question posed in the heading is that *Waterline* is a successful publication. The use of *Waterline* data by all parties during the severe waterfront dispute in 1998 is good evidence of this. Throughout the dispute there was never any question of the accuracy of *Waterline* stevedoring data. The credibility built up over several years paid off for the BTE and that credibility is still intact after the dispute.

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[2] From the first issue, information on port throughputs, inter alia, were also contained in *Waterline*.

[3] The Bureau of Industry Economics (BIE) conducted the first two studies before being absorbed into the Productivity Commission.

The release of *Waterline* receives wide coverage in both industry publications and mainstream media. The coverage has widened since the 1998 waterfront dispute as there is continuing interest in the effect of the dispute on stevedoring performance. *Waterline* is clearly accepted as being an authoritative and objective source of stevedoring performance data.

Although shipping companies collect performance data for their own ships at container terminals, they use *Waterline* as an alternative source of information to complement their own data. *Waterline* also provides information to ship operators on the relative performance of Australian ports. The credibility of *Waterline* makes it difficult for stevedores to make exaggerated claims about the performance of their terminals in negotiations with ship operators. Of course, stevedores also use *Waterline* data when these serve to strengthen their negotiation position (Hamilton 1999).

Although stevedoring data are the focus of attention in *Waterline*, the Port Interface Cost Index has also been of value to the commercial interests of port authorities. In the early days of *Waterline* some port authorities were less than enthusiastic about supplying data for *Waterline*. After the marketing opportunities presented by *Waterline* data were realised, the BTE was able to work cooperatively with the port authorities in developing the Port Interface Cost Index to better meet industry needs. Now most port authorities are able to find information in *Waterline* to support the promotion of their port.

Lessons from the BTE experience

Much of the following is commonsense and a team with good management and research skills should have little difficulty with preparing and implementing a sound performance monitoring program.

Know what you want – the forest and the trees

It may sound simplistic, but the most important step in performance monitoring is to be very clear about what you are trying to achieve. Potential data suppliers, in particular, are very good at quickly identifying whether or not you understand the connection between your data request and the purpose of the monitoring program.

It is important to understand the big picture, that is, identify operating parameters such as:

- the client's demands;
- other stakeholders such as data suppliers and even those who may not want performance measurement to take place;
- threats and opportunities;
- lifespan of the exercise; and
- the delivery vehicle for the information.

Once these issues have been explored, it should be easier to identify the types of indicators that could be used to achieve the purpose of the exercise. Ideally, a suite of indicators should be developed including a holistic (or headline) indicator supported by a series of partial indicators that help to explain changes in the headline indicator. For example, the BTE provides a national average of the individual port indicators, and it is the national figure that is used by the media, policy advisers and industry groups to provide a general picture of what is going on. This can be a problem of course when too much attention is paid to movements in the headline indicator while movements in the supporting indicators are ignored.

This transparency of the headline indicator may be achieved through a hierarchical structure or through partial indicators. For example, in *Waterline* the port indicators used to develop the national average are themselves headline indicators for each port. In regional discussions, the headline port indicator is often used in a way similar to the use of the national indicator. Ideally, the port headline indicator should also be broken down into terminal indicators[4], but this may not be possible given legitimate claims for commercial confidentiality.

Transparency through the use of partial indicators

Partial indicators should support headline indicators wherever possible. Ideally, any change in the headline indicator would be explained by the weighted sum of the changes to the partial indicators.

The world, however, is not ideal. Therefore, greater effort must be made to construct partial indicators for the significant factors causing variability in the headline indicator on a regular basis. For example, the rate at which stevedores can work a ship will depend on the rate at which each crane operates. Consequently, the BTE reports both the average ship rate and the average crane-handling rate.

Where important partial indicators cannot be developed, it has been the BTE's experience that it is essential to at least be able to make some qualitative statements about the independent variable, even if those statements are based on anecdotal evidence.

In cases where an influencing factor remains relatively constant, a partial indicator for that independent variable may not be required. For example, changes in the mix of container sizes will have an effect on teu based stevedoring productivity indicators. However, in recent years the mix of 20' and 40' containers in Australia has remained reasonably constant and therefore development of a box-size partial indicator has not been a priority.

[4] At the time of writing, the BTE and the Department of Transport and Regional Services were negotiating with the stevedores to allow the publication of individual terminal indicators for the first time.

One final but very important factor to consider about the choice of indicators. Experience has taught the BTE that when comparisons between performance measures are made[5], it is precisely those influencing factors where partial indicators have not been constructed that cause the comparisons to be inappropriate. For example, comparing various Australian stevedoring crane rates is reasonably acceptable because many of the unmeasured influences are the same at each Australian port, such as the type of ship and terminal capital equipment to name just two variables. However, comparing Australian stevedoring crane rates with other national crane rates is fraught with danger when the unmeasured influences are not considered

Identify stakeholders

Identifying stakeholders is essential to establish the appropriate strategy for implementing a performance monitoring program. In addition to the client, two most important stakeholders to consider are:

Those organisations that would be affected, positively or negatively, by the monitoring program: The support of these organisations is critical to the ongoing development of the indicators, and the way the indicators may be used. For *Waterline*, the key stakeholders are the stevedores, unions, port authorities, industry representatives, shipping lines, state and federal government agencies, as well as a number of individuals who either work or have worked in the maritime industry and are willing to verify anecdotal evidence through their own networks. Interestingly, cargo owners have never been active stakeholders; a situation not unique to *Waterline*.

The data suppliers: An administrative ideal would be for the data to be sourced from one supplier. However, such a situation would only be ideal if the supplier were reliable, able to provide the information over the entire life of the monitoring program, and if quality checks were available. One of the successful aspects of *Waterline* is the improved relationship between the BTE and the data suppliers. After an initial environment of reluctant cooperation, some data suppliers began to realise that they could legitimately use the BTE as their sole contact with the government (and other inquisitive bodies). This would allow the data suppliers to reduce their information burden. Other data suppliers (particularly one of the major stevedores) have been attracted to the idea of supplying the BTE with more data so that the BTE may develop new partial indicators that will then be used by the operator as part of their own internal performance monitoring.

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[5] And comparisons are inevitably made, regardless of warnings of the inappropriateness to do so.

Know your data and the individual who prepares the data

It might sound obvious, but there are times when the data collected are not necessarily what you thought they were. For example, all the stevedoring productivity indicators contained in *Waterline* are based on aggregated data supplied by the stevedores. These data are based on definitions that have remained fairly consistent since 1989. However, people in critical positions change, information systems change and operating procedures change. Each time one of these changes occurs, it is possible that the definitions of each indicator are interpreted differently without anyone realising. Audits of the data suppliers information systems are critical, but could be considered intrusive.

The relationship with the agency supplying the data needs to be developed at both the management and operational level. Sometimes there is a gulf between what the management of the organisation supplying the data thinks it can supply and what the individual preparing the data will supply. It is not good enough to rely on the supplying agency to provide the data according to the needs of the monitoring program. Even if the supplying agency has perfect information systems, their systems may not be designed to report the data in ways required for the monitoring program. Consequently, the individual responsible for responding to the requests for the data may need to manipulate the output; a task that may not be high on the individual's list of priorities.

With *Waterline*, the BTE has always attempted to maintain a good working relationship with stevedoring management and with the stevedoring data managers. However, it is reasonably fair to say that the Australian stevedores' information systems are not as good as perhaps an outsider would think possible. This is partly due to historical factors relating to the previous ownership structure of the stevedoring industry, and partly due to the difficulty of coordinating the information systems between terminals of different information technology standards across Australia. It would also be fair to stay that it does appear the Australian stevedores have begun to place a greater focus on their information technology requirements.

Share and care

It has been the BTE experience that strong networks can be developed by openly sharing data and information. These networks are essential for expanding the range of indicators and for verifying anecdotal evidence. There are times, obviously, when the sensitive commercial nature of some data sets means the data cannot be passed on, but even so, a discussion of the issues relating to the data will often provide positive results for both parties.

The sharing of information and views has the additional benefits of:

- creating a stronger sense of ownership of the monitoring program among the stakeholders; and

- developing greater respect for each agency's policy position, while promoting continued, and sometimes still heated, debate based on a shared understanding and a common interpretation of the facts

More than just numbers?

Deciding on the appropriate format for the publication of the results of the monitoring program is critical. The BTE has experience in producing data publications and data and commentary publications. There is little doubt that the success of *Waterline* relies heavily on the accompanying commentary, which promotes a consistent message based on the available data.

Without commentary, there remains the opportunity for individuals to inappropriately interpret the results. While this is possible even with commentary, an accompanying article that contains well articulated and developed analyses raises the level of the debate and minimises the misuse of the data.

Providing *Waterline* free of charge means that the information permeates widely through the maritime community. Wide distribution helps in providing a consistent starting point for debate and also demonstrates the BTE's commitment to assisting in the reform process.

Be apolitical – "just the facts thanks M'am"

Providing commentary with data can be a difficult exercise when balancing current political imperatives (not just of government) with the management of the monitoring exercise. But by providing an apolitical account of the data strengthens the relationship between the BTE, data suppliers and other key stakeholders, and ensures the longer term viability of the publication.

It is interesting to note that being apolitical still does not stop the use of *Waterline* as a political document. For example, during a past stevedoring industrial dispute, a senior representative of the Maritime Union of Australia and the then Commonwealth Minister for Transport, appearing on a respected prime-time current affairs program, both began waving *Waterline* at each other while arguing their respective positions from selected passages from the latest issue.

Listen and learn and listen again

The BTE prides itself on the generally good relationship it maintains with industry organisations while providing information to the government. This is particularly so with *Waterline*. The relationship is strengthened by the way the indicators adapt to better reflect the activity they are intended to measure. This flexibility shows the BTE is willing to listen to advice, learn from that advice, and then listen to feedback on the

revised indicator. The BTE has consequently been able to avoid some of the unnecessary mistakes other monitoring agencies have made.

Conclusion

It is the BTE's experience that, compared to one-off industry studies, on-going performance monitoring can provide a cost-effective means of raising the standard of community debate. The benefits of performance monitoring over ad hoc studies are:

- quick access to critical data as input into the policy making process, including input into major studies that would have had to expend the resources on obtaining the data anyway;
- the development of relevant and current corporate knowledge and expertise of how industry works;
- the development and maintenance of strong working relationships with industry agencies which can be used to anticipate, rather than being reactive to, policy debate developments. This allows the monitoring agency to anticipate future data needs and actively seek that data; and
- the regular publication of performance indicators provides a transparent public service to the community.

The challenge of managing a performance monitoring program, however, is to remain vigilant to ensure the program is relevant and of substance. Otherwise, the monitoring agency would be doing little to raise the standard of public debate and could rightly be criticised as doing nothing more than navel gazing.

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