1 Evidence-based policy

There is nothing new about the idea that the best available evidence should underpin policy decisions — it has been described as old as the state itself (Nutley et al. 2009, p. 3). But the term evidence-based policy is relatively new — popularised in the late 1990s when the Blair Labour government was elected on a platform of 'what counts is what works':

> We will improve our use of evidence and research so that we understand better the problems we are trying to address. We must make more use of pilot schemes to encourage innovations and test whether they work. We will ensure that all policies and programmes are clearly specified and evaluated, and the lessons of success and failure are communicated and acted upon. (Blair and Cunningham 1999)

In the ensuing decade, the ideals of evidence-based policy became a global movement. In Australia, the Prime Minister said in an address to senior public servants in April 2008:

> Policy design and policy evaluation should be driven by analysis of all the available options, and not by ideology. …We're interested in facts, not fads. (Rudd 2008)

In the United States, President Obama (2009) echoed some language of evidence-based policy in his inauguration address:

> The question we ask today is not whether our government is too big or too small, but whether it works … Where the answer is yes, we intend to move forward. Where the answer is no, programs will end.

Subsequently, the White House's Office of Management and Budget has issued guidance on what constitutes strong evidence for policy evaluation, and its new director has outlined a program to build rigorous evidence to drive policy. In a separate development, the non profit and non partison US Coalition for Evidence-Based Policy works to encourage appropriate financing for evaluation, the use of state variation to improve knowledge of what works and the sharing of evaluation results.

Similar ideas have filtered through aid organisations and many developing countries, with impact evaluation now a routine requirement under aid donors' systems. International agencies, such as the OECD's Development Assistance Committee, the World Bank and the International Monetary Fund (with extensive evaluation programs of their own), have joined evaluation 'clubs' to pool knowledge, fund better evaluation and disseminate results and lessons learned.

Nevertheless, in essence, evidence-based policy is simply the latest name to describe what economists, social scientists and policy analysts have attempted to practise for decades. It is a collection of concepts and methods to reinvigorate existing efforts and encourage better approaches to the analysis of public policy, with the primary aim of improving the rigour of policy development and enhancing accountability of decision makers.

Both the demand for, and supply of, evidence have grown

On the demand side, the number of complex policy challenges on the horizon puts a premium on ensuring rigorous assessment of policy choices and evaluation of existing programs. For instance, in the human capital sphere there is often little settled evidence about what policy measures work best and there can be long lead times before results are fully evident. Single-cause explanations or answers to policy questions are likely to be rare. And, as the Council of Australian Governments (COAG) moves towards nation-wide solutions, policy experiments and opportunities to learn may decline. Policy mistakes could be national and come at a significant cost.

On the supply side, the opportunity for better analysis has grown with the emergence of large microeconomic and social data sets, cheap computing power and more sophisticated modelling, experimentation and econometric examination of micro and social policy impacts. These have combined to yield improvements in the ability to identify and quantify causal relationships (Donohue 2001, p. 2). Analysts can now examine what works to a degree previously unimaginable, and taxpayers expect government policies to work without wasting resources.

All this provides a challenge to ensure that the analytical tools and evidentiary practices appropriately serve contemporary policymaking and that the institutional framework is sufficiently robust to ensure transparent and independent evaluation of the evidence.

What is evidence-based policy?

At first glance, the term evidence-based policy appears self-explanatory — public policy based on rigorous evidence:

> Like all of the best ideas, the big idea here is a simple one – that research should attempt to pass on collective wisdom about the successes and failure of previous initiatives in particular policy domains. The prize is also a big one in that such an endeavour could provide an antidote to policy making's frequent lapses into crowd pleasing, political pandering, window dressing and god-acting. (Pawson 2002)

Nevertheless, there is considerable variation in what is understood by the term evidence-based policy. Some researchers narrowly associate it with a particular type of evidence or evaluation methodology, most notably quantitative evaluation, meta-analyses of existing research or randomised policy trials (Nutley et al. 2009, p. 5).

The broader definition offered here views evidence-based policymaking as a process that transparently uses rigorous and tested evidence in the design, implementation and refinement of policy to meet designated policy objectives. This definition stresses three characteristics that seem emblematic of the present interest:

- evidence should be broad, tested, rigorous, and ideally capable of replication;
- evidence should be robust and avoid common methodological pitfalls; and
- the entire process should be transparent and contestable.

This broader view recognises that evidence and evaluation are relevant at every stage of the policy cycle, from identifying the policy problem, through assessing policy options, to ex-post evaluation (figure 1.1). Moreover, it can encompass an array of evidence and research methods (figure 1.2).

Figure 1.1 **The role of evidence in the policy cycle**

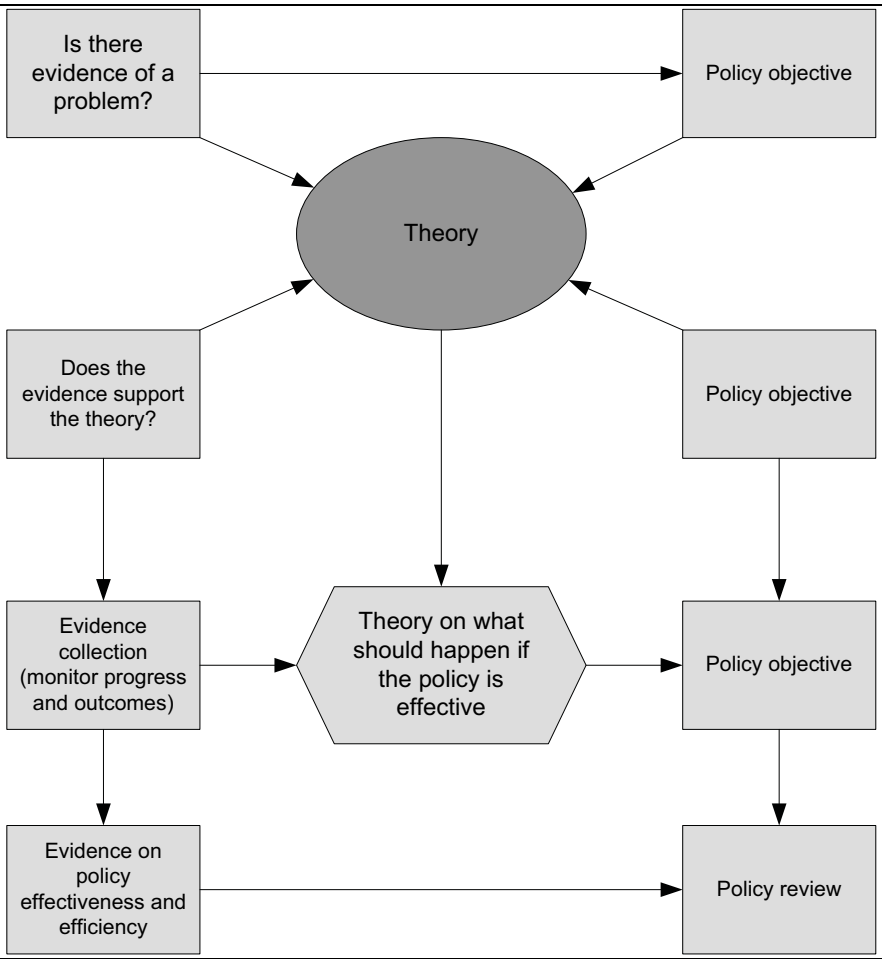
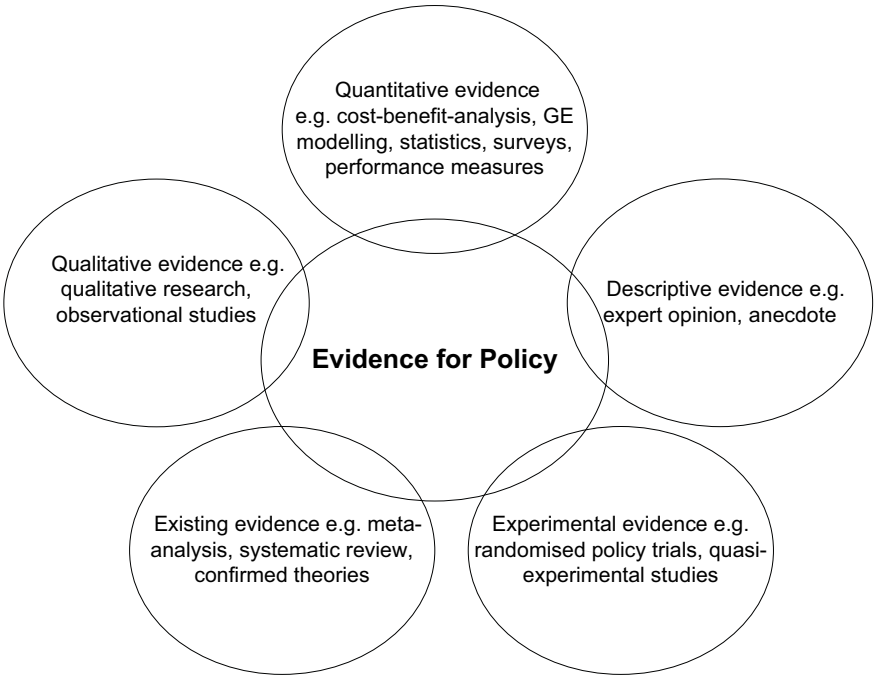


Figure 1.2 **Types of evidence**



Under this broad view, what matters for public policy development is not only what works, but also how does it work?, what are the broader ramifications?, at what cost? and who benefits or loses? For instance, increasing the school leaving age could certainly be shown to 'work' by increasing the number of children with a year 12 qualification, but it may not actually improve student outcomes. Similarly, tariffs and industry subsidies 'work' to improve the position of the target domestic industry, yet this may come at the (greater) expense of the wider economy and community. Fundamentally, evidence-based policy is about assessing whether a policy improves community wellbeing.

Why is it important?

The purpose of government is to improve the wellbeing of the community in ways that may not be possible by individuals acting alone. However, policymakers can get it wrong, be ineffective or fail to foresee unintended consequences (box 1.1). There is often considerable debate about whether government action has actually led to an improvement and, if so, the extent of the gains. An evidence-based approach to policymaking is one way to improve policy development. It is built around the belief that better quality decisions will be made if the process is informed by robust evidence.

Box 1.1 Why is evidence-based policy important? Some examples

Conventional wisdom is often wrong. Policies can be ineffective or have unintended and perverse outcomes.

Government spending on education has increased by around 260 per cent in the last four decades, largely to finance reductions in class size. But overall the evidence suggests that class size reductions do not yield significantly better student outcomes (Hanushek 2002, Leigh and Ryan 2006).

The 'United States Scared Straight' program, which aim to deter 'at risk' juveniles from future offending through first-hand observation of prison life, actually have the reverse effect, by providing 'positive' criminal role-models and attracting juveniles towards crime. A meta-analysis of randomised controlled trials demonstrated that programs like Scared Straight are likely to have a harmful effect and increase delinquency relative to doing nothing at all (Petrosino et al 2002).

Conservation regulations, introduced to protect and conserve, can have the reverse effect. For example, there was considerable pre-emptive clearing of native vegetation in Queensland in anticipation of the imposition of regulatory restrictions. Total clearing rose from around 330 000 hectares a year over the 1991-1999 period to 758 000 hectares in 1999-2000, when forthcoming restrictions were signalled (PC 2004a).

Evidence can improve clarity when dealing with complex interventions which act on complex social systems.

Childcare is often viewed in a binary fashion — it is either 'good' or 'bad' for young children. The Commission's report on Paid Parental Leave found the reality to be more complex. There is evidence of problems where non-parental care is initiated early in a child's life (three to six months), where childcare hours are extensive and care is of low quality. But, the evidence is inconclusive for babies aged six to twelve months and actually suggests positive effects from quality care between 12 and 18 months (PC 2008a).

Evidence is persuasive. It can shape the policy debate and overcome sectoral and special interest arguments vying to influence policy.

The decision to reduce tariffs in the 1970s had a strong theoretical basis. Nevertheless, it took quantitative evidence of the extent of the implicit taxes and costs on the losers from the tariff regime to galvanise support for reform. Similar evidentiary process under the National Competition Policy were pivotal in delivering the reform over the last decade (Banks 2009).

Evidence-based approaches cannot, of course, guarantee perfect policy. Evidence is sometimes difficult and time-consuming to obtain, and can be incomplete or indecisive. Even when a single study is robust, it may not be sufficient to be conclusive. And the realm of public policy and the social sciences are further complicated by the interdependencies in our society and economy. Governments are sometimes under pressure to act quickly, and politicians rightly bring their own reading of community values and objectives to bear in formulating policy. In this context, an evidence-based policy model will not provide all of the answers; nor may it be entirely welcomed. But it can improve the basis for decisions, help avoid costly mistakes and make it transparent when political trade-offs are made.

What does robust evidence-based policy look like?

There is a vast number of 'how to' handbooks and methodological guidelines for generating evidence and evaluating public policy. This paper is not intended to replicate such an exercise or provide a handbook for applying specific evaluation methodologies. Different policies and variations in data availability require analysts to assess the most appropriate evaluation technique and navigate the technical pitfalls and advantages of each.

Rather, this paper sets out some suggested principles for sound evidence-based policymaking, starting with methodological challenges, before moving to institutional and process issues. Most of the principles will be familiar to policymakers — they have been highlighted in policy manuals, Commission reports in one form or another, and reflected elsewhere such as through the Regulatory Impact Statement (RIS) process. This exercise aims to consolidate them, and to move beyond a statement of principles by illustrating their application through specific policy examples. Wider knowledge and a better understanding of such a 'checklist' of principles might serve as a practical guide to governments, officials, analysts, journalists and the general public in thinking through policy proposals.

Naturally, identifying such a set of principles necessarily involves an element of specifying best-practice, or setting a benchmark, which can appear removed from the reality facing many policymakers. For the most part, policy assessment must be done in real time, often with limited data and evidence. Even so, the aim of an evidence-based approach should be to improve the analysis for decisions, even if the evidence is not 'perfect' every time.

The challenge of gathering this evidence will vary depending on the policy area under investigation. Mulgan (2003) identifies three fields that policy challenges will typically fit. In relatively stable policy fields, where the knowledge is reasonably settled, the theoretical foundations are strong and there is a significant evidence

base, most research involves filling in the gaps and refining insights. In the second category are policy fields where the knowledge base is contested, there is disagreement over the theoretical approach, and the evidence base is uneven. And then there is a third category, where the level of uncertainty is such that there is virtually no evidence base at all (2003 pp. 6-7).

In all three fields evidence has a critical role to play. Nevertheless, there will be cases in the latter two fields where the challenge is to make the best use of evidence, and in its absence, to recognise uncertainty and take a sensible approach to policy development. Inherently new and unique policy problems, such as global warming and biotechnology, present the greatest challenge here.

In these cases, the existing evidence base will often be insufficient for decision making purposes, and can even be misleading. The latter case arises with 'black swan' problems, so named because prior to the discovery of Australia it had been concluded (with no available evidence to the contrary) that all swans were white. A modern day equivalent would be the UK Government's declaration in 1990 that there was no evidence of a threat to human health from BSE (mad-cow disease) and that eating British beef was completely safe. Tragically in this case, the initial absence of evidence of transmission did not preclude the possibility.

This does not support the view that action should be taken in advance of evidence in areas of uncertainty and risk. Such an approach reflects a rather binary view that policymakers either use evidence or not, rather than the more variable role that evidence actually plays (see box 1.2 on the precautionary principle). In cases of policymaking under uncertainty, such as global warming and public health risks, the challenge is to generate the best evidence possible, while implementing any necessary early policy action in a way that recognises uncertainties. As the OECD (1999) has argued, the objective of evaluation is not necessarily to provide an absolute truth but to provide insight and well-justified views on policy programs.

Box 1.2 **The precautionary principle and evidence-based policy**

The most widely adopted definition of the precautionary principle in Australia, based on the Rio declaration, seeks to ensure that uncertainty about potentially serious hazards does not justify ignoring them.

> Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation (United Nations Environment Program, 1992, Principle 15).

Unlike more prescriptive versions of the principle, which mandate action in response to uncertainty, regardless of the magnitude of the potential threat or the costs and benefits of action, there must be plausible, albeit uncertain evidence, relating to both the likelihood of occurrence and severity of the consequences. Scientific uncertainty alone or the possibility of minor damage will not satisfy the test for triggering application of the principle. Any precautionary action should be cost-effective.

Under such a definition, evidence has a significant role to play in:

- marshalling the evidence that is available on the size and scope of the problem
- modelling a selection of potential outcomes or a worst case scenario
- developing an adaptive approach that can respond to new information.

Source: Weier & Loke (2007).