

Access to knowledge – supporting information

“..., knowledge connotes the confident theoretical or practical understanding of an entity along with the capability of using it for a specific purpose. Combination of information, experience and intuition leads to knowledge which has the potential to draw inferences and develop insights, based on our experience and thus it can assist in decision making and taking actions.” [Keydifferences.com]

Policy advice is expert’s knowledge...

All advice to Ministers is expected to be authoritative – within practical bounds, like those caused by time and resource limitations. But it must go further; where practical it should draw on the specialised knowledge¹ available to the advisor and support these views with appropriately selected and apt evidence. Securing this may require research, evaluation or engagement.

...backed up by what evidence is available

Because most policy advice is operating at or close to the boundary of the known universe (otherwise the issues would be well threshed out and little politics remain to create sensible differences), information and data is likely to be at a premium. If nothing else is available, carefully hedged anecdotes can be deftly employed, as long as their weaknesses are signalled to the decision-makers.

The rest of this brief focuses on the practical side of knowledge gathering (as distinct from new research) in the context of policy advising.

Knowledge is not the same as information

An important distinction is that between information and knowledge – see Table 1. Good advice is based on the advisor’s ability to deploy their knowledge on the advisee’s behalf.

Table 1 Comparison between information and knowledge

Basis for comparison	Information	Knowledge
Meaning	When the facts obtained are systematically presented in a given context it is known as information.	Knowledge refers to the relevant and objective information gained through experience.
What is it?	Refined data.	Useful information.
Combination of	Data and context.	Information, experience and intuition.
Processing	Improves representation.	Increases consciousness.
Outcome	Comprehension.	Understanding.
Transfer	Easily transferable.	Requires learning.
Reproducibility	Can be reproduced.	Identical reproduction is not possible.
Prediction	Information alone is not sufficient to make predictions.	Prediction is possible if one possesses required knowledge.
One in other	All information need not be knowledge.	All knowledge is information.

Source: <http://keydifferences.com/difference-between-information-and-knowledge.html#ixzz4ZMjn2iFl>

¹ For the practical difference between knowledge and information see the table in Appendix A.

Information sources have a natural hierarchy

One way of thinking about sources is from the local/specific to the global/general. So, there is a list:

Own agency

Typically, data gathered in agencies is material extracted from actions taken for other purposes – what is normally called ‘administrative reasons’.

This means it can be very valuable as it is:

- Unique – no other body will have natural, ready access to this data.
- Accessible – as long as arrangements to code, store and retrieve are standardised.
- Relevant – as it is typically related to the population and/or activity under investigation.

But it can also have drawbacks:

- Scale – the sample of data may be small and thus not representative.
- Applicability – under the Privacy Act, data can only be used for the purpose stated at the time it is collected. So, if the source has not been told about the usage envisaged it is not allowed.
- Bias – the primary purpose for which it is gathered may skew the answers provided (income tax data is likely to understate incomes given higher incomes mean higher taxes).
- Attribute poor – as the initial data collection is not usually aimed at subsequent uses, the material collected may lack critical factors (age, ethnicity or income, say).

Specialised data consolidators, such as Stats NZ^{2, 3}

Normally these will have appropriate working protocols and standards that assure quality. Other advantages are:

- Ease of use – the organisations concerned have well-functioning accessibility channels.
- Credibility – the standing of the source assists when the aim is to develop an independent evidence case.

On the other hand:

- Availability – on occasion there are gaps in the official datasets, either through missing material, or because the type of data gathered does not fit the issue of concern adequately.
- Selectivity – as official data their collection policy will have been determined some time ago and may not fit the current purpose.

Authoritative and available overseas data collections

These are designed for producing comparisons. The list of prospects is long but the usual economic suspects include:

- OECD – wide range of economic and social information on their members (and beyond).⁴
- IMF – very good on basic macro-economic data and more widely.⁵
- EC – the European Commission carries out surveys of policy issues from time to time.⁶
- UN data – a search engine that brings together the resources of the UN system, like population.⁷
- World Bank – eclectic set of data covering many countries and many areas of policy.⁸
- WTO – good international trade material.⁹
- CIA – useful information in the World Factbook.¹⁰

These organisations have the strength that the data is:

- Credible – they are well-known and their reputation reflects into the power of their data as evidence.
- Pre-digested – in many cases the information has been standardised before collection.

Fits the local use – as most of these organisations receive their material from the New Zealand producer it should be consistent with other local data.

² One example of data available from Stats NZ is the Integrated Data Infrastructure (IDI). It is a large research database, holding microdata about people and households. The data includes education, income, benefits, migration, justice, and health, sourced from government agencies, Stats NZ surveys, and non-government organisations (NGOs). While there are steps required to gain access its content makes it a worthwhile source.

³ The Ministry of Health coordinates all health data from a wide variety of providers. These statistics conform to international (WHO) standards in most cases to allow for international comparisons. <https://www.health.govt.nz/health-statistics/health-statistics-and-data-sets>

⁴ oecd.org

⁵ imf.org

⁶ ec.europa.eu/commission/index_en

⁷ data.un.org

⁸ worldbank.org

⁹ wto.org

¹⁰ cia.gov/library/publications/the-world-factbook/

But there are still things to bear in mind:

- Choice – their selection of series reflects their interests and may omit the very data required.
- Timeliness – often the material is not up to date.

Using information is often a matter of compromise, so the choice must be clear¹¹

Often it is difficult to locate a data source which has precisely the right material. So, if it is not, to a fair degree, just what is required, the user must decide whether it is close enough to be useful, or whether to go without supporting data. And there are other ways the source may be inappropriate.

Virtually all uses of information are a matter of judgement about quality and of communication. Typical trade-offs are between availability and accuracy, or between types of bias.

In public data sources the latter might be a choice between Census information and administrative data.

The former has all the weaknesses associated with individuals filling in returns, like relying on recall; while the latter is collected for a primary purpose often distinct from the new use.

The user needs to know the limits of the material

High quality advice has a discussion of how drawbacks apply. It will cover appropriate health warnings, possible weaknesses and drawbacks in the evidence. Ideally, this is in an apt technical form: confidence intervals, sample size, collection method, and other relevant background.

This should then flow into an assessment of the qualifications that need to accompany the use of the information and the strength of conclusions drawn from it. In best practice, this will take the form of useable text/script for the advisee to employ.

Using information means having the capacity to make it do what is required...

To best use available data, your organisation needs the capacity to 'work' through it and make the most of it.

In practice that means, having at hand (inside your organisation, or readily contractible):

- The competence to process the available information so it is relevant to the task, including:
 - A full suite of quantitative methods
 - Other analytics – including simple ways of describing a situation without numerical data
 - Big simple, robust models and other 'chains of support' that can take a factual position and make it an implication.
- The ability to develop and discuss the crucial implications of the data in simple language – including the means to pass such insights on to the relevant audience.

...and then present the key points convincingly

To do this well demands care and attention to detail. Communicating supporting information is all about achieving a match between the material and the audience. Different people take in knowledge in different ways. To be successful with large groups means putting the data in front of them in a variety of formats. So, while for some a picture (or graph or chart) is worth a thousand words. For others it is the opposite.

We have some helpful ideas about presentation in our Masterclass on A3s.¹²

¹¹ For a related and more detailed discussion on the way information is used in supporting advice see Masterclass Brief No 20 Presenting evidence. Available at https://www.nzier.org.nz/hubfs/Masterclasses/Central%20Government/brief_20_presenting_evidence.pdf

¹² See Masterclass Brief No 19 Getting the best from A3s. Available at https://www.nzier.org.nz/hubfs/Masterclasses/Central%20Government/brief_19_getting_the_best_from_a3s.pdf

There are a few practical hints that can be used

Do:

- Gather your own data and intelligence – unique material that can help make your advice better.
- Annotate all information to ensure other users are aware of sources, weaknesses and quirks.
- Think of new sources of data – this can provide unusual slants on problems of interest.
- For new policies or programmes, develop a monitoring and evaluation strategy so you will have relevant information to assess effectiveness when required subsequently.
- Create special ways of processing the information – often merely using a striking comparison can give existing information new life.

Build linkages and networks to test ideas and supposition/speculation with people who have practical experience or insight.

Don't:

- Build private/personal databases (they are as bad as private filing systems and undermine the organisational strengths of public agencies).
- Use material that cannot be sourced and debated in public as it is useless in the logical (political) setting where policy operates.
- Save material without attaching details of origin, date, and its strengths, weaknesses or biases.

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