



Queensland
Government

Australian National Summit
on Open Access to
Public Sector Information

The Economics of Statistics

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13 July 2007

Statistics and the Economy?

- Generally accepted that economic growth is fundamental to increasing the prosperity and well-being of the community
- Economic growth occurs in two ways
 - Adding more inputs or factors of production
 - Doing things better with a given level of production factors (ie productivity)

Statistics and the Economy?

- Factors of production typically thought of as land, capital and labour
 - adding more is relatively easy – e.g. Queensland grows because of more migrants
- improving productivity is more challenging.....
 - Drivers of productivity are policies and/or practices that can change our stock and usage of factors of production

Statistics and the Economy?

- When analysing productivity drivers, typically the focus is on factors for which there is good specification and measurement – e.g. labour
- Those factors for which the specification is poor and measurement non-existent are lumped together to form a residual.

Statistics and the Economy?

- A fine tradition among economists is to make a simplifying assumption about the residual and drop it from the calculus all together.....
- Or even worse they give it to the econometricians who formulate a proxy and model it !!!!!!!

Statistics and the Economy?

- So where does information fit in the analysis of productivity drivers?
 - Can you feel a framework coming on.....?

Engines, Enablers and Drivers...

- **Engine** – a machine with moving parts that converts power into motion
 - Production function employing factors and capable of innovation/productivity
- **Enabler** – provides ability or means to do something
 - Passive feature of production factors which allows innovation
- **Driver** – provides the energy to stay in motion
 - Active policies or practices, which employ enablers, to innovate a production function

Statistics as an Enabler

- So thinking of the role information plays in:
 - ✓ Decision making
 - ✓ Policy making
 - ✓ Planning
 - ✓ Performance evaluation
- As a factor of production information is clearly an **enabler** of productivity
- But this can only work if information policies and practices (the drivers) are set appropriately to improve the supply of information

Statistics as an Enabler

- Statistics are produced (either by direct collection or as by-products from the production process) as long as the return on investment from the statistics at the margin is higher than for any other alternative use of those resources
- Investment in by-product statistics results in two kinds of information
 - That which is appropriable and that which is not

Statistics as an Enabler

- Appropriable statistics
 - Agents own use, use by others excluded, used to generate profits
- Non-appropriable statistics
 - Public good
 - Non-rivalrous (use by one agent does not preclude use by another)
 - Non-excludable (difficult to prevent other agents from using them)

Statistics as an Enabler

- The public sector has the potential to make available a vast array of by-product statistics.
- These statistics are certainly Non-rivalrous and can only be excludable by choice.
 - The marginal cost of collecting and managing by-product statistics from ICT systems is very low. So what else would cause public sector information to be excludable?

Statistics as an Enabler

- Is there an element of latency to the supply of public sector information via by-product statistics?
- Is there market failure operating on the supply of public sector information?
 - Externalities – e.g. privacy concerns, ethics reviews
 - Monopolies – Information markets have high fixed costs (collection) and low variable costs (dissemination). The legal application of property rights to information assets can result in the owners acting as price discriminating monopolists.

The Statistical Supply-Side

- Always room for more and better statistics
- From a Queensland perspective, there are deficiencies in the supply of statistics, particularly at the regional level
 - It is for this reason the Queensland Government continues to have its own statistical infrastructure; and
 - Has acted to bring together parallel information universes – e.g. QSIO

The Statistical Supply-Side

- But Queensland would say that.....
- Other evidence of demand pressures include:
 - Data matching for university based research
 - Government policy agencies desiring a better evidence base including the triangulation of policy research via the use of more and richer datasets
 - Research into e-Health solutions

So what are the drivers?

- Whether it is latency or market failure limiting the supply of public sector information, a full and systematic review of the drivers (policies and practices) which govern the creation of statistical enablers is necessary.

Some first steps?

- Negotiate, develop and implement national solutions – respect and include all levels of government, the private sector and the community
- Negotiate and develop comprehensive legislative and operational solutions for privacy protection
- Deliver increased transparency of statistical quality and quantity through a system of metadata registration
- Clarify information property rights to limit monopolistic behaviour

An example from the USA

- Confidential Information Protection and Statistical Efficiency Act 2002
- Addressed problem that individual federal statistical agencies must separately collect information from the public on the same subject because prevented by law from sharing
- Use this as an example to think about sharing in Australia – between and among all jurisdictions and for both direct collection and by-products

We are beginning to do things better in Australia....

- Changes to the ABS pricing policy
 - Removed cost as a barrier to accessing information
- National Data Network
 - Leadership from the ABS and support from the information community on the need to improve the supply of statistics
- Government Information Licensing Framework
 - Queensland (through OESR) developing a creative commons approach to information licensing

In Summary.....

- We use statistics all the time
- They are a fundamental enabler of innovation and hence economic growth and prosperity
- We can and should improve their quality and quantity, in simple, achievable and cheap ways
- Look for national solutions for the whole community
- Innovate to get innovation from statistics