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Data Communication Strategies

Session 2:

**Communication to data suppliers: strategies and tactics
Case Study - Experience of Australian Bureau of Statistics**

Introduction

The Australian Bureau of Statistics (ABS) is Australia's central statistical authority, providing statistical services to government, business and the community for research and decision making on a wide range of economic, population, social and environmental matters.

2 Over the past one hundred years, ABS has built a strong reputation with the Australian community as a trusted custodian of information provided by data suppliers, and as an authoritative source of high quality statistical information. It does this through the use of information from administrative sources (such as tax and customs data), through business surveys which are mainly based on mail-out-mail back collections, through household surveys which are usually conducted by interview either face to face or over the telephone, and, in the case of the Population Census, through drop off-pick up methods.

3 This paper mainly focuses on economic statistics and communication with data suppliers through survey collection from businesses and through administrative sources. It addresses the relationships, strategies and tactics that are fundamental to the ongoing success of the ABS in its role as a provider of key economic statistics.

ABS Relationship with Data Suppliers

4 ABS data collection activities are backed by strong legislative provisions that are based on mutual obligation:

- a the responsibility of data suppliers to provide data to the Statistician when directed to do so, and
- b the responsibility of the Statistician to protect the confidentiality of data provided by a data supplier.

5 The ABS bases its data supplier strategy on the willing cooperation of respondents. The use of legislative powers is the last resort, but provides a strong basis for the development of strategy and the articulation of powers where needed. The strategy is built around minimising the reporting burden on data suppliers, consistent with government policy on minimising the impact of regulation and reporting on businesses, households and the community.

6 The ABS sets out its policy regarding data supplier relationships in its business and household survey charters. These are publicly available documents on the ABS website and are regularly provided to respondents in brochure form. The ABS business surveys charter sets out the relationship between the ABS and businesses which provide information for statistical purposes, and includes details of:

- a what the ABS is, its mission, its legislation, and what it does,
- b what the provider can expect from the ABS, including professionalism, courtesy, an explanation of what information is needed and how it will be used, protection of information provided, and quick and fair consideration of complaints,
- c data supplier responsibilities covering both the initial request for information, and the legal responsibility of data suppliers to ultimately comply if formally directed to do so by the Australian Statistician,
- d a commitment by the ABS to minimise costs to data suppliers by using alternative sources of data where possible, by seeking information in a way that suits record keeping practices, by properly and thoroughly testing questions before use, and by asking only a sample of businesses for information where possible, and
- e how to contact the ABS, and how to obtain more information about the ABS and its work.

7 Given the level of trust established over many years, and the backing of the legislation, ABS regularly achieves very high response rates for its business, household and population census collections. For example:

- a in 2005/06, some 475,000 forms were sent to business data suppliers and over 445,000 were returned completed, a response rate of about 94%,
- b in 2008/09, some 55,000 households were included in the Monthly Population Survey with average monthly response rates of over 97%, and
- c in the 2006 Census of Population and Housing, the Post Enumeration Survey indicated an underenumeration rate nationally of 2.7%, implying a final response rate in excess of 97% for over ten million households.

8 An important reason that ABS is able to achieve its high levels of cooperation from its data suppliers (apart from trust and legislation) is the quality of services provided in the data collection process. ABS has an excellent reputation in the community as a highly professional and independent organisation. Some important elements include:

- a the use of very high quality survey instruments, based on extensive development and testing, designed to strict standards of question wording and presentation (including use

of typeface, colours, white space etc) with the intention of both positive data supplier experience and provision of high quality data,

- b the use of extensively tested explanatory material both on form and in separate brochures to assist data suppliers to understand what is required,
- c use of an extensive program of mail and telephone based follow-up (or response chasing) to encourage the cooperation of data suppliers,
- d the capacity for suppliers to negotiate flexible response timing that best suits their business or household circumstances,
- e the opportunity for small businesses to seek exemption from a survey if they have responded to that survey for three or more years and their exclusion does not jeopardise the quality of results,
- f the use of call centre based assistance for the completion of forms,
- g provision of results from participated surveys where requested, and
- h treatment of complaints as a priority - comments on the return questionnaires are captured and analysed to look for patterns or common areas for improvement.

Traditional Organisational Arrangements

9 Throughout most of the twentieth century, the ABS organised its business statistics activities around subject matter and collection lines. Each business statistics area was responsible for all elements of the development, despatch, collection, processing, analysis and output preparation for the collections that applied to its subject matter stream.

10 This method of operation had some significant disadvantages:

- a the dispersion of responsibility for each function meant that knowledge about particular elements of the operations was spread very thinly and economies of scale could not be realised,
- b methodologies and systems were often based on local knowledge and traditional methods rather than continuous improvement and best practice,
- c technology tended to be used in very specialised ways rather than for multiple uses, requiring significant investment in the creation, ongoing development and support of individually tailored systems,
- d integration of information from different sources was very difficult because the design of collections was focussed on individual survey benefits, quality and productivity, rather than on the wider integrated uses that potentially applied, and

e data suppliers were treated as individual suppliers for individual collections, with no integrated understanding or strategy for the collection of information across a wide range of subject matter requirements.

11 This method of operation had significant implications for the amount of resources required to undertake functions. For example, capturing data from forms obtained from businesses was most cost effectively done on a small scale using data preparation (individual keying) techniques. For individual collections, the use of more efficient methods such as imaging or Optical Character Reading (OCR) was inhibited due to the significant up front investment required in equipment, software, collection transition, etc.

12 Similar restrictions applied to improvements in processing and output systems, data quality improvements, survey methodology development and application, etc. Inefficiencies and survey data quality inhibitors prevailed not through lack of will to improve, but primarily because of the way in which statistical activities were organised and had become entrenched.

The Business Statistics innovation Program

13 Around the turn of the century, strategic planning undertaken by the ABS led to the conclusion that it was time for change in the management arrangements for its business statistics programs. This was consistent with the ABS Corporate Plan which in part stated that ABS aspired to be "an organisation that encourages learning, innovation, performance and excellence in all it does". It was also consistent with the realisation that existing organisational arrangements were unsustainable in terms of the efficiency of use of resources, ABS aspirations for improvements to data quality, and the need to improve arrangements for interactions with data suppliers.

14 Successful organisations continually look at improving the ways that they go about their business. There were a number of factors that suggested that ABS could improve the way it produced statistics relating to businesses:

- a the opportunities provided by technological, communications and methodological developments,
- b increased access to administrative data, particularly taxation data, including the availability of a comprehensive business number (Australian Business Number) to assist "mix and match" of data sources to compile statistics,
- c the desire to improve relationships with data suppliers by reducing their response burden, and implementing their preferred ways of supporting ABS requests for data,
- d the need to increase capacity to do analytical and other "subject matter" work, and
- e the imperative to continually improve productivity to meet rising costs and fund new activity.

Organisational and operational initiatives

15 Organisational arrangements were a key inhibitor to change. Conversion of organisational arrangements away from fully defined subject matter management, to a model that allowed some activities to be functionally and centrally specialised was needed. The key organisational initiatives involved:

- a an Economic Statistics Data Centre (ESDC) which established a common, nationally managed environment for pre-input editing functions for all business collections, including sample frame creation, survey form design standards and testing, despatch of forms, collection and imaging of forms (data capture) and intensive follow-up (response chasing) of outstanding forms from central sites using common systems and methodologies,
- b subject matter based Business Statistics Centres (BSCs) responsible for survey development, editing data and the production of regular ABS outputs, including analysis, and
- c National Statistics Centres (NSCs) to provide statistical leadership in a designated field of statistics focusing on future opportunities. NSCs have no control of the day to day operation of statistical collections and regular output activity. NSCs are expert in matters of policy, issues and developments in their field; have close links with relevant stakeholders; influence matters affecting the development of statistics both within and outside the ABS; undertake complex analytical work; and contribute to the development of statistics in the national and international contexts.

16 Economies of scale were achieved through:

- a functional specialisation/centralisation (eg all data capture through a central imaging centre, all intensive follow-up through a central provider contact unit (call centre), etc),
- b the elimination of "shadowing" of activities between centrally based program managers and local collection management units,
- c reduction in layers of management, and
- d a reduction in staff working on business collections from about 1,025 to about 870 (15%).

17 From an operational perspective, a key initiative was to make greater use of administrative data, especially tax data, which contributed to a reduction in provider load, improvements in quality, the development of new products, and greater operational efficiencies.

Technological and methodological initiatives

18 The key technological and methodological initiatives were:

- a development of systems and processes that allowed easier use of both survey data and administrative data (particularly taxation data),
- b adoption of centralised optical character reading capabilities to cover all business collections and expansion of its functions to include imaging, automated repair and automated coding,
- c adoption of methodologies based on significance for prioritising editing and follow -up,
- d adoption of new estimation systems (eg generalised regression and automated imputation for partial non-response),
- e expansion of collection options to include electronic & telephone data reporting,
- f rationalisation of administrative data acquisition processes & systems and development of systematic quality assessment and assurance strategies for administrative data,
- g establishment of an input data warehouse (IDW) that enables central warehouse storage and management of input data, analysis of business processes, analysis of final micro-level datasets, and an on-line amendment facility, and.
- h introduction of a provider management framework to support improved management of and relations with our data providers.

19 Underpinning these technological and methodological initiatives is a greater standardisation of systems and processes, which enable improved methodologies and technologies across the entire business statistics environment.

Improvements for Data Suppliers and ABS Management of Data Supplier Processes

20 Associated with the organisational, methodological and technological changes that took place under the Business Statistics Innovation Program were several innovations that improved the survey experience for data suppliers and which improved the efficiency and professionalism of ABS management processes involving data suppliers. These included:

- a integration of telephone and computer systems that facilitated -
 - automated caller identification and contact record details on incoming calls,
 - prioritised automated outgoing call selection and dial up,
 - call volume and waiting time management facilities, and
 - comprehensive management information on incoming and outgoing call activity,

- b standardisation of correspondence with data suppliers including approach letters, follow up reminders and notification of legal responsibilities if under Direction from the Australian Statistician,
- c creation and implementation of the Provider Information Management System (PIMS) which established a single source of information and record of all contact made with individual data suppliers - this database acts as a source of information on which the automated telephone call system is based and allows fast retrieval of information about previous contact with data suppliers leading to faster resolution of data supplier enquiries,
- d capacity for data suppliers to supply data in excel spreadsheets for some collections, and
- e use of operations research techniques to develop best practice methods of contacting clients based on past experience.

21 In an effort to effectively manage ABS survey arrangements affecting data suppliers, the ABS has in place a specific governance process, the Business Provider Relations Policy Committee. The role of this committee is to regularly monitor provider burden levels, to consider the impact of any change in the overall level of provider burden implied by new collections or significant changes to collections, and to consider options to reduce the overall level of response burden imposed by the ABS on businesses.

Use of Administrative Data for Statistical Purposes

22 The ABS recognises that some data generated as a by-product of the administrative processes of government can be an important source of information about the performance of the economy and the social wellbeing of the population. For many years, the ABS has produced statistics from a range of administrative systems to achieve the following objectives:

- a minimise respondent burden,
- b minimise the costs of direct collection of information from data suppliers,
- c provide a source of data to construct registers,
- d provide a source of data to support efficient sample selection, and
- e provide a source of information to support estimation, imputation, editing and data confrontation processes.

23 The main administrative data sources used by the ABS include:

- a international trade data on imports and exports from Customs,
- b data on financial institutions and financial flows from the Reserve Bank and the Australian Prudential Regulation Authority,
- c information from the Taxation Office to maintain the business register, provide benchmarks for business surveys and to contribute to income measures for the national accounts,

- d building approvals reports from local government authorities to support monitoring of construction activity,
- e motor vehicle sales details for new vehicles ,
- f vital statistics of births, deaths and marriages from vitals registrars in regional jurisdictions (Australian States and Territories),
- g divorce statistics from the Australian Federal Family Court,
- h international migration and travel data from incoming and outgoing passenger cards from immigration authorities,
- i data on numbers of students and their courses from schools, vocational and higher education training institutions from education and training authorities,
- j crime, courts and prison statistics from the police, higher courts and corrective services agencies in regional jurisdictions, and
- k public hospital admissions and separations data, and perinatal data from the regional jurisdictions, supplied to ABS through the Australian Institute of Health and Welfare.

24 A major initiative in the use of administrative data came with the introduction in Australia in 2000 of a broad based consumption tax (GST) associated with a regular reporting system by business to the Tax Office. ABS had for some time been using data on businesses from the Tax Office to update its register of businesses. Introduction of the new tax system provided the opportunity to access additional information on wages and salaries to assist in the design of more efficient surveys. Furthermore it provided some scope to substitute tax data for directly collected information and to model other data particularly in the provision of economic activity data for small areas.

25 In all of these cases, the capacity for the ABS to have access to and use administrative data for statistical purposes is built around strong relationships between the ABS and the source Department. These relationships are strong at both the strategic and operational levels. For example, in the case of the Tax Department:

- a there is an annual meeting between the heads and deputies of both the Tax Department and the ABS at which strategic issues are discussed,
- b there are quarterly meetings between senior tax and ABS officials to monitor progress on agreed projects,
- c there are regular tactical and working group meetings on specific issues, and
- d the ABS has a joint working team at the Tax Department which includes staff from both agencies who work on projects that are important to both agencies.

Current Initiatives

26 The main initiatives currently being pursued by the ABS to minimise the level of response burden and to improve the data supplier experience are

- a integration of business surveys,
- b use of administrative data wherever possible,
- c use of modelling to extend the usefulness of collected and administrative data, and
- d and the adoption of e-reporting by businesses.

27 ABS is increasingly using collection integration and administrative data to reduce response burden. ABS has merged its former annual economic activity survey, manufacturing survey, mining survey, utilities survey and its periodic surveys of construction, retail, wholesale and service industries into an Annual Integrated Collection which provides estimates for all sectors of the economy. A core set of mainly financial data is collected for all sectors. A flexible component provides information at greater detail covering both financial and non-financial details for selected priority industries in particular years. Direct collection methods are used for all large and some medium sized businesses. Administrative data (taxation data) are used for small and most medium sized firms.

28 Using the same example as the previous paragraph, modelling techniques are used to produce finer level industry and state and territory based estimates than are supported by the Annual Integrated Collection survey design. If these finer level estimates were to be produced directly from the combined survey and administrative methodology, a much larger sample would be required, imposing a greater level of response burden on data suppliers.

29 Finally ABS has embarked on a development program to create e-reporting arrangements to allow data suppliers to provide data using internet based e-reporting methods. ABS used e-reporting successfully in its 2006 Census of Population and Housing and is aiming for an e-reporting level of about 25% for its 2011 Census. The focus on systems developed by the ABS for business based e-reporting will be improved reporting experience for data suppliers and, to the extent possible, improved efficiencies for the ABS. It is intended to implement the new arrangements in the 2010-11 year for selected monthly and quarterly business collections, and to commence its introduction to larger and more complex surveys from 2011-12.

Conclusion

30 The ABS takes its responsibilities to data suppliers very seriously, including the need to minimise reporting burden as far as possible and to ensure that the reporting experience of data suppliers is made as efficient as possible. Administrative data and surveys rather than censuses are used wherever possible, and survey methods are regularly reviewed and improved both to reduce the burden on data suppliers and to make the collection process as efficient as possible for both data suppliers and the ABS.