

1996 Census of Population and Housing

Australian Bureau of Statistics

Performance Audit

Tabled 3 June 1997

Audit Report No. 35 1996-97

Abbreviations

ABS	Australian Bureau of Statistics
ANAO	Australian National Audit Office
ASO	Administrative Service Officer

Summary

Introduction

1. Since 1961 a Census of Population and Housing has been conducted at five-yearly intervals, a frequency specified in the 1977 Amendment to the *Census and Statistics Act 1905*. On 6 August 1996, the thirteenth Census of Population and Housing was conducted throughout Australia by the Australian Bureau of Statistics (ABS), which included approximately 7.2 million households being visited.
2. The primary objective of the Census is to obtain a snapshot of Australia, on one day, of the number and key characteristics of the people and their housing. The 1996 Census was a full content-full enumeration Census (that is the occupants of every household or dwelling were asked the same questions and, with only a few exceptions, all people in Australia on Census night were counted ¹).
3. To collect the 1996 Census data, a temporary work force of some 40 000 people had to be recruited, trained, supervised and paid to deliver and collect Census forms. In addition, there were the logistics associated with designing and preparing maps and the printing, packing, distribution and return of over 1700 tonnes of material. During the Census collection period additional contractors were engaged to operate a national 'Census Hotline' telephone inquiry service with linked telephone interpreter services. Some 1300 temporary staff were also recruited and trained to undertake the processing of the Census forms at the ABS Data Processing Centre in Sydney.
4. Census data are essential for a number of purposes including: determining Federal electoral representation of the States and Territories and for Commonwealth and State electoral boundary redistribution; for the disbursement of grants to the States, Territories and local governments; and for planning the provision of community infrastructures and services. Given the significance of the

activities for which Census data is a fundamental requirement, the Census is seen as an important activity for audit coverage and accountability to Parliament. The Census is also the largest individual statistical collection that the Australian Bureau of Statistics undertakes.

Census cost

4. The 1996 Census was planned to cost around \$135 million, in constant 1993-94 dollars. The Census involves expenditure over a seven-year period from initial planning activity which commenced in 1992-93 through to projected completion in 1998-99. The bulk of expenditure occurs in the year in which the data are collected.

5. Expenditure to date on the 1996 Census, in nominal dollars, has been \$1.511 million (1992-93); \$4.658 million (1993-94); \$7.622 million (1994-95); and \$29.169 million (1995-96). The forecast for 1996-97 expenditure is \$92.732 million. The estimates for the remaining two years are \$10.278 million and \$2.114 million in 1997-98 and 1998-99 respectively. On this basis, the latest total nominal cost estimate of the 1996 Census will be \$148.084 million. The 1996 Census is forecast to cost some 22 per cent more in nominal dollars than the 1991 Census. The ABS advised the ANAO that the difference in forecast nominal cost between the 1991 and 1996 Censuses was due to the effects of inflation (51 per cent), changes in Government policy (15 per cent) and growth in size of the population (34 per cent).

6. The ABS uses the per capita cost of Censuses as a means of comparing Censuses relative cost efficiency. The per capita cost for the 1996 Census in nominal dollars is forecast to be \$8.27 per person. The per capita cost for the 1991 Census in nominal dollars was \$7.17.

7. Major difficulties in comparing the relative costs of Censuses over time are movements in prices, developments in statistical methods and processes (including improvements in technology) and changes in Government policy on issues such as superannuation policy. To facilitate comparison of the real per capita costs of the 1991 and 1996 Censuses, the ABS undertook a costing exercise in which it made two different estimates of real per capita cost of the 1996 Census.

8. Both estimates used constant 1993-94 dollars and took into account the requirements of Government policies as they stood in 1996. The difference between the two estimates was that one was based on the application of 1991 statistical methods and processes and the other on 1996 statistical methods and processes. The ABS has calculated that if 1991 statistical methods and processes had been applied in the 1996 Census, the real per capita cost would have been \$6.99 in constant 1993-94 dollars. The ABS estimates that the application of the improved statistical methods and processes developed for the 1996 Census will result in a per capita cost of \$6.83 in constant 1993-94 dollars. Accordingly, the ABS estimates that the 1996 Census will cost in real terms, some 2.3 percentage points less per capita than the 1991 Census.

Audit objectives and approach

9. The objectives of the audit were to examine ABS management of the procedures and processes associated with the planning and operational aspects of the 1996 Census to ascertain:

- whether the results of the 1991 Census evaluations were used to improve the 1996 Census;
- whether the Census could be undertaken more efficiently while still yielding data of the required quality; and
- how privacy concerns were being satisfied by the processes employed.

10. The scope of the audit was limited to reporting on the efficiency and effectiveness of the management by the ABS of the development, collection and initiation of the processing phases of the 1996 Census. The ANAO conducted an assessment of the procedures and processes used in the 1996 Census against the ABS performance indicators and by an examination of ABS documentation. The audit did not seek to review the ABS statistical methodology.

Overall conclusions

11. The ANAO considers that the part of the 1996 Census cycle completed to March 1997 (including incorporation of the results of the evaluation of the 1991 Census into the development of the 1996 Census, the development and collection phases and a significant part of the processing phase) has been generally carried out efficiently and effectively by the ABS.

Evaluation

12. The continuous planning processes employed by the ABS have been effective tools for planning of the various phases of 1996 Census. The ABS conducted a thorough evaluation of the 1991 Census which was complemented by an additional review undertaken by an Interdepartmental Committee in 1993. The results of this evaluation and the Interdepartmental Committee review were directly employed in seeking to improve administrative processes for the 1996 Census.

Cost savings options

13. The ANAO supports the current evaluation that the ABS is making of the broader application of mail back of Census forms as a potential cost savings measure. The ABS actively reviews options for reducing the per capita cost of successive Censuses on a continuing basis. In addition, the 1993 Interdepartmental Committee review was specifically tasked with considering options for lowering the cost of the Census. The Committee concluded that there were two main policy options for lowering the cost of the Census, that is, reducing frequency and/or reducing the content or extent of the Census. However, the Interdepartmental Committee concluded that it would not be prudent to implement either option.

Administrative arrangements

14. The ABS' administrative arrangements for the conduct of the 1996 Census of Population and Housing were sound and included a comprehensive and effective communication strategy; suitable contracting arrangements; an appropriate performance information framework; and utilisation of the user pays principle for Census statistics where appropriate.

Privacy

15. The ABS recognises that privacy is a significant issue for the Census. It consults effectively with the Office of the Privacy Commissioner with regard to privacy issues arising in connection with the Census. The ABS also has sound administrative procedures in place to secure the Census data and to protect individuals' privacy with regard to the Data Processing Centre and those aspects of ABS Central Office activity covered by ANAO field work.

Agency response

16. The ABS has advised the ANAO that it intends to use this audit report as a benchmark for performance of future censuses, and reference for planning and conducting the 2001 Census.

Key Findings

Evaluation

1. The continuous planning processes employed by the ABS have been effective tools for planning of the various phases of 1996 Census. The ABS conducted a thorough evaluation of the 1991 Census which was complemented by an additional review undertaken by an Interdepartmental Committee in 1993. The results of this evaluation and the Interdepartmental Committee review were directly employed in seeking to improve administrative processes for the 1996 Census.

Performance measurement

2. The ABS has undertaken appropriate benchmarking practices, by comparing its performance against that of other relevant national statistical collection agencies involved in undertaking periodic Censuses of Population.

Cost-savings options

3. Options for reducing the content and/or coverage of the 1996 Census have been identified and investigated both by the ABS and an Interdepartmental Committee composed of major Commonwealth users.

Census processing

4. The lessons learnt from the evaluation of the 1991 Census were used by the ABS in planning the 1996 Census. Accordingly, improvements have been made in processing and output processes and strategies for the 1996 Census which have

the potential to increase efficiency and customer satisfaction.

Privacy

5. The ABS is aware of the need to ensure that the public is satisfied that their privacy will be adequately protected in the taking of the Census and the processing of the resultant data. High response rates suggest that the ABS has been successful to date in maintaining public confidence in the Census process.

Mail back

6. The ABS is reviewing the broader application of mail back of completed Census forms to realise possible savings in the collection of Census data and to enhance privacy by reducing the likelihood of a person known to respondents reviewing their completed forms.

Stakeholder consultation

7. The ABS has undertaken extensive consultations with users of Census statistics and the public and has taken steps to improve the standard of data quality, comprehensiveness and service delivery, compared to the 1991 Census.

Administrative arrangements

8. The ABS administrative arrangements for the conduct of the 1996 Census were sound and included a comprehensive and effective communications strategy; suitable contracting arrangements; an appropriate performance information framework; and utilisation of the user pays principle for Census statistics where appropriate.

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People excluded from the Census were foreign diplomats and their families and foreign crew members on ships. Australian residents out of the country on Census night were generally not included unless they had left the country without having been required to undertake departure formalities, for example naval personnel on board ships away from Australia. The results for populations of the Cocos Island and Christmas Island were included in the counts for Australia for the first time in 1996.

1. Introduction

This chapter outlines the background to the Census, audit approach and overall conclusions for the audit.

Background

1.1 Since 1961 a Census of Population and Housing has been conducted at five-yearly intervals, a frequency specified in the 1977 Amendment to the *Census and Statistics Act 1905*.¹ On 6 August 1996, the thirteenth Census of Population and Housing was conducted throughout Australia by the Australian Bureau of Statistics (ABS),² which included approximately 7.2 million households being

visited.

1.2 The primary objective of the Census is to obtain a snapshot of Australia, on one day, of the number and key characteristics of the people and their housing. The 1996 Census was a full content-full enumeration Census (that is the occupants of every household or dwelling were asked the same questions and, with only a few exceptions, all people in Australia on Census night were counted ³).

1.3 To collect the 1996 Census data, a temporary work force of some 40 000 people had to be recruited, trained, supervised and paid to deliver and collect Census forms. In addition, there were the logistics associated with designing and preparing maps and the printing, packing, distribution and return of over 1700 tonnes of material. During the Census collection period additional contractors were engaged to operate a national 'Census Hotline' telephone inquiry service with linked telephone interpreter services. Some 1300 temporary staff were also recruited and trained to undertake the processing of the Census forms at the ABS Data Processing Centre in Sydney.

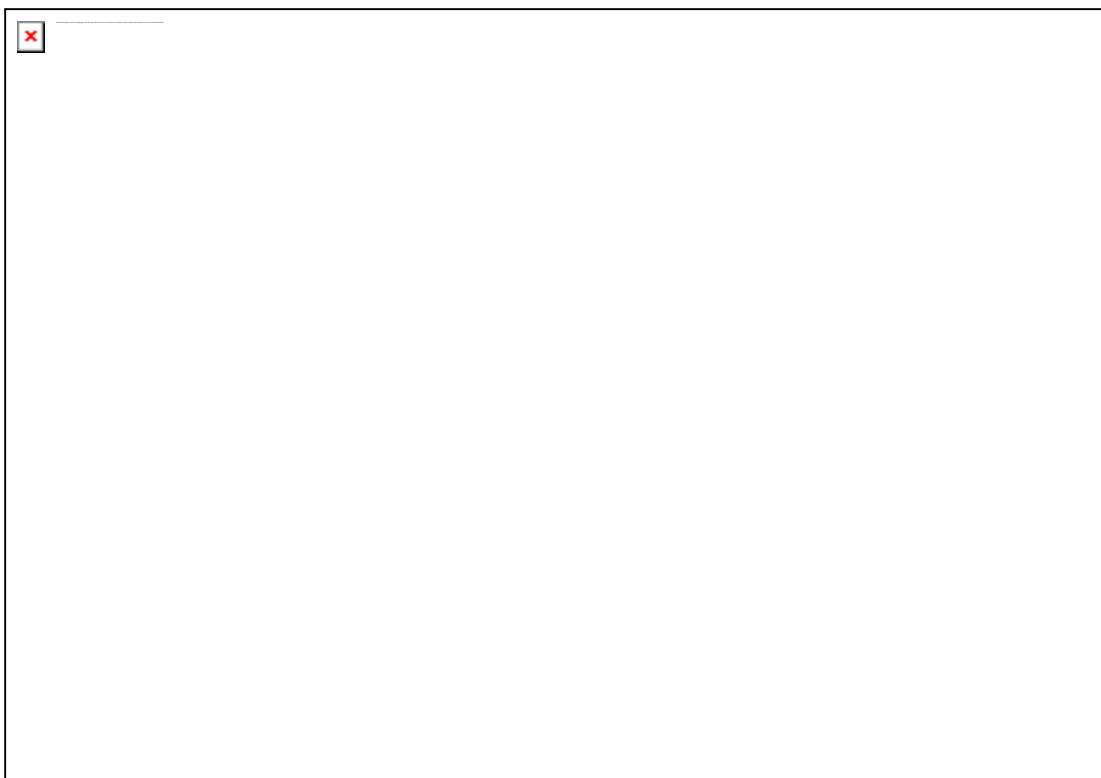
1.4 Census data are essential for a number of purposes including: determining Federal electoral representation of the States and Territories and for Commonwealth and State electoral boundary redistribution; for the disbursement of grants to the States, Territories and local governments; and for planning the provision of community infrastructures and services. Given the significance of the activities for which Census data is a fundamental requirement, the Census is seen as an important activity for audit coverage and accountability to Parliament. The Census is also the largest individual statistical collection that the Australian Bureau of Statistics undertakes.

Census cost

1.5 The 1996 Census was planned to cost around \$135 million, in 1993-94 dollars. The Census involves expenditure over a seven-year period from initial planning activity which commenced in 1992-93 through to projected completion in 1998-99. The bulk of expenditure occurs in the year in which the data are collected. Details of the estimated expenditure by year for the 1996 Census are provided in Exhibit 1.1.

Exhibit 1.1

Estimates of 1996 Census expenditure profile from 1992-93 to 1998-99 (1993-94 dollars)



1.6 Expenditure to date on the 1996 Census, in nominal dollars, has been \$1.511 million (1992-93); \$4.658 million (1993-94); \$7.622 million (1994-95); and \$29.169 million (1995-96). The forecast for 1996-97 is for expenditure of \$92.732 million. The estimates for the remaining two years are \$10.278 million and \$2.114 million in 1997-98 and 1998-99 respectively. On this basis, the latest total nominal cost estimate of the 1996 Census will be \$148.084 million. The 1996 Census is forecast to cost some 22 per cent more in nominal dollars than the 1991 Census. The ABS advised the ANAO that the difference in forecast nominal cost between the 1991 and 1996 Censuses was due to the effects of inflation (51 per cent), changes in Government policy (15 per cent) and growth in size of the population (34 per cent).

Benchmarking

1.7 The ABS uses the per capita cost of Censuses as a means of comparing Censuses relative cost efficiency. The per capita cost for the 1996 Census in nominal dollars is forecast to be \$8.27 per person. The per capita cost for the 1991 Census in nominal dollars was \$7.17.

1.8 Major difficulties in comparing the relative costs of Censuses over time are movements in prices, developments in statistical methods and processes (including improvements in technology) and changes in Government policy on issues such as superannuation policy. To facilitate comparison of the real per capita costs of the 1991 and 1996 Censuses, the ABS undertook a costing exercise in which it made two different estimates of real per capita cost of the 1996 Census.

1.9 Both estimates used constant 1993-94 dollars and took into account the requirements of Government policies as they stood in 1996. The difference

between the two estimates was that one was based on the application of 1991 statistical methods and processes and the other on 1996 statistical methods and processes. The ABS has calculated that if 1991 statistical methods and processes had been applied in the 1996 Census, the real per capita cost would have been \$6.99 in constant 1993-94 dollars. The ABS estimates that the application of the improved statistical methods and processes developed for the 1996 Census will result in a per capita cost of \$6.83 in constant 1993-94 dollars. Accordingly, the ABS estimates that the 1996 Census will cost in real terms, some 2.3 percentage points less per capita than the 1991 Census. In the same way, the ABS estimates that the 1991 Census per capita cost was 1.7 per cent cheaper in real terms than the 1986 per capita cost.

1.10 In comparison, the cost of United States' Censuses have increased markedly as measured in constant dollars. The 1980 United States' Census was double the cost of the 1970 Census as measured in constant dollars and the 1990 Census was 25 per cent more expensive compared to the previous Census.

Testing

1.11 The ABS employs a comprehensive program of testing for all materials and procedures associated with the Census. These range from routine testing of individual materials and administrative procedures to a full 'dress rehearsal' of the Census a year before Census night.

1.12 To decide on the layout and question wording for the Census form, the ABS conducts a program of tests where it goes out into the field and tests the proposed forms on sample populations of the public. A major test using a sample of 10 000 households is the culmination of the form design process. The major test for the 1996 Census was conducted in August 1994.

1.13 In August 1995, the Census dress rehearsal (sample of 20 000 households) was conducted. Having settled the form design following the major test in 1994, the dress rehearsal allowed for detailed testing of most aspects of the collection including processing procedures for the Census, as well as the computing and administrative systems. The lessons learned from the dress rehearsal were then available in time to improve materials and/or processes for the conduct of the actual Census.

1.14 The total cost of the testing program leading to the 1996 Census was \$1.914 million and represents around 1.3 per cent of total cost of the Census in 1993-94 dollars.

Audit objectives and approach

1.15 The objectives of the audit were to examine ABS management of the procedures and processes associated with the planning and operational aspects of the 1996 Census to ascertain:

- whether the results of the 1991 Census evaluations were used to improve the 1996 Census;

- whether the Census could be undertaken more efficiently while still yielding data of the required quality; and
- how privacy concerns were being satisfied by the processes employed.

Methodology

1.16 The approach taken by the ANAO in the audit was to establish whether the evaluations of the 1991 Census were adequate and to examine what action has been taken by ABS to address areas that were targeted for improvement. The ANAO also sought to examine whether privacy issues such as the protection of individual Census forms and Census data were adequately addressed by the ABS.

1.17 The scope of the audit was limited to reporting on the efficiency and effectiveness of the management by the ABS of the development, collection and initiation of the processing phases of the 1996 Census. The ANAO conducted an assessment of the procedures and processes used in the 1996 Census against the ABS performance indicators and by an examination of ABS documentation. The audit did not seek to review the ABS statistical methodology.

1.18 The ANAO's field work was conducted between June 1996 and March 1997. Field work included discussions with ABS staff, the examination of ABS files in Canberra and discussions with staff of the Office of the Privacy Commissioner. The Data Processing Centre located at Ultimo in Sydney, where all the completed Census forms are delivered and processed, was also visited in September 1996. In addition, the audit report papers were reviewed by Reibnitz Consulting in relation to issues and content.

1.19 The cost of the study was \$109 000. The audit was conducted in accordance with ANAO Auditing Standards.

Overall conclusions

1.20 The ANAO considers that the part of the 1996 Census cycle completed to March 1997 (including incorporation of the results of the evaluation of the 1991 Census into the development of the 1996 Census, the development and collection phases and a significant part of the processing phase) has been generally carried out efficiently and effectively by the ABS.

Evaluation

1.21 The continuous planning processes employed by the ABS have been effective tools for planning the various phases of the 1996 Census. The ABS conducted a thorough evaluation of the 1991 Census which was complemented by an additional review undertaken by an Interdepartmental Committee in 1993. The results of this evaluation and the Interdepartmental Committee review were directly employed in seeking to improve administrative processes for the 1996 Census.

Cost savings options

1.22 The ANAO supports the current evaluation that the ABS is making of the broader application of mail back of Census forms as a potential cost savings measure. The ABS actively reviews options for reducing the per capita cost of successive Censuses on a continuing basis. In addition, the 1993 Interdepartmental Committee review was specifically tasked with considering options for lowering the cost of the Census. The Committee concluded that there were two main policy options for lowering the cost of the Census, that is, reducing frequency and/or reducing the content or extent of the Census. However, the Interdepartmental Committee concluded that it would not be prudent to implement either option.

Administrative arrangements

1.23 The ABS' administrative arrangements for the conduct of the 1996 Census were sound and included: a comprehensive and effective communications strategy; suitable contracting arrangements; an appropriate performance information framework; and utilisation of the user pays principle for Census statistics where appropriate.

Privacy

1.24 The ABS recognises that privacy is a significant issue for the Census. It consults effectively with the Office of the Privacy Commissioner with regard to privacy issues arising in connection with the Census. The ABS also has sound administrative procedures in place to secure the Census data and to protect individuals' privacy with regard to the Data Processing Centre and those aspects of ABS Central Office activity covered by ANAO field work.

Agency response

1.25 The ABS has advised the ANAO that it intends to use this audit report as a benchmark for performance of future censuses, and reference for planning and conducting the 2001 Census.

Report outline

1.26 The following two chapters of the audit report examine the ABS evaluation procedures and its management of the 1996 Census relating to planning, privacy, stakeholder consultations and administrative arrangements.

2. Census Evaluation

This chapter discusses the ABS evaluation of the 1991 Census and its contribution to the development of the 1996 Census. Planning, benchmarking and evaluation practices undertaken have been extensive and the ABS has taken appropriate action to reduce the costs associated with the 1996 Census.

Background

2.1 The Census cycle is conducted over a seven-year period with the initial stages

of the next Census and the final stages of the previous Census overlapping. There are various phases of the Census: development phase; collection phase; processing phase; output/dissemination phase; and evaluation phase (see Exhibit 2.1). The planning, conduct and evaluation of the different phases are often intertwined and can be concurrent.

2.2 Specific detail regarding each phase of the Census is as follows:

- **Development phase:** during which planning for the conduct of the Census and the topics on which information is to be collected by the Census are determined. The outcome of the evaluation of the previous Census is taken into account⁴ and an extensive community consultation program is undertaken to obtain user views.
- **Collection phase:** covers all those activities undertaken up to and including the collection of the completed Census forms from householders. Apart from the delivery and subsequent collection of the completed Census form from householders this includes:
 - planning and production of accurate maps for Census collectors;
 - printing of Census forms and administrative manuals and documents;
 - recruiting, organising and training of the temporary field force of some 40 000 people;
 - providing information and interpreter services; and
 - a public awareness campaign.
- **Processing phase:** covers the capture of responses on Census forms and conversion to statistical codes for output purposes. This is done by optical mark recognition technology for simpler responses and manual entry by trained operators for the more complex responses such as that concerning occupation.
- **Output/dissemination phase:** the key objective is to produce a suite of products and services in the right media and in a timely fashion to fulfil the data needs of users.
- **Evaluation phase:** evaluation activity occurs in almost all phases of the Census and the outcomes are brought together in an overall evaluation.

2.3 These various phases of the Census are inextricably linked, with planning and work on each phase being carried out largely concurrently. The following part of this chapter details the evaluation made of the 1991 Census and its contribution to the development phase of the 1996 Census, as well as the consultation undertaken by the ABS in developing the 1996 Census.

Exhibit 2.1 The Census Cycle



Evaluation

2.4 The ABS evaluates each phase of every Census. Following the 1991 Census, an evaluation was published in 1994 which contained an overall evaluation together with reports regarding the evaluation of each of the phases of the 1991 Census.

2.5 The ABS has in place mechanisms for considering the recommendations for improvements arising from evaluations of the planning processes for the next Census. For example, in connection with the evaluation of the collection phase of the 1991 Census, a database of all the recommendations was compiled, action officers were assigned, decisions on whether or not to implement them recorded, and actions implementing them noted.

2.6 In addition, the ABS engages in significant consultation with Census data users and with the public in order to obtain suggestions about the most useful output from the Census. The information obtained as a result is then taken into account in Census planning processes.

Finding:

2.7 The continuous planning processes employed by the ABS have been effective tools for planning the various phases of the 1996 Census. The ABS conducted a thorough evaluation of the 1991 Census which was complemented by an additional review undertaken by an Interdepartmental Committee in 1993. The results of this evaluation and the Interdepartmental Committee review were directly employed in seeking to improve administrative processes for the 1996 Census.

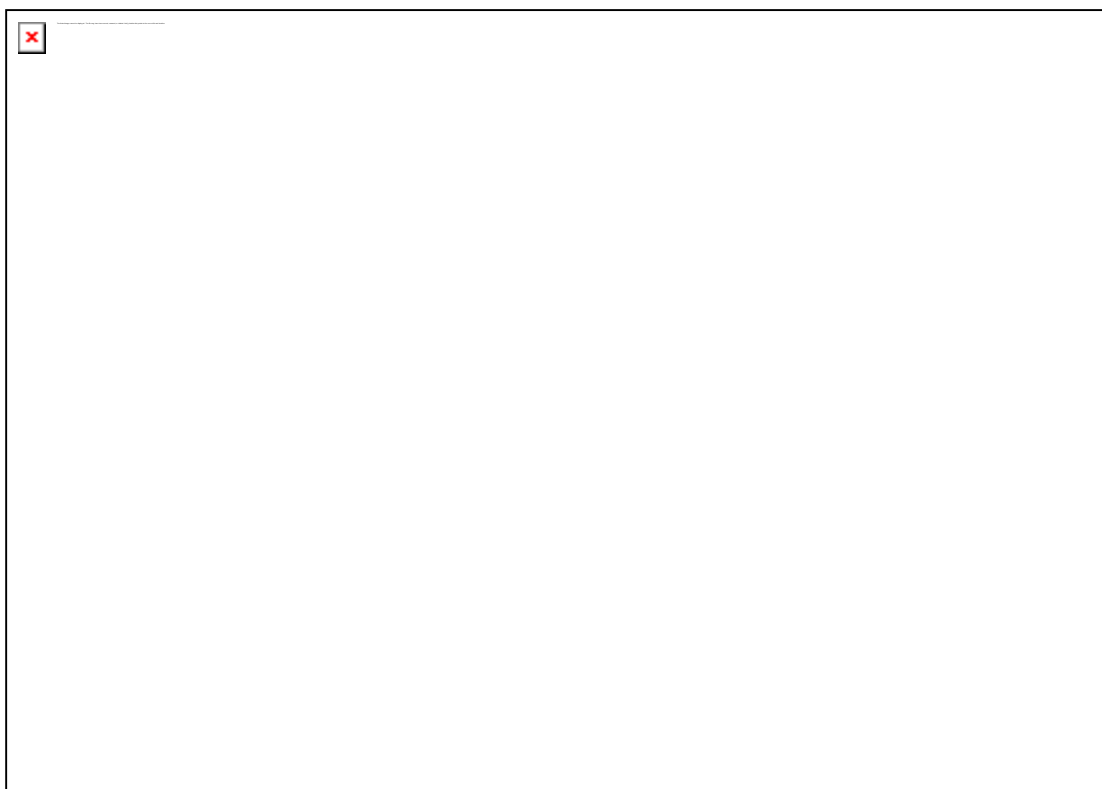
Census cost

2.8 In light of the Census' unique character, it is difficult to assess the cost

efficiency with which the Census is carried out. However, the per capita cost of the Census has declined since 1986 and the ABS advises that it is committed to continuing to achieve reductions, in real terms, of the per capita cost of successive Censuses.

2.9 Exhibit 2.2 outlines the major cost analysis of the 1996 Census in 1993-94 dollars. The process of actually undertaking the collection of Census forms accounts for nearly half of the total costs (\$65.1 million in 1993-94 dollars). Two-thirds of this expenditure is related to labour costs. The other major cost groups for the Census are those associated with processing the Census data. These amount to \$58.6 million in 1993-94 dollars (43.3 per cent of total expenditure).

Exhibit 2.2 Distribution of Census costs



2.10 Advances in technology have been largely responsible for savings achieved in conducting Censuses. Cost reductions have occurred with the introduction of processes such as self-coding, optical mark recognition and computer-assisted coding.

2.11 In July 1992, the ABS conducted a field test of 5000 dwellings with the primary aim of providing data on the viability and cost-effectiveness of optical character recognition data capture -a new technology which involves computer scanning and recognition of word and/or numeric responses, as compared with optical mark recognition which recognises only marks against a set number of choices. However, following this test, the ABS decided, for the 1996 Census at least, to stay with the optical mark recognition technology which was employed on the 1991 Census. It was considered that development efforts would be better concentrated on improving the timeliness of Census output and on data quality

considerations.

International benchmarking

2.12 As part of the evaluation of the 1991 Census, estimates were collected on the costing of some comparable countries' Census operations. The process of making directly comparable estimates between countries is difficult given differing Census methods, population characteristics, geographic distribution, inflation rates, timing and exchange rates. Subject to that qualification, on a per capita cost basis, ⁵ the ABS advised in May 1997 ⁶ that the nominal cost of the 1991 Australian Census was \$A7.17, which was markedly cheaper than those of the United States (\$A13.54), and Canada (\$A12.12) but was more expensive than Censuses conducted in the United Kingdom (\$A5.47) and New Zealand (\$A6.43). The United Kingdom has lower processing costs as it processes only 10 per cent of the Census responses to questions, whereas in Australia, all responses are processed.

Finding:

2.13 The ABS has undertaken appropriate benchmarking practices, by comparing its performance against that of other relevant national statistical collection agencies involved in undertaking periodic Censuses of population.

Data quality

2.14 One of the key performance indicators by which the success of the Census is measured is data quality. The most significant source of error in the Census statistics is through undercounting, that is, people are missed from the Census. As well as affecting the total population counts, undercounting can bias other Census statistics because the characteristics of missed people are different from those of counted people. The most significant way in which the ABS assesses the data quality of the Census is through measuring the rates of undercount in each of the States and Territories and in Australia as a whole. The ABS experience has been that rates of undercounting vary significantly for different population groups depending on factors such as age, sex and geographic area. The chief tool the ABS employs to measure the extent of undercounting is a sample survey of households undertaken shortly after the Census, called the Post Enumeration Survey.

2.15 The ABS reported a decrease of 0.1 per cent in the undercount rate of the 1991 Census (1.8 per cent) compared to the rate for the 1986 Census (1.9 per cent). There were significant variations between the States and Territories for the 1991 Census with a high of 3.2 per cent reported for the Northern Territory and a low of 1.1 per cent reported for the Australian Capital Territory. The ABS advises that it expects to be in a position to disseminate the results of the 1996 Post Enumeration Survey in early June 1997. Other indicators of Census data quality considered by the ABS relate to the extent of records which have to be created (imputed) by the ABS for persons or households who did not return a Census form and non-response rates for particular questions.

Census frequency issues

2.16 Of the countries that Australia frequently compares itself to, only Canada and New Zealand conduct Censuses every five years. By international standards, the Australian Census is comprehensive in terms of the extent of enumeration.

2.17 Some of the major avenues available to the ABS in seeking to reduce the cost of successive Censuses are reducing the frequency of Censuses, consideration of alternatives to conducting a full count, full enumeration Census each time and reducing the content of the Census. These issues were specifically considered by an Interdepartmental Committee⁷ established by the then Government in 1993.

Interdepartmental Committee's findings

2.18 The Interdepartmental Committee evaluated a number of options for cost reduction centred on conducting Censuses less frequently and/or reducing the content or extent of the Census. These options and the savings associated with them are set out in Exhibit 2.3.

Exhibit 2.3 Census Savings Options

Census Type	Annual Average Cost (\$m) (a)	Annual Gross Savings (\$m) (a)(b)
• Five year frequency		
- Full content/full enumeration	27.0	Nil
- Alternate reduced content/full content	24.8	2.2 (c)
- Long/short form	25.0	2.0 (d)
• Seven year frequency (e)	19.0	8.0
• Ten year frequency (e)	13.5	13.5
Notes:		
(a) All costs/savings are in constant 1993-94 dollars.		

(b) The savings referred to are gross and they have not allowed for the additional costs to the ABS of increasing the sample size of intercensal household surveys.

(c) \$22 million savings every 10 years.

(d) \$10 million savings every 5 years.

(e) Full content-full enumeration Census.

Source: *Report of the Interdepartmental Committee on the Review of the Census of Population and Housing*, December 1993.

2.19 The Interdepartmental Committee concluded that it would not be prudent to reduce the frequency of the Census as a cost-saving measure because of:

- increased risk of successful challenge under section 24 of the Constitution relating to the allocation of House of Representatives seats among the States;
- the implications of reduced timeliness of data used to distribute Financial Assistance Grants to States/Territories and used in managing, for example, employment, education, regional and social security programs; and
- the additional costs to the ABS through the need to increase the sample size to maintain the accuracy of intercensal household surveys such as the labour force survey.

Electoral considerations

2.20 The current legislative requirement that the Census be carried out every five years was introduced in 1977 by the then Government in response to the High Court's decision in *Attorney-General (Cth); Ex Rel McKinlay v. The Commonwealth* (1975) ⁸ and a subsequent 1976 legal opinion provided jointly by the then Solicitor-General and Attorney-General. The legal opinion was that, in light of the High Court's findings in the above *McKinlay* case, the safest course to avoid a possible successful challenge under section 24 of the Constitution relating to the allocation of House of Representative seats among States would be to conduct Censuses at least triennially.

2.21 In 1977 the then Government chose to amend the *Census and Statistics Act 1905*, the *Commonwealth Electoral Act 1918*, and the *Representation Act 1905* to provide that quinquennial Censuses would be supplemented with a population estimate based on those Censuses made one year into the life of each House of Representatives.

Timeliness of data for grant allocation and program management

2.22 Census data are also used extensively in allocating both Commonwealth general and specific purpose payments to the States, Territories and local governments as well as in planning and managing the Commonwealth's own

purpose programs. The following activities rely heavily on Census data: the allocation and management of major specific purpose payments to the States and Territories, including for hospitals, education and housing; and the management of the Commonwealth's own purpose programs in social security and welfare, health, higher education and community services areas.

Relationship to other ABS activities

2.23 Census data are the cornerstone of the ABS' collection of a wide range of economic and social statistics. ABS household surveys, such as the monthly labour force survey, national surveys of health, income, expenditure, families, time use, and crime victims are all benchmarked to Census data, as are important indicators of economic activity such as the National Accounts.

2.24 Reducing the frequency of the Census would have significant adverse implications for the accuracy and quality of the data on which important and ongoing social and economic analysis is founded. In addition, the efficiency of all intercensal ABS household surveys is dependent on the availability of regular Census data. Without the survey redesigns which follow each Census, the samples in each of these surveys would have to be larger than otherwise required if the accuracy of the data was to be maintained. ⁹

Finding:

2.25 Evaluation of the Census is extensive and there are sound administrative efficiency and legal reasons for the current practice of conducting the Census every five years.

Reducing the content and coverage

2.26 There are a range of options which might be considered in terms of reducing the content and/or coverage of the Census as a cost-savings measure. Options identified as alternatives to a full count and full enumeration Census by the Interdepartmental Committee included:

- a) *Reduced Content*: This option has the same characteristics as a full content Census, except that certain topics are omitted on the basis that they involve relatively high processing costs. Savings were calculated, after taking into account loss of revenue, at \$22 million every five years.
- b) *Headcount Census*: This is an extreme form of the reduced content option, and would provide only the basic demographic data needed for electoral and limited Commonwealth grant allocation purposes. Allowing for loss of revenue, net savings of \$22.5 million every five years would be achieved.
- c) *Rolling Full Content Census*: A rolling full content Census would involve a headcount Census every five years, supported by a rolling program of sample surveys to provide auxiliary information during the intercensal period. To be effective the surveys would have to be fairly large, say 5 per cent each year, so that the data on their own would provide reliable national measures, and

indicative, though not very precise, regional data. Modelling of the annual data would be needed to enable users to utilise the accumulated data of five years (a 25 per cent sample) to adjust for changes in the socio-economic and demographic characteristics of the population. If statistics for small areas and small population groups are required then a much larger sample than 5 per cent would be needed annually. This option was estimated to cost more than the full content option.

d) *Long form/short form*: Under this option, data from the long form are processed only for a sample of households (and individuals) while data from the short form are processed for every household and individual. The questions in the short form are a subset of the questions in the long form. The net savings every five years from this option would be \$10 million. ¹⁰

2.27 This last approach would have the benefit of providing sufficient data for the full range of regional analysis (for large regions) and the interrelationship of various characteristics for the data collected from the short form. However, because of the effect of sampling errors, the ABS advises that data from the long form sample would be unreliable for smaller areas and groups of the population.

2.28 It should be noted that Canada, France, Germany, the United Kingdom and the United States, which use sampling in their Census, have additional information available from administrative sources, for example from national identification schemes, to support the Census data obtained under an option such as this.

2.29 A major function of the Census is to provide detailed data for small areas and small groups. These data are not only crucial to planning and grant allocation decisions by all levels of government but are also significant to the generation of revenue from Census data. This is because it is the small area and small group data which are attractive to business users for targeting their marketing efforts.

Finding:

2.30 Options for reducing the content and/or coverage of the 1996 Census have been identified and investigated both by the ABS and an Interdepartmental Committee composed of major Commonwealth users.

Following two High Court decisions, *Attorney-General (CTH) (Ex rel. McKellar v The Commonwealth)* (1977 139 CLR 527) and *Attorney-General (CTH) (Ex rel McKinlay v The Commonwealth)* (1975 135 CLR 1), two legal opinions were obtained from the Solicitor-General and the Attorney-General. The Government of the day decided to opt for a five-yearly Census. The *Census and Statistics Act 1905* was duly amended in 1977 to reflect this decision.

The ABS is the central statistical agency for the Commonwealth Government. In its present form the agency came into operation on 3 March 1976 as a result of the *Australian Bureau of Statistics Act 1975*. In 1995-96, the ABS employed on average the full time equivalent of 3227 staff. Revenue generated from Census products and services are retained by ABS.

3

People excluded from the Census were foreign diplomats and their families and foreign crew members on ships. Australian residents out of the country on Census night were generally not included unless they had left the country without having been required to undertake departure formalities, for example naval personnel on board ships away from Australia. The results for populations of the Cocos Island and Christmas Island were included in the counts for Australia for the first time in 1996.

4

In the case of the 1996 Census, the development phase also included consideration of the December 1993 report by an Interdepartmental Committee which had been established in the context of the preparation of the 1993-94 Budget to consider options for reducing the cost of the Census.

5

Similar results are also seen when the measurement base is the cost of the Census as a proportion to Gross Domestic Product (GDP). Australia's 1991 Census cost as a percentage of GDP was 0.035, the United States 0.047, Canada 0.045, New Zealand 0.040 and United Kingdom 0.023.

6

These numbers differ from those reported in the Australian Bureau of Statistics, *An Evaluation of the 1991 Census of Population and Housing*, 1994, p14. which quotes costs for the United States (\$A28.20 to \$A41.80), Canada (\$A7.83 to \$A10.76), United Kingdom (\$A4.80 to \$A6.32) and New Zealand (\$A4.00 to \$A5.44).

7

The members of the Interdepartmental Committee included representatives of the Department of the Prime Minister and Cabinet; the then Department of Arts and Administrative Services; the Attorney-General's Department; the Australian Bureau of Statistics; the Commonwealth Grants Commission; the Australian Electoral Commission; the then Department of Employment, Education and Training; the Department of Finance; the then Department of Health, Housing, Local Government and Community Affairs; the then Department of Immigration and Ethnic Affairs; the Department of Social Security; the then Department of Transport and Communications; and the Department of the Treasury.

8

Attorney-General (CTH); Ex rel McKinlay v. The Commonwealth; South Australia v. The Commonwealth; Lawlor v. The Commonwealth (1975) 135 CLR 1.

9

The example used by the Interdepartmental Committee to illustrate this point was the monthly labour force sample. In 1993 this sample included 30 000 households. According to the Committee's advice, had the redesign using 1991 Census data not occurred, the sample would have had to be increased to 34 000 households to maintain accuracy. *Report of the Interdepartmental Committee on the Review of the Census of Population and Housing*, December 1993, p. 11

10

Estimated savings taken from the *Report of the Interdepartmental Committee on the Review of the Census of Population and Housing*, pp9-10.

3. Census Management

This chapter discusses the ABS management of the 1996 Census for that part of the Census cycle completed to March 1997 and the community consultation it conducts regarding the Census. The ABS have utilised information obtained from evaluation and consultation practices to make improvements to the conduct of the Census and to address community concerns about the 1996 Census.

Planning

3.1 Following the evaluation of the output/dissemination phase of the 1991 Census, a major issue to emerge for the 1996 Census was the early release of data. Notwithstanding that the release dates actually achieved for 1991 Census data were by and large earlier than those achieved for the 1986 Census, there was user dissatisfaction with the release dates for some of the 1991 Census data because they were later than those announced publicly - some by six months. The main reason identified for this was the lack of systems integration and coherence between the input and output processing systems.

3.2 Planning for the 1996 Census has involved taking several steps in connection with the design and development of the processing systems to overcome the types of problems encountered in the processing of the 1991 data. In addition, the ABS has adopted an improved two-phased processing and output strategy for the 1996 Census which will see priority placed on processing and disseminating all easy-to-process topics in the first phase with a planned release date for this data of July 1997. For the 1991 Census the strategy was different and the first release data was preliminary data subject to correction. For the 1996 Census the first release data will represent the final version for the topics involved.

3.3 The ABS considers that by moving to processing the easy-to-process topics first, it will not only improve the output it can make available in the short term after the 1996 Census, but will also achieve savings and efficiencies in connection with the training of processing staff. Since the staff will already be experienced

with the processing system, they will be not require as much training for the more complex processing required for the second phase.

Finding:

3.4 The lessons learnt from the evaluation of the 1991 Census were used by the ABS in planning the 1996 Census. Accordingly, improvements have been made in processing and output processes and strategies for the 1996 Census which have the potential to increase efficiency and customer satisfaction.

Privacy

3.5 The ABS recognises that privacy is a significant issue for the Census. Unless the ABS is able to assure the public that their privacy will be adequately protected, there is a substantial risk that a significant reduction in the quality and quantity of the data captured by the Census will result.

3.6 The ABS has taken action to reassure the public that their privacy will be protected in the Census process. A key aspect of the public relations strategy for each Census focuses on educating the public that not only is the Census necessary for the public good but that their own personal information will also be adequately safeguarded.

Privacy Commissioner

3.7 The *Privacy Act 1988* provides for privacy safeguards which Commonwealth departments and agencies, such as the ABS, must observe in collecting, storing, using and disclosing personal information. These principles are based on guidelines on the protection and transborder flows of personal information which were developed by the Organisation for Economic Co-operation and Development in 1980. ¹

3.8 Officers from the Office of the Privacy Commissioner were consulted in the course of this audit. The ANAO was advised that the ABS extensively consulted the Office of the Privacy Commissioner concerning possible privacy issues arising from its operations, including its conduct of the 1996 Census of Population and Housing.

3.9 The Office of the Privacy Commissioner advised the ANAO that it received 120 Census related calls during a three week period from 27 July 1996 to 16 August 1996. Approximately 80 per cent of callers questioned why name and address details were required. The main comment was that if the Census was to be confidential and the ABS was only interested in responses on a general statistical rather than individual level, why was it necessary to record a person's name and address on the census form.

3.10 The issue of privacy in connection with the provision of names and addresses on census forms has concerned the Office of the Privacy Commissioner for some time. The previous Privacy Commissioner in his 1995-96 Annual Report noted that he would prefer ABS survey and census forms to provide a detachable name

and address page that could be separated from the rest of the survey forms, to better protect individual's privacy.² The current Privacy Commissioner has advised the ANAO that it is her understanding that, in response to her concerns, the ABS is examining the possibility of requiring first names only for the 2001 Census, and other alternatives to the recording of address information.³

3.11 ABS has previously advised the ANAO that the inclusion of names reduces the likelihood of inaccurate responses and non-completion of census forms. ABS also advises that names are used for coding purposes to determine the composition of households and that names and addresses are required for the post-enumeration survey. ABS advises that addresses, in particular postcodes, are required for statistical coding purposes.

3.12 A number of callers also questioned the requirement to sign the census form. ABS advises that signing the census form reduces the incidence of inaccurate responses and non-completion of census forms.

3.13 Other people rang to ask if the Census was compulsory, and to express concern about collectors having access to their personal information, or to question the requirement to provide employer and employment details. Completion of census forms is compulsory under Section 10 of the *Census and Statistics Act 1905* and ABS advises that the Statistician has approved 48 cases for prosecution due to non-compliance for the 1996 Census, which is less than in the 1991 Census in which 192 cases were approved for prosecution.⁴

ABS position

3.14 The ABS maintains that it instils a strong confidentiality ethos⁵ among its staff and this is underpinned by the provisions of the *Census and Statistics Act 1905* and the *Privacy Act 1988*.⁶

3.15 All employees of the ABS, whether permanent or temporary, taken on for various activities such as the collection and processing phases of the Census, sign undertakings not to disclose any information which might come to their attention in the course of their employment in accordance with the provisions of the *Census and Statistics Act 1905*. Penalties are prescribed under the legislation for any breaches of the secrecy provisions of the Act.

3.16 When all processing is complete the Census forms are destroyed. In contrast, the United Kingdom and United States Census agencies retain the Census forms. Genealogists and other people interested in long-term data on a range of issues have questioned the ABS' practice of destroying Census forms.

3.17 The Office of the Privacy Commissioner has consistently endorsed the destruction of Census forms as a necessary privacy measure. The then Privacy Commissioner wrote to the *Sydney Morning Herald* on 12 July 1996 and advised that:

I have consistently supported, on privacy grounds, the longstanding government policy which is that the census forms are destroyed after the processing is complete. The Bureau

*of Statistics fully complies with the privacy principle that personal information should only be used for the purpose for which it is obtained, and this has contributed to a high level of community trust. If the forms were to be retained, that trust would most likely be significantly diminished, leading to a reduced level of accuracy, and undermining the important objectives of the census. It would also, in my view, be an undesirable intrusion into the privacy of all Australians. However strong the assurances initially given about confidentiality during a "closed access" period, the Bureau would inevitably come under severe pressure to make exceptions for other public interests. There would also be differing opinions about the length of time before the forms were made available.*⁷

3.18 The Australian Archives must give permission for the destruction of these Commonwealth records after each Census. Permission has always been given for this and has, in fact, already been given in respect of the 1996 Census forms once processing is complete. This is on the basis that the interests of those who would like access to the data in the future are outweighed by the threat to the integrity of the data the ABS obtains from the Census, should the public lose confidence that their privacy is adequately protected.

Finding:

3.19 The ABS is aware of the need to ensure that the public is satisfied that their privacy will be adequately protected in the taking of the Census and the processing of the resultant data. High response rates suggest that the ABS has been successful to date in maintaining public confidence in the Census process.

3.20 On 7 May 1997, the Treasurer announced that he was referring the issue of whether Census forms should continue to be destroyed after the completion of the Census to the House of Representatives Standing Committee on Legal and Constitutional Affairs.⁸

Mail back

3.21 The ABS has several practices in place which enhance privacy during the collection phase of the Census. In recognition of the fact that not all residents in a particular household may wish to include their personal information on the one Census form, individuals requiring greater privacy can use a separate form from the other occupants.

3.22 Privacy envelopes are also available to provide either additional privacy from other occupants of the dwelling or to overcome concerns an individual may have about the Census collector reading the completed form. Although complaints to the Privacy Commissioner indicated that some callers were unaware of the availability of privacy envelopes, the ABS does advise all respondents of this option in the Census information booklet and also on the front of the Census form.

3.23 It is not uncommon for residents in a collection district to know the collector because the pool of available staff to undertake collection duties may not be sufficient to avoid this situation. In urban localities, where it is more feasible, efforts are made to avoid having Census collectors work in areas close to where

they live and/or ensure that collectors do not know any of the respondents in their collection district, but this may not always be possible.

3.24 Although the ABS discourages the practice, members of the public who make objections to providing their completed form to the collector are advised of the opportunity of mailing back the completed form directly to the Data Processing Centre. The ABS experience, in the context of current practice, is that there are increased risks of non-completion, poor completion and/or non-return of Census forms where respondents are allowed the option of mailing back their forms. In addition, processing costs can be increased under this option. Not only is it usually necessary to devote significant resources to following up forms that have not been returned or not completed correctly but also when the forms are received at the Data Processing Centre the collection district they belong to has to be identified and the forms then inserted into the relevant batch.

3.25 The ABS continues to review options such as employing mail back instead of personal collection for the majority of Census forms in light of changing conditions and as a method to reduce the per capita cost of successive Censuses. The ABS is seeking advice from Statistics Canada, which employs a mail back collection system, regarding the feasibility of introducing mail back in Australian Census data collection to replace the current manual collection system. The ABS has an officer dedicated to progressing this initiative.

3.26 Notwithstanding some of the problems which can occur when respondents mail back their completed forms, there are potential cost savings to be achieved by employing the mail back method. In addition, privacy is enhanced because respondents are not obliged to hand their completed forms to the collector. Even given the ABS best efforts to avoid the likelihood that a collector will be known to a respondent this does still occur and can be a cause of concern to some people. However, where completed forms are mailed back, it becomes largely irrelevant whether the collector who delivers the form is known to the respondent.

Finding:

3.27 The ABS is reviewing the broader application of mail back of completed Census forms to realise possible savings in the collection of Census data and to enhance privacy by reducing the likelihood of a person known to respondents reviewing their completed forms.

3.28 Privacy concerns also arise concerning the particular questions asked on the Census form. To address this issue the ABS conducts public consultation on the form and content of the proposed questions in advance of each Census, seeking to balance the planner's need to know against concerns individuals may have about revealing personal information in response to the Census.

Security arrangements

3.29 The ABS recognises the importance of ensuring the physical security of Census forms and data. The Data Processing Centre at Ultimo in Sydney has

advanced perimeter security measures, including split television screens at the manned guard desk which allow all security cameras to be monitored simultaneously. Access to the building is controlled and staff require electronic photo ID passes for entry and exit. The passes issued to staff also allow them access only to those parts of the building they need to enter as part of their work. Movement of Census forms around the Data Processing Centre is monitored by way of an electronic registry system which can pick up signals anywhere in the building when a wand is waved across the barcode on a set of forms.

3.30 The computer systems used for processing Census data enable the ABS to identify persons having had access to information. The computer system is also set up to ensure that users of the system have access to only that part of the system for which they require access in order to do their work. Accordingly, the system architecture is such that, for example, the temporary staff employed at the Data Processing Centre are given access only to the Census data processing system and have no access to the Windows environment and facilities such as file manager. Staff are made aware that the processing system leaves an audit trail which allows management to identify who has seen which forms.

3.31 In order to process the Census forms, processing staff need access to the computer records. However, the record fields they can access are strictly controlled. Quality assurance measures are in place to pick up any deliberate sabotage of the Census database and/or inadvertent corruption of the database by frequently occurring errors. For example, samples of forms which have been coded and keyed in by an operator are re-coded and keyed in by a different operator, thereby picking up possible deliberate wrong keying, and/or problems with the coding guidelines provided to staff. The ABS has also trialed the effectiveness of its arrangements against computer hacking and so far they have proven to be resistant.

3.32 Names and addresses are not entered on the computer database at any time. All information made available from Census data are aggregated to ensure no individual can be identified. In addition, statistical techniques are employed, particularly with small area or group data, to reduce the likelihood of individual recognition.⁹

Vetting of staff

3.33 A work-force of some 1300 people is employed at the Data Processing Centre when it is at peak operation. Most of these employees are temporary. These staff are required to complete the normal documentation required for temporary employment in the Australian Public Service and a random sample of these temporary employees is subject to more detailed security checks.

3.34 Collectors are all interviewed before selection and required to complete undertakings under the *Census and Statistics Act 1905* to maintain the privacy of the information on the completed Census forms they collect. The ABS contends that it is not possible with such a large temporary work force -of some 40 000 people-to conduct any more rigorous vetting procedures. It is difficult to see how

more vigorous vetting procedures could be effectively done without significant additional cost and effort. To date this has been a reasonable risk management position, since problems with breach of privacy in relation to completed Census forms have been infrequent.

Finding:

3.35 The ABS has sound administrative procedures to secure the Census data and protect individuals' privacy with regard to the Data Processing Centre.

Stakeholder consultations

3.36 The content of Census forms is determined through consultation with users of Census statistics and the public. For the 1996 Census, the ABS published, in February 1993, a document ¹⁰ outlining its initial views on content and invited anyone interested to provide comment. Written submissions received were followed up by consultation with major users and other interested parties. Nine consultation meetings were organised in capital cities to discuss users' comments and requirements. The final content of the Census is determined by the Government on the basis of a Cabinet submission put forward by the ABS after consultation with the Australian Statistics Advisory Council. ¹¹

3.37 The ABS also engages in extensive consultation with users of Census data and the community concerning other issues such as the procedures to be used in collection and processing, the range of products to be derived from the data and the timing of their production. In the run-up to the 1996 Census the ABS produced a range of publications ¹² which put its views on content, procedures and products before users and which invited user comment to be taken into account in developing the final outcomes.

3.38 The ABS engages in extensive consultation to determine the content and form of the questions to be included in each Census. Notwithstanding that, for some subjects on which Census data users require information, it can still prove a challenge to capture the necessary data without causing concern to some group in the community.

Community reactions

3.39 The extensive consultation processes established by ABS do not ensure that all members of the community will not have some difficulties with the conduct of the Census. For the 1996 Census it was decided to include a question designed to capture information on fertility rates of different groups within Australian society. A similar question had been included in the 1986 Census but omitted from the 1991 Census on the basis that it was only necessary to update these data every ten years. The problem with trying to seek data on this subject arises in connection with how to deal with the sensitive issue of stillbirths.

3.40 The relevant question, as it was drafted for the 1986 Census, caused some concern among community groups who assist the parents of stillborn children. The ABS responded to these concerns, and similar concerns raised in the

consultation process for question design of the 1996 Census, by amending the wording of the particular question. ¹³ However, the question as designed for the 1996 Census still caused concern to some parents of stillborn children. The ABS advises that it is working with the relevant community groups to find a resolution to this problem before it next seeks to collect data on this subject.

Client perceptions

3.41 In developing its plans for 1996 Census data output, the ABS also undertook both qualitative and quantitative market research on the user satisfaction of 1991 Census products and services. Together with publishing its initial views on 1996 Census data output and inviting submissions from users, the ABS also engaged an consultant to investigate the needs of 150 key users of Census data and their reactions to the 1991 output program.

3.42 The strengths of the 1991 Census program thus identified were: the quality of the data in terms of comprehensiveness, detail and accuracy and usefulness; the level of services; and the ease of use of the products and presentation of the data, including the range of formats in which the data were presented.

3.43 The key weaknesses of the previous Census were: the timeliness in the release of Census data and the failure to adhere to previously announced release dates; the perceived inflexibility of the pricing structure; lack of user friendliness of some products and insufficient published details on classifications (such as of occupation data); and the random perturbations into the Census data, to protect confidentiality. ¹⁴

3.44 In light of this feedback, the main goal of the ABS' 1996 Census output program is to improve the timeliness and predicability of the data releases while seeking to maintain and improve the standards of data quality, comprehensiveness and service delivery achieved by the 1991 Census. The key strategies the ABS is implementing to achieve this goal include:

- adoption of a two-phase approach to the processing and release of Census data. Easy-to-process topics, which comprise the majority of Census topics, will be included in the first release of data. The remaining topics, which require more complex processing, will be included in the second release;
- rationalisation of the data content of standard products and services within similar product lines so that they meet the general needs of users of Census data;
- provision of timely, responsive and cost-efficient customised service to meet specific user needs; and
- facilitation in the use of Census data alongside other ABS data by integrating Census data with other ABS products and services.

Finding:

3.45 The ABS has undertaken extensive consultations with users of Census statistics and the public and has taken steps to improve the standard of data quality, comprehensiveness and service delivery, compared to the 1991 Census.

Administrative arrangements

3.46 The administrative arrangements considered in this section concern the ABS' communication strategy, its contracting arrangements, its performance information framework and revenue arrangements.

Communication strategy

3.47 The ABS' communication strategy for the Census sought to support field operations through:

- a recruitment campaign for field staff;
- an awareness campaign to maximise awareness of the Census and to address issues of concern to the community; and
- a contingency plan to deal with negative media issues.

3.48 The ABS set out to achieve this in a number of ways. To facilitate the recruitment of the large temporary work force required to carry out the collection phase of the 1996 Census the ABS used press advertisements and exploited public relations opportunities such as access to talk-back radio.

3.49 Community awareness of the Census was achieved through paid press, radio and television advertising and through extensive public relations activities such as media liaison, media releases and information as well as talk-back radio. In addition, the ABS sought to build community support for the Census through third-party endorsements by personalities and organisations. An innovative angle on this approach used in the run-up to Census night 1996 was to inform the large viewing audience of the Olympic Games coverage through commentary by the television presenters. Campaigns were also developed to target specific audiences from non-English-speaking backgrounds and indigenous people.

3.50 Independent research commissioned by the ABS following the 1991 Census indicated that the television advertisement developed for that Census was highly successful. In 1994, follow-up research was conducted which indicated that the advertisement remained relevant and the decision was taken to use it again in 1996 both as a cost-saving measure and because it was successful.

3.51 For several Censuses a telephone inquiry service has been provided to the public. For the 1991 Census, a telephone enquiry service was provided by offering a phone-in facility to ABS State offices and an interpreting service was provided through the then Department of Immigration and Ethnic Affairs. Several areas for improvement were highlighted after the 1991 Census. For example, there were problems with equipment and having seven different hotline numbers instead of one national number.

3.52 To rectify these problems, the ABS Management Review Committee in 1994 directed the Census program to look at out-sourcing the hotline service. A telephone inquiry and interpreter service, commonly referred to as the 'Census Hotline' was provided for the 1996 Census and answered approximately 370 000 calls. The Hotline was outsourced and the interpreting services were also provided by an external contractor. The 1996 Hotline provided:

- a facility for members of the public to contact the ABS to obtain information about the Census;
- an interpreter service to provide initial assistance to people with language difficulties;
- a standardised method of responding to those requests; and
- a means of providing feedback to collection staff regarding inquiries raised by the public.

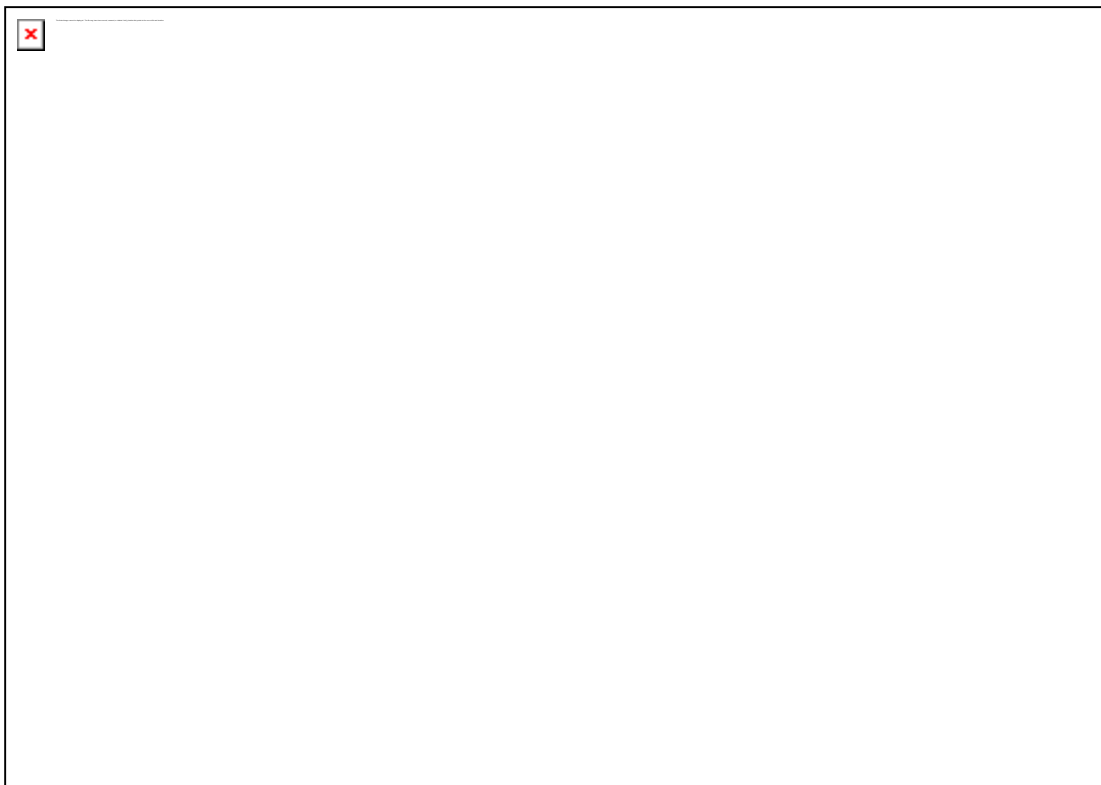
Contracting

3.53 In conducting the Census the ABS maintained control over core functions while outsourcing other services to other agencies and the private sector. For example, a private security firm has been engaged to provide security at the Data Processing Centre, while another private firm provides both the machinery and the operators for guillotining the Census forms before they are processed.

3.54 In addition to the contracts for the provision of the Census Hotline and accompanying interpreter service, (as at July 1996) a further 26 contracts had been let in association with the Census with a value greater than \$10 000 (see Exhibit 3.1). The total value of these contracts was some \$16 million. In many cases several tenders were received and/or expressions of interest invited before select tenders were invited. However, in eight cases only one tender was considered. The contracts involved were worth nearly \$8.3 million in total. The ABS advised that the contracts involving only one tender came about largely because the specialised goods or services required could not be supplied by other organisations or because others were not interested in supplying the ABS.

Exhibit 3.1

1996 Census contracts with a value exceeding \$10 000



3.55 Recruitment of the temporary staff for the Data Processing Centre was achieved through a mixture of in-house and contracting-out activities based on relative cost and efficiency. The recruitment of the large number of temporary Administrative Service Officers (ASO) Grade 1 required for the Data Processing Centre was outsourced to Recruitment Services Australia which is part of the Department of Employment, Education, Training and Youth Affairs. The ABS decided to conduct the interviews for the temporary ASO Grade 3 positions in-house after receiving and evaluating tenders from six companies expert in the field. This decision was taken on grounds of relative cost and efficiency.

Performance information

3.56 The ABS maintains performance information on the Census program which is compatible with better practice principles. [15](#)

3.57 The objective of the program is clearly identified as are the strategies for achieving it. The performance measurement framework includes indicators of the effectiveness, efficiency and quality of the ABS' conduct of the Census. The ABS sets standards for matters such as data quality and community consultation. It benchmarks the cost-effectiveness of the Census against that of other countries. Milestones are identified during the Census cycle to ensure that critical deadlines can be met and targets are set for a range of matters, including release dates for Census data output. The ABS routinely evaluates its performance against this framework and reports the results publicly after every Census.

Revenue

3.58 The ABS recognises the importance of ready access to statistics for public

information and for effective decision-making on a wide range of economic and social matters. Accordingly, basic statistics, including basic Census data, are readily and freely available through such means as press releases and through the ABS library extension program which provides to participating libraries not only hard-copy standard Census publications but also, to selected libraries, a CD-ROM product. The production costs for the standard products meeting this public good requirement are funded by appropriation.

3.59 Beyond satisfying public interest requirements the user-pays principle is applied by the ABS. The ABS' policy is to price in a manner which recovers production, marketing and distribution costs beyond the creation of the basic statistics from which they are produced. Accordingly, users requiring their own copies of standard publications are charged prices which seek to recover only any additional production, distribution and marketing costs incurred over and above this basic cost. The prices of specialised and detailed information are set to recover the costs of producing the detailed statistics as well as distribution and marketing costs.

3.60 The 1991 Census products and services have generated to date more than \$10 million in revenue, off-setting the majority of the costs involved in producing them.

3.61 The small area and small group data provided by the Census are increasing in commercial value as businesses become increasingly aware of the value of sophisticated customer databases to the marketing of their products and services. The ABS is responding to this issue by using CD-ROM technology to make Census data more accessible and user-friendly.

Finding:

3.62 The ABS' administrative arrangements for the conduct of the 1996 Census of Population and Housing were sound and included:

- a comprehensive and effective communication strategy;
- suitable contracting arrangements;
- an appropriate performance information framework; and
- utilisation of the user pays principle for Census statistics where appropriate.



Canberra ACT
2 June 1997

P. J. Barrett
Auditor-General

1

Privacy Commissioner, Information Paper Number 3, Community Attitudes to Privacy, August 1995, p. 28.

2

Privacy Commissioner, Annual Report 1995-96, p67.

3

Privacy Commissioner, letter to the Auditor-General dated 19 May 1997.

4

Australian Bureau of Statistics, Annual Report 1993-94, p71.

5

The Australian Public Service also places great importance on a high level of ethical behaviour as enunciated in the Management Advisory Board and Management Improvement Advisory Committee Report, *Ethical Standards and Values in the Australian Public Service*, May 1996.

6

Section 19 of the *Census and Statistics Act 1905* prohibits the disclosure of information obtained under the Act, either directly or indirectly, to persons other than the person who furnished the information unless it is for the purposes of the Act or in accordance with a determination under the Act. A penalty of a fine not exceeding \$5 000 or imprisonment for a period not exceeding two years or both may be imposed for a conviction for contravening this provision. Section 7 requires every officer executing any power or duty under the Act to sign an undertaking of fidelity and secrecy.

7

Letter reproduced in the *Australian Bureau of Statistics, Annual Report 1995-96, p40.*

8

Treasurer Press Release No. 38, 7 May 1997, states that the terms of reference to the Committee are as follows: The Committee shall look at the current practice of destroying name-identified forms collected in population censuses and make recommendations for future censuses taking into account:- (a) the effect retention would have on the quality, and hence the value, of data from

future censuses and other ABS collections; (b) the privacy concerns relating to the storage and use of name-identified census data; (c) the value of name-identified records for medical, social and genealogical research released after a significant period of time; and (d) the cost of retention.

9

The ANAO has previously investigated the adequacy of the ABS' computer data security, Audit Report No.2 , 1993-94. The ANAO found that the ABS computer system could not be used to facilitate the release of personal information in contravention of the *Census and Statistics Act 1905* and the *Privacy Act 1988* and that the ABS was a good custodian of the personal and business information it collects and holds. The report made recommendations concerning improvements which could be made to the computer security protection of sensitive aggregate data of significant commercial value. However, this issue falls outside the scope of this audit.

10

1996 Census of Population and Housing: ABS Views on Content and Procedures, 1993.

11

The Australian Statistics Advisory Council provides advice to the Minister and the Australian Statistician on the improvement, extension and coordination of statistical services provided for public purposes in Australia; annual and longer-term priorities and programs of work that should be adopted in relation to major aspects of the provision of statistical services; and any other matters relating generally to those statistical services.

12

Publications included: *1996 Census Dictionary*; *1996 Census of Population and Housing: ABS Views on Content and Procedures*; *1996 Census of Population and Housing: Nature and Content*; *1996 Census of Population and Housing: ABS views on Census Classifications*; *1996 Census: ABS Views on Census Output*; *1996 Census - ABS Views on Census Products and Services*.

13

Question 28 on the 1996 Census form: *For each female, how many babies has she ever had?*

**Include only live births.*

14

Random perturbation is a method used to ensure confidentiality of the data, by rounding small numbers to either zero or three in a manner that would not distort the overall accuracy of the statistics.

As articulated in the ANAO and Department of Finance joint publication, *Performance Information Principles, Better Practice Guide*, November 1996.

Appendix 1. Performance Audits in the Treasury Portfolio

Set out below are the titles of the reports of the main performance audits by the ANAO in the Treasury Portfolio tabled in the Parliament in the past three years.

Audit Report No.26 1994-95
Inoperative Staff in the APS

Audit Report No.27 1994-95
Studybank

Audit Report No.28 1994-95
*Insurance and Superannuation Commission
Superannuation Industry (Supervision) Act
- Administrative Arrangements*

Audit Report No.30 1994-95
Commonwealth Government Information and Advertising

Audit Report No.1 1995-96
*Income Matching System
Australian Taxation Office*

Audit Report No.16 1995-96
*Assessable Government Industry Assistance
Australian Taxation Office*

Audit Report No.6 1996-97
*Commonwealth Guarantees, Indemnities
and Letters of Comfort*

Audit Report No.7 1996-97
IT Acquisition Councils

Audit Report No.13 1996-97
*Tax Debt Collection
Australian Taxation Office*

Audit Report No.16 1996-97
Payment of Accounts

Audit Report No.22 1996-97
*Client Service
Australian Taxation Office*

