

## Chapter 3

### Effects on data quality of retaining census forms

*The quality of the data of the census and of other ABS collections affects the value of the data for research purposes. The reliability of the statistics obtained can be assessed. Comparisons can be made with indicators, such as undercount rates, in other countries – New Zealand, Canada, United States and United Kingdom.*

*The ABS suggested that public cooperation with the census would decline if people knew that their information would be kept and released in the future. On this view, non-response rates would rise and the information provided would be less accurate. Consequently, the level of non-response and the accuracy of data provided for small geographic areas or particular sub-groups of the population would vary which would mean that data at these levels, such as regional estimates, would be less reliable.*

*A reduction in the data quality of the census would adversely affect users of census data and population estimates, electoral redistributions and Commonwealth Grants processes. ABS considers that other collections conducted by it would also be adversely affected.*

*An alternative view is that the retention of census forms would have no, or only a minimal, adverse effect on census data quality, and some argued, it would have a positive effect on data quality. Most people would not be concerned about the retention of their census forms and would continue to cooperate with the census as good public citizens.*

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## Introduction

3.1 This chapter examines the effects of retention of name-identified census forms on the quality, and hence the value, of data from future censuses and other collections by the Australian Bureau of Statistics (ABS).

3.2 It was argued variously in the evidence that the retention of census forms would have no, minimal or significant detrimental effects on data quality.

3.3 On the one hand, ABS, other statistical bodies and government departments argued that the quality of data collected in the census would decline, possibly significantly, if people knew that their information would be kept and released in the future. Non-response rates would rise and the information provided in the census would be less accurate. Other collections conducted by ABS would also be adversely affected.

3.4 On the other hand, a number of genealogical researchers and associations and researchers in other fields argued that the retention of census forms would have no, or only a minimal, adverse effect on census data quality. Data quality might in some cases improve.

3.5 The Committee examines each of these propositions. The chapter commences with an examination of the concept of 'data quality' and how it is assessed.

### **Data quality and how it is assessed**

3.6 The term 'data quality' refers to the validity or reliability of the statistics obtained from the census or from other statistical collections.

3.7 An important aspect of conducting censuses and surveys is to ensure that the quality of the data obtained is as high as possible because poor quality data can be misleading or unreliable. In the census, high quality data relies on the maximum number of people being counted and on householders providing accurate responses to the census questions.

3.8 Statistical information is often derived from surveys, which collect data from a sample of the population, rather than censuses which collect data from the population as a whole. However, the census can be the only source of reliable information for matters affecting only a small proportion of the population or where 'small area' data are needed for the country as a whole (for example, for each local government area).

3.9 Because the census covers the population as a whole (and therefore is not a sample survey) it avoids sampling errors.

3.10 Other errors may arise in the census. For example, a census collector may fail to find a dwelling or wrongly infer that it is unoccupied. A person may be counted more than once. Overseas visitors in Australia on census night may not be counted. A person may fail to answer all the questions on the forms or may deliberately provide false information about himself or herself or about others in the household.

3.11 The undercount rate and the rate of non-response to questions asked by the census can be measured.

3.12 Other aspects of data quality, such as the provision of false or inaccurate responses, are more difficult to assess. ABS tests the proposed questions before the census to ensure as far as possible that householders understand them and are willing to respond to them.<sup>1</sup> The data quality of aspects of the census is evaluated by ABS after the census and the results of these studies are made available to users of census data.

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1 Australian Bureau of Statistics, *Submissions*, p. S361.

## **Non-response to census questions**

3.13 If the non-response rate for a particular question is high, then the results for that question are likely to be less reliable than those for questions where non-response rates are low.

3.14 Many factors can affect question non-response, such as the way the question is asked and the perceived sensitivity of the question. It is possible that some sub-groups of the population will view some questions differently to other sub-groups of the population.<sup>2</sup>

3.15 Particular questions elicit higher non-response rates than others. For example, in the 1996 Census non-response rates for questions on religion<sup>3</sup> (8.73 %), number of babies ever born (6.3 %), income (6.21 %) and highest level qualification (10.86 %) were higher than many others<sup>4</sup>.

3.16 Missing information is imputed<sup>5</sup> in only a very limited number of circumstances, for example, where there is missing information relating to age, sex, marital status or State of usual residence.<sup>6</sup>

## **The undercount of the census**

3.17 Although the census aims to achieve maximum coverage of the population, some people will be missed and some will be counted more

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2 Rabbi John Levi, *Transcript*, p. 277.

3 Religion is the only optional question.

4 Australian Bureau of Statistics, *Fact Sheet 10.0 - Non-Response Rates: 1996 & 1991 Censuses*.

5 Derived from other information provided by the respondent.

6 Australian Bureau of Statistics, *1996 Census of Population and Housing: Nature and Content of the Census*, Catalogue no. 2008.0.

than once. ABS believes that usually more people are missed than overcounted.<sup>7</sup> The difference between the census count and the true population count is called the net undercount of the census.

3.18 The undercount rate is a key measure. It assists in estimating the resident population of Australia on census night. It also provides users with an important assessment of the completeness of the census counts.<sup>8</sup>

3.19 The undercount can bias census counts because the characteristics of people missed might be different from those of people counted. In Australia, as in other countries, rates of net undercount vary significantly for different population groups. They vary according to factors such as age, sex, ethnicity and geographic area.<sup>9</sup>

3.20 The 1996 Census missed 1.6 % of people who were present in Australia on census night. This represents a decline in the net undercount from 1.9 % in the 1981 Census to 1.6 % in 1996.<sup>10</sup>

3.21 The ABS compared the Australian undercount rate to the rates of Canada, New Zealand, USA and the UK. The following table sets out the results.

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7 Australian Bureau of Statistics, *1996 Census of Population and Housing: Data Quality – Undercount*, Catalogue no. 2940.0.

8 Accurate resident population estimates are required for demographic, social and economic studies as well as for the allocation of seats in the federal House of Representatives and general revenue grants to States and Territories.

9 Australian Bureau of Statistics, *1996 Census of Population and Housing: Data Quality – Undercount*, Catalogue no. 2940.0.

10 Australian Bureau of Statistics, *Submissions*, p. S776.

**Table 1 – Undercount rates in censuses of population and housing for Australia, New Zealand, Canada, United States of America and United Kingdom**

Country	Gross Undercount	Gross Overcount	Net Undercount
Australia	1.8 %	0.2 %	1.6 %
New Zealand	1.4 %	0.2 %	1.2 %
Canada <sup>(a)</sup>	3.4 %	0.5 %	2.9 %
USA <sup>(a)</sup>	4.7 %	3.1 %	1.6 %
UK <sup>(a)</sup>	Not available	Not available	2.2 %

(a) 1991 census figures only. Whilst Canada also conducted a census in 1996, it has not completed the census under-enumeration studies and Canadian figures for 1996 are not available.<sup>11</sup>

3.22 New Zealand had the lowest net undercount rate (1.2 %), followed by Australia (1.6 %) and the USA (1.6 %). The rates in Canada and the UK were 2.9 % and 2.2 % respectively.

3.23 In the case of the USA, the gross undercount and overcount rates were each high (4.7 % and 3.1 % respectively). ABS commented that:

In the case of the USA, it ... managed to achieve a low rate in the 1991 Census because of huge 'compensating' errors ... [W]hilst these errors compensated the personal counts, the errors did not compensate the characteristics eg most of the overcounts were white Americans whilst the undercounts were non-white Americans.<sup>12</sup>

3.24 In Canada the gross undercount and gross overcount rates were 3.4 % and 0.5 % respectively.

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11 Australian Bureau of Statistics, *Submissions*, p. S775.

12 Australian Bureau of Statistics, *Submissions*, p. S774.

3.25 In Australia, the gross undercount was 1.8 % and the gross overcount was 0.2 %. New Zealand also had low gross undercount and overcount rates, at 1.4 % and 0.2 % respectively.

### **Adverse effects on data quality of the census**

3.26 ABS considers that the retention of census forms could lead to a reduction in the data quality of the census. This view was shared by statistical bodies such as the Australian Statistics Advisory Council (ASAC) and the Statistics Society of Australia, and a number of Commonwealth and State agencies. Data quality would reduce if some people do not complete a census form or give accurate or comprehensive responses, because of fears that the information they give in the census will not be kept confidential, or for any other reason.

3.27 ABS has found that, in its experience, privacy and confidentiality are significant issues that need to be allayed in the conduct of each census.<sup>13</sup> This has been derived through feedback from survey interviewers and census collectors, letters to ministers, members of parliament, the media and ABS and through market research undertaken prior to each census since 1981.

3.28 The federal Office of the Privacy Commissioner and the Privacy Committee of NSW have also found that members of the public raised privacy and confidentiality concerns in relation to the last census.<sup>14</sup>

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13 Australian Bureau of Statistics, *Submissions*, p. S368.

14 Mr Nigel Waters, *Transcript*, p. 198 and Privacy Committee of NSW, *Submissions*, p. S615.

3.29 ABS stated that it has a ‘solid compact’ with its respondents; response rates are very high and respondents provide accurate data, and in turn the confidentiality of the data is completely protected.<sup>15</sup> Mr Bill McLennan, the Australian Statistician, told the Committee that “giving absolute guarantees of privacy and confidentiality of census data to the public is considered by the ABS to be the most effective way to allay ... privacy concerns”.<sup>16</sup>

3.30 A number of government agencies with experience in collecting information from the community advised the Committee that assurances of privacy and confidentiality are important to ensure high levels of response.<sup>17</sup>

3.31 The NSW Registry of Births, Deaths and Marriages is concerned that general opening of its register would cause data distortion as informants may ‘fabricate personal information to avoid disclosing details or simply not include them at all’.<sup>18</sup> Nevertheless, the Registry also believes that:

The privacy sensitivity of personal information decreases over time. For this reason all Australian Registries of Births, Deaths and Marriages restrict access to full registration information for the equivalent of the lifetime of the data subject, (marriages @ 50 years, births 75 – 100 years).<sup>19</sup>

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15 Australian Bureau of Statistics, *Submissions*, p. S345.

16 Mr McLennan, *Transcript*, pp. 4–5.

17 For example, the Department of Employment, Education, Training and Youth Affairs, the NSW Registry of Births, Deaths and Marriages and the NSW Department of Training and Education Coordination.

18 NSW Registry of Births, Deaths and Marriages, *Submissions*, p. S721.

19 NSW Registry of Births, Deaths and Marriages, *Submissions*, p. S727.



3.32 ABS considers that there would be significant public opposition to the retention of census forms on privacy grounds. This view was underpinned by market research commissioned by ABS and conducted by AGB McNair<sup>20</sup> shortly after the 1996 Census to test public attitudes towards retention.<sup>21</sup> ABS argued that:

These findings are consistent with the qualitative evidence obtained from ABS consultations with the community about the census, feedback from census collectors and other empirical indicators of community attitudes to privacy and confidentiality, such as the increasing proportion of people and households opting to use privacy envelopes.<sup>22</sup>

3.33 ABS concluded that if census forms were retained it could expect a significant reduction in the level of public cooperation with the census, in terms of the levels of response in the census and the quality of data provided.<sup>23</sup>

3.34 Mr McLennan said that non-response rates of the order of ten per cent or more are possible and they could be even higher if civil liberty and privacy groups mount a substantial campaign at census time.<sup>24</sup> In addition, response rates, and hence data quality, could be worse for some groups in the community than others. The level of non-response and the accuracy of answers provided could vary according to

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20 Now ACNielsen•McNair.

21 Australian Bureau of Statistics, *Submissions*, p. S343.

22 Australian Bureau of Statistics, *Submissions*, p. S344.

23 Australian Bureau of Statistics, *Submissions*, p. S342.

24 Mr McLennan, *Transcript*, p. 5.

geographic location, age, ethnic background, marital status and level of education.<sup>25</sup>

3.35 ABS stated that privacy concerns in some overseas countries had adversely affected some censuses. Privacy concerns in the United Kingdom affected both the 1971 and 1991 censuses. Response rates to the 1991 census were so poor that the results are not used as the basis for estimates of the population. The 1981 census is still relied on.<sup>26</sup> In 1971, a public campaign on privacy grounds led to the destruction of that year's census forms in the Netherlands and traditional censuses in the Netherlands are no longer conducted.<sup>27</sup> In West Germany, a substantial campaign of opposition to the 1983 census led to its cancellation because of public concerns about protection of privacy. Following this West Germany made the destruction of census forms mandatory.<sup>28</sup>

3.36 ABS considers that although the *Census and Statistics Act 1905* provides for the compulsory completion of census forms and provision of accurate information, these powers are unlikely to be sufficient to ensure an effective census in the face of widespread public opposition.<sup>29</sup>

3.37 ABS believes that it is unlikely that a public relations campaign explaining the benefits of form retention could completely assuage privacy concerns. It considers that the view that a public relations

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25 Australian Bureau of Statistics, *Submissions*, p. S360.

26 Australian Bureau of Statistics, *Submissions*, p. S387.

27 Australian Bureau of Statistics, *Submissions*, p. S391.

28 Australian Bureau of Statistics, *Submissions*, pp. S391–S392.

29 Australian Bureau of Statistics, *Submissions*, p. S360.

campaign would be effective in this manner 'has very much over-rated the likely effectiveness of such campaigns'.<sup>30</sup>

3.38 The question of retention of census records has been considered by the ASAC on seven occasions since its inception. The role of the ASAC is to advise the Minister and the Australian Statistician on the statistical services provided for public purposes in Australia and on the priorities and work programs of ABS. ASAC comprises up to 22 members from universities and other academic institutions, State and Territory governments, business and community groups. The membership over that period has been unanimous in its support for destruction of census forms on each occasion.<sup>31</sup>

3.39 ASAC's chairman, Mr John Macleod, told the Committee that ABS is 'always ranked in the first two statistical agencies in the world'. He said that a reduction in quality of data from the census and other ABS collections would jeopardise the internationally high standing of Australia's statistics.<sup>32</sup>

3.40 Professor Des Nicholls, president of the Statistical Society of Australia and Dean of the Faculty of Economics and Commerce at the Australian National University, told the Committee that the Society did not want to see the quality of census data compromised because of its importance to the community.<sup>33</sup>

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30 Australian Bureau of Statistics, *Submissions*, p. S876.

31 Australian Statistics Advisory Council, *Submissions*, p. S482.

32 Mr John Macleod, *Transcript*, p. 317.

33 Professor Nicholls, *Transcript*, p. 448.

3.41 In his experience as a consultant to private enterprise, from the university over a period of 15 years, Professor Nicholls found that non-response rates increase where name and address are included:

As soon as people can be identified with their responses, there is an element of caution and non-response rates and the quality of the data deteriorates.<sup>34</sup>

3.42 Professor Nicholls believes that poor quality census data cannot be adjusted using statistical techniques or adjustment methods:

You still have to have information to tell you which way to make the adjustments ... Somehow or other you have to chase up the data or try to track the data to find which way to adjust the data; do you adjust it up; do you adjust it down, and by how much?<sup>35</sup>

3.43 He said that sample surveys cannot effectively be used to adjust census data because one would “still have to go back and ask those questions that are causing the problems, and once more your response rates or the information given may not be appropriate”.<sup>36</sup>

### **Population characteristics and small area data**

3.44 ABS stated that lower response rates would mean less accurate data would be available on the social and demographic characteristics of the population.<sup>37</sup>

3.45 Data for small population groups and small geographic areas (such as regional estimates) would also be adversely affected if non-

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34 Professor Nicholls, *Transcript*, p. 449.

35 Professor Nicholls, *Transcript*, p. 450.

36 Professor Nicholls, *Transcript*, p. 450.

37 Australian Bureau of Statistics, *Submissions*, p. S361.

response rates rise. Different levels of non-response among States and Territories, between small geographic groups or between small population groups (whether that be migrant groups, low income groups, Indigenous people, people in specific occupations etc) would mean that statistics at lower levels would be less reliable.<sup>38</sup>

### **Population estimates**

3.46 One of the primary purposes of the census is to count accurately the number of people in Australia on census night to provide a reliable basis to estimate the resident population of each State and Territory. The accuracy of the population estimates relies in large measure on the accuracy of the census counts.

3.47 ABS advised that if retention of census forms led to poor quality population counts from the census, the accuracy of the State and Territory population estimates would certainly be reduced, perhaps significantly.<sup>39</sup> ABS would need to put greater reliance on the post-enumeration survey (conducted after the census to measure the undercount) to adjust for the undercount and on other less accurate methods of population estimation. ABS is of the view that these alternatives probably would not be up to the task.<sup>40</sup> Differing levels of response between States and Territories, or between various small geographic areas, would make the adjustment process more difficult.

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38 Australian Bureau of Statistics, *Submissions*, p. S361.

39 Australian Bureau of Statistics, *Submissions*, p. S345.

40 Australian Bureau of Statistics, *Submissions*, p. S361.

This would mean that the accuracy of population estimates would vary across States and Territories and across other geographic regions.<sup>41</sup>

3.48 ABS stated that the lower level of cooperation in both the 1991 UK census and its post-enumeration survey – thought to have been affected by the introduction of a poll tax – led to the 1991 census count not being of sufficient quality to be used in the re-basing of the population estimates. The UK still relies on the 1981 census as the base for its population estimates, moving them forward over what will be a 20 year period before the next census results are available.<sup>42</sup>

### **Electoral representations**

3.49 Population estimates provided by ABS are used for the purpose of determining representation entitlements in the federal parliament under the *Commonwealth Electoral Act 1918*. The Australian Statistician is one of the three members of the Australian Electoral Commission (AEC).<sup>43</sup>

3.50 The AEC stated that the accuracy of the statistical information provided to it by ABS is fundamental to the process of ensuring that the federal parliament is constituted in a manner that meets the requirements of section 24 of the Australian Constitution.<sup>44</sup>

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41 Australian Bureau of Statistics, *Submissions*, p. S361.

42 Australian Bureau of Statistics, *Submissions*, p. S361.

43 The other two members of the Australian Electoral Commission are the Chairperson, Mr Trevor Morling QC, and the Electoral Commissioner, Mr Bill Gray AM.

44 Australian Electoral Commission, *Submissions*, p. S118.

3.51 Section 46 of the Commonwealth Electoral Act requires the Electoral Commissioner periodically to ascertain the numbers of the people of the Commonwealth and the States and Territories in accordance with the latest statistics of the Commonwealth.<sup>45</sup>

3.52 Section 47 of the Commonwealth Electoral Act provides that, on request by the Electoral Commissioner, the Australian Statistician shall supply the Electoral Commissioner with all such statistical information as is required for the purposes of determining representation entitlements. Section 48 of the Act then provides the mechanism by which that determination is made. The provisions of the Act make a determination by the Electoral Commissioner final and conclusive, and also free from judicial review. However, those provisions are expressly 'subject to the Constitution'.<sup>46</sup>

3.53 Although the Commonwealth Electoral Act requires the Electoral Commissioner formally to ascertain the numbers of the people of the Commonwealth and of the several States, in doing so the Electoral Commissioner invariably relies on the statistical information provided by the Australian Statistician.<sup>47</sup>

3.54 The AEC described the calculation of state representation entitlements as mechanical in nature. The statistics provided by the

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45 Australian Electoral Commission, *Submissions*, p. S118.

46 Australian Electoral Commission, *Submissions*, p. S118.

47 Australian Electoral Commission, *Submissions*, p. S118.

Australian Statistician in effect determine the representation entitlements of the States.<sup>48</sup>

3.55 The AEC said that the High Court decision in *(Attorney-General) (Cth) (Ex rel McKinlay) v The Commonwealth* (1975) 7 ALR 59 held that the Australian Constitution required that the population of the various States needed to be ascertained during the life of each ordinary parliament, and in time to permit elections to be held, for the purpose of determining the number of members from each State in the House of Representatives. This has now been effected in the provisions of the Commonwealth Electoral Act.<sup>49</sup>

3.56 Immediately following the High Court decision, the Commonwealth Law Officers, the then Attorney-General, Hon Bob Ellicott QC MP, and the then Solicitor-General, Mr Maurice Byers QC, advised that:

it necessarily follows that the State's respective populations be reliably determined. For this some method of counting the population such as a periodical census is essential.<sup>50</sup>

3.57 They further advised that:

We do not think a triennial population census geared to ordinary general elections is required by the decision...If, as at present, quinquennial counts alone are taken, the decision requires that statistical estimates of the populations of the States are taken during the life of each ordinary or triennial Parliament and reasonably close to its determination ...<sup>51</sup>

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48 Australian Electoral Commission, *Submissions*, p. S118.

49 Australian Electoral Commission, *Submissions*, p. S119.

50 Australian Electoral Commission, *Submissions*, p. S119.

51 Australian Electoral Commission, *Submissions*, p. S119.



3.58 This opinion led to the provisions in the Census and Statistics Act which require five-yearly censuses and quarterly population estimates.<sup>52</sup>

3.59 The AEC stated that a reduction in accuracy of the population estimates could have the ultimate effect of inviting constitutional litigation on the accuracy and appropriateness of the information provided to the Electoral Commissioner by the Australian Statistician.<sup>53</sup> Such constitutional litigation could throw into doubt, at least for a time, the validity of a determination of representation entitlements, and could also constrain the calling of an election where the litigation was before a court, since it might be unclear ‘whether or not a “mini-redistribution” ... would or would not be required in respect of a State or Territory where the representation entitlement had been changed by the determination.’<sup>54</sup>

3.60 The Australian Joint Roll Council (AJRC), is the consultative council of Electoral Commissioners and Chief Electoral Officers from the electoral authorities of the Commonwealth, States and Territories of Australia. It advised that the redistribution process demands that highly accurate population statistics and estimates be available to determine

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52 Australian Electoral Commission, *Submissions*, p. S119.

53 Australian Electoral Commission, *Submissions*, p. S120.

54 Australian Electoral Commission, *Submissions*, p. S120.

representation entitlements.<sup>55</sup> The occurrence of a redistribution of electoral boundaries is frequent.<sup>56</sup>

3.61 Mr David Farrell, Chair of the AJRC, told the Committee that reduced quality census data would also provide a less accurate benchmark for the electoral roll. He said that:

The task of having an electoral roll which matches the census estimates of the population of 18 year-olds who are Australian citizens or British subjects at 1984 is a task which we have not quite achieved. Having an accurate census figure with full compliance certainly gives us a goal to aim for.<sup>57</sup>

3.62 Mr Farrell said further that there is a disincentive to people enrolling on the electoral roll (which is compulsory) by virtue of the electoral roll being a document open for inspection and use for mailing and so on, by other bodies and agencies. Mr Farrell told the Committee that the AJRC feared that if name-identified census forms were not destroyed, it could be a similar disincentive to compliance with the census.<sup>58</sup>

3.63 Mr Michael Maley of the Australian Electoral Commission said that evidence within the AEC over a period of years indicated that there is a degree of resistance to the enrolment process associated with

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55 Australian Joint Roll Council, *Submissions*, p. S267.

56 Requirements for a redistribution vary between AJRC authorities and include: after every general election, when equal representation no longer applies and when quota requirements no longer apply.

57 Mr David Farrell, *Transcript*, p. 420.

58 Mr David Farrell, *Transcript*, p. 420.

people being concerned about privacy and not wanting to be part of the system.<sup>59</sup>

3.64 A recent study by the AEC showed a rate of compliance with enrolment of 92.8 %. He stated that AEC surveys showed a significant variation in the degree of proclaimed enrolments from State to State.<sup>60</sup>

### **Commonwealth Grants**

3.65 The Commonwealth Grants Commission is an extensive user of information derived from the census, including information for small areas and sub-groups of the population. The Commission is responsible for advising the Government on the distribution among the States and Territories of the annual general revenue and hospital funding grants made available by the Commonwealth. In 1997–98, these grants are estimated to total in excess of \$20 billion and account for an average of 35 per cent of the States' and Territories' recurrent funds.<sup>61</sup>

3.66 The Commission was concerned that any reduction in the accuracy of census information could have significant effects on the budgets of the States and Territories.<sup>62</sup> This concern was also expressed by the Queensland and South Australian Premiers and the ACT Chief Minister.

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59 Mr Michael Maley, Australian Electoral Commission, *Transcript*, p. 515.

60 Mr Michael Maley, Australian Electoral Commission, *Transcript*, p. 513.

61 Commonwealth Grants Commission, *Submissions*, p. S332.

62 Commonwealth Grants Commission, *Submissions*, p. S332.

3.67 Should the distribution of grants be made on an equal per capita basis instead of in accordance with the Commission's relativities (which depend very heavily on census data), almost \$1.5 billion would have been distributed differently in 1996–97.<sup>63</sup>

3.68 The Commission stated that if its relativities were calculated without making allowances for the interstate differences in the size of population groups for which state services are provided and in the age-sex and socio-economic composition of state populations, some \$749 million would have been distributed differently in 1996–97.<sup>64</sup>

### **Other uses of census data**

3.69 Many government agencies stated their need for high quality census data.<sup>65</sup>

3.70 The Department of the Treasury is a heavy user of census data for policy purposes.<sup>66</sup> A reduction in the quality of census data and sample survey data used by the Treasury could increase the difficulty of modelling and developing retirement income policies, assessing economic conditions and processes, and economic forecasting.

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63 Commonwealth Grants Commission, *Submissions*, p. S333.

64 Commonwealth Grants Commission, *Submissions*, p. S333.

65 For example, the Department of the Treasury, the Department of Social Security, the Department of Employment, Education, Training and Youth Affairs, the Australian Institute of Health and Welfare, the NSW Cabinet Office, the NSW Treasury, the NSW Department of Health, the NSW Department of Training and Education Coordination, the NSW Department of Urban Affairs and Planning, the WA Ministry for Planning, the Vic Department of the Premier and Cabinet and the NT Department of Housing and Local Government.

66 The Department of the Treasury, *Submissions*, p. S575.

3.71 The Treasury provided examples of the use of census related data in the areas for which the Treasury has prime responsibility. The information used includes both census data and data from ABS household surveys which use census data for construction of samples and for benchmarking.

3.72 The census is a primary source of data for the distributional analysis undertaken in relation to retirement incomes.<sup>67</sup> Models have been developed to project the comparative adequacy, equity, costs and benefits of alternative retirement income policies. The models' projections of superannuation are used by many private sector analysts. These projections depends on detailed statistical information from ABS household surveys. In this analysis, the most important applications of the census are the updating of the household survey sampling framework and the provision of information on persons in non-private dwellings.<sup>68</sup>

3.73 The Treasury uses ABS household survey data in its analysis of the impact of tax policy alternatives on households.<sup>69</sup>

3.74 The Treasury argued that it relies heavily on the accuracy of ABS statistics in formulating its advice on macro-economic conditions and the conduct of macro-economic policy.<sup>70</sup> While the use of census data for macro-economic analysis is generally indirect, many data

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67 The Department of the Treasury, *Submissions*, p. S570.

68 The Department of the Treasury, *Submissions*, pp. S570–S571.

69 The Department of the Treasury, *Submissions*, p. S571.

70 The Department of the Treasury, *Submissions*, p. S572.

sources important to the Treasury in the areas of economic activity, labour market and inflation are linked to the census.

3.75 For example, the quarterly National Accounts (which provide key information about current economic conditions) depend on census data for benchmarking as does the Labour Force Survey which provides information on levels of unemployment and employment and other aspects of the labour market. The Consumer Price Index, which is a measure of price change in the economy and is used to adjust a range of Commonwealth payments, is re-weighted every five years to ensure that it continues to reflect household spending patterns and hence remains an accurate measure of price change. Consumer Price Index weights are based on the ABS Household Expenditure Survey.<sup>71</sup>

3.76 Census data provides the Department of Employment, Education, Training and Youth Affairs (DEETYA) with a strong information base, not otherwise available, about small populations. DEETYA stated it uses a large number of items in analysing census data including geographical regions, labour force status, occupation, industry, age, gender, English proficiency, birthplace, educational attainment, field of study, income, journey to work and Aboriginal and Torres Strait Islander characteristics.

3.77 DEETYA is concerned that the quality of census data may decline, particularly if a reduced response was to be magnified amongst those population groups which are the focus of DEETYA's analyses. It argued that any deleterious impact on sensitive data items and those items which respondents find difficult to report (employment details,

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71 The Department of the Treasury, *Submissions*, pp. S572–S573.

occupation, industry, income, qualifications, hours worked etc) would be regarded as serious.<sup>72</sup>

3.78 The Department of Social Security (DSS) is a major user of information from the census.<sup>73</sup> Census data are valuable to DSS in advising government on social policy issues. DSS uses census information to examine issues such as home ownership and housing access, levels of household income for various household types, and the labour market experiences of particular client groups. Often information is required on the characteristics of relatively small groups such as Aboriginal and Torres Strait Islander people, or recently arrived migrants.

3.79 DSS stated that information on personal, family and household income is very important to it. This question in the census has one of the highest rates of non-response.<sup>74</sup> DSS expects that any adverse public reaction to the retention of census forms is likely to be particularly evident in the willingness to provide accurate income information.<sup>75</sup>

3.80 The Australian Institute of Health and Welfare (AIHW) uses results from the census in its work and its primary concern is maintaining a high quality, reliable population census.<sup>76</sup> AIHW uses aggregate census data in epidemiological studies. The census provides the 'at risk'

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72 Department of Employment, Education, Training and Youth Affairs, *Submissions*, p. S84.

73 Department of Social Security, *Submissions*, p. S602.

74 The non-response rate in the 1996 Census was 6.21 %.

75 Department of Social Security, *Submissions*, p. S602.

76 Australian Institute of Health and Welfare, *Submissions*, p. S705.

population (the population at risk of the event or condition being studied), whether it is by age, sex or country of birth.

### **Adverse effect on the data quality of other ABS collections**

3.81 ABS referred to the adverse effects on the data quality of its other collections if census forms are retained.<sup>77</sup>

3.82 Firstly, a change in policy on census form retention could undermine confidence in the community, or in parts of the community, about the resolve of ABS to protect the confidentiality of other information that it collects.<sup>78</sup> Respondents may not believe that information from these other collections will be kept completely confidential if personal information from the census is to be retained and released at some future date. This could lead to a rise in non-response rates in these other collections or to a decline in the accuracy with which respondents answer the questions.

3.83 Secondly, a reduction in data quality of the census would affect the sample selection of other collections and the benchmarking of other collections from census data.

3.84 Census data are used for construction of samples (sample selection) in other collections such as ABS household surveys. Information from the census is used for 'benchmarking' surveys conducted on sample populations. This involves the comparison of results of the survey sample with independent estimates of the whole

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77 Australian Bureau of Statistics, *Submissions*, pp. S366–S367.

78 Australian Bureau of Statistics, *Submissions*, p. S344.



population based on the census (adjusted for births, deaths and migration between the time of the census and the survey). Such comparisons help to ensure the reliability and comparability of the sample surveys.

### **No adverse effect on, or some improvement in, data quality**

3.85 Some genealogical and academic researchers argued that many people do not know that their census forms are not currently kept and that therefore a change in policy would not be likely to affect response rates.

3.86 For example, Dr Kenneth Knight, President of the Society of Australian Genealogists, told the Committee that his Society had formed that opinion from discussions with family historians. He believed that the destruction of census forms is not a strong factor in ensuring the accuracy of responses to the questions asked in the census.<sup>79</sup> Professor Graham Johnston, member, Australian and New Zealand Association for the Advancement of Science, New South Wales Division, also told the Committee that he believed that not many people understand that currently the census forms are destroyed.<sup>80</sup>

3.87 Some genealogical and academic researchers also suggested that some people would be more likely to complete a census form or to provide accurate information if they knew census forms were to be retained, especially if this were well publicised at census time. For example, Professor Donald DeBats, Professor of American Studies,

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79 Exhibit 41, letter of 23 November 1997.

80 Professor Graham Johnston, *Transcript*, p. 269.

Professor of Politics and Head of American Studies, Flinders University of South Australia, suggested that:

you could even find that [response rates] went up – that people would say, ‘Here’s something for my children.’ Here is a record on a not insignificant Australian census – and a chance to be part of it.<sup>81</sup>

3.88 The Australian Federation of Family History Organisations believes:

there could well be an ‘improved response’ from many census participants because they can see some LONG TERM POINT to the census.<sup>82</sup>

3.89 Market research undertaken by ABS suggested such an effect may be possible in some cases. A survey conducted by AGB McNair for the 1996 Census found that 14 per cent of people aware of the census said they would be more likely to fill in a census form if forms were to be retained.<sup>83</sup>

3.90 Some researchers suggested to the Committee that many people in Australia would continue to complete a census form accurately regardless of whether census forms were retained because they are law abiding citizens. It was also suggested that the compulsory nature of the census may be sufficient grounds to convince the public generally to cooperate. For example, Dr Gordon Carmichael, Demography Program, Australian National University, argued that ‘the requirement at law to

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81 Professor Donald DeBats, *Transcript*, p. 114.

82 Australasian Federation of Family History Organisations, *Submissions*, p. S626.

83 Exhibit 1, AGB McNair, Report on Attitudes to Retention of Census Forms, p. 15.

cooperate with the census should continue to contain non-response assuming maintenance of the current capacity to locate respondents.<sup>84</sup>

3.91 Mr Martyn Killion, professional archivist and past President of the Australasian Federation of Family History Organisations, argued that many members of the public would largely be indifferent to the retention of census material and that the data quality of the census would therefore not be affected. He suggested that this indifference was due to the large amount of material which it is generally known is retained on individual citizens, such as taxation and medical services records. The census records would simply be 'another record retained by government'.<sup>85</sup>

3.92 A number of researchers argued that any possible public concerns about the retention of census forms could be managed by an appropriate media campaign at the time of the next census explaining the benefits of the records for research. Mr David Weatherill, member of the Genealogical Society of Victoria, expressed a view shared by many people who gave evidence when he said that:

if what is being saved, and why, is spelt out up-front, you may have better acceptance of it, rather than trying to bury it and having innuendo and rumour floating around as to what is being kept. I get the feeling that if you are up-front with what is being done, you will always have your sceptics and those people with concerns but you may find that the greater population would accept it if they understood the reasons and the structure in place for its maintenance and its release.<sup>86</sup>

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84 Dr Gordon Carmichael, *Submissions*, p. S658.

85 Mr Martyn Killion, *Submissions*, p. S413A.

86 Mr David Weatherill, *Transcript*, p. 308.

## **Verifying concerns that data quality will reduce**

3.93 A number of agencies including ABS, ASAC, the Statistics Society of Australia and Commonwealth and State departments have all argued that a change in policy could lead to a reduction in data quality.

3.94 In response to this view, a number of genealogical and academic researchers argued that they believed that fears of potential risks to data quality had been overstated and that little, if any, empirical evidence supported this contention.<sup>87</sup>

3.95 The Committee is concerned that the contention that data quality of the census and of other ABS collections would decline if census forms were to be retained, should be verified in an empirical and objective way before it could be used to support any judgements on this issue.

3.96 The Committee asked a number of statistical experts at what level of inaccuracy the information that is collected might become so much less useful that it might create a problem. The Committee found that there was no definitive or simple answer to this question. The general view was that the effect of any reduction in data quality would depend on the uses which were made of the information.<sup>88</sup>

3.97 The Committee found no precedents, in the experiences of any other country to support a policy of destruction of census forms over a policy of retention of census forms.

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87 For example, Professor Johnston, *Transcript*, p. 289 and Dr Kenneth Knight, Exhibit 41, letter of 23 November 1997.

88 For example, Professor Nicholls, *Transcript*, p. 451.

3.98 The Committee notes that ABS presented a very strongly worded case for continuing the practice of destruction of census forms. In its case, ABS referred to qualitative evidence that the public will not support the retention of census forms, including consultations with the community about the census, feedback from census collectors, empirical indicators of community attitudes towards privacy and confidentiality and its own experience in running other surveys.

3.99 ABS also presented evidence from attitudinal surveys conducted on its behalf prior to each census since 1981.<sup>89</sup> ABS relied heavily on a survey conducted shortly after the 1996 Census by AGB McNair.<sup>90</sup> This company was commissioned by ABS to conduct research into aspects of the census including community attitudes to the retention of census forms.<sup>91</sup>

3.100 A number of people criticised the methodology of this survey. Dr Kenneth Knight, President of the Society of Australian Genealogists, encapsulated the views of many people who spoke to the Committee when he commented that:

one can say that no attempt was made ... to outline the importance of the Census for research purposes or to canvass arguments that might be advanced in favour of retention with appropriate safeguards to ensure confidentiality in the period before eventual release ... for public use. The tone of the questionnaire was set by the initial loaded questions and assertions; there was stress throughout on the likelihood that it

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89 Australian Bureau of Statistics, *Submissions*, p. S368.

90 Now ACNielsen•McNair.

91 Immediately after the 1996 Census, telephone interviews were conducted with 2,011 persons aged 18 years or over. Results from this survey indicated that retention of census forms with name and addresses was likely to have a major negative impact on the accuracy of census data.

would not be possible to ensure protection of privacy; and there was a building up of the widespread fear of the invasiveness of computers and resentment of the breaking of promises by governments. The nature of the questions is such as to cast doubt on their neutrality and it is easy to see how questions could have been re-cast to achieve quite different responses.<sup>92</sup>

3.101 Following discussions with the Committee on 2 September 1997, Mr Bob White of AGB McNair conducted a second survey during September 1997. The company had redesigned the questionnaire with the stated aim of removing any perceived bias. ACNielsen•McNair reported that the second survey confirmed the results of the first survey. It concluded that the vast majority of people supported the destruction of census forms and that retention of census forms is likely to lead to a backlash from the community.<sup>93</sup>

3.102 Professor Sless, Research Director at the Communications Research Institute of Australia, told the Committee that attitudinal research generally is an imprecise science. He said that:

I should say at the outset that, within the limits of what is possible in professional market research, the...survey is a proper and professionally conducted survey within those limits. However, I think it is important to understand that there are inherent weaknesses in that type of work.<sup>94</sup>

3.103 Professor Sless said that tests of its validity, reliability and sensitivity should be applied to any kind of survey. He considered that these had not been adequately applied in the first and second surveys conducted by AGB McNair but noted that there are “some deeper underlying problems and they have really to do with notions of attitude

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92 Exhibit 41, letter of 23 November 1997.

93 ACNielsen•McNair, *Submissions*, p. S784.

94 Professor David Sless, *Transcript*, p. 465.

and attitude measurement”.<sup>95</sup> Professor Sless said that using evidence from this kind of survey to arrive at decisions is a risky business: “we do not know of any method that reliably, sensitively or validly measures attitudes”.<sup>96</sup>

### Committee observations

3.104 The Committee was concerned about the evidence provided by some government agencies. Many government agencies (both Commonwealth and State departments) advised the Committee about the risks to their program delivery if data quality of the census or of other collections should decline. **However, many of these agencies also said that they had been persuaded by the evidence available to them that data quality would decline if census forms were to be retained.**

3.105 **The Committee formed the impression that the submissions from these agencies were drafted principally at the impetus of a letter sent to them by ABS highlighting its fears that data quality of the census would decline.**<sup>97</sup> The Committee noted that many of the submissions used expressions like those contained in the ABS letter. While a similar practice was apparent to a greater extent amongst genealogical associations, the Committee was concerned that what it regards as virtually solicitation and collusion should occur amongst government agencies.

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95 Professor David Sless, *Transcript*, p. 466.

96 Professor David Sless, *Transcript*, p. 467.

97 Exhibit 34, letter from Dr Gordon Carmichael, 1 October 1997.

3.106 **The Committee was also concerned that DEETYA did not initially declare that it had used the services of an outposted ABS officer to prepare its submission.<sup>98</sup> The Committee considered that the submission had been influenced by the views of ABS. In responding to these concerns, DEETYA stated that the views expressed in its submission were its own.<sup>99</sup> Nonetheless, the Committee questions the independence of DEETYA's expressed views.**

3.107 The Committee also had some concerns about the independence of the ASAC from ABS. The Committee observed that ASAC is based in the same offices as ABS and that its secretariat is drawn from officers of ABS. ASAC's chairman, Mr John Macleod, advised the Committee that ASAC is quite independent.<sup>100</sup> Nonetheless, the Committee holds reservations about its impartiality.

3.108 The Committee's final conclusions are discussed in Chapter 7 of this report.

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98 ABS officers are permanently located in this and some other government departments to assist them with their data requirements.

99 Department of Employment, Education, Training and Youth Affairs, *Submissions*, p. S846.

100 Mr John Macleod, *Transcript*, p. 322.