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The Australian Internet Usage Survey: Method

2020

Introduction

The Australian Internet Usage Survey (AIUS) uses a sequential mixed-mode design. An online self-completion survey is offered first, with a hard copy option initiated during a second phase of data collection. The AIUS uses an address-based sampling (A-BS) approach, with mail as the primary mode of conduct to ensure the survey sample includes both internet users and non-users.

Survey distribution and data collection for the AIUS is managed by the Social Research Centre in partnership with Valiant Press (for hardcopy questionnaire forms design, printing, and distribution) and Datatime Services (for hardcopy questionnaire scanning and data processing).

The AIUS is conducted under ethical approval provided by the Human Research Ethics Committee of Swinburne University (20203023-4585). All data collection activities are undertaken in accordance with the *Privacy Act 1988* (Cth) and the Australian Privacy Principles contained therein, the *Privacy (Market and Social Research) Code 2014*, the Research Society's Code of Professional Behaviour and ISO 20252 standards.

Sampling approach

The AIUS uses an address-based sampling (A-BS) approach that selects addresses from a comprehensive listing of virtually all addresses. The A-BS differs from other commonly used sample designs in Australian household surveys such as block-listing for face-to-face surveys, which involves having trained staff visit selected locations ahead of face-to-face interviewing to map and list all addresses. The Australian Bureau of Statistics (ABS) has switched its household surveys to A-BS from the former block-listing approach. Although A-BS is used only in Australia by the ABS and SRC, it is a well-accepted sampling approach more widely used overseas (Harter et al. 2016).

The AIUS sample is selected from a sample frame called the Geocoded National Address File (G-NAF), and uses a stratified sample design in accordance with the distribution of the Australian residential population.

G-NAF sample frame

The G-NAF sample frame is maintained by Geoscape Australia. Formerly known as the Public Sector Mapping Authority, Geoscape Australia is jointly owned by the Commonwealth, State and Territory Governments, and provides the authoritative national address index for Australia.

The G-NAF is comprised of existing addresses from three recognised sources: State and Territory Government land records, the Australian Electoral Commission's Electoral Roll data, and validated addresses from Australia Post.



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Sample design and selection

The AIUS uses a stratified sample designed in accordance with the distribution of the Australian residential population. Fifteen geographic strata (based on state or territory and capital city/rest of state) were established, with quotas set for each strata in proportion to the population. Addresses within each strata were then randomly selected. The final number of selections for each strata was also varied to account for the anticipated sample yield. This design aimed to yield a sample that closely approximates the distribution of the Australian population across states and territories and capital cities and other areas.

Addresses selected from the G-NAF are checked against Australia Post's Postal Address File (PAF) to confirm deliverability and address type. Addresses lacking a delivery point identifier (DPID) or flagged as non-residential in the PAF are excluded from the sample.

In-scope sample

Households selected from the G-NAF are considered in-scope for the AIUS if it contains one or more Australian adults aged 18 years or over. To maximise survey responses, any responsible adult within the household is eligible to complete the AIUS. This approach contrasts with those that apply a within-household selection procedure. We choose not to do this with the AIUS as prior research suggests that the use of within-household selection have been found to add a layer of complexity that increase non-response (Battaglia et al., 2008).

Data collection

The AIUS uses a sequential mixed-mode (online and hardcopy) approach to data collection. We incorporate a push-to-web approach (i.e. not offering hard copy completion to begin with) as this has been shown to increase online response (Dillman, 2017; Holmberg, Lorenc and Werner, 2010; McMaster et al., 2017; Messer and Dillman, 2011; Millar and Dillman, 2011; Smyth et al., 2010; Tourangeau, 2017). In addition, offering respondents choice in terms of mode (either online or hard copy) has been shown to reduce overall response rates (Medway and Fulton, 2012).

Data collection for the AIUS is undertaken during the following periods:

YEAR	DATA COLLECTION COMMENCES	DATA COLLECTION ENDS
2020	September	November
2021	April	June
2022	April	June
2023	April	June

Push-to-web

Addresses within the sample are first mailed an information pack that invites a household resident to complete the AIUS online. Two weeks later, a postcard is sent out which again invites the recipient to complete the AIUS online.



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The invitation pack provides information on the AIUS and encourages online survey completion. It includes an invitation letter and a brochure that details the study, provides information on how to complete the survey online, and relevant contact details.

The postcard reminds recipients of the AIUS and encourages them to go online to complete it. Addresses are excluded from this stage if have already completed the survey, opted out, or if the initial mailing results in a 'return to sender'.

Hard copy completion

Two weeks after the postcard is sent out, non-respondents (including those yet to complete or opt out of the survey) are sent a hard copy of the AIUS. The questionnaire booklet is accompanied by a cover letter providing information about the survey, and a reply-paid envelope.

No further reminder activities are employed once the hard copy booklets are mailed. However, the online mode of completion remains available for recipients, should they choose to take advantage of this.

The approach and reminder schedule are detailed below.

Days since data collection commenced	Approach and reminder schedule
0	Invitation letter mailed out (including tri-fold information brochure)
+14	Reminder postcard mailed out
+28	Hard copy survey booklet mailed out
+58	Data collection closes

Additional response maximisation techniques

The AIUS uses several additional response maximisation techniques. All contact with potential respondents include information and support to alleviate any concerns about the survey and surrounding research. Respondents are encouraged to review further information available via the website, or in the brochure provided as part of the invitation package, which includes the contact details for the research team, as well as those for the Swinburne Human Research Ethics Committee, should recipients have any concerns they do not wish to discuss with the researchers. In addition, the Social Research Centre operates a 1800 helpdesk phone line, and provides a project-specific email address to respond to individual queries or concerns.

The AIUS also offers an AUD\$10 contingent incentive in the form of a gift card in return for survey completion. For respondents who complete the AIUS online, gift cards are sent in batches via email at regular intervals following survey completion. Online respondents who do not provide an email address, and those who complete the survey via hard copy are mailed incentives upon the completion of data collection.



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