**A New Contact Strategy: Targeted Advertising for Address-Based Survey Samples**

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# Introduction

Surveys are in peril as response rates continue to dwindle. Fortunately, a rise in digital technology use provides new ways to contact survey respondents. For example, advertisers increasingly serve individual consumers hyper-targeted digital advertisements by matching postal addresses and other geographic information to digital profiles such as Facebook and mobile device identifiers. This process is akin to how address-based surveys match phone numbers to sample addresses.

This paper discusses how the Census Bureau has used digital advertisements to promote census and survey participation as well as promote general awareness of data collections. It presents ways to target digital advertisements to sample addresses and describes how such methodologies have been or are planning to be employed in two Census Bureau tests. The paper ends with a list of questions for discussion.

# Trends in Respondent Contactability Offline and Online

Survey response rates are declining. Researchers have documented decreasing response rates and rising refusal rates since the 1950s in several telephone surveys (Curtin et al., 2005; Steeh, 1981; Dutwin & Lavrakas, 2016; Tourangeau & Plewes, 2013). U.S. Census Bureau and international household surveys have also witnessed these decreases (Atrostic et al., 2001; de Leeuw & de Heer, 2002). One culprit of decreasing response rates is an increase in refusals to participate in both household (Atrostic et al., 2001; Tourangeau & Plewes, 2013) and telephone surveys (Curtin et al., 2005).

While increased refusal rates partially contribute to declining response rates, decreases in contactability are also a key driver of this trend. “No one home” rates displayed the greatest relative increase of reasons among rising nonresponse rates in six Census Bureau-administered household surveys during the 1990s (Atrostic et al., 2001). Noncontact rates also increased internationally in household surveys during the same time regardless of survey topic (de Leeuw & de Heer, 2002). Curtin and colleagues reported non-contact drove the decline in response rates in the telephone interviewer-administered Survey of Consumers between 1979 and 1996 (2005). Examining two telephone surveys during the 1990s, Steeh and colleagues conclude, “The character of nonresponse is shifting from a preponderance of refusals to a combination of refusals and noncontacts, although our conclusions must remain tentative for he time being” (p. 243, 2001). Dutwin and Lavrakas examine more recent telephone disposition codes and agree; refusals have increased only slightly for landlines and declined for cell phones, while no answer and answering machine rates have increased (2016).

Although respondents may be harder to reach at home or via their landline telephone, evidence suggests they are increasingly spending more time on digital devices such as computers, laptops, and cell phones. Only thirteen percent of U.S. adults reported not using the internet in 2014 (Pew Research Center, 2016), and American adults’ digital media use increased from over three hours to nearly six hours between 2010 and 2014 (eMarketer, 2014). Trends in the U.K. and other countries follow similar patterns (Ofcom, 2015; Poushter, 2016). This increase in screen time may allow survey administrators to contact respondents where they can be reached – on the Web.

Increasingly, U.S. Census Bureau administered surveys are providing respondents the option to respond to surveys online, although this choice is still limited. For example, in 2013 the American Community Survey began offering sample units the opportunity to fill out the questionnaire online by mailing sample addresses instructions on how to respond online before mailing a paper questionnaire (U.S. Census Bureau, 2014). The U.S. Census Bureau also plans to encourage the American population to respond via the internet using mailed materials in 2020 (Blumerman et al., 2016). While web-based data collection methods offer surveys the ability to reach people where they spend their time, they traditionally require an email sampling frame previously provided by respondents or an invite to respond on the web via an alternate mode like a mail invitation.

# Digital Advertisements as a Data Collection Contact Strategy

Contacting potential respondents to participate in surveys using digital advertising offers a method that does not require an email provided in a previous wave or a mailed invitation to participate. Advertisers can now link physical mailing addresses to specific browser cookies, digital device IDs, online profiles, or media access control addresses (MAC addresses). Advertisers also can also geo-target digital advertisements by pinpointing audiences based on, for example, their IP addresses, wireless network’s address (wifi ISP), billing or registration address, or their mobile device’s physical location using GPS or cell tower triangulation. These capabilities will likely become more widespread as media marketing firms predict digital advertising will outspend television advertising by 2017 (eMarketer, 2016), and they also afford the opportunity for survey practitioners to contact sample units at specific addresses or in specific geographies using digital advertisements as survey invitations.

Inviting matched address-based sample addresses to respond to online surveys via targeted digital advertisements offers a potentially useful way to connect with prospective respondents. Using databases of information about households located at specific addresses as well as the past behaviors of the users of specific devices, advertisers can further target audiences with advertisements containing content likely to resonate with them. The opportunities afforded by this new contact strategy include targeting the message, the form, and the placement of survey invitations based on information from the sampled addresses’ digital profile history and other databases, like past media consumption patterns. Contacting potential respondents online also has the potential to reach “hard-to-reach” populations who are less likely to check their postal mail, be home, and pick up a landline or cell phone.

The U.S. Census Bureau has embarked on several research projects to determine whether they can target sample addresses with digital advertisements. The results of one experiment and a description of the plan for another are described below.

# 2015 Census Test in Savannah, Georgia

The 2015 Census Test in the designated market area (DMA) of Savannah, Georgia was the first known official census or survey to link potential respondents to a data collection instrument via digital advertisements targeted to specific geographic locations and digital profiles. The test measured whether digital advertisements could promote self-response, Internet self-response, and self-response of hard-to-survey populations in seventeen counties in Georgia and three in South Carolina containing approximately 440,000 addresses.

The test divided the DMA into five digital panels, by assigning each residential ZIP code to a single panel. All panels were exposed to traditional advertising, earned media coverage, partnership efforts, and organic social media outreach, but digital advertising was restricted from one panel. Spend level and targeting strategy varied among the remaining four – two panels received higher spend levels on digital advertisements, and two panels targeted advertisements towards hard-to-survey sub-populations in addition to general digital advertisements aimed at a broader audience.

The test produced many encouraging results. Respondents submitted over eighty percent of responses via the Internet with over thirteen percent directly attributed to digital advertising. The two high-spend panels had a significantly higher number of digital ad-initiated self-responses than did the two low-spend panels. The two panels receiving general digital advertising as compared with the two panels receiving general and targeted advertisements also had a statistically significant higher number of self-responses.

Although hard-to-survey populations remained difficult to convert, the test was largely accurate in its alignment between respondents’ self-reported demographics and the demographic the advertisement targeted. Targeted advertisements aimed at people ages 65 and older, African Americans, and specific counties were over 75 percent accurate. However, advertisements targeted towards 18 to 25 year-olds and renters were less than 50 percent accurate.

# 2016 American Community Survey Online Communications to Improve Survey Response Campaign

The American Community Survey plans to test the use of digital advertisements in an experiment at the end of 2016. Advertisements targeted to sample addresses will not ask potential respondents to fill out the survey but are designed to create general U.S. Census Bureau brand awareness and a positive association. The experiment will also manipulate levels of advertising affecting the average number of advertisements served to each sample address. The experiment will measure whether general brand awareness advertisements significantly increase return rates – both self-response and interviewer-administered – at different stages of data collection.

# Discussion Points

Questions for discussion related to this paper follow:

* Have other data collections used digital advertisements as a contact strategy? If so, what were the results and lessons learned?
* If implemented in U.S. Census Bureau data collections such as the American Community Survey and 2020 Census, what errors and biases might it cause?
* At the U.S. Census Bureau, we have experienced concern about using this method for surveys because it necessitates sharing sample addresses with a company that matches device IDs to addresses and sharing device IDs to digital advertising companies. (Sample addresses are highly regulated data.) What steps can be taken to mitigate policy concerns, and what other potential concerns does this methodology create?
* How can this methodology be used to target survey invites to specific people and geographies?
* What research questions should be addressed with this methodology? (Currently, the U.S. Census Bureau is interested in testing whether digital advertisements can be used to target hard-to-reach sub-groups and the number and type of digital advertisements needed to increase self-response.)
* Could this be a useful methodology in other countries? What hurdles exist to the use of digital advertisements in other countries?

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