

# Improving Response Rates with Address Based Sample (ABS) and Auxiliary Variables

**Often it feels as if survey researchers are battling a two-headed dragon. How do we combat the continuing trend of declining response rates and simultaneously beat back the ballooning costs of data collection?**

For many, one way to attack the problem has been to switch to online non-probability panels. What's the appeal of online non-probability panels? Simply put, they're drastically cheaper and faster. Does this however come at the cost of data quality? Unfortunately, the answer is often yes.

There are several reasons for this, including lack of coverage, self-selection bias, and high levels of fraudulent responses. With that said, intrepid dragon slayers need not panic. Why not? Because the cost savings of collecting data online doesn't really come from non-probability panels themselves, but rather the actual mode in which the survey data is collected.

**How is this possible? The answer is two magic words: "auxiliary variables".**

Commercial list sources have a plethora of data on households and individuals. This information can be appended to any sample source. The data items include names, telephone numbers (cellular and land line), addresses, email addresses, demographic and behavioral variables. Each is a potential helper.

First and foremost, having addresses allows you to send out mailers with the survey web link, which drives potential respondents to complete the survey online. Secondly, by appending emails you can send out email

invitations with the survey link. Emails can be appended both at the individual and household levels, with an average match rate of about 40%-50%. There is also an option to append multiple emails, but we recommend capping this at two or three.

Finally, we check for bounce backs in advance, reducing the number of wasted outbound emails by 20%-30%.

**To illustrate the impact of directing people to respond online, let's look at a case study.**

## **Client Case: Making the Transition to Web**

The very dilemma we have been discussing was faced by a large, state-wide government organization that conducts a resident opinion survey every two years. Their survey covers various topics, including employment, taxes, and disability. They were continuing to push towards a web methodology, but the response rates kept declining.

They came to **Marketing Systems Group (MSG)** looking for options and had two specific needs:

- **A statistically representative frame of all households in the specified geography.**
- **An efficient sampling frame that maintained a probabilistic design along with multimode data collection capability.**

Given these requirements, we recommended an **Address Based Sampling (ABS) frame** as the ideal sampling source.

## **Powering Up with ABS**

Let's explain just what makes ABS such a powerhouse sampling frame. Every month, MSG receives the full raw postal **Computerized Delivery Sequence File (CDSF)**.

This file contains nearly all residential mailing addresses in the country and is the most comprehensive source of residential mailings available.

With every monthly file, MSG enhances those addresses, just like your breakfast cereal is fortified with essential vitamins and minerals. MSG appends the latitude and longitude coordinate for every address. Next, all levels of census geography (all the way down to the census block) are affixed to each address. Any remaining simplified addresses or drop point addresses are augmented where possible from various commercial sources.

With all of these enhancements in place, the raw postal file is converted into the ABS sampling frame that serves as the work horse for any probability survey. It provides the highest-level coverage and maximizes multi-mode options with all the modes of contact that can be appended. A versatile, battle-ready ally, if you will.

Back to our client's survey. From the ABS frame, we drew a sample of 15,000 addresses and matched them up to commercial sources to append telephone numbers and email addresses where available. The phone match rate was around 25%, and 48% for emails. (**Note:** this state in particular has the lowest phone match rate compared to other states, which average anywhere from 50%-60%.) After checking for bounce backs, about 30% of the addresses had emails. While a majority of the invalid email addresses will be filtered out, a small percent may remain.

Moreover, the survey had to be CAN-SPAM compliant. An initial permission pass must be sent to all the email addresses to allow the recipient to actively opt-out. MSG can provide this service while checking for bounce backs, or you can choose to complete it on your end. The link below provides more information on the CAN-SPAM guidelines:

<https://www.ftc.gov/tips-advice/business-center/guidance/can-spam-act-compliance-guide-business>

## Deployment and Results

The initial deployment protocol consisted of 4 mail-

outs with the web link to drive the potential respondent to complete the survey online. For this wave, they also incorporated the 4,500 or so appended email addresses (one per address) by contacting them four more times via email invitations to take the survey online.

**Response rates improved.** The overall response rate went from 13.9% from the previous wave to 18.6% in the current wave. There was an increase of 2.7% in the push-to-web method from the prior wave and an additional 2% gain from the email invitations, **netting an overall 4.7% increase in response rate.**

The increases in response rates may be incremental with the email invitations; however, the ROI is much greater when you consider what a 2% increase would have cost under other methods. For example, to post four more mailings, you would nearly double your printing and mailing costs. Furthermore, enacting phone outreach to the addresses with appended phone numbers would have driven the costs so high it would have overshadowed the gain. In other words, it would have been cost prohibitive.

By contrast, **the cost per email append is pennies**, and the cost to deploy the survey invitations is relatively cheap, so it makes intuitive and financial sense to capitalize on this strategy.

As researchers gain insight with every study, with help from tools like push-to-web, additional enhancements can be made to the email invitations to drive response rates even higher. At the end of the day, with a little help from email appends, you can move the needle in the positive direction while saving money, a winning scenario!

Regardless of the off-line sampling frame, we recommend taking full advantage of the cost savings delivered by on-line data collection whenever possible. Utilizing the least cost data collection mode first can leave room in your budget available to really go after the hard to reach respondents.

**To learn more about how Address Based Sampling can meet your survey needs, contact a Marketing Systems Group representative today.**