

Non-response Bias Analysis and Evaluation
Reporting
Passport Demand Forecasting Study

11/14/2013

LMI

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Agenda

- Current Reporting Status
- Overall Non-response Rates
- Factors Associated with Non-response
- Actions Taken to Address Non-response Bias
- Non-response Rates by Passport Agency/Center
- Current Options for Improving Case Response Rate
- Potential Actions

Current Reporting Status

- Every month, the LMI Team provides the “Technical Report for Weighting for *Month* Passport Study”.
 - The report covers the procedures by which the LMI Team constructed the sample design, generated initial sampling weights, generated a nonresponse adjustment, imputed values for missing responses for design-critical variables, and generated a post-stratification adjustment.

Overall Non-response Rate

- The overall non-response rate for the Passport Demand Forecast Study is 88%.
- This is a good non-response rate.
 - Non-response rates for telephone surveys are typically on the order of 91% (Kohut, Keeter, Doherty, Dimock, and Christian 2012).

Month	Sample	Non-response Count	Non-response rate
Total	180,000	158,489	88.0%
June	40,000	35,432	88.6%
July	35,000	30,828	88.1%
August	35,000	30,991	88.5%
September	35,000	30,637	87.5%
October	35,000	30,601	87.4%

Kohut, A., Keeter, S., Doherty, C., Dimock, M., and Christian, L. (2012) *Assessing the Representativeness of Public Opinion Surveys*. Washington, DC: Pew Research Center.

Factors Associated with Non-response

- Several consistent “bias” features appear in the reports:
 - Addresses that cannot be matched to a phone listing (57% of the samples) are less likely to respond, which is in part a consequence of the survey design to follow-up non-responses with up to 10 phone calls to get participation by persons at sampled addresses with a phone match;
 - Addresses occupied by renters or persons of unknown ownership status are less likely to respond, particularly if the address cannot be matched to a phone listing;
 - Addresses with only 1 adult or an unknown number of adults in the household are less likely to respond;
 - Addresses where there is no age information on the head of household are less likely to respond;
 - Addresses in certain U.S. Census divisions are less likely to respond, particularly in the East-South Central, West-South Central, South Atlantic divisions.

Takeaway

- The behaviors that lead people to have their phone numbers and personal information in publicly available databases are associated with their likelihood of responding to the Passport Demand Forecast Study.
 - The more information available about persons residing at an address, the more likely the persons at that address are to respond to the Passport Demand Forecast Study.

Actions Taken to Address Non-response Bias

- The LMI Team has weighted information from the responding addresses as a function of the degree of non-response from addresses that share similar known characteristics (e.g., presence/absence of phone match, age of head of household, Census Division, etc.).
 - The more non-responses for a particular characteristics set, the greater the weight assigned to each response for that particular characteristics set (i.e. non-response adjustment class approach)
- After the non-response weights are assigned, a further calibration aligns the projected counts with known population totals for U.S. residents over the age of 18.
 - The percentage of addresses with listed phone numbers is included in the final calibration models for household level weights to smooth out the impact of the larger non-response adjustments for households with no phone matched phone number.

Non-Response by Passport Agency/Center

Month	3 Highest Non-response Agencies/Centers	3 Lowest Non-response Agencies/Centers
July	Atlanta, Dallas, Los Angeles	Minneapolis, Colorado, National Processing Center
August	Atlanta, Houston, Los Angeles	Minneapolis, Buffalo, Vermont
September	Detroit, San Francisco, Vermont	Houston, Dallas, Seattle
October	TBA	TBA

- There does not appear to be any consistent pattern of high or low levels of non-response for any passport agency/center.
 - The geographic non-response pattern seen is at the Census Division level, and moderated by the address having a phone match

Current Options for Improving Case Response Rate

- Per the original OMB application, the LMI Team can address case non-response by adjusting the:
 - Invitation
 - envelope
 - letterhead
 - content of letter
 - salutation
 - timing of mailing
 - Follow-up calls

Potential Actions

- Item (question) non-response rate analysis
- Recommended question adjustments to improve item response rates
- Summation of case non-response analysis and item non-response analysis as report to CA/PPT by 2/21/2014
- Potential requirement by OMB for a non-response follow-up survey to determine additional characteristics of non-respondents and whether responses from non-respondents are different than respondents
 - When survey response rate is below 80% OMB often requires a follow-on survey (Harris-Kojetin 2004, Graham 2006)
 - This generally requires contacting a sample of non-respondents, incentivizing (paying) non-respondents to respond to the survey, and analyzing the responses for differences with the main (non-incentivized) survey
 - Current OMB paperwork states study is not incentivized for any of the survey participants

Harris-Kojetin, B. (2004) *OMB Guidance for Nonresponse on Household Surveys*. OMB: CNSTAT Seminar.
Graham, J. (2006) Memorandum for the President's Management Council, Guidance on Agency Survey and Statistical Information Collections. OMB:
http://www.whitehouse.gov/sites/default/files/omb/assets/omb/inforeg/pmc_survey_guidance_2006.pdf