ABS Coverage Evaluation: Recommendations for evaluating the residential household coverage of Address-Based Sampling Frames

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This document outlines preliminary methodology for determining how much of the USPS Computerised Delivery Sequence (CDS) file a vendor qualifies.

The frame for an ABS sample is based on the United States Postal Service's Computerized Delivery Sequence file (CDS) which is often called the delivery sequence file or DSF (though not to be confused with DSF[2]). Updates to the CDS are made on a weekly basis to *qualifying* vendors.

What makes a qualifying vendor? Qualifying vendors must qualify for each ZIP code by providing a list that contains at least 90 percent (but not to exceed 100 percent) of all possible deliveries within the 5-digit ZIP Code area. There are currently 250+ CDS customers but only two vendors claim to qualify for virtually the entire CDS nationally:Compact Information Systems (CIS) and Valassis. USPS does not publish CDS qualification rates, only qualifying vendors. For some vendors qualifying for the national CDS is not necessary. For example, the Washington Post is likely primarily interested in having addresses for homes that are likely to subscribe to its paper. But, for a nationally-representative survey having a vendor that qualifies nationally is key.

This assessment took the CDS product that RTI leases from its vendor, Compact Information Systems to evaluate how much of the addresses nationwide the vendor qualifies. We examined two files provided by USPS to carry out this evaluation. The first is the City State Product which provides a comprehensive list of all ZIP codes, ZIP code validation and assignment, and ZIP Code and carrier route changes. The second USPS product was the Delivery Statistics Product which defines the number of PO Box and business/residential deliveries on city, rural, and contract routes for all ZIP Codes.

Merging information from these two products with the CDS file leased from CIS we evaluated where there was overlap and where there were areas on the USPS products not contained in the leased file. The table below displays this Venn relationship. Addresses that were on the City State Product but not the other two files were single ZIP business addresses, government addresses, and university addresses – these are not usually of interest for household surveys. There were 5,560 ZIP Codes on both the ABS frame and the City State Product but not contained on the Delivery Statistics Product. Other addresses not contained on the ABS frame were primarily business addresses with a small number of residential addresses of which only a small portion are active residential addresses.

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[1] RTI International is a registered trademark and a trade name of Research Triangle Institute.

City State Product	Delivery Statistics Product	ABS Frame	ZIP Code count	Assessment
✘	✘	✔	1	
✔	✘	✘	762	Single ZIP business addresses, government, and university.
✔	✘	✔	5,560	26+ million residential addresses on ABS Frame.
✔	✔	✘	2,052	Mostly business addresses. 8,052 potential residential addresses. 2,889 active residential addresses.
✔	✔	✔	32,635	
			41,010	

While this evaluation shows that CIS appears to be missing more than 2,700 of 41,000 ZIP Codes based on the Delivery Statistics Product these ZIP Codes contained mostly PO Boxes and at most 8,052 residential addresses (2,889 of which are active).

Address coverage is commonly discussed in how well the number of addresses in an area segment corresponds to the number of housing units in the target population. Another form of address coverage that is important to consider is how complete the coverage of the vendor's file whether local or national.

I am very interested in your experiences relating to the use and utility of ABS frames. Please feel free to contact me with questions and insights.

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