

Developing and Implementing a Targeted Nonresponse Follow-Up Procedure in Establishment Surveys

Katherine Jenny Thompson

Senior Mathematical Statistician, Associate Directorate for Economic Programs, U.S. Census Bureau

Adaptive design strategies for data collection can increase the quality of response data even under a reduced survey budget. In this framework, the U.S. Census Bureau is investigating nonresponse subsampling strategies for usage in the recently conducted 2017 Economic Census. One proposed adaptive collection design strategy is to implement a systematic sample of nonrespondents sorted by a measure of size, instead of attempting complete (100%) follow-up. For this, we developed an optimal allocation nonrespondent subsampling procedure with the objective of selecting larger systematic samples in domains that have lower initial response. Through simulation, we demonstrated that subsampling nonrespondents this way without changing the data collection procedure has minimal tangible benefits besides cost reduction. Improving the data collection procedure to target “hard to reach” establishments that were selected for nonresponse subsampling is likely to improve estimates. In this presentation, I describe and present the results of two field separate experiments : the first, to test alternative contact strategies for selected small units embedded in the 2014 Annual Survey of Manufactures (ASM); the second, to assess the effects of combining the proposed nonrespondent subsampling design with the most effective follow-up procedures determined from the earlier test.

Keywords: adaptive collection design, nonresponse follow-up, establishment survey, optimal allocation