

IAB-Colloquium

zur Arbeitsmarkt- und Berufsforschung

Volunteer Web Surveys, Propensity Adjustments, and Case-Control Assumptions

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Panels of persons who volunteer to participate in Web surveys are currently being used to make estimates for entire populations, including persons who have no access to the Internet at all. One creative method of adjusting a Volunteer sample to attempt to make it representative of a larger population involves randomly selecting a Reference sample from the larger population. Weights are applied to the Volunteer sample to adjust its distribution to be similar to that of the Reference sample. The weights are computed by combining the Reference sample and Web volunteers and estimating probabilities of being a Web volunteer via propensity modeling. Careful analysis to justify these methods is lacking. The goals of this paper are to identify the assumptions needed for inference, and to note when they may be violated. Our main finding is that commonly used estimators based on the propensity adjustments are biased even when the probability of volunteering is correctly modeled. In that case, calibration estimation can yield approximately unbiased estimates, but, if the propensity of volunteering depends on analysis variables collected in the Web survey, then calibration estimators are also biased.

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