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Linking Federal Administrative Records to Respondents and Nonrespondents in Household Surveys: A Case Study

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Background

In response to increasing nonresponse rates in household surveys, auxiliary information is being sought to augment survey samples and adjust for possible nonresponse bias in key survey estimates. Auxiliary data options are typically limited in most general population surveys and there are questions concerning their utility for nonresponse adjustment. Federal administrative databases provide a potentially rich source of auxiliary information for nonresponse adjustment, but linking them to general population samples is usually restricted to surveys which draw their samples from population registers containing unique personal identity numbers which can be directly linked to federal databases.

Method

In this article, we examine the feasibility of linking a federal administrative database to a general population survey sample without a unique identifier. We employ a series of indirect linkage procedures that rely instead on non-unique and error-prone identifiers collected from the sampling frame to link a federal employment database to a general population survey in Germany. The quality and selectivity of the established links are evaluated using household- and person-level interview data in accordance with German data protection laws.

Results

We report a linkage rate of 60 percent for the entire sample under a strict linkage criterion, and 80 percent under a more relaxed criterion. Linkage rates varied across some household- and person-level characteristics that are likely specific to the particular administrative database used in this case study.

Conclusion

We conclude with a general discussion of the practical implications of this work for survey organizations considering performing similar linkages and highlight some opportunities for future linkage research.

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