LISS panel R-indicator: representativity in different stages of recruitment and participation of an Internet panel

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The LISS panel (Longitudinal Internet Studies for the Social sciences) is an online panel which is based on a true probability sample of households. Households that cannot otherwise participate are provided with a computer and Internet connection. In this paper, we evaluate the representativity of this Internet panel using the R-indicator.

The R-indicator is developed by SN as a measure of response bias in the framework of the research project Representativity Indicators for Survey Quality (RISQ). The R-indicator (‘R’ for representativity) represents the dissimilarity between the respondent and sample pool with respect to auxiliary variables that are available from other sources than the survey itself.

We calculated the R-indicator and partial R-indicators for each of the different recruitment stages of the LISS panel, which are: contact; central question; recruitment interview; agreement to participate in the panel; registration for the panel. The R is in each stage significantly lower than in the foregoing stage. The largest decrease in R and increase in bias is observed in the stage in which agreement to participate in the panel is demanded. The partial indicators show that the bias is mostly caused by the variables household composition and age.

Furthermore, we evaluated the long-term panel participation, from 2008 to 2010. Whereas the response steadily decreases in this period, the R-indicator increases. The core of long-term panel members is remains biased primarily in age and household composition.

Finally, the LISS panel R-indicators are compared to the R-indicators obtained for the Labour Force Survey (LFS) of Statistics Netherlands, which is a panel survey using traditional modes of interviewing. Although the response rate in the LISS panel are lower than in the LFS, the R-indicator is comparable in the first panel waves and in later waves even somewhat better in the LISS panel. This shows that it is possible to build a probability based Internet panel that is in representativity comparable to a traditional panel.