**Small Business Survey Methodology Improvement**

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Sample Design and Estimation (Business Surveys)

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In 2013/14, the Quality Improvement Fund project to review of the sampling and estimation methodology of the Small Business Survey (SBS) for the Department of Business, Innovation and Skills makes the following eight recommendations.

1. Non-response analysis is recommended to check all information requested can be provided (*non-response bias*); cognitive testing of questionnaires is recommended to check respondents understanding (*non-sampling error*); and user consultation is recommended to check the target population is still relevant (*irrelevant statistics*).
2. The sampling frame should be Dun and Bradstreet for zero employment businesses, and the Inter-Departmental Business Register for businesses with non-zero employment.
3. The sampling method should be random, representative, unbiased and that meaningful measures of sampling errors can be calculated.
4. The sample should be random within strata and the response needs to be representative. If users are flexible about what estimates are produced by the SBS, it is recommended that the stratification design is optimised to minimise overall sampling errors.
5. Fixed sampling fractions should be used to allocate sample to strata, in order to meet hard targets with a set overall sample size. It is recommended that the hard targets for employment size bands – set as proportions of the overall sample – should be reviewed. It is recommended that the proportions of the overall sample should represent both the numbers and size of SMEs, not just their size.
6. To weight SBS: for businesses with zero employee returns from the Dun and Bradstreet sample the Business Population Estimates should be used for weighting; for businesses with non-zero employee returns from the IDBR sample, the IDBR should be used for weighting. It is recommended that expansion estimation is used, not ratio estimation.
7. It is recommended that variances should be estimated at the stratum level from responses to the question being tested/reported on, and aggregated to higher levels as required (weighting for stratum sizes).
8. It is recommended that the survey design should not be longitudinal. Instead, it is recommended that, conditional on practical considerations such as attrition, the survey design should be either quarterly, with a sample rotation period of five quarters, or annual, with a sample rotation period of two years. It is recommended the decision between a longitudinal, rotating survey or non-overlapping design is made based on consultation with users regards their needs from the survey and practical considerations.