

In business surveys, information on variables of interest like turnover or value added, generally, have to be gained at regional levels as well as for NACE classes. Additional to both sub-classifications, at least the number of employees is used for building strata. Hence, optimizing sampling designs has to consider on the one hand a vast number of strata, and on the other hand, optimization conflicts due to the complementary information needs for NACE classes and regional levels. Though a large amount of interesting auxiliary information to foster the needs of the optimization process comes from business registers, the final estimates suffer from skewed distributions with outliers, especially for the main variables of interest. The present paper will give an overview of the different optimization strategies for sampling designs in the context of design-based estimation methods. The methodology will cover specified stratification methods while considering possibly empty strata, unequal probability methods, as well as balanced sampling methods. Further attention will be laid on the conflicting goals by optimizing on NACE classes versus regions, integrality conditions on sampling sizes, as well as on boundary constraints on sampling sizes that allow minimal or maximal sampling fractions for special sub-groups of interest to be set. Finally, the impact of the methods on small area estimation problems will be discussed.