Stratification in Business Surveys: A Review and Some Advances

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In business surveys, a measure of the size of a unit is often used as a stratification variable. First some methods for constructing the stratum boundaries will be reviewed, including the well known cumulative root frequency method of Dalenius and Hodges (Skand. Aktuar., 1957, 198-203), the recent proposal of Gunning and Horgan (Survey Method. 2004, 159-166), and the method of Lavall?e and Hidiroglou (Survey Method.1988, 33-43) who chose the stratum boundaries to minimize the sample size needed to achieve a certain level of precision when estimating the mean of the stratification variable. This method provides the stratum boundaries and the sample size within each stratum all at once. The impact of an ignorable non response and of the death of some the sample units on the estimators produced by these stratification algorithms will then be investigated in the framework developed in Rivest (Survey Method.,2002, 191-198). This is joint work with Michel Ferland and Sophie Baillargeon.

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