## A DIFFERENT IMPUTATION APPROACH FOR THE CATEGORICAL SURVEY STUDIES

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Missing data is a common problem for all areas of statistics. Especially, in the survey analysis, researchers are often faced with the problem of nonresponse. Thus, the statistical inferences of surveys are not reliable in such cases. Various imputation methods and different analysis techniques are developed for dealing with the missing data. These methods have different approaches which depend on the type of the data.

In this paper, a new approach is developed for dealing with missing data in a categorical survey study. Suggested method base on finding a subset of similar respondents to the respondent with missing data. Imputation is made randomly according to the probabilities which determined from the chosen subset. The application of suggested method is made with a real survey data and the results of this categorical imputation approach are interpreted.

## References

- Beale, E.M.L., and Little R.J.A., 1975, Missing Values in Multivariate Analysis, Journal of the Royal Statistical Society. Series B (Methodological), 37, 1, 129-145.
- Craig K. Enders, 2010, Applied Missing Data Analysis, The Guilford Press, New York, United States of America.
- Finch, W.H., 2010, Imputation Methods for Missing Categorical Questionnaire Data: A Comparison of Approaches Journal of Data Science 8, 361-378
- Little, R. J. A., and Rubin, D. B., 2002, Statistical analysis with missing data, John Wiley.