

# A NEW SAMPLING SCHEME FOR PARTIAL NON- RESPONSE SITUATIONS WITH MULTIPLE OBJECTIVES

S. MAQBOOL

*Division of Agricultural Statistics,  
Sher-e -kashmir University of Agricultural Sciences & Technology of Kashmir  
Shalimar, SRINAGAR-191121.*

Email: [showkatmaq@gmail.com](mailto:showkatmaq@gmail.com)

## ABSTRACT

In multivariate surveys it is experienced that the data may not be obtained in the first attempt on all the characters, sometimes due to absentism and sometimes due to refusal of the subject for replying some (or all) of the questions. In this paper, we consider the problem of determining the initial sample size and sub sampling proportion in two variate surveys when some subjects refuse to reply a part of the questions i.e. their responses are partial. The population is divided into three groups: one of complete non- respondents, the second with response to only questions of category I and third with response to questions of both the categories. It is assumed that the respondents of the questions of category II always reply the questions of category I but not necessarily the vice versa , i.e, there may be some subjects who agree to reply the questions of category I but do not provide the information on the questions of category II unless some additional efforts are made. Accordingly new sampling scheme with the cost function is proposed.

**Key Words:** Sampling scheme, partial response, initial sample size, sub-sampling proportion, cost function.