

Abstract

This study based on two sections. In the first section a family of improved estimators has been proposed by mixture of different ratio and regression estimators from the literature on the basis of full information on the main ancillary variable X and secondary ancillary variable Z in single and two phase sampling in which main variable of interest is qualitative, mean square error up to first order and biases up to second order have been derived. In the second section a family of improved estimators has been proposed by mixture of qualitative and quantitative in different ratio estimators from the literature on the basis of full information on the main ancillary variable X and but the information on two ancillary attribute is not known. Mean square error up to first order has been derived. Empirical comparison with other well-know estimators in single and two phase sampling also been carried out. For the numerical comparison the data has been taken from Punjab Bureau of Statistics the data is based on child's nutrition in the flood affected areas of Punjab province, Pakistan. Under this data the proposed estimators are competent from the other well known estimators. Empirical study confirmed that the suggested family of estimators is the family of more efficient estimators than the estimators suggested in the literature under the MEAN SQUARE ERROR criterion.