

TITLE:

**AN ANALYSIS OF DESIGN EFFECTS FOR MEDIA INDEX SURVEY IN
PENINSULAR MALAYSIA**

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ABSTRACT

This study has attempted to analyze the sampling errors and design effects of Media Index Survey (MIS). MIS is a nationwide survey of sample size of 8738 interviews carried out in Peninsular Malaysia adopting stratified 2-stage cluster sampling, a complex sampling design that widely use in most of the general public surveys

Taylor Expansion of ratio estimates method is employed in this study to compute the sampling errors. A total of 60 variables concerning ownership of household durable goods, daily consumer products bought in the past 1 month, media consumption habits, banking services, leisure activities and literacy rate are analyzed for total sample, urban-rural domains and demographic subclasses. Analysis is also carried out by grouping these variables into 5 categories, which measure approximately similar dimension or characteristics.

Design effects (*deft*) and coefficients of intra-class correlation (*roh*) are also computed for above variables. Overall, the average design effect (*deft*) for all variables is around 1.8 with coefficient of variation of 13%. Besides, the MIS has an average homogeneity rate (*roh*) of 0.12 for the PSUs used in the survey. The geographical domain differentials in design effects are small as similar sampling design is adopted across geographical domains. Design effects of variables for demographic subclass vary by the characteristics of variables with respect to its distribution across PSUs.

The results show that the stratified 2-stage cluster sampling adopted in MIS is sufficient to provide reasonably reliable estimates. The overall design effect and coefficient of intra-class correlation are within the range of similar surveys.

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