

1. Compare bivariate predictors to independence predictors

- run `runME_oneZoneY.R`
- required files: `basefun.R` , `basefun_uni.R`, `cpp.R`
- change `case` from 1 to 4 to do four different simulation studies in Section 4.1
- output: `result/simuresult_EBP.rds`
- use function `AvMSE_BR` in `runME_analysis.R` to compute MSE and bias ratio

2. Evaluation of bootstrap MSE estimator

- run `runME_oneZoneY.R` with setting `bootstrap = TRUE`
- required files: `basefun.R` , `basefun_uni.R`, `cpp.R`
- this bootstrap computation requires parallel computation
- output: `result/bootsarpMSE_s.rds` for $s = 1, \dots, S$
- use function `relative_bias` in `runME_analysis.R` to compute relative bias

3. Informative sampling simulation

- run `runME_oneZoneY.R` with setting `noninfor = FALSE`
- required files: `basefun.R` , `basefun_uni.R`, `cpp.R`
- set `wronguse = TRUE` to ignore the sampling weights in estimation procedure
- simulated sample data sets are names as `SAE_sample_infor_s.rds` for $s = 1, \dots, S$
- output: `result/simuresult_EBP.rds`

4. Reproduce Li & Zaslavsky (2010) Bayesian model

- run `runME_bayes.R` with `rstan` package
- required files: `Bayes_basefun.R` and simulated population and sample data stored in `data` folder
- output: `rstan/Bayes_result.rds`