betaMC: Staging

Ivan Jacob Agaloos Pesigan

Staging...

```
object <- lm(QUALITY ~ NARTIC + PCTGRT + PCTSUPP, data = nas1982)
```

```
dif(BetaMC(object))

#> Difference between standardized regression coefficients with type =  " HC3 "
#>                   est     se     R   0.05%    0.5%    2.5%  97.5%  99.5% 99.95%
#> NARTIC-PCTGRT  0.1037 0.1435 20000 -0.3736 -0.2704 -0.1805 0.3768 0.4654 0.5537
#> NARTIC-PCTSUPP 0.2319 0.1335 20000 -0.2192 -0.1274 -0.0409 0.4821 0.5645 0.6514
#> PCTGRT-PCTSUPP 0.1282 0.1368 20000 -0.3172 -0.2255 -0.1448 0.3895 0.4691 0.5658

dif(BetaMC(object, type = "mvn"))

#> Difference between standardized regression coefficients with type =  " MVN "
#>                   est     se     R   0.05%    0.5%    2.5%  97.5%  99.5% 99.95%
#> NARTIC-PCTGRT  0.1037 0.1352 20000 -0.3629 -0.2574 -0.1653 0.3604 0.4399 0.5225
#> NARTIC-PCTSUPP 0.2319 0.1257 20000 -0.1858 -0.0997 -0.0250 0.4677 0.5416 0.6222
#> PCTGRT-PCTSUPP 0.1282 0.1215 20000 -0.2641 -0.1920 -0.1172 0.3622 0.4402 0.5201

dif(BetaMC(object, type = "adf"))

#> Difference between standardized regression coefficients with type =  " ADF "
#>                   est     se     R   0.05%    0.5%    2.5%  97.5%  99.5% 99.95%
#> NARTIC-PCTGRT  0.1037 0.1215 20000 -0.2828 -0.2070 -0.1337 0.3395 0.4146 0.4924
#> NARTIC-PCTSUPP 0.2319 0.1180 20000 -0.1810 -0.0766 -0.0056 0.4581 0.5342 0.6137
#> PCTGRT-PCTSUPP 0.1282 0.1213 20000 -0.2848 -0.1939 -0.1176 0.3623 0.4320 0.5128
```

```
out <- rsq(BetaMC(object))
print(out)

#> Multiple correlation
#> type = "HC3"
#>        est     se     R  0.05%   0.5%   2.5%  97.5%  99.5% 99.95%
#> rsq 0.8045 0.0619 20000 0.4969 0.5772 0.6461 0.8881 0.9109 0.9327
#> adj 0.7906 0.0663 20000 0.4609 0.5470 0.6209 0.8801 0.9045 0.9279
```

```r
summary(out)

#> Multiple correlation
#> type = "HC3"
#>        est     se     R  0.05%   0.5%   2.5%  97.5%  99.5% 99.95%
#> rsq 0.8045 0.0619 20000 0.4969 0.5772 0.6461 0.8881 0.9109 0.9327
#> adj 0.7906 0.0663 20000 0.4609 0.5470 0.6209 0.8801 0.9045 0.9279

coef(out)

#>       rsq       adj
#> 0.8045263 0.7905638

vcov(out)

#>             rsq         adj
#> rsq 0.003826412 0.004099727
#> adj 0.004099727 0.004392564

confint(out)

#>          2.5%     97.5%
#> rsq 0.6461316 0.8881363
#> adj 0.6208553 0.8801461

rsq(BetaMC(object, type = "mvn"))

#> Multiple correlation
#> type = "MVN"
#>        est     se     R  0.05%   0.5%   2.5%  97.5%  99.5% 99.95%
#> rsq 0.8045 0.0567 20000 0.4984 0.5973 0.6601 0.8806 0.9029 0.9286
#> adj 0.7906 0.0607 20000 0.4626 0.5685 0.6358 0.8721 0.8960 0.9235

rsq(BetaMC(object, type = "adf"))

#> Multiple correlation
#> type = "ADF"
#>        est     se     R  0.05%   0.5%   2.5%  97.5%  99.5% 99.95%
#> rsq 0.8045 0.0550 20000 0.5129 0.6102 0.6637 0.8799 0.9025 0.9297
#> adj 0.7906 0.0589 20000 0.4781 0.5824 0.6396 0.8713 0.8955 0.9247
```

References

R Core Team. (2022). *R: A language and environment for statistical computing*. R Foundation for Statistical Computing. Vienna, Austria. https://www.R-project.org/