

**Example of Use of R Package "Convey" for Survey Analysis of Concentration of Wealth/Income Uses GINI coefficient with Linearized and Repeated Replication Variance Estimation
November 15, 2017**

R Code

```
# Test of new svygini command in R, 15nov2017 Berglund
# Part of Convey Package plus requires vardpoor and survey packages as well
# Load packages required

library(survey)
library(vardpoor)
library(convey)

# Load data used in example
data(eusilc) ; names( eusilc ) <- tolower( names( eusilc ) )

# linearized design
des_eusilc <- svydesign( ids = ~rb030 , strata = ~db040 , weights = ~rb050 , data = eusilc )
des_eusilc <- convey_prep(des_eusilc)
svygini( ~eqincome , design = des_eusilc )

# replicate-weighted design
des_eusilc_rep <- as.svrepdesign( des_eusilc , type = "bootstrap" )
des_eusilc_rep <- convey_prep(des_eusilc_rep)
svygini( ~eqincome , design = des_eusilc_rep )
```

R Output

```
# Part of Convey Package plus requires vardpoor and survey packages as well
> # Load packages required
>
> library(survey)
> library(vardpoor)
> library(convey)
>
> # Load data used in example
> data(eusilc) ; names( eusilc ) <- tolower( names( eusilc ) )
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> # linearized design
> des_eusilc <- svydesign( ids = ~rb030 , strata = ~db040 , weights = ~rb050 , data = eusilc )
> des_eusilc <- convey_prep(des_eusilc)
> svygini( ~eqincome , design = des_eusilc )
      gini      SE
eqincome 0.26497 0.0019
>
>
> # replicate-weighted design
> des_eusilc_rep <- as.svrepdesign( des_eusilc , type = "bootstrap" )
> des_eusilc_rep <- convey_prep(des_eusilc_rep)
> svygini( ~eqincome , design = des_eusilc_rep )
      gini      SE
eqincome 0.26497 0.0019
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