

Helsingin yliopisto  
Matematiikan ja tilastotieteen laitos

**SAE-kurssi**  
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**7.4.2009**

## **SAS-MAKRO EBLUPGREG**

```
%ebgupgreg(sample=omaotos,  
    population=pj,  
    y=y,  
    xlist=x,  
    regionIdentifier=domain,  
    test=1,  
    estimateMeans=0,  
    weights=samplingweight,  
    convergenceCrit=1e-8,  
    maxiterations=200,  
    initialSigma2=1,  
    modules=modules.eurarea,  
    parametersEstimatedBy='REML',  
    eblup=1,  
    greg=1,  
    synthetic=1,  
    stratified=0,  
    output=out1  
);
```

## SAS Macro EBLUPGREG / GREG ja SYN

domain	n	GREG	synthetic	sqrt MSEsyn	stdGREG	true Value
1	8	1292.93	1302.88	16.3148	24.8442	1299.27
2	13	2472.54	2560.54	24.7205	42.2263	2532.79
3	14	1816.11	1921.33	19.4337	32.3286	1839.14
4	5	1913.76	1880.74	18.1961	41.4054	1864.56
5	7	1747.49	1750.69	17.8414	53.4452	1737.94
6	19	4745.43	4595.54	45.7247	78.6909	4662.57
7	8	874.72	831.64	12.0799	31.9516	835.20
8	6	1026.49	1053.62	10.4176	31.4930	1022.06
9	6	939.52	922.79	9.5419	32.7146	884.18
10	14	3630.78	3632.68	35.6288	48.2893	3593.91

sqrtMSEsyn      SYN-estimaattorin Root MSE (keskineliövirheen neliöjuuri)  
 stdGREG          GREG-estimaattorin keskivirhe s.e

## SAS Macro EBLUPGREG / EBLUP

domain	n	EBLUP	sqrtMSE	sqrt MSENoG3	sqrtg1	sqrtg2	sqrtg3	sqrtg4	true Value
1	8	1299.00	30.0123	24.9866	19.8890	9.3051	11.7560	11.9236	1299.27
2	13	2515.35	45.9894	36.9976	31.4816	11.3290	19.3158	15.7919	2532.79
3	14	1879.40	34.5820	28.1648	23.1123	8.5218	14.1891	13.6549	1839.14
4	5	1898.53	40.4164	34.0563	28.4264	12.7666	15.3892	13.7400	1864.56
5	7	1749.16	38.3467	31.6833	26.3662	11.1594	15.2748	13.5693	1737.94
6	19	4697.90	70.5633	56.5358	49.2219	18.5020	29.8570	20.7648	4662.57
7	8	843.73	19.6283	16.6735	12.3899	5.9942	7.3234	9.4110	835.20
8	6	1045.11	21.3437	18.1871	14.0229	6.2106	7.8988	9.7754	1022.06
9	6	927.46	18.4963	16.0095	11.6288	6.4678	6.5502	8.9019	884.18
10	14	3631.15	66.2352	52.6922	46.2247	16.3351	28.3781	19.3109	3593.91

sqrtMSE      EBLUP-estimaattorin Root MSE (keskineliövirheen neliöjuuri)

MSENoG3      MSE ilman komponenttia g3

**EBLUP-estimaattorin MSE:n komponentit** g1, g2, g3 ja g4

sqrtg1      sqrtg2      sqrtg3      sqrtg4

Katso EBLUPGREG-makron manuaali s. 7