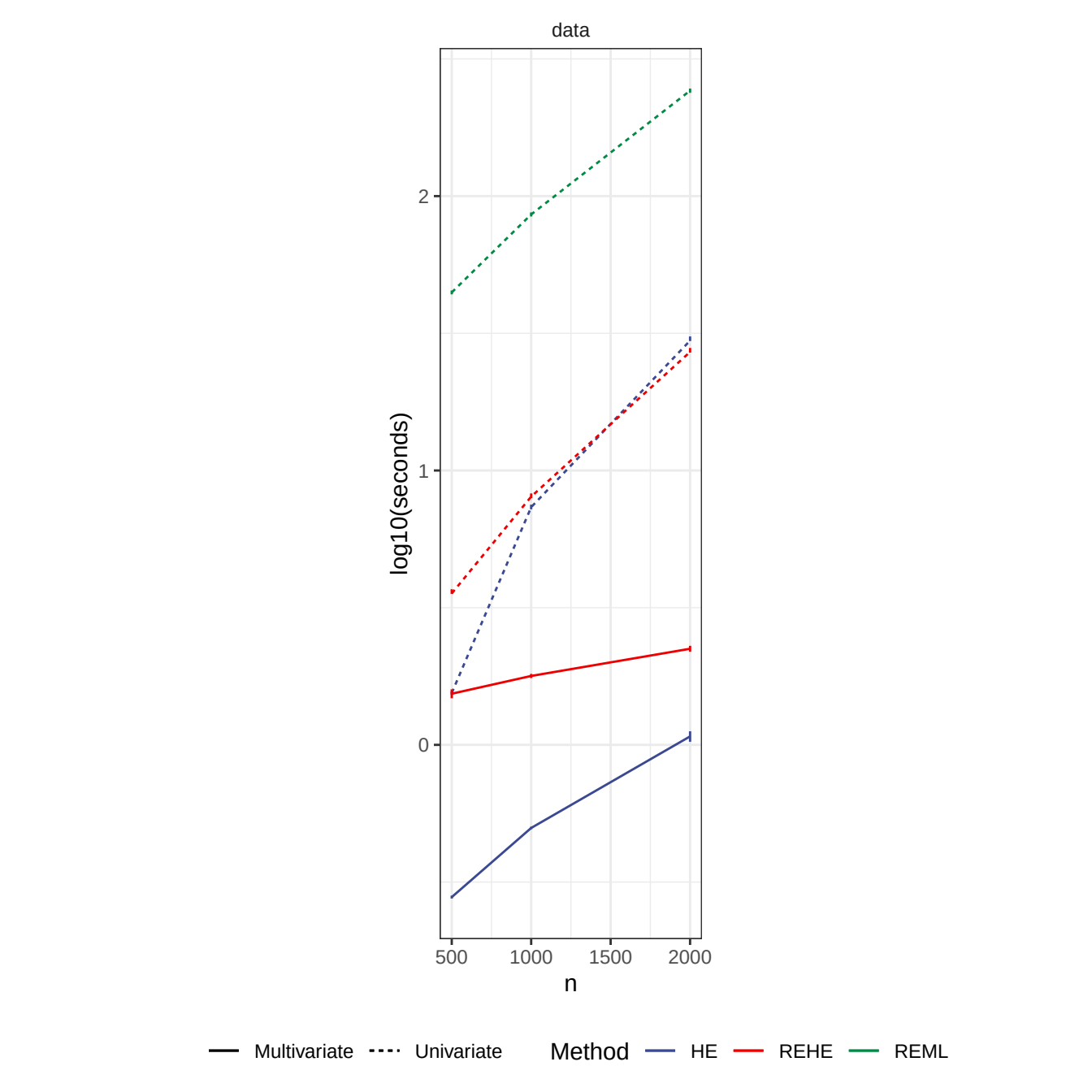
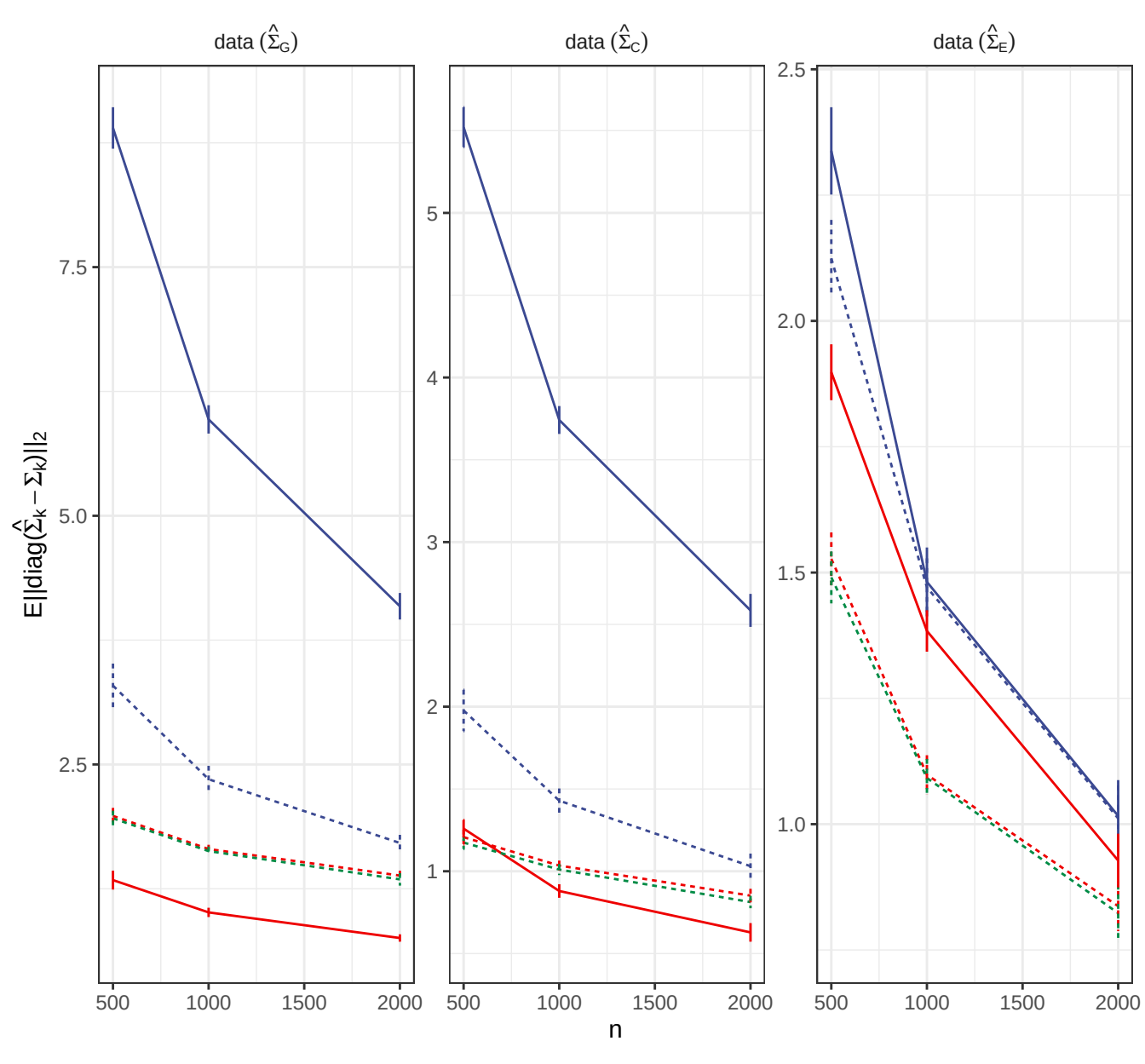
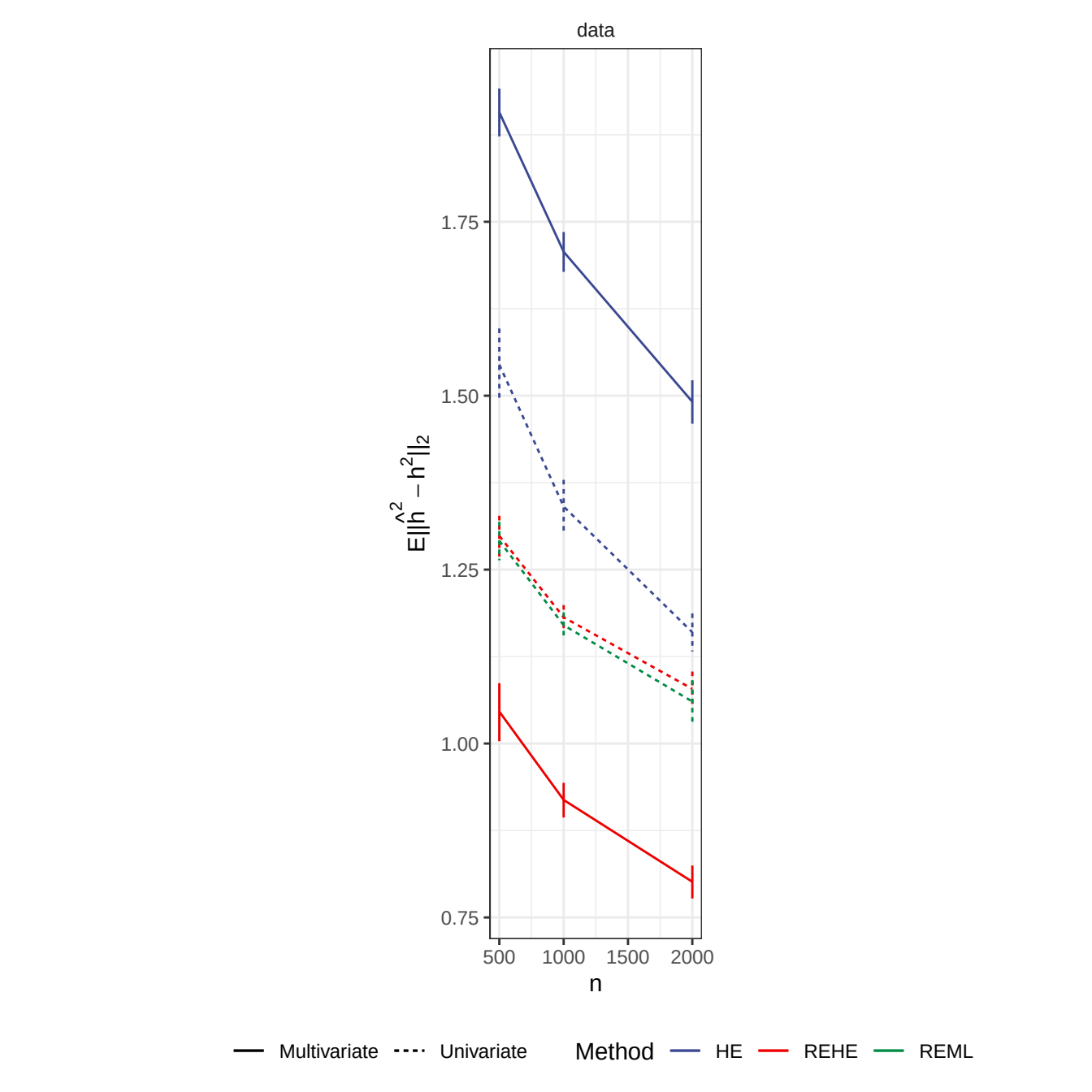
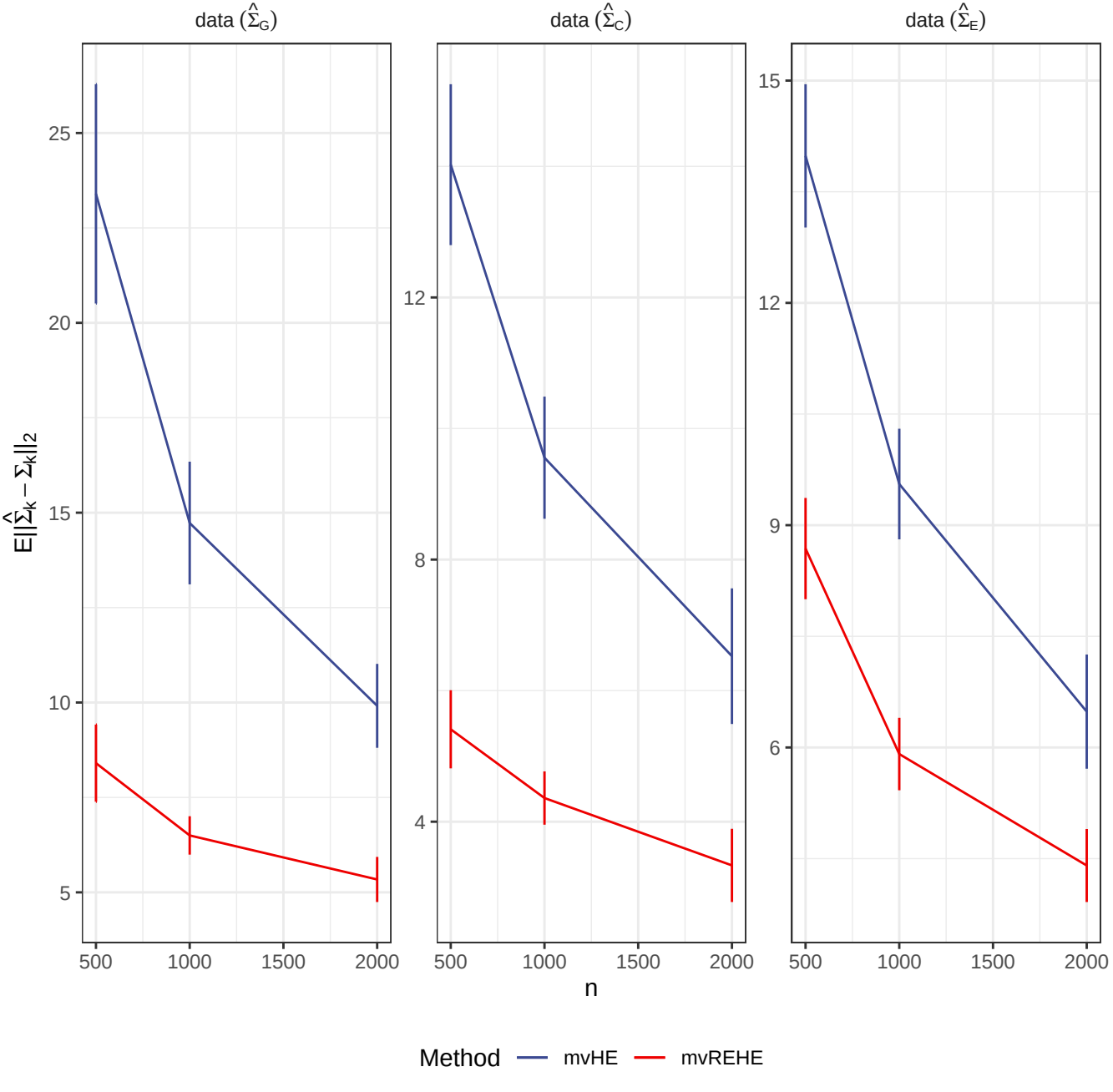
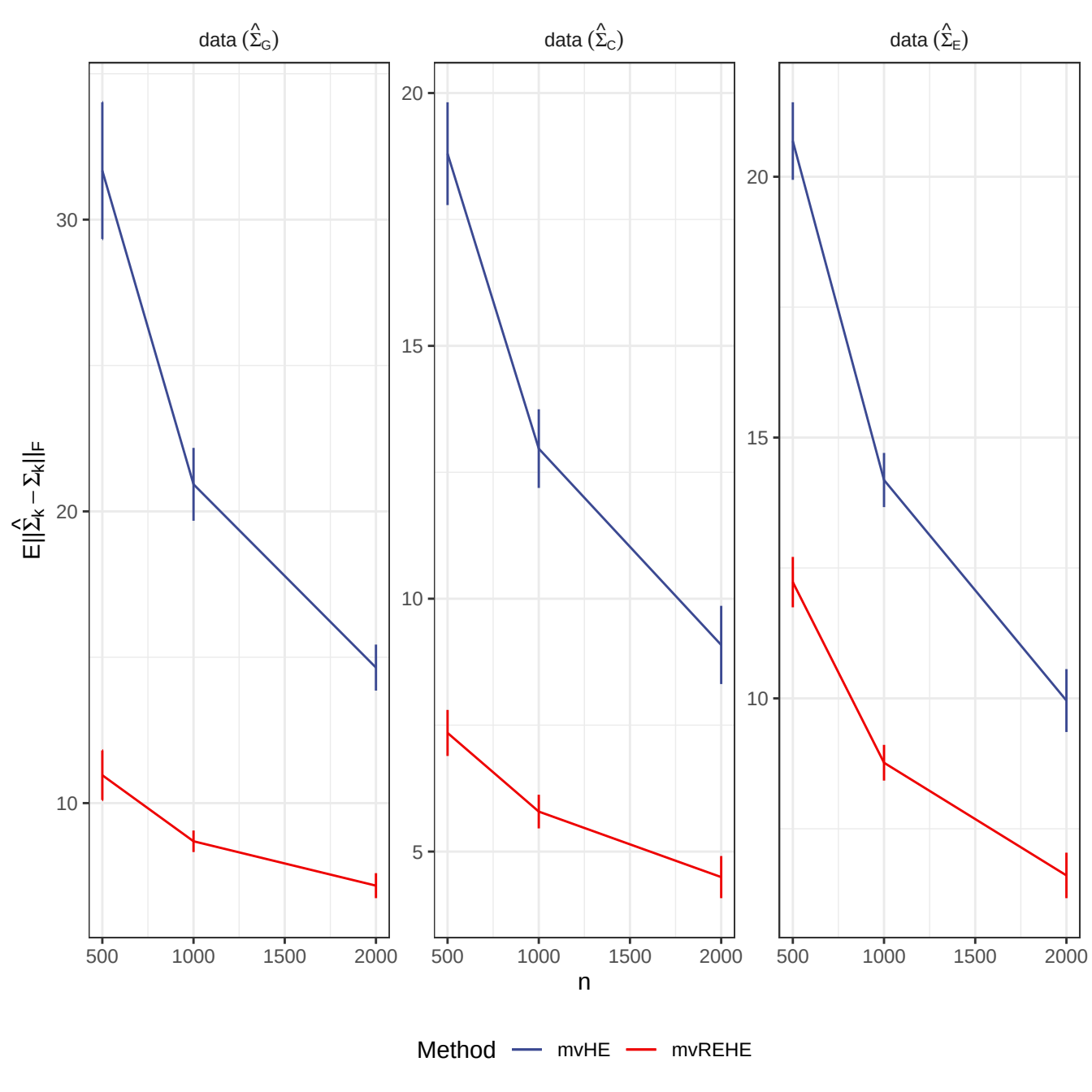
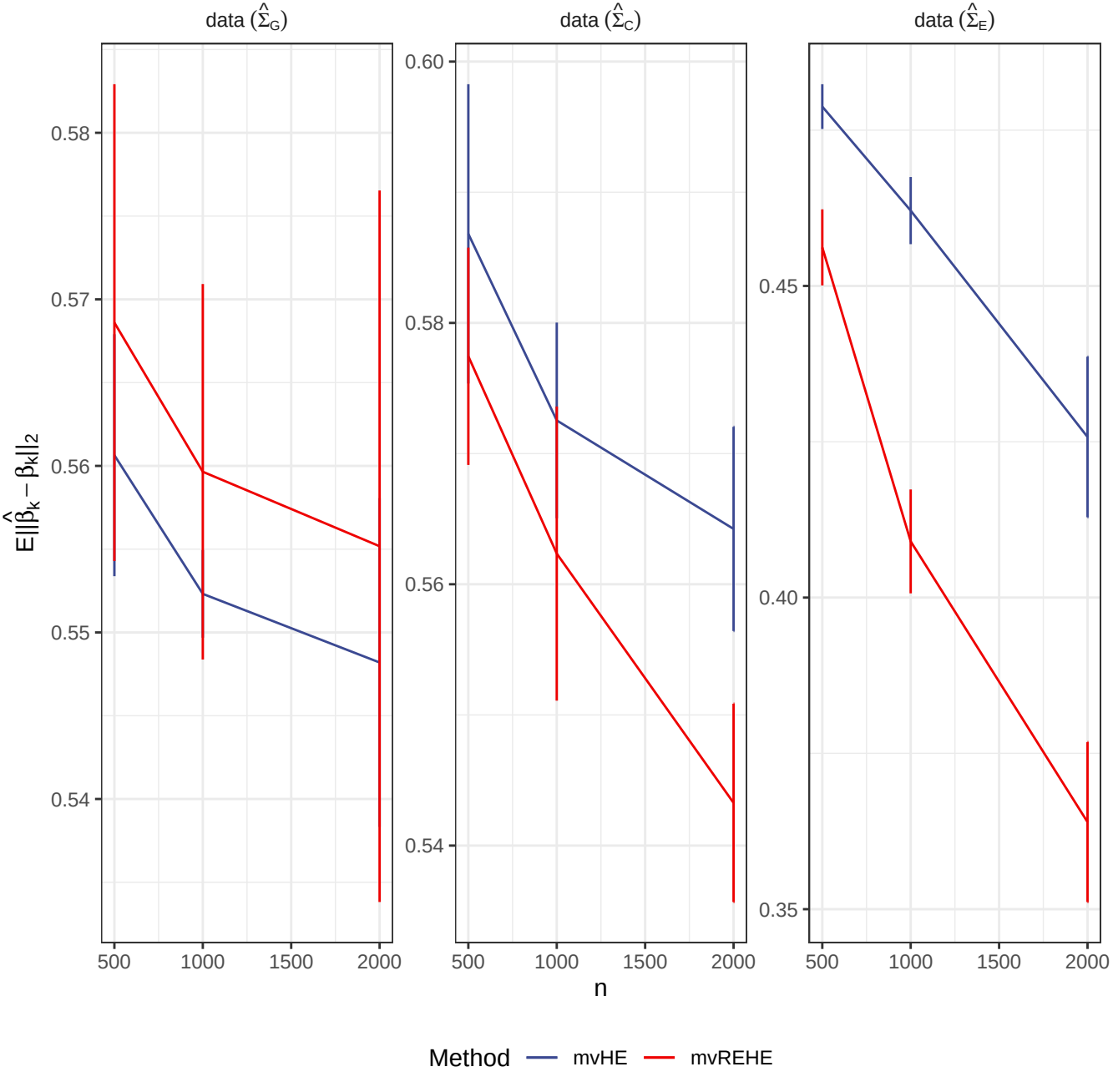

data
log10(seconds)
2
1
0
500
1000
1500
2000
n
Multivariate
Univariate
Method
HE
REHE
REML

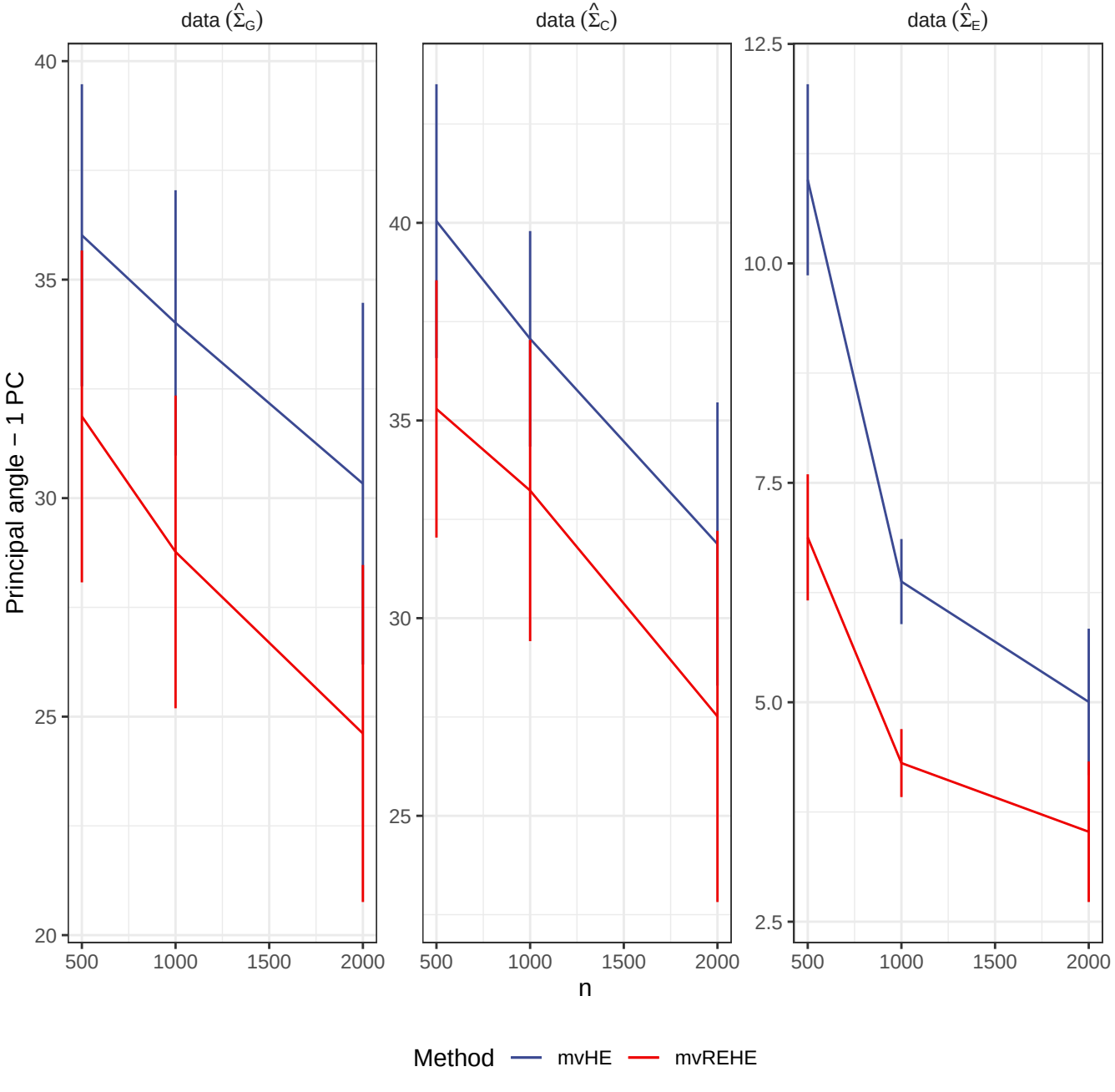

data ($\hat{\Sigma}_G$)
data ($\hat{\Sigma}_C$)
data ($\hat{\Sigma}_E$)
E||diag($\hat{\Sigma}_k - \Sigma_k$)||$_2$
n
repl("mv", method), "Multivariate", "Univariate")
Multivariate
Univariate
Method
HE
R

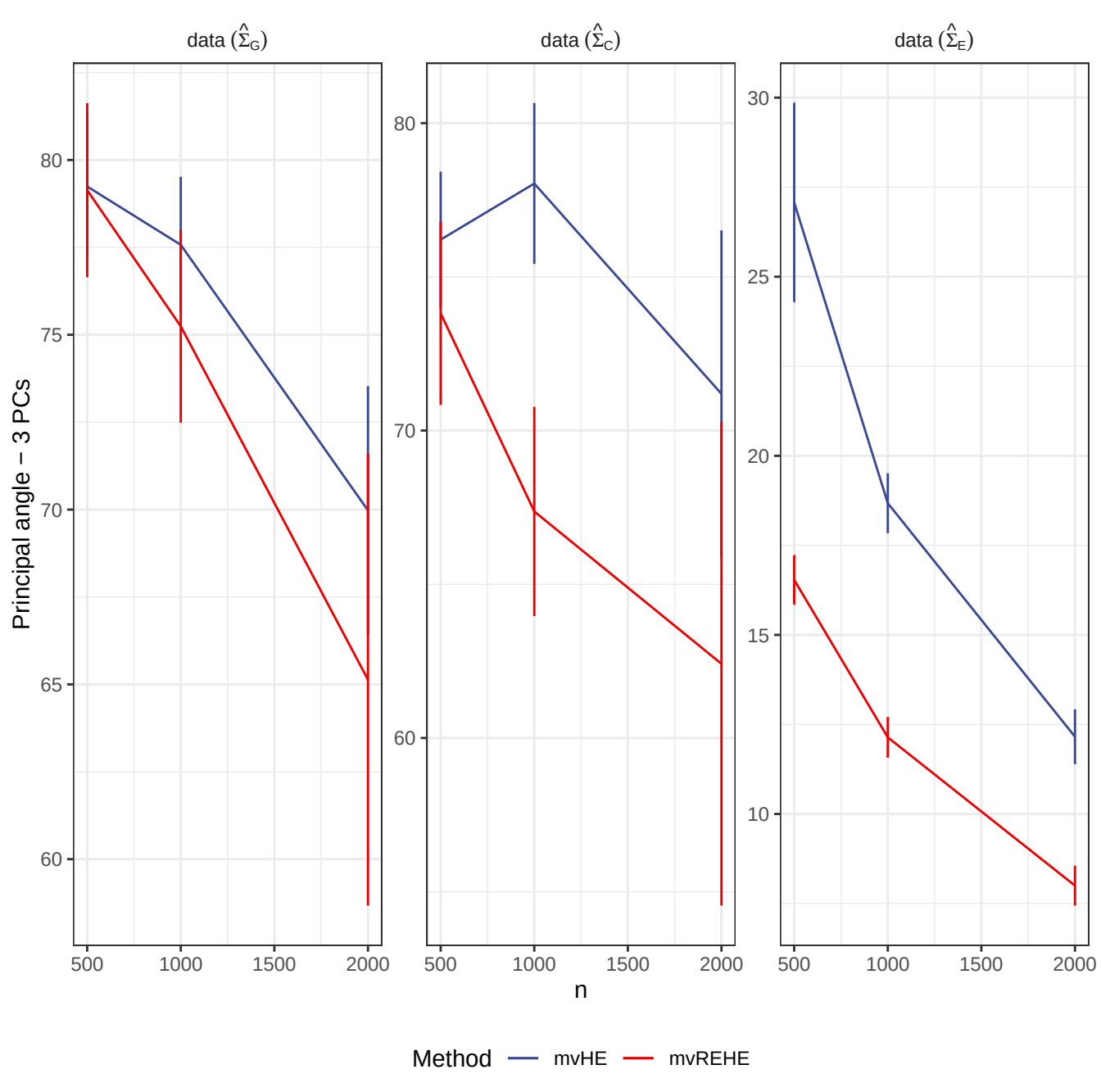

data
1.75
1.50
1.25
1.00
0.75
$E\|\hat{h}^2 - h^2\|_2$
500
1000
1500
2000
n
Multivariate
Univariate
Method
HE
REHE
REML


data ($\hat{\Sigma}_G$)
data ($\hat{\Sigma}_C$)
data ($\hat{\Sigma}_E$)
$E\|\hat{\Sigma}_k - \Sigma_k\|_2$
n
Method
mvHE
mvREHE


data ($\hat{\Sigma}_G$)
data ($\hat{\Sigma}_C$)
data ($\hat{\Sigma}_E$)
$E\|\hat{\Sigma}_k - \Sigma_k\|_F$
n
Method
mvHE
mvREHE


data ($\hat{\Sigma}_G$)
data ($\hat{\Sigma}_C$)
data ($\hat{\Sigma}_E$)
$E\|\hat{\beta}_k - \beta_k\|_2$
0.58
0.57
0.56
0.55
0.54
0.60
0.58
0.56
0.54
0.45
0.40
0.35
500
1000
1500
2000
n
Method
mvHE
mvREHE


data ($\hat{\Sigma}_G$)
data ($\hat{\Sigma}_C$)
data ($\hat{\Sigma}_E$)
Principal angle – 1 PC
n
Method
mvHE
mvREHE


data ($\hat{\Sigma}_G$)
data ($\hat{\Sigma}_C$)
data ($\hat{\Sigma}_E$)
Principal angle – 3 PCs
n
Method
mvHE
mvREHE