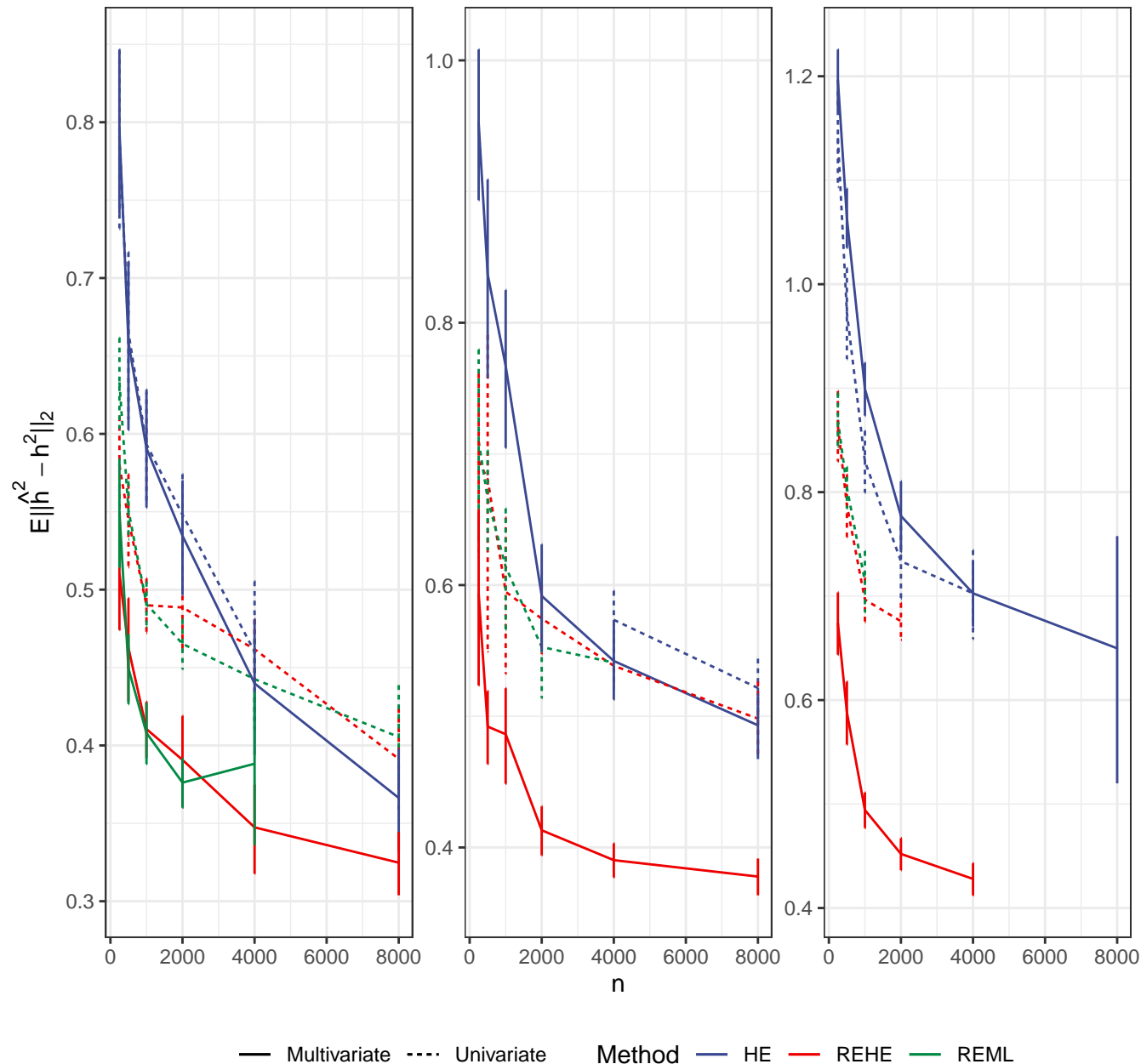
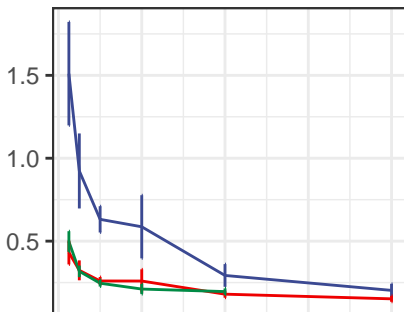
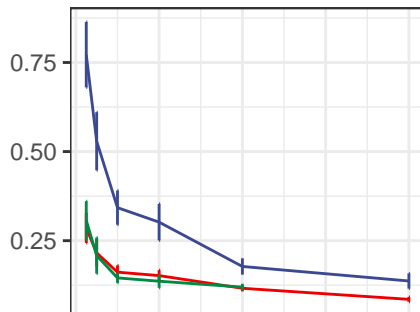
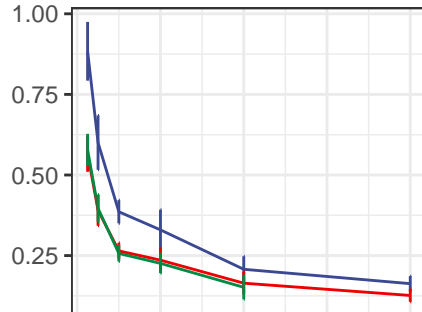
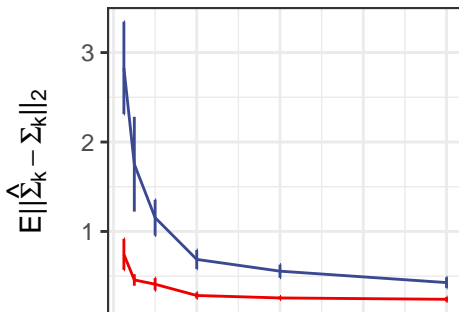
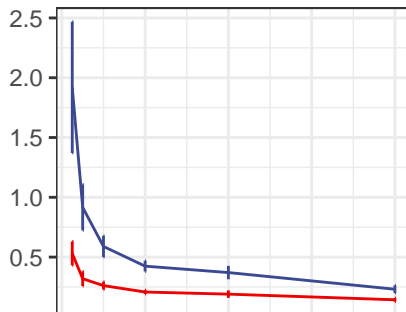
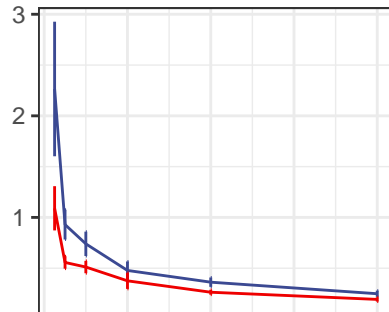
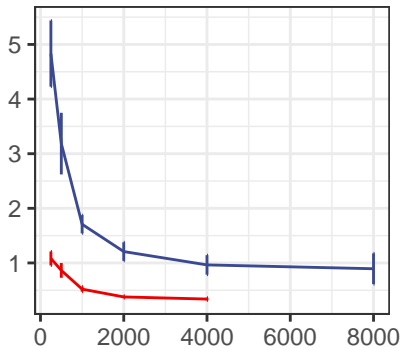
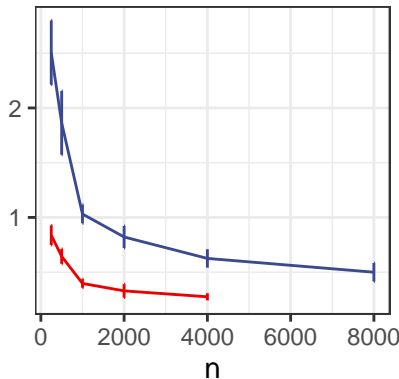
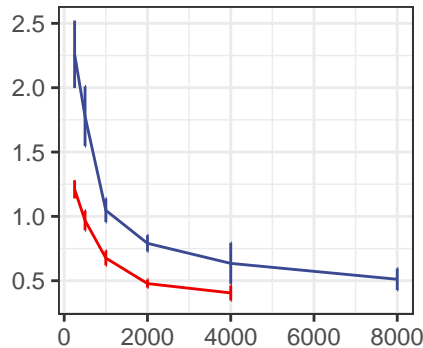


q = 5

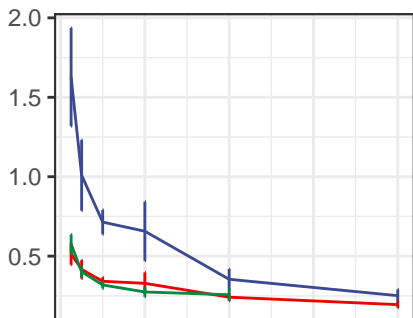
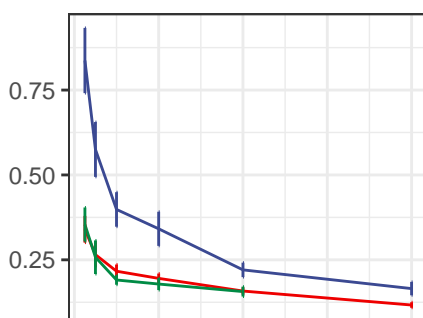
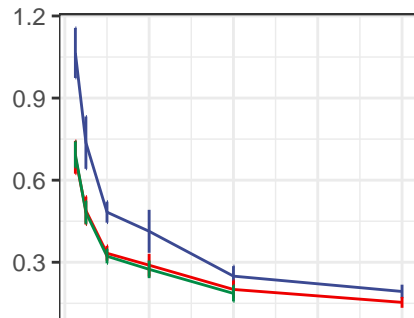
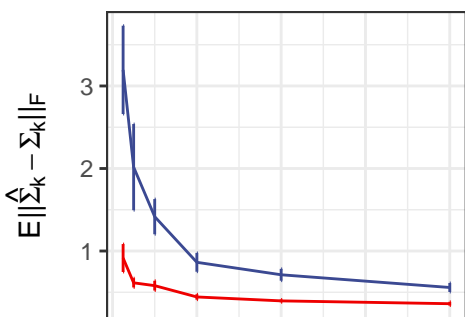
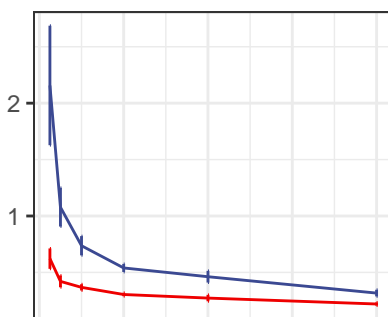
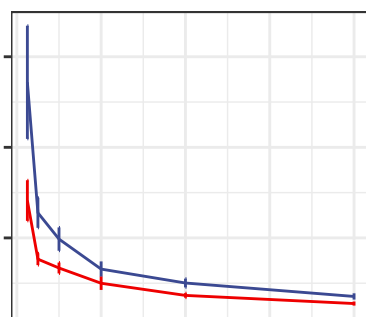
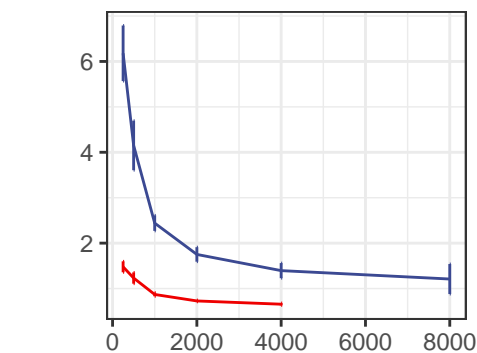
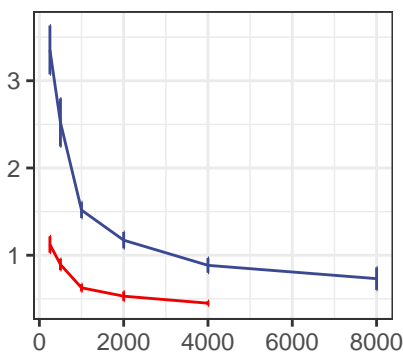
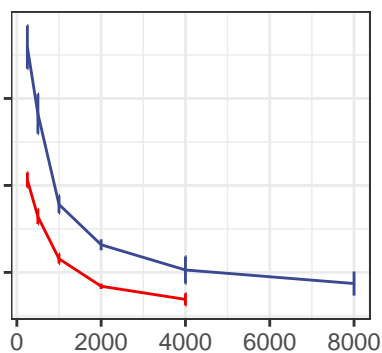
q = 10

q = 20

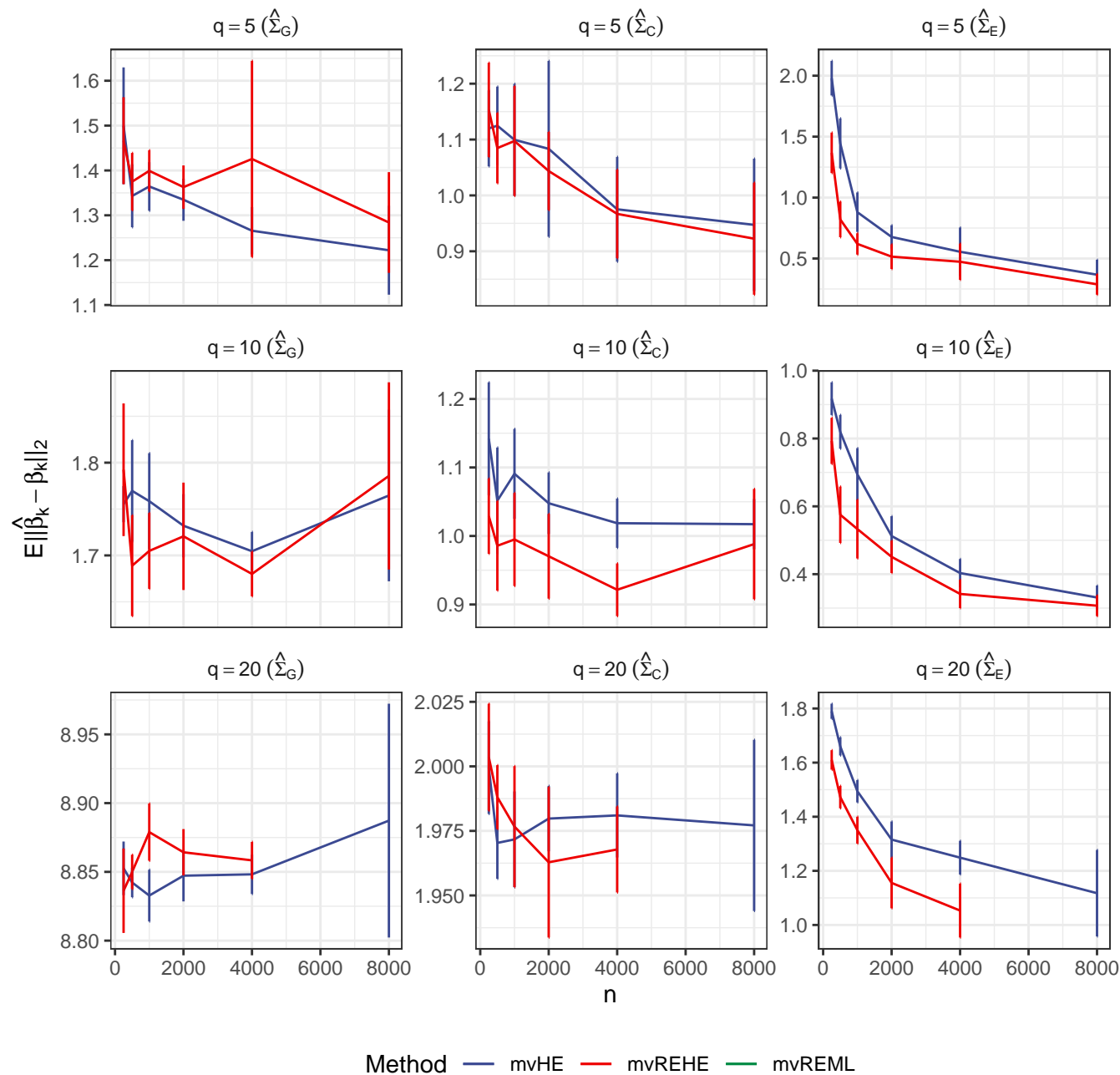


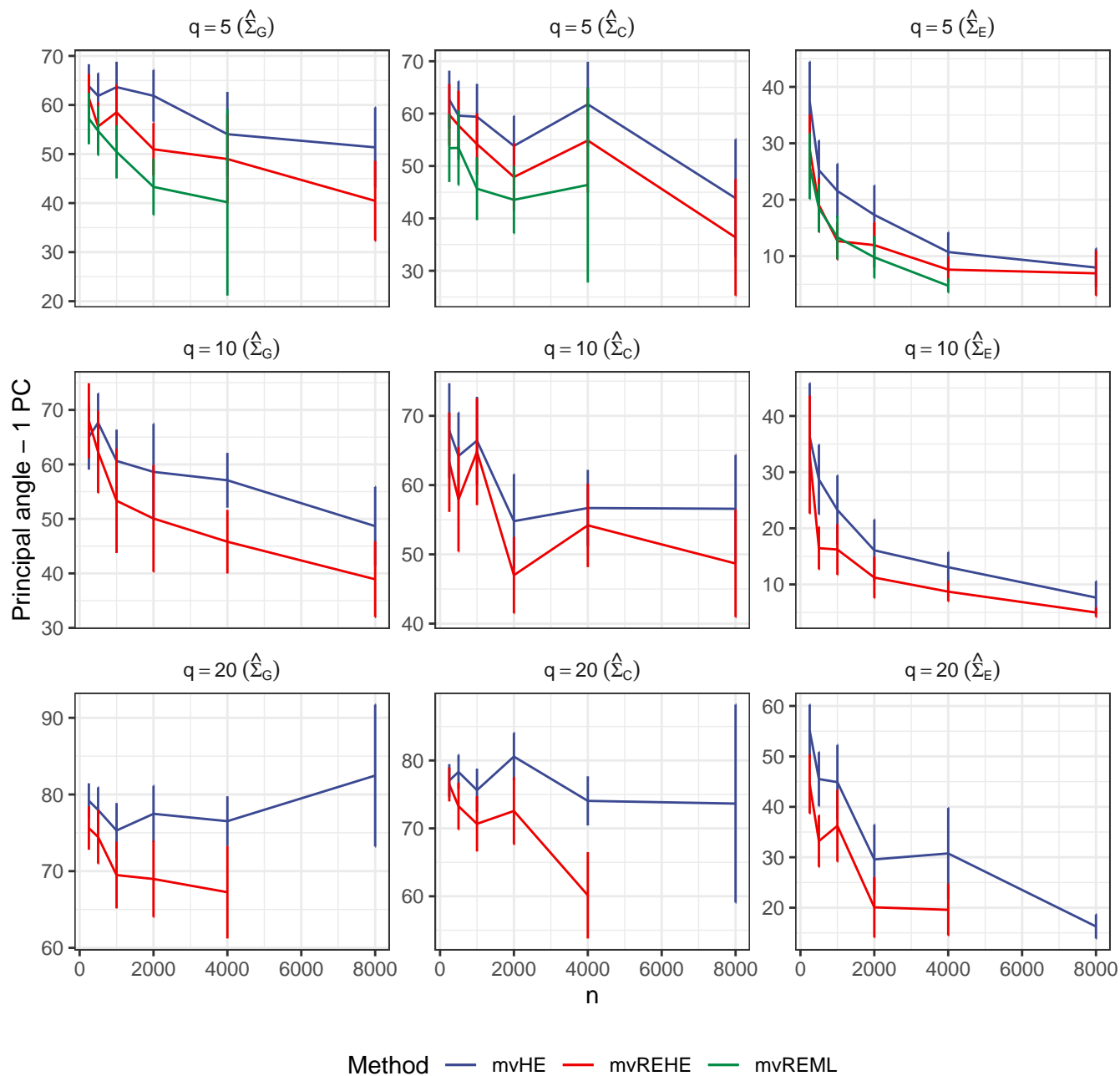
$q = 5 (\hat{\Sigma}_G)$  $q = 5 (\hat{\Sigma}_C)$  $q = 5 (\hat{\Sigma}_E)$  $q = 10 (\hat{\Sigma}_G)$  $q = 10 (\hat{\Sigma}_C)$  $q = 10 (\hat{\Sigma}_E)$  $q = 20 (\hat{\Sigma}_G)$  $q = 20 (\hat{\Sigma}_C)$  $q = 20 (\hat{\Sigma}_E)$ 

Method — mvHE — mvREHE — mvREML

$q = 5 (\hat{\Sigma}_G)$  $q = 5 (\hat{\Sigma}_C)$  $q = 5 (\hat{\Sigma}_E)$  $q = 10 (\hat{\Sigma}_G)$  $q = 10 (\hat{\Sigma}_C)$  $q = 10 (\hat{\Sigma}_E)$  $q = 20 (\hat{\Sigma}_G)$  $q = 20 (\hat{\Sigma}_C)$  $q = 20 (\hat{\Sigma}_E)$  n

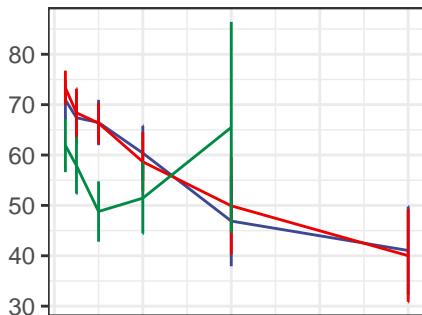
Method — mvHE — mvREHE — mvREML



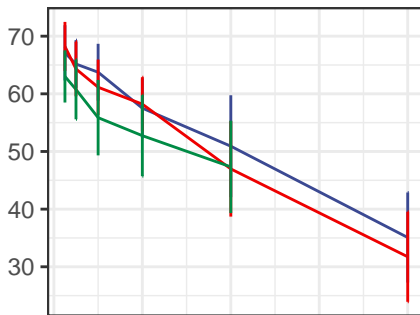


Max principal angle - 3 PCs

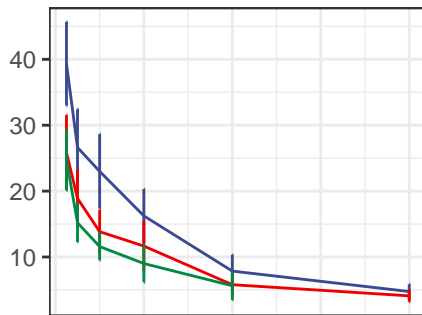
$q = 5$ ($\hat{\Sigma}_G$)



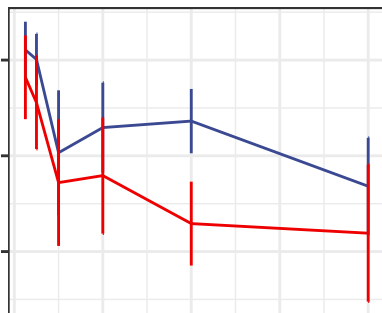
$q = 5$ ($\hat{\Sigma}_C$)



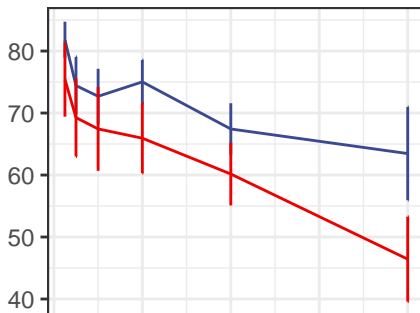
$q = 5$ ($\hat{\Sigma}_E$)



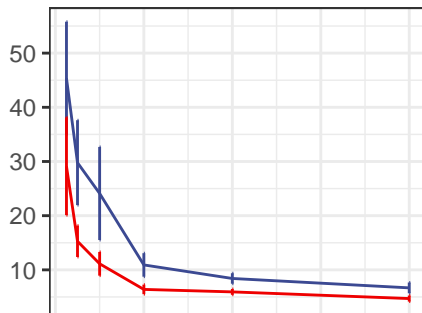
$q = 10$ ($\hat{\Sigma}_G$)



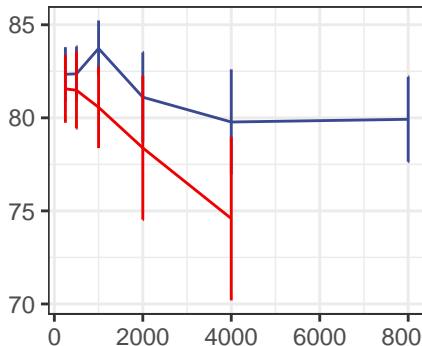
$q = 10$ ($\hat{\Sigma}_C$)



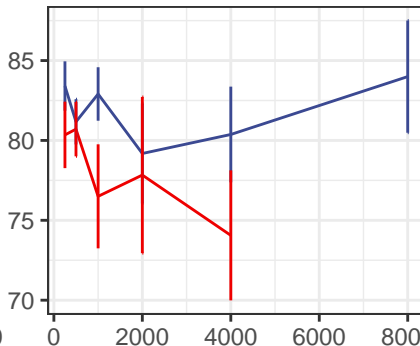
$q = 10$ ($\hat{\Sigma}_E$)



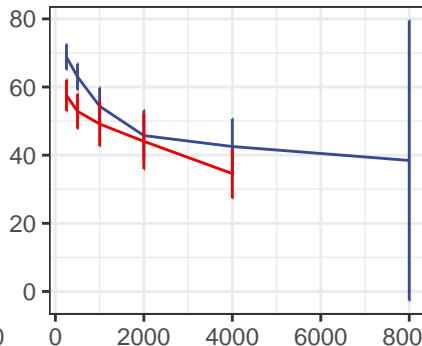
$q = 20$ ($\hat{\Sigma}_G$)



$q = 20$ ($\hat{\Sigma}_C$)



$q = 20$ ($\hat{\Sigma}_E$)



Method — mvHE — mvREHE — mvREML