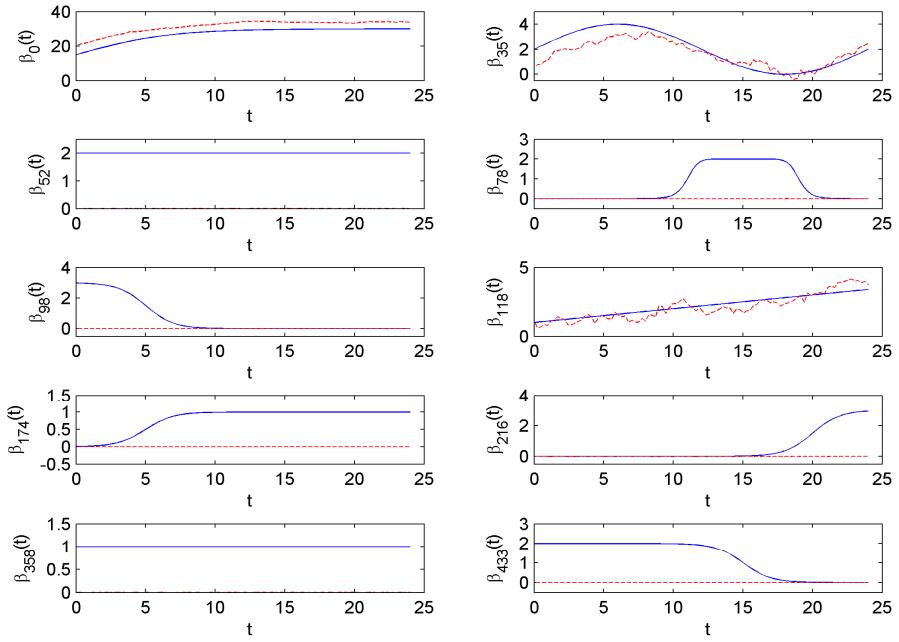


(a) Estimates of **VBfun** which assumed the AR(1) residual covariance structure



(b) Estimates of **VBnonfun** which assumed the AR(1) residual covariance structure

**Figure S6** Simulated data with  $k = 100$ ,  $u = 0.8$ : the estimated trend curves (red dashed lines) against the simulated trend curves (blue solid lines)