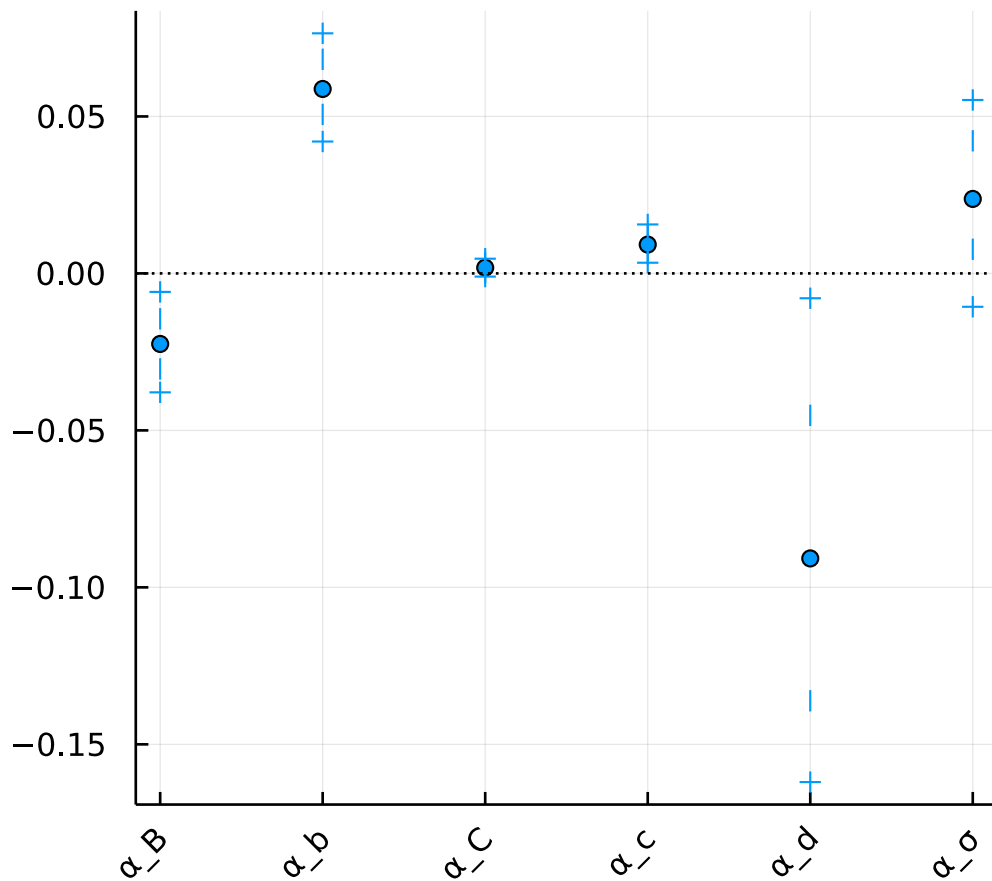Siler time series parameters GBR