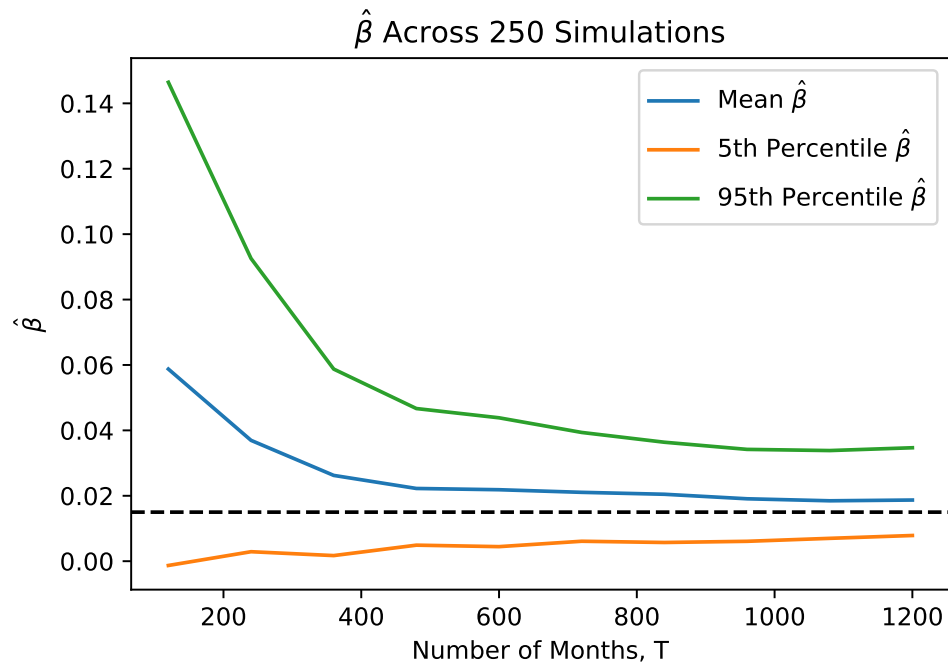


### Part 1 - Finite Sample Bias

**Figure 1 :** The figure shows the mean, 5th percentile, and 95th percentile beta estimates across B=250 simulated samples, generated with  $\rho_{uv} = -.8$ . The true  $\beta$  is indicated with a dashed line.



## Part 2 - Effect of residual correlation

**Figure 2 :** The figure shows the mean, 5th percentile, and 95th percentile beta estimates across B=250 simulated samples, generated with  $\rho_{uv} = -.8, -.5, \text{ or } -.2$ . The true  $\beta$  is indicated with a dashed line.

