

Bayesian Ridge Regression - Second Report

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Introduction

The value of \mathbf{x} is -0.06.

```
## [1] -0.149848
```

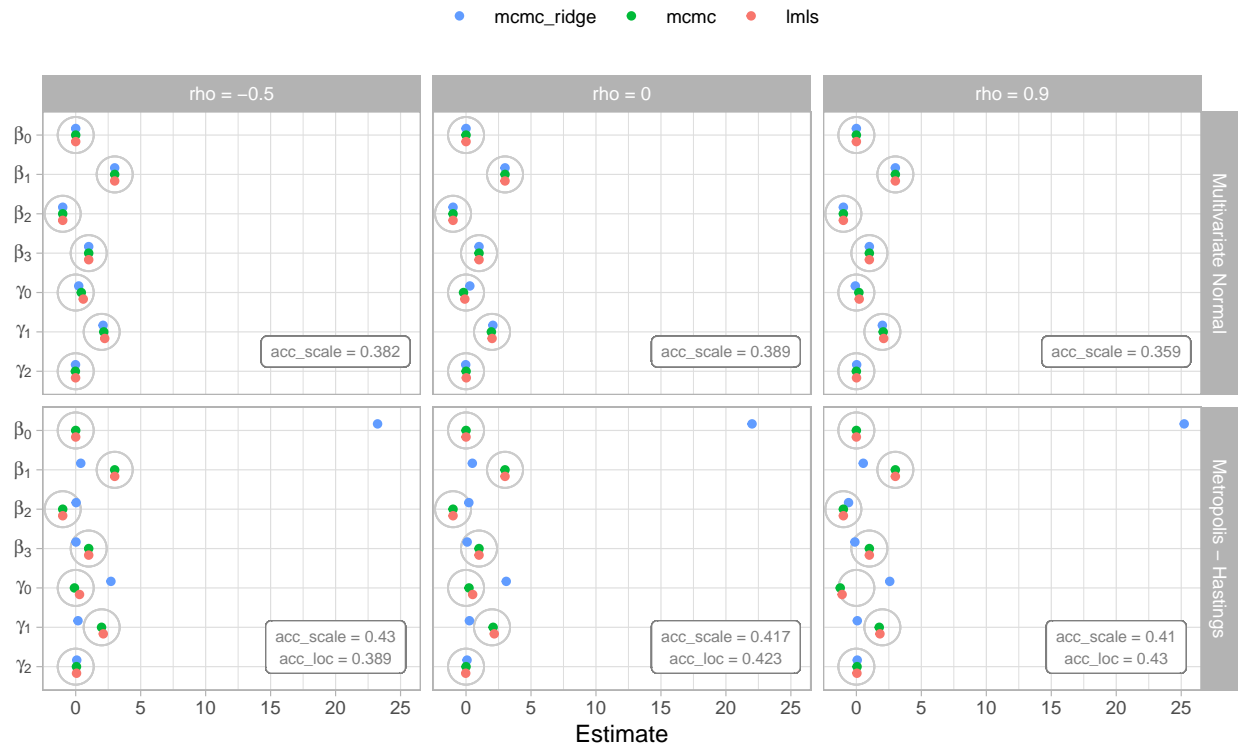
```
# eval = FALSE  
z <- mean(rnorm(100))  
z
```

1 Simulation Studies

1.1 Correlated Predictor Variables

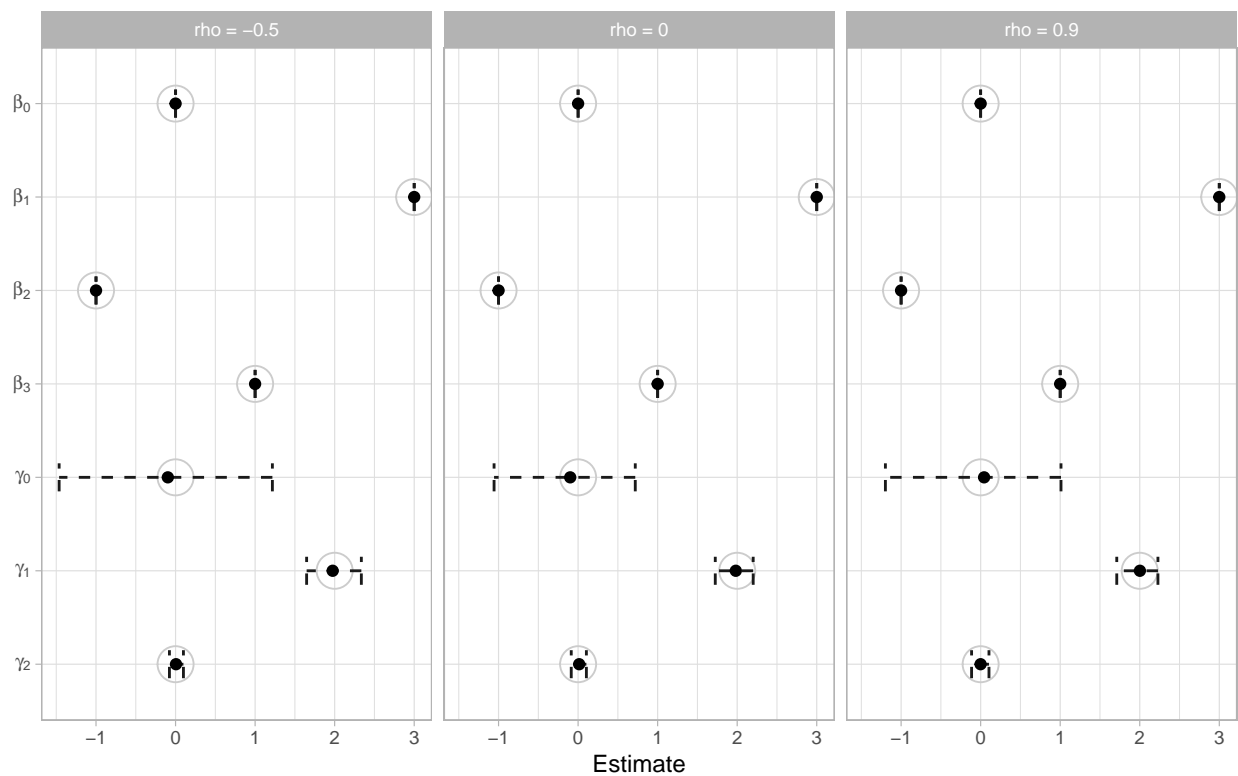
Model Performance for different Predictor Correlation Structures

True coefficient values are indicated by grey circles



Empirical 90% Confidence Intervals for Posterior Mean Estimates

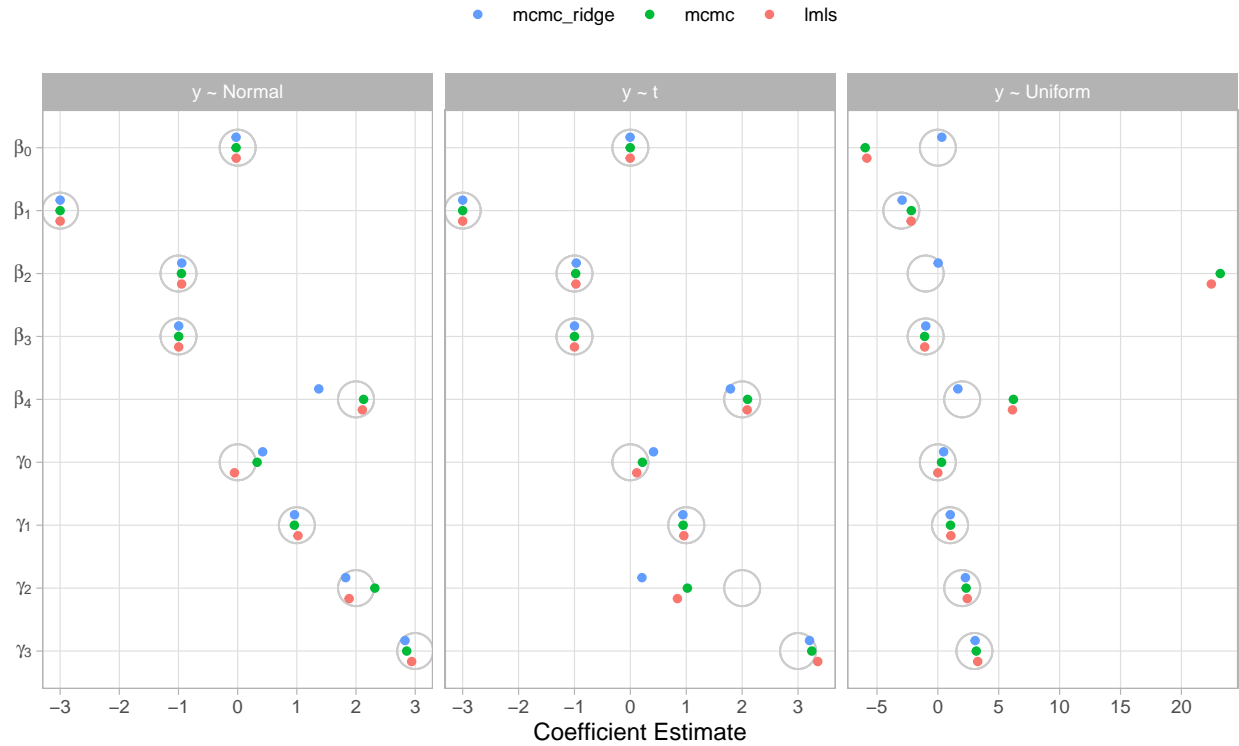
True coefficient values are marked by grey circles



1.2 Challenging the Model Assumptions

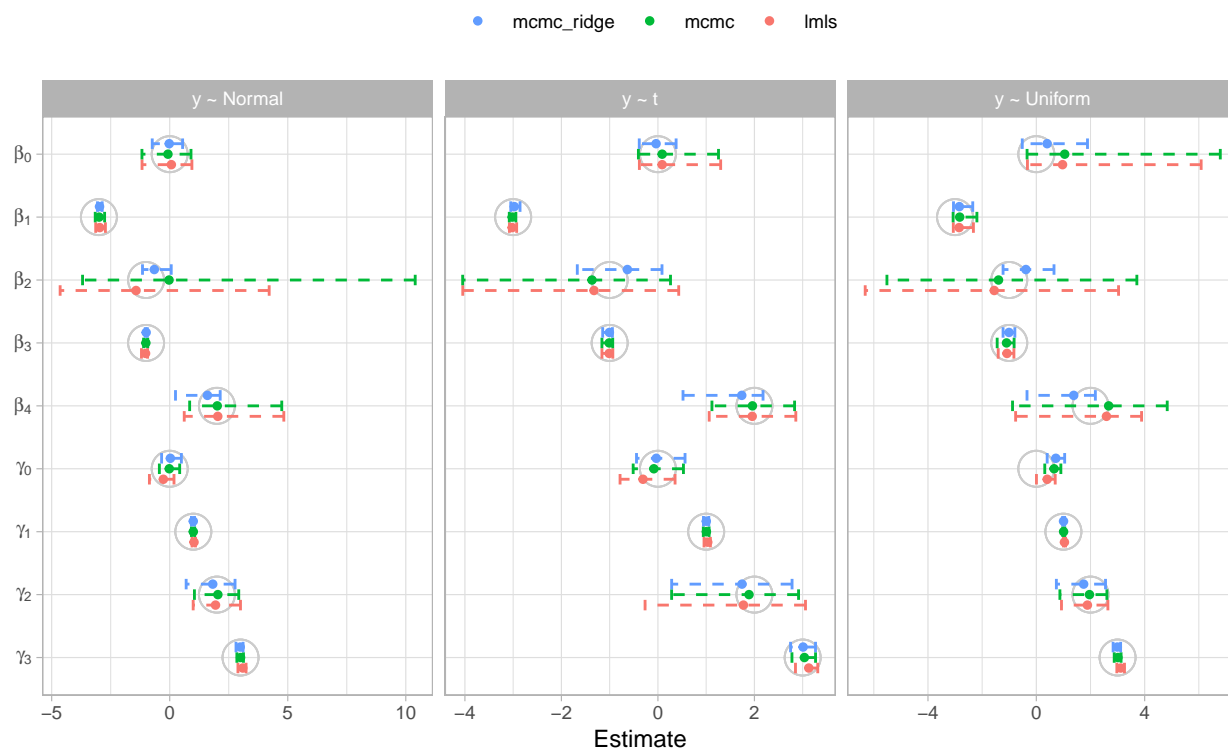
Posterior Means / MLE for (misspecified) Regression Models

True coefficient values are marked by grey circles

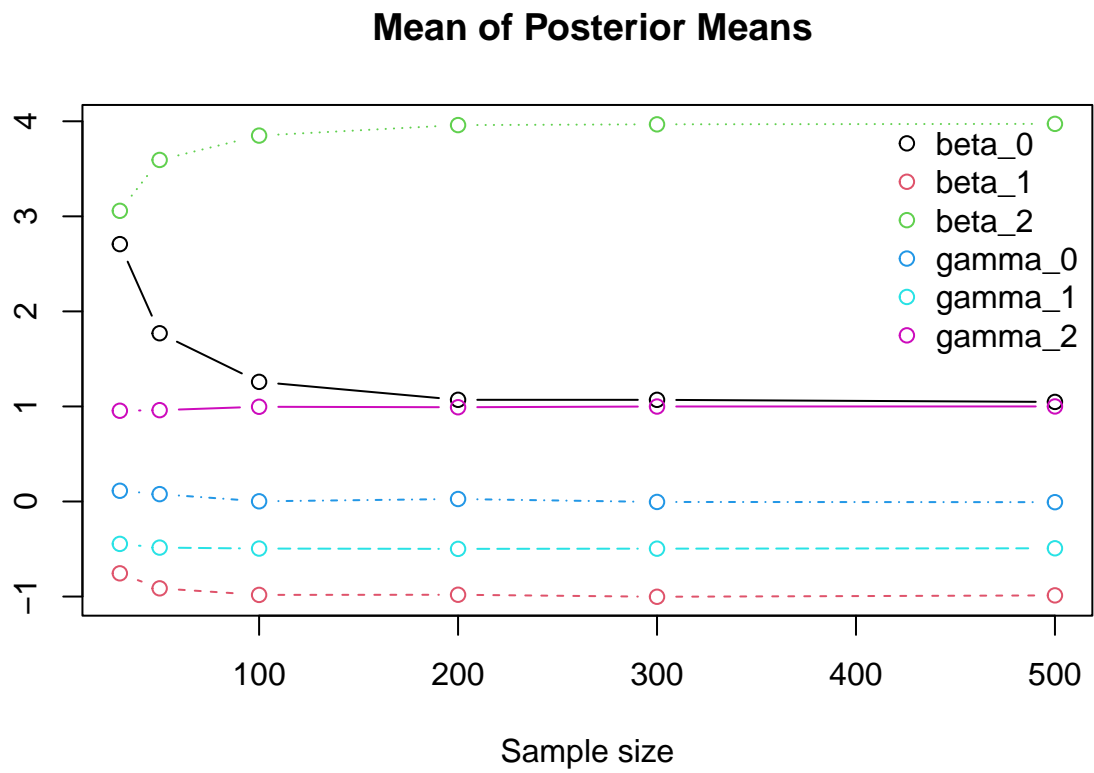


Empirical 90% Confidence Intervals for Posterior Mean Estimates

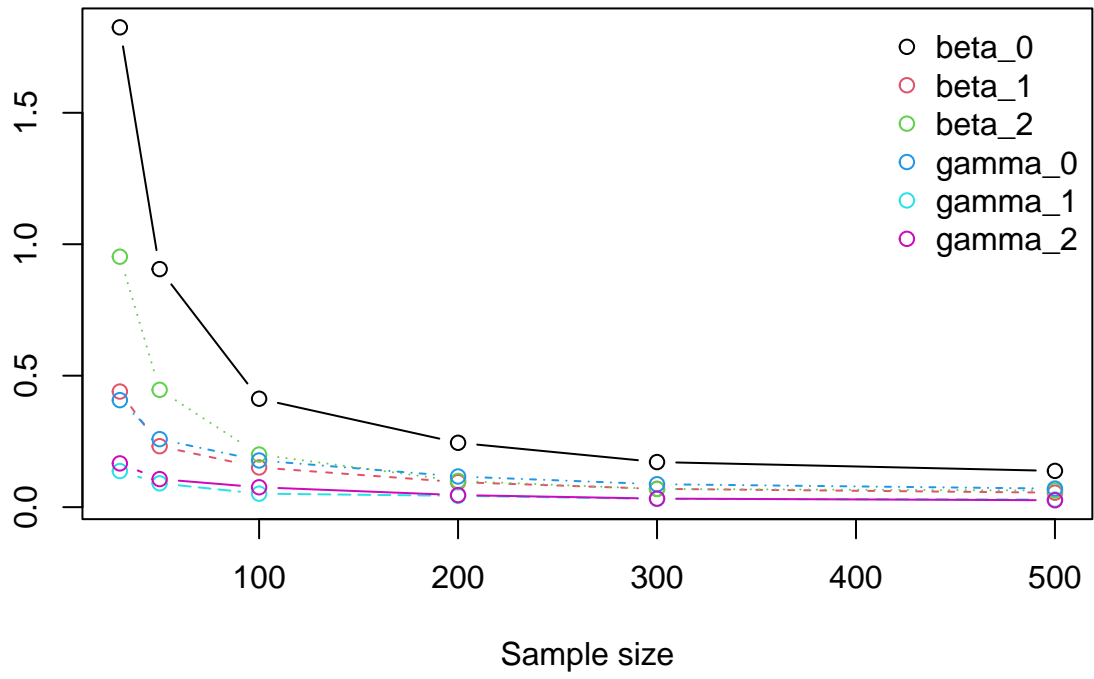
True coefficient values are marked by grey circles



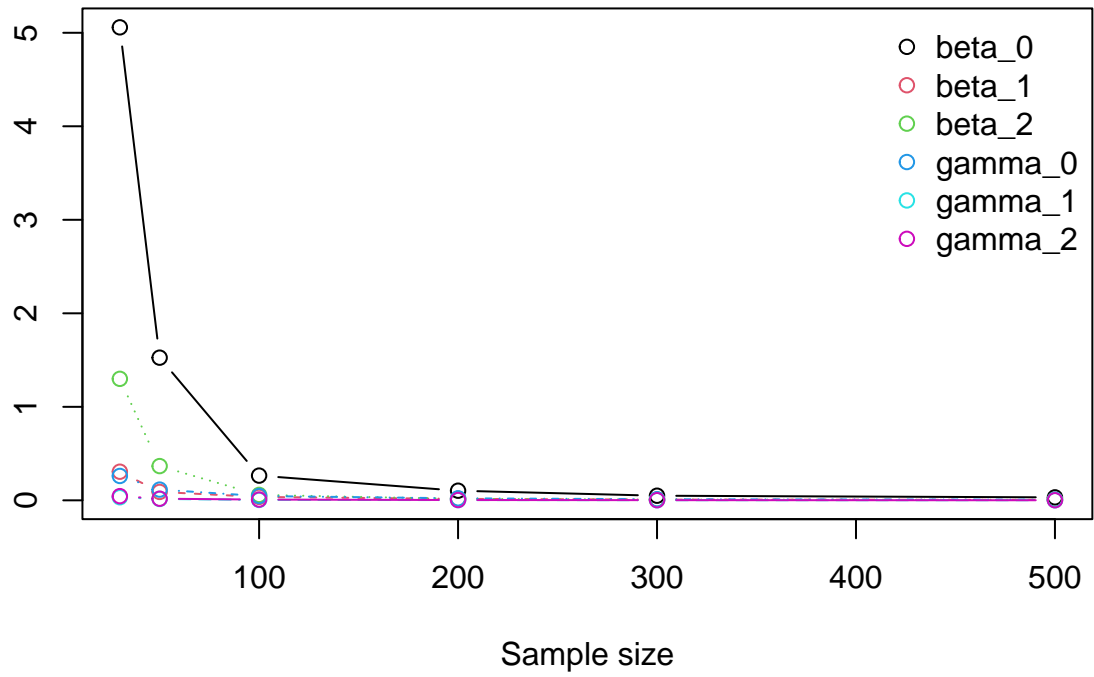
1.3 Sample Size



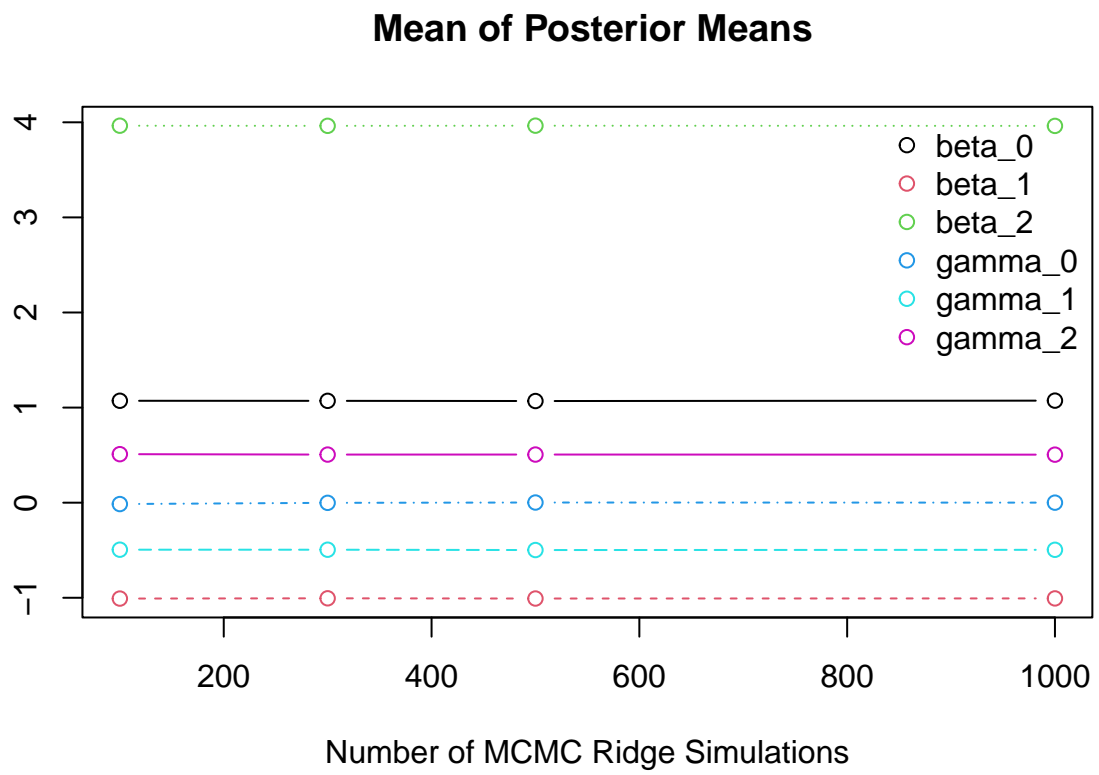
MAE of Posterior Means



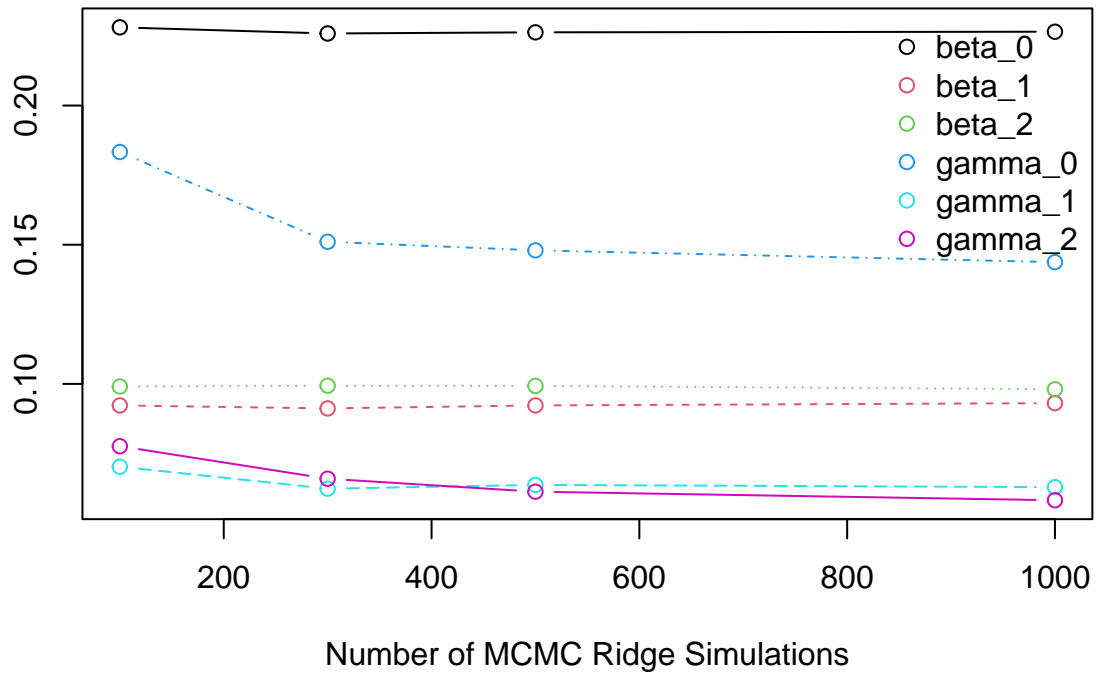
MSE of Posterior Means



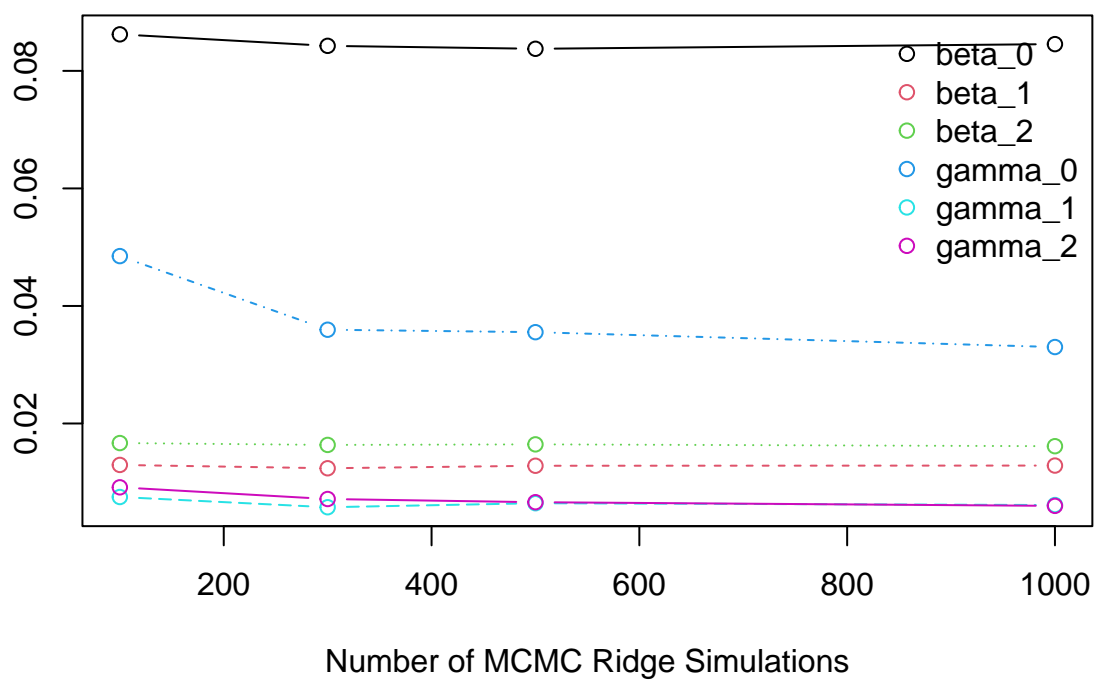
1.4 Number of Simulations

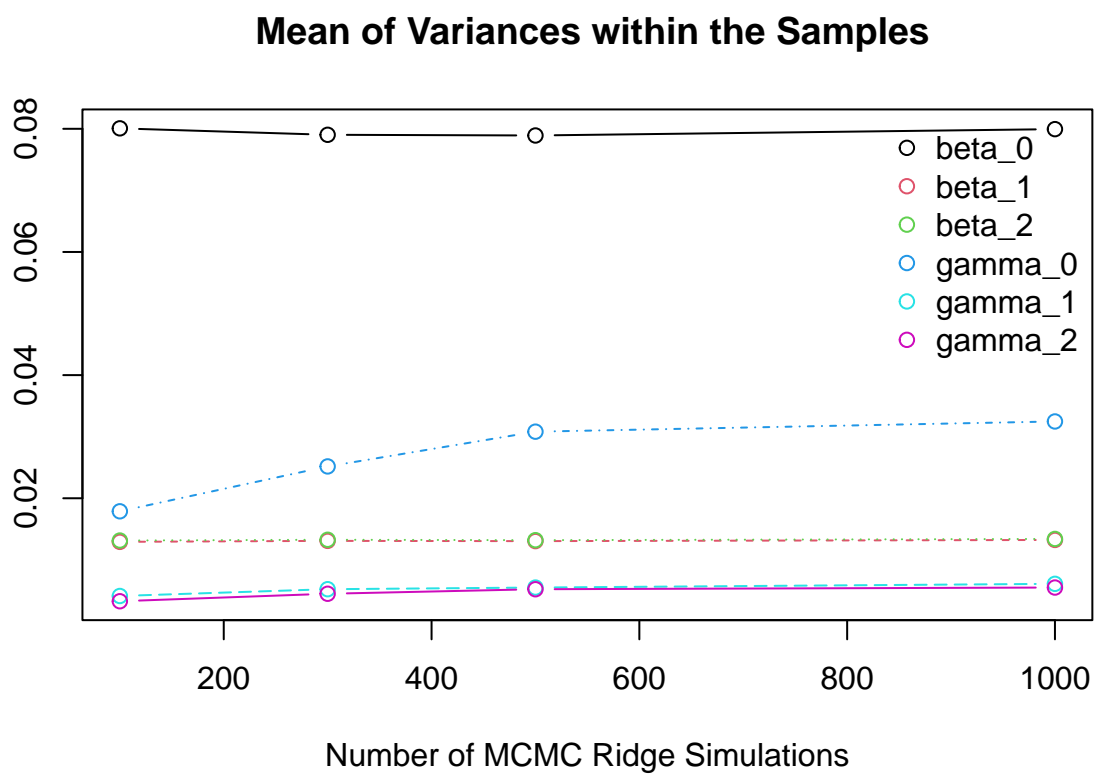


MAE of Posterior Means



MSE of Posterior Means





1.5 Hyperparameters

Next Steps