Complete data simulation-Method 1

7/18/2017

```
##run n_iter=10000 iterations
burnin=5000
##posterior mean
(posterior.mean.eta=apply(eta_keep[-(1:burnin),],2, mean))
```

```
## [1]  0.0000000  2.4876045  1.4533125 -0.4400211
```

```
(posterior.mean.M=apply(M_keep[-(1:burnin),],2, mean))
```

```
## [1]  0.0000000  0.5969996  1.1991621 -0.5972875
```

```
(posterior.mean.v=apply(v_keep[-(1:burnin),],2, mean))
```

```
## [1]  0.4876921 -0.3029863
```

```
(posterior.mean.beta=apply(beta_keep[-(1:burnin),],2, mean))
```

```
## [1] -0.4509654  0.3208147
```

```
(posterior.mean.sgmr2=mean(sgmr2_keep[-(1:burnin)]))
```

```
## [1] 1.152137
```

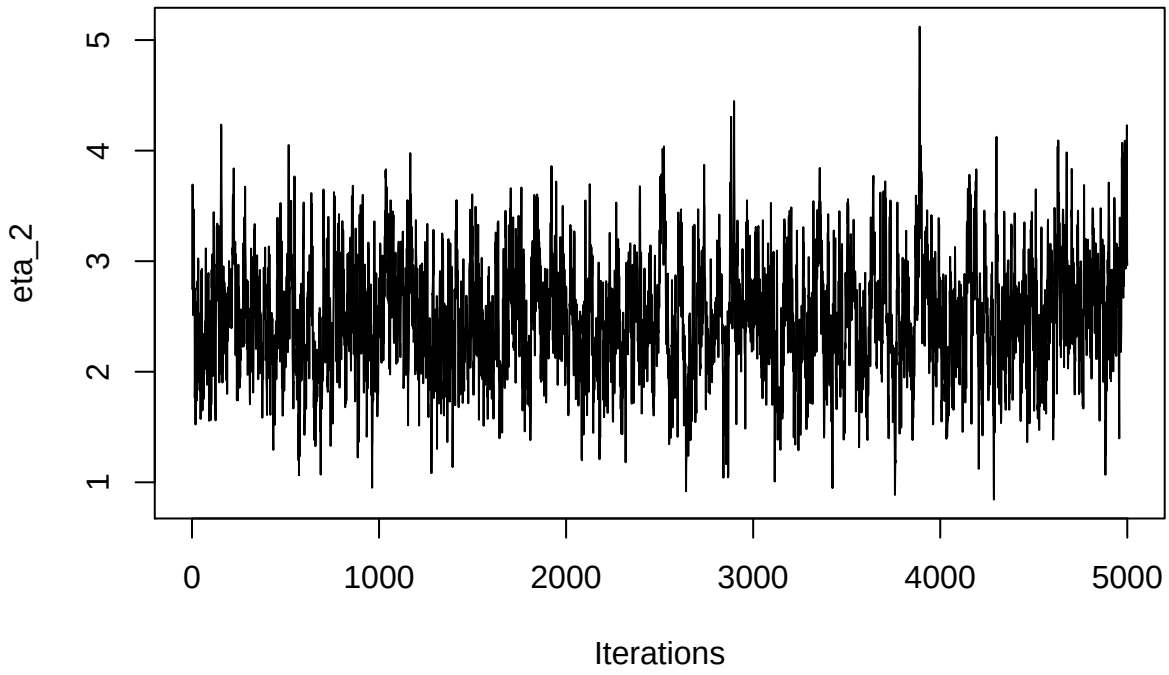
```
(posterior.mean.sgm2=mean(sgm2_keep[-(1:burnin)]))
```

```
## [1] 1.076466
```

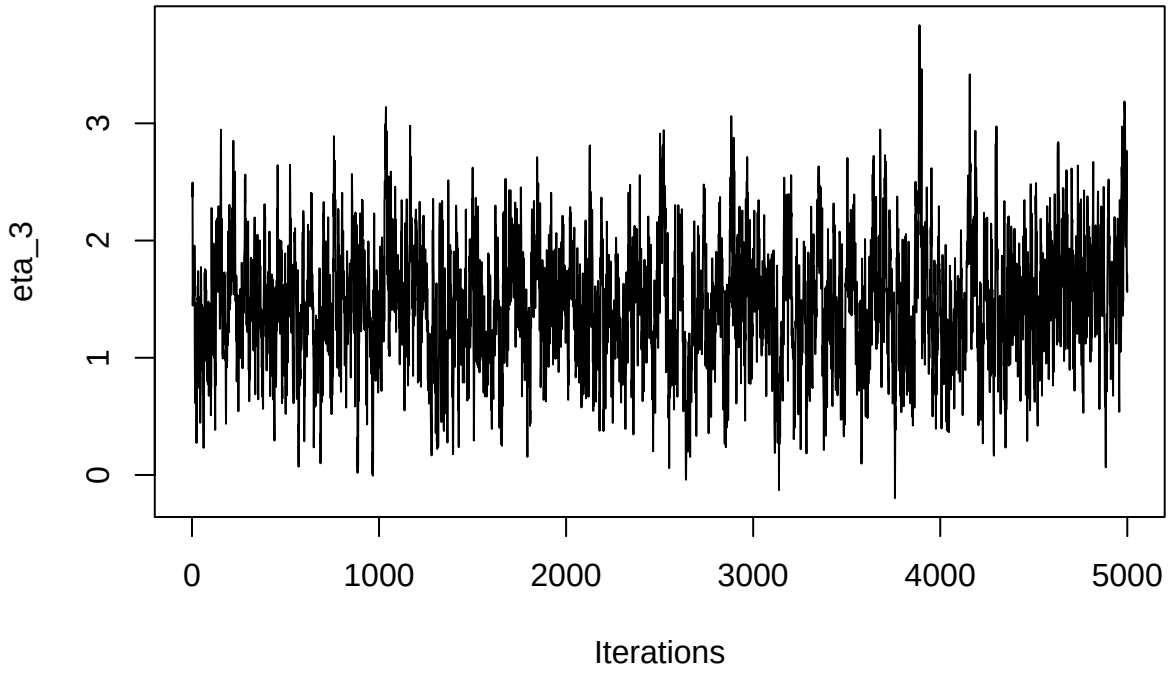
```
(posterior.mean.E=mean(E_keep[-(1:burnin)]))
```

```
## [1] 1.693353
```

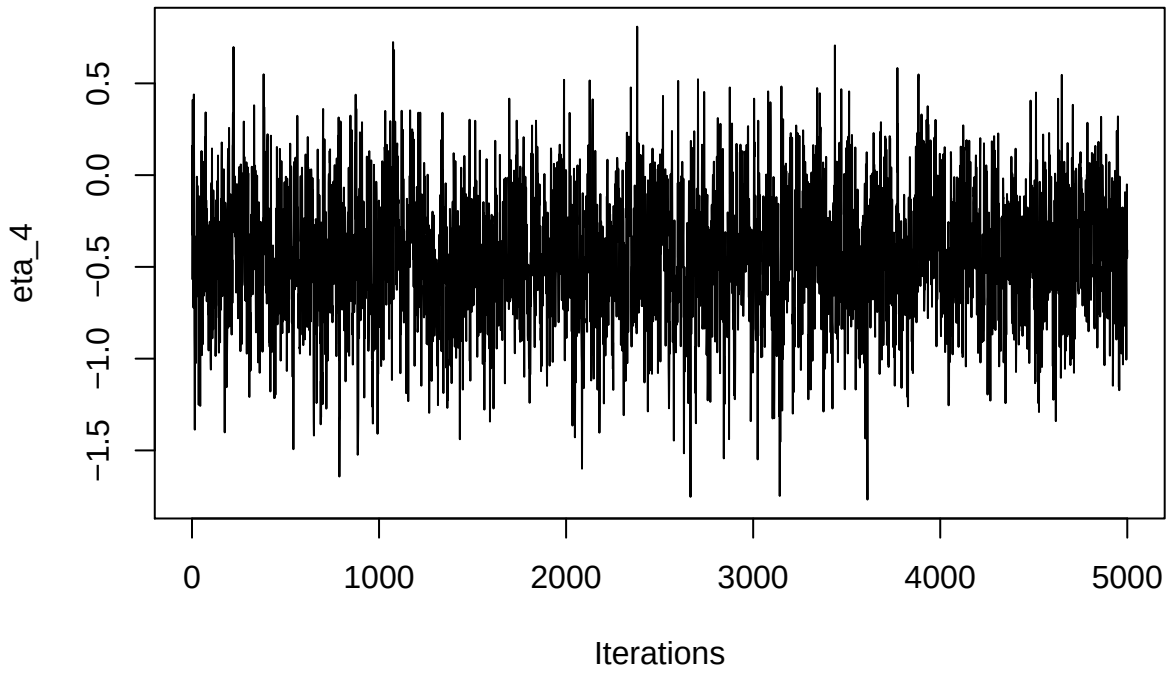
```
##traceplots after burn-in

##ture value of eta2 is 0.5
traceplot(x=as.mcmc(eta_keep[-(1:burnin),2]), ylab="eta_2")
```



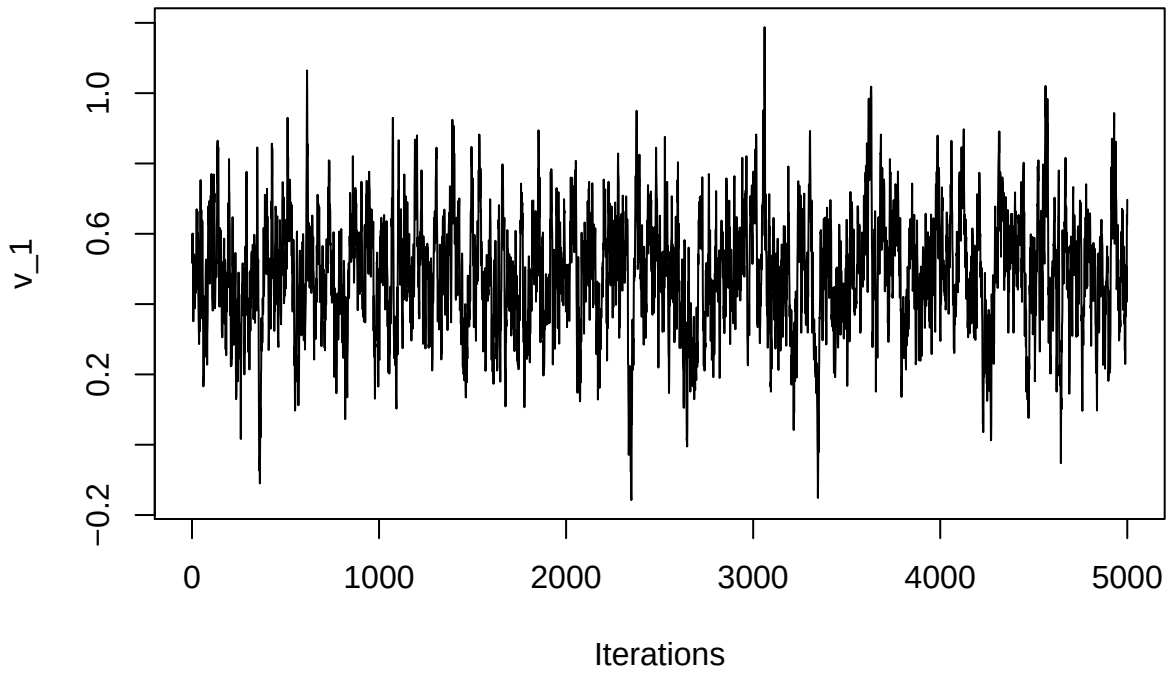

```
##true value of eta3 is 1.5
traceplot(x=as.mcmc(eta_keep[-(1:burnin),3]), ylab="eta_3")
```



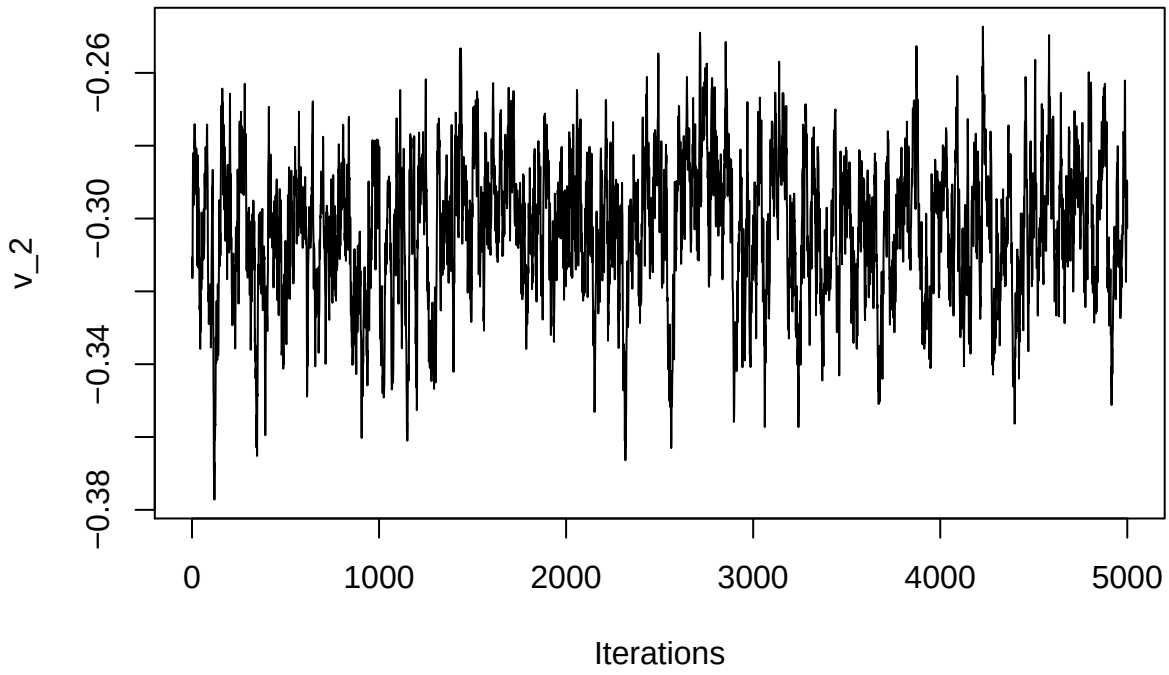

```
##true value of eta4 is 1
traceplot(x=as.mcmc(eta_keep[-(1:burnin),4]), ylab="eta_4")
```



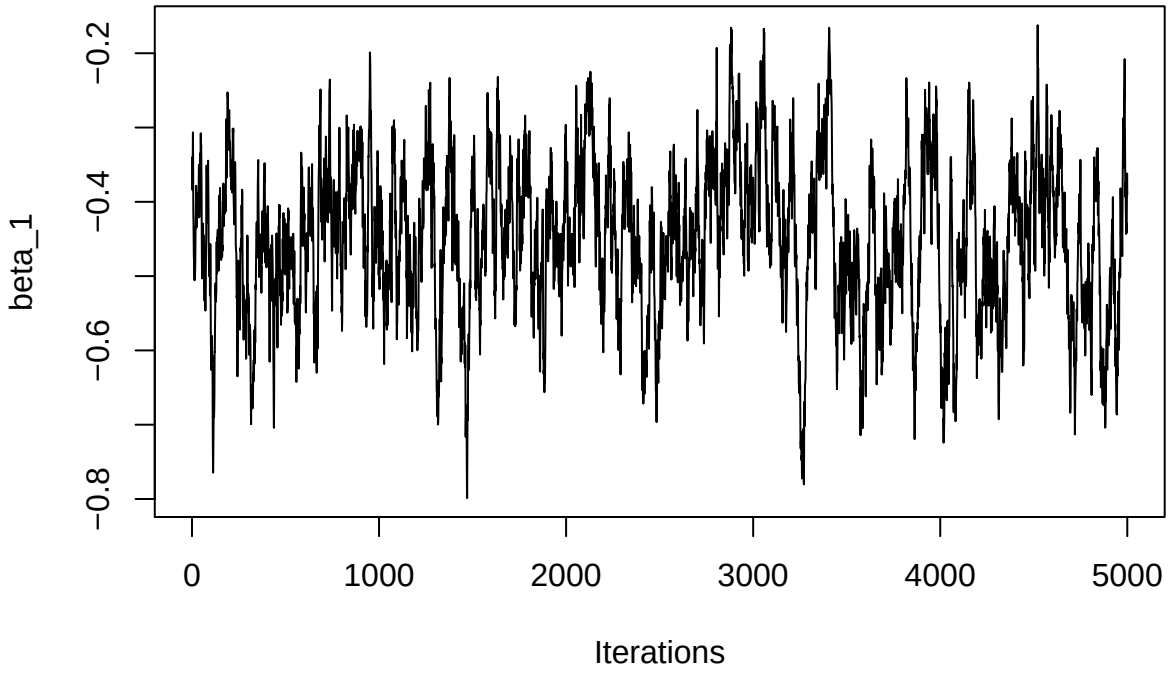

```
##true value of v1 is 0.5
traceplot(x=as.mcmc(v_keep[-(1:burnin),1]), ylab="v_1")
```



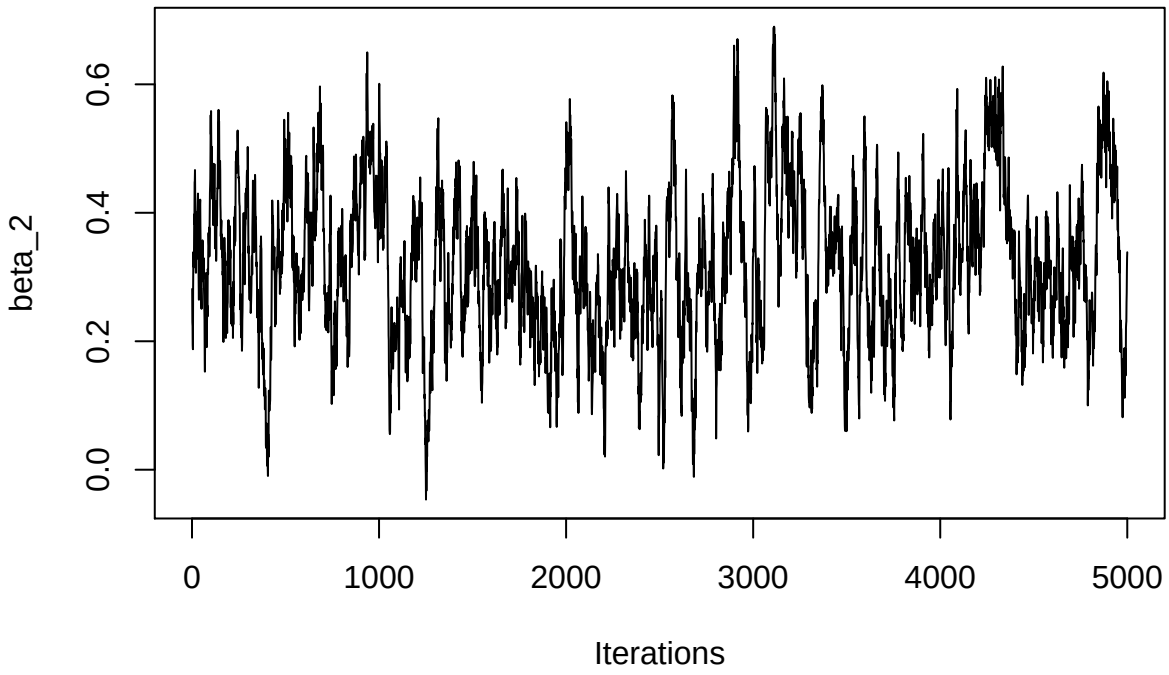

```
##true value of v2 is -0.3
traceplot(x=as.mcmc(v_keep[-(1:burnin),2]), ylab="v_2")
```



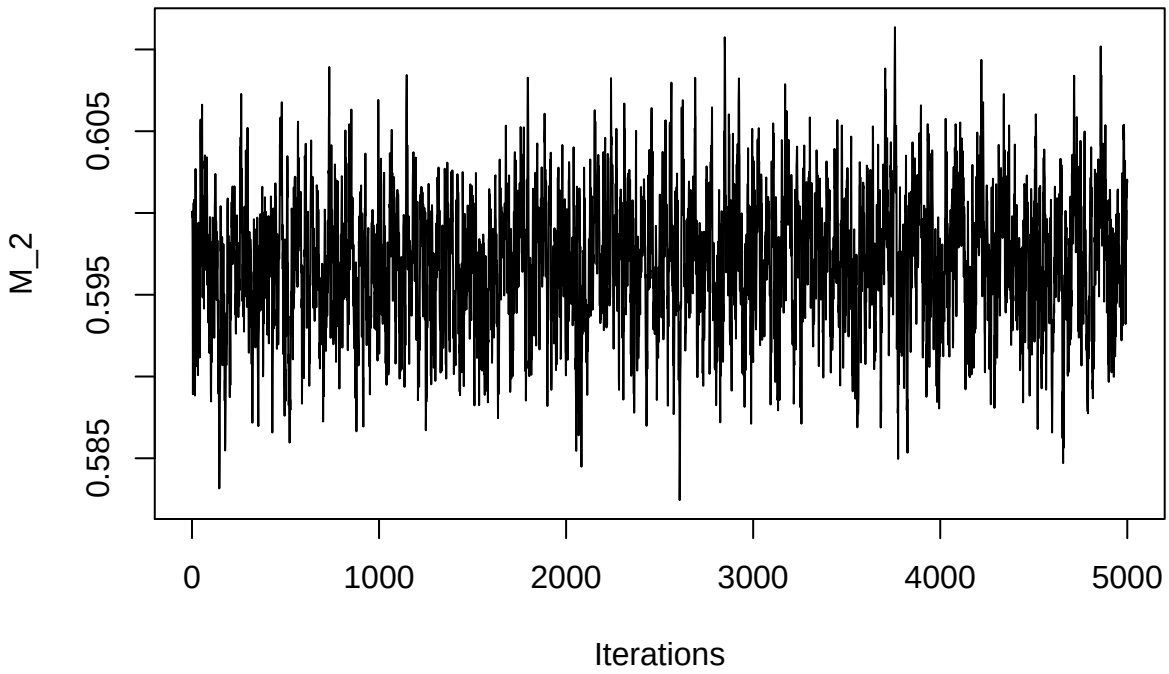

```
##true value of beta1 is -0.4
traceplot(x=as.mcmc(beta_keep[-(1:burnin),1]), ylab="beta_1")
```



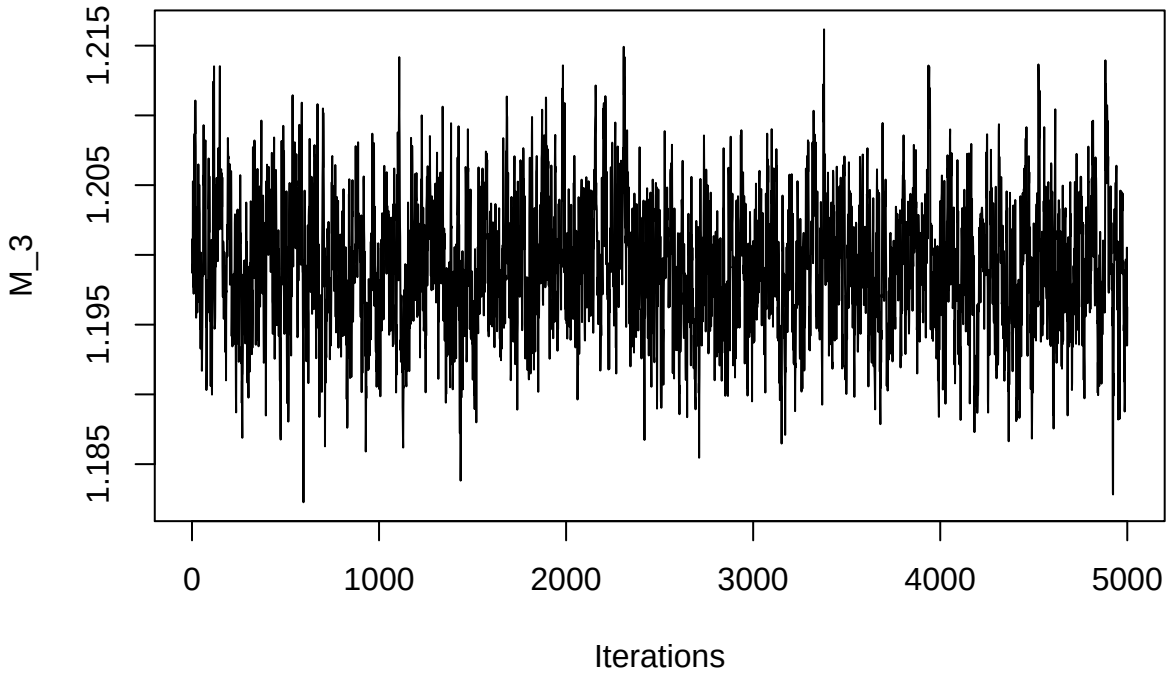

```
##true value of beta2 is 0.5
traceplot(x=as.mcmc(beta_keep[-(1:burnin),2]), ylab="beta_2")
```



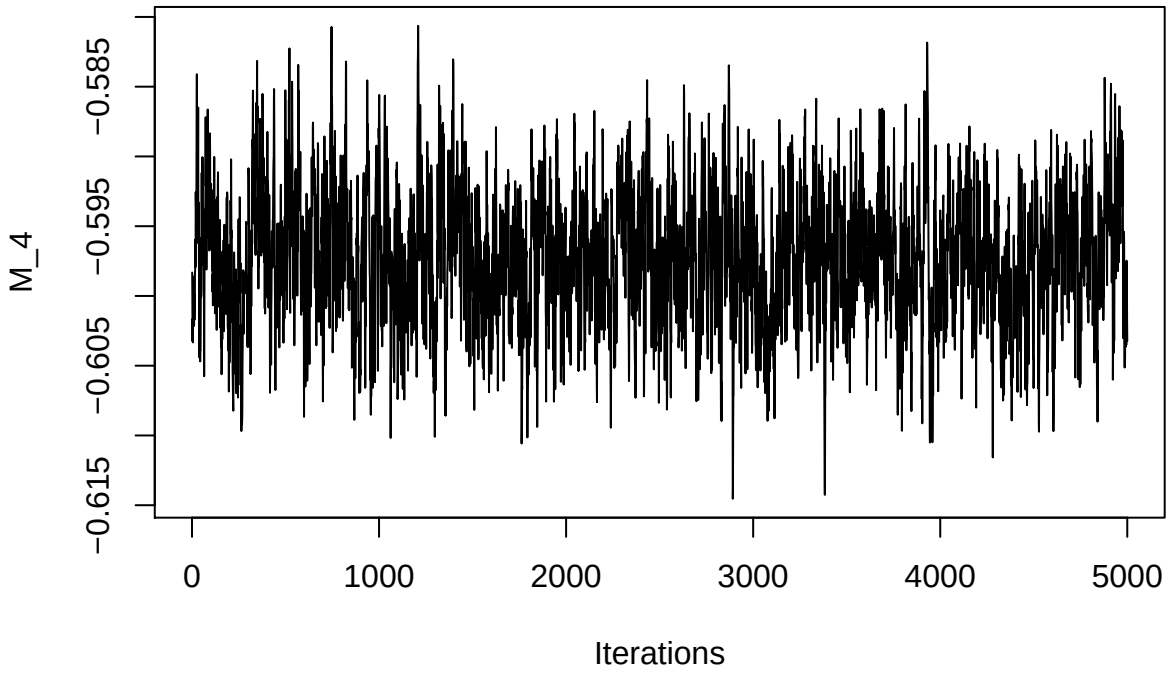

```
##true value of M2 is -0.6
traceplot(x=as.mcmc(M_keep[-(1:burnin),2]), ylab="M_2")
```



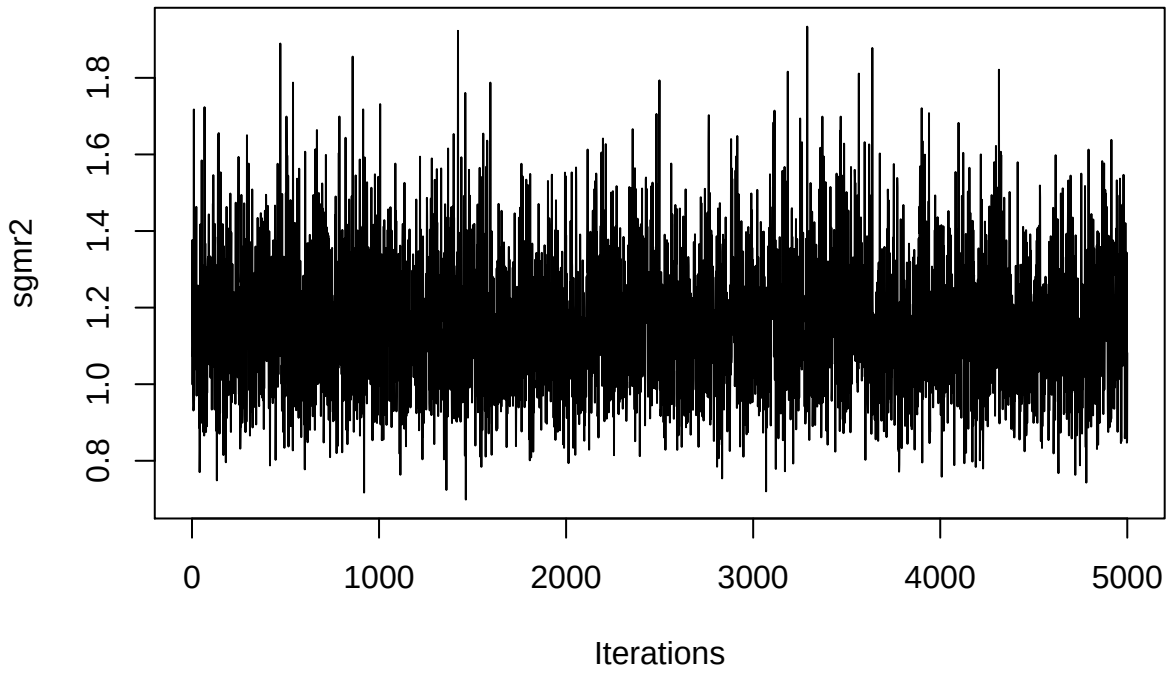

```
##true value of M3 is 0.6
traceplot(x=as.mcmc(M_keep[-(1:burnin),3]), ylab="M_3")
```



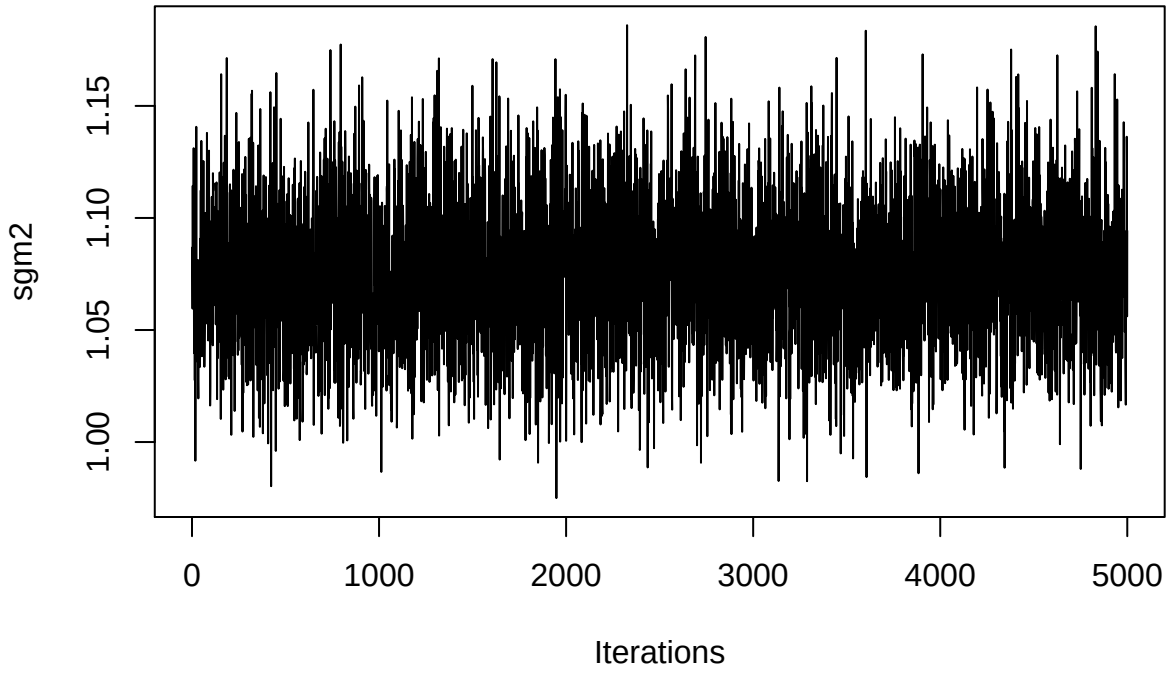

```
##true value of M4 is 1.2
traceplot(x=as.mcmc(M_keep[-(1:burnin),4]), ylab="M_4")
```



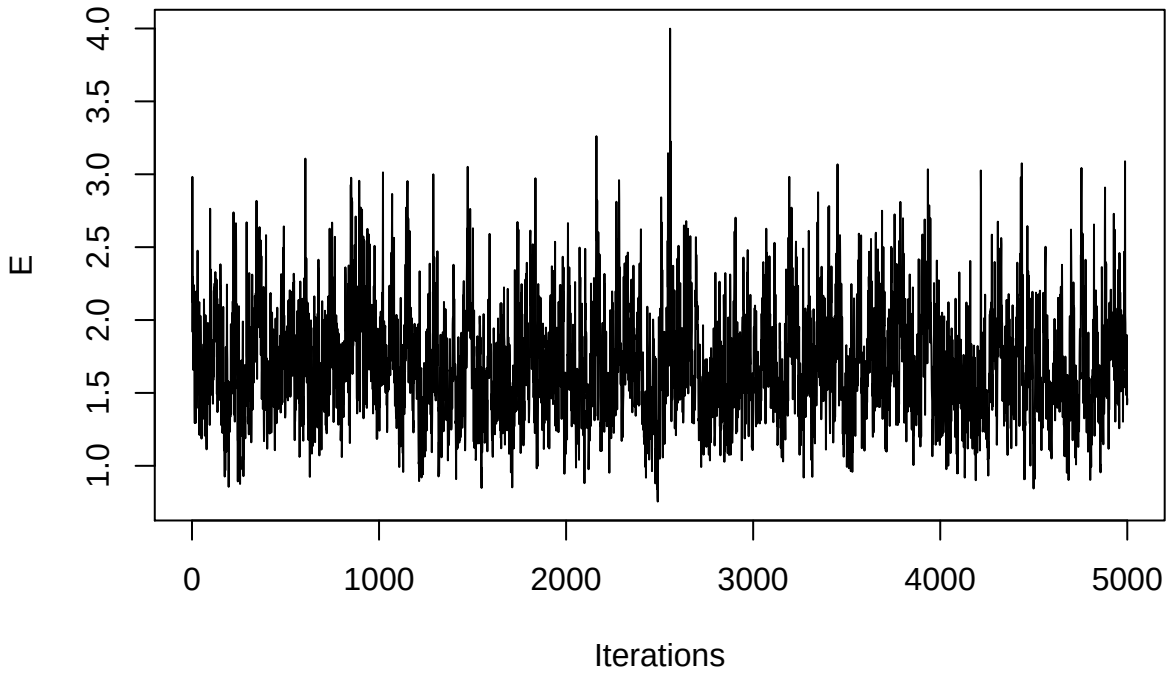

```
##true value of sgmr2 is 1
traceplot(x=as.mcmc(sgmr2_keep[-(1:burnin)]), ylab="sgmr2")
```




```
##true value of sgm2 is 1
traceplot(x=as.mcmc(sgm2_keep[-(1:burnin)]), ylab="sgm2")
```




```
##true value of E is 1
traceplot(x=as.mcmc(E_keep[-(1:burnin)]), ylab="E")
```


E
1.0
1.5
2.0
2.5
3.0
3.5
4.0
0
1000
2000
3000
4000
5000
Iterations