Complete data simulation-Method 2

7/19/2017

```
##run n_iter=10000 iterations
time
```

```
##     user   system  elapsed
## 2439.175  151.836 2627.456
```

```
burnin=5000
(posterior.mean.eta=apply(eta_keep[-(1:burnin),],2, mean))
```

```
## [1]  0.0000000  2.4031176  1.3585534 -0.4722044
```

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

```
## [1]  0.0000000  0.5970990  1.1993183 -0.5971426
```

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

```
## [1]  0.4961513 -0.3066278
```

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

```
## [1] -0.4530501  0.3043924
```

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

```
## [1] 1.154069
```

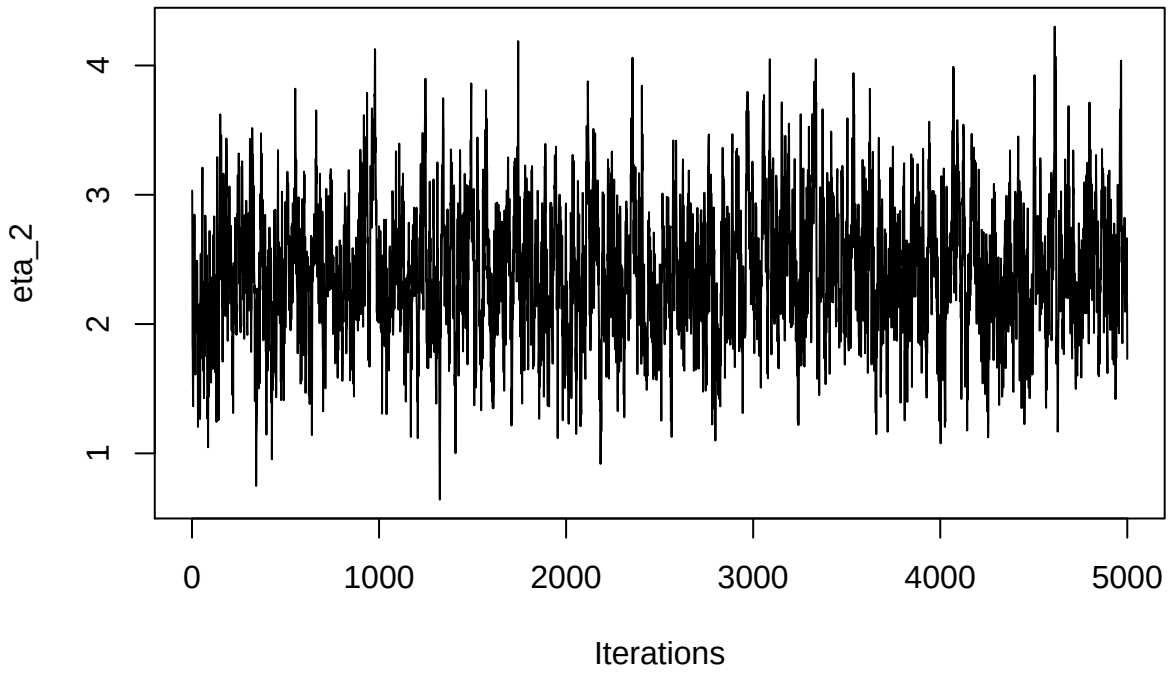
```
(posterior.mean.sgm2=mean(sgm2_keep[-(1:burnin)]))
```

```
## [1] 1.075933
```

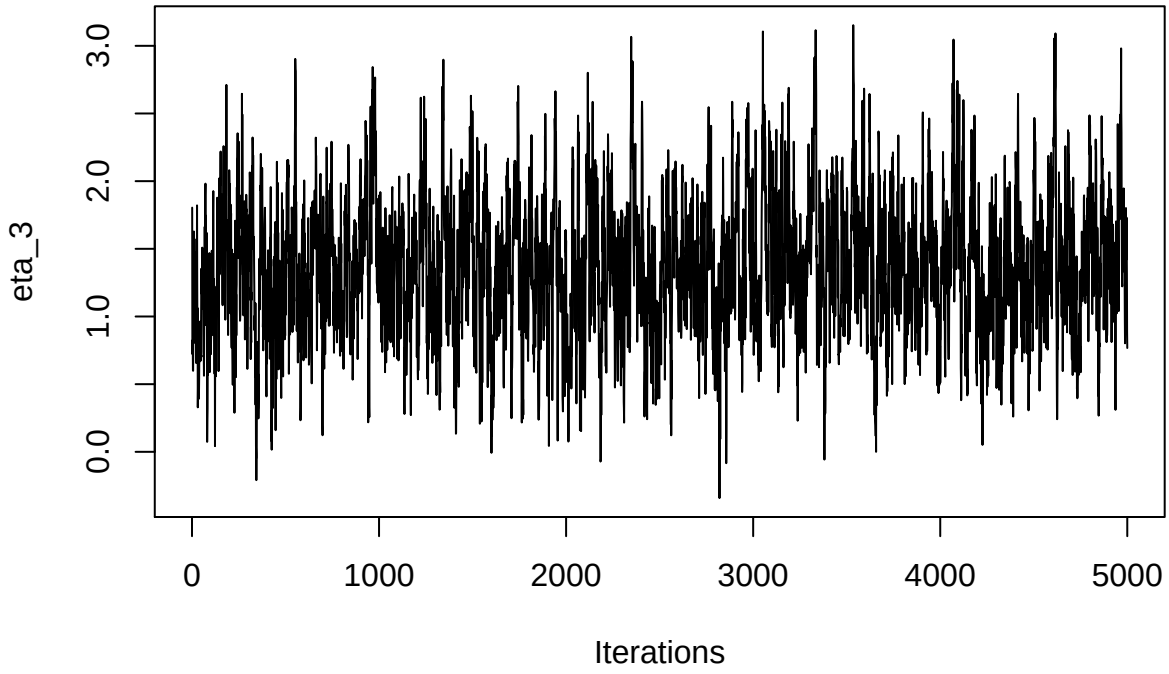
```
(posterior.mean.E=mean(E_keep[-(1:burnin)]))
```

```
## [1] 1.697401
```

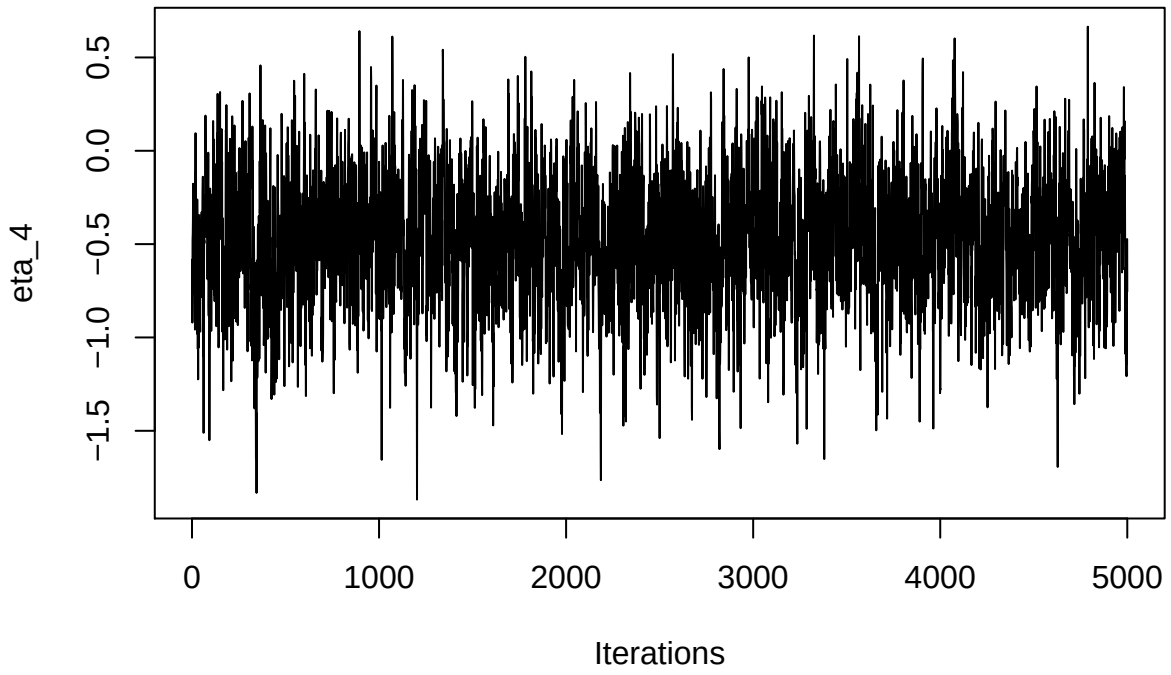
```
##traceplots after burn-in

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



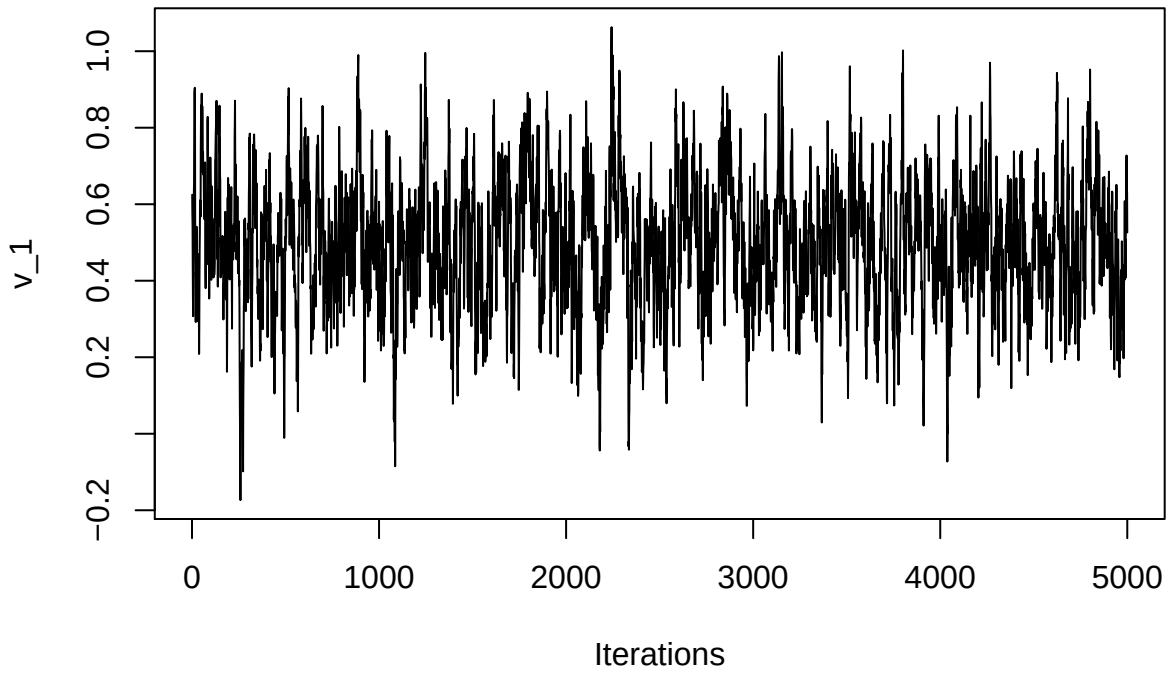

```
##true value of eta3 is 1.5
traceplot(x=as.mcmc(eta_keep[-(1:burnin),3]), ylab="eta_3")
```



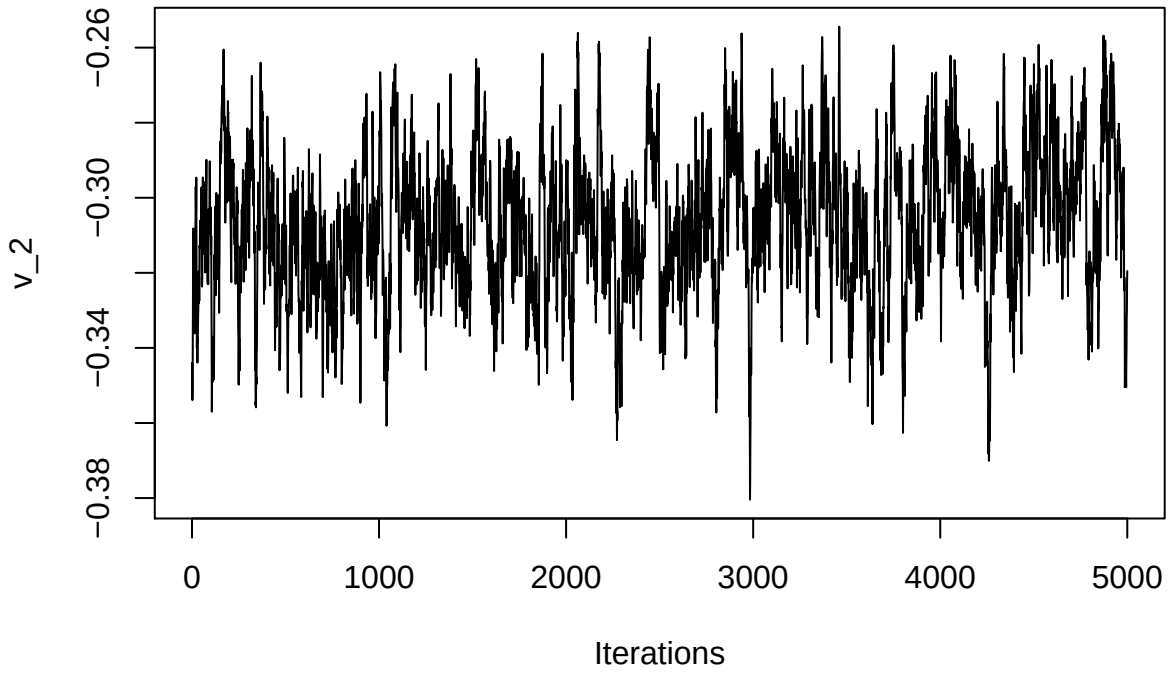

```
##true value of eta4 is 1
traceplot(x=as.mcmc(eta_keep[-(1:burnin),4]), ylab="eta_4")
```



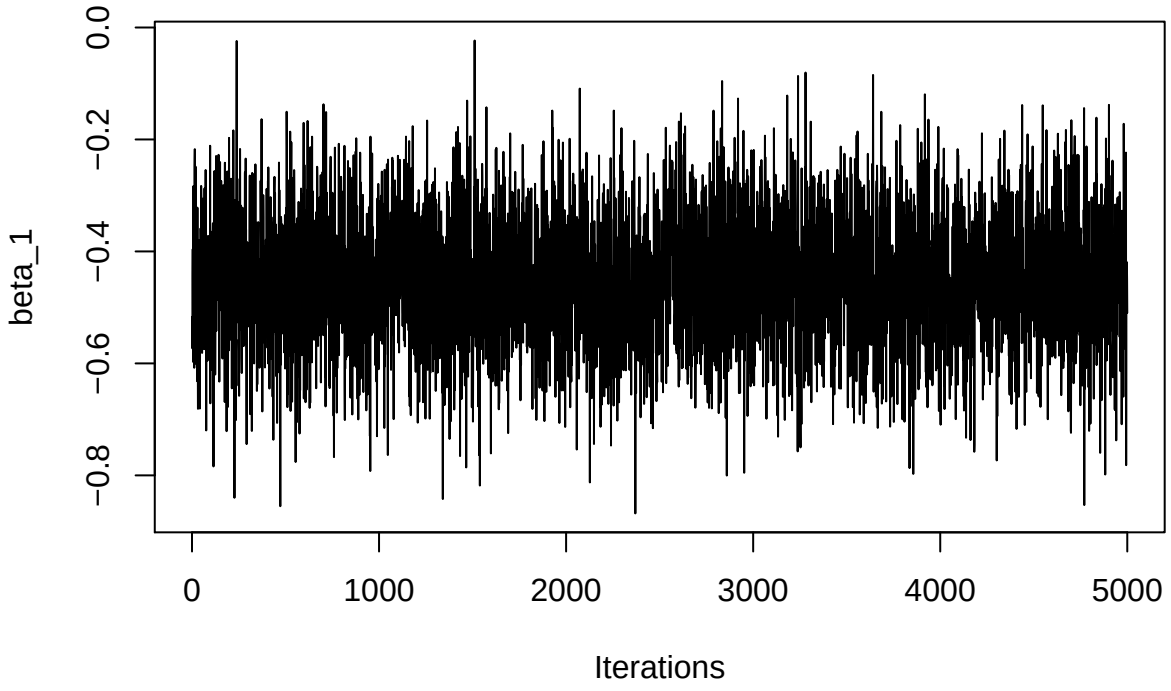

```
##true value of v1 is 0.5
traceplot(x=as.mcmc(v_keep[-(1:burnin),1]), ylab="v_1")
```



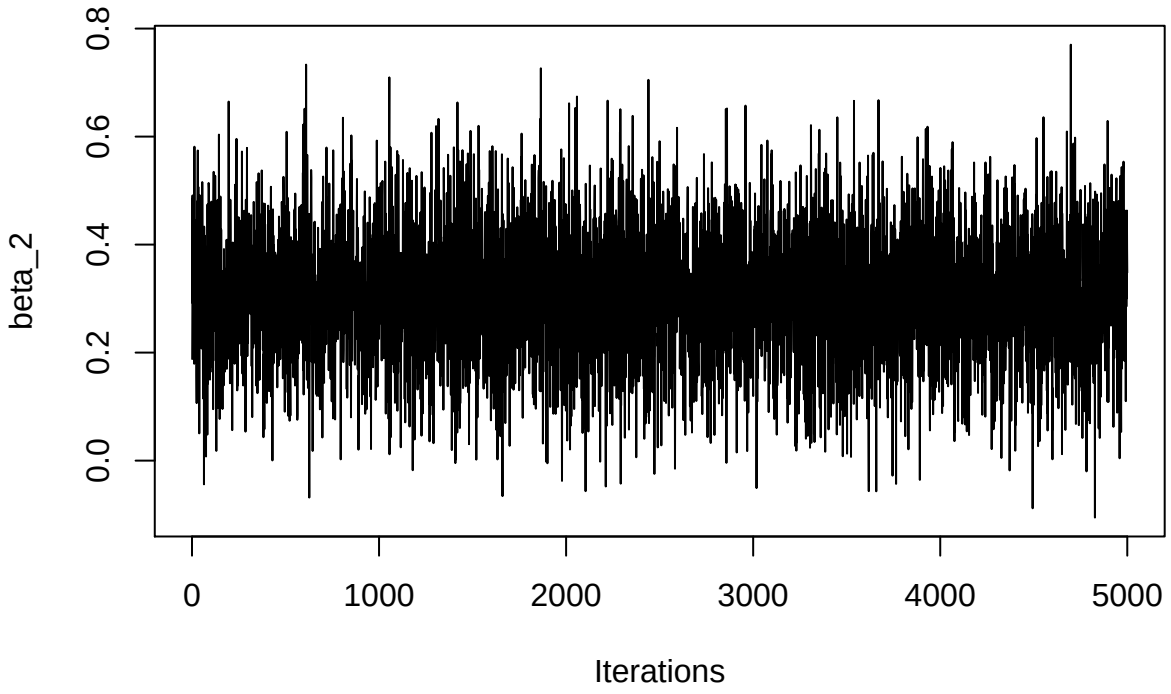

```
##true value of v2 is -0.3
traceplot(x=as.mcmc(v_keep[-(1:burnin),2]), ylab="v_2")
```



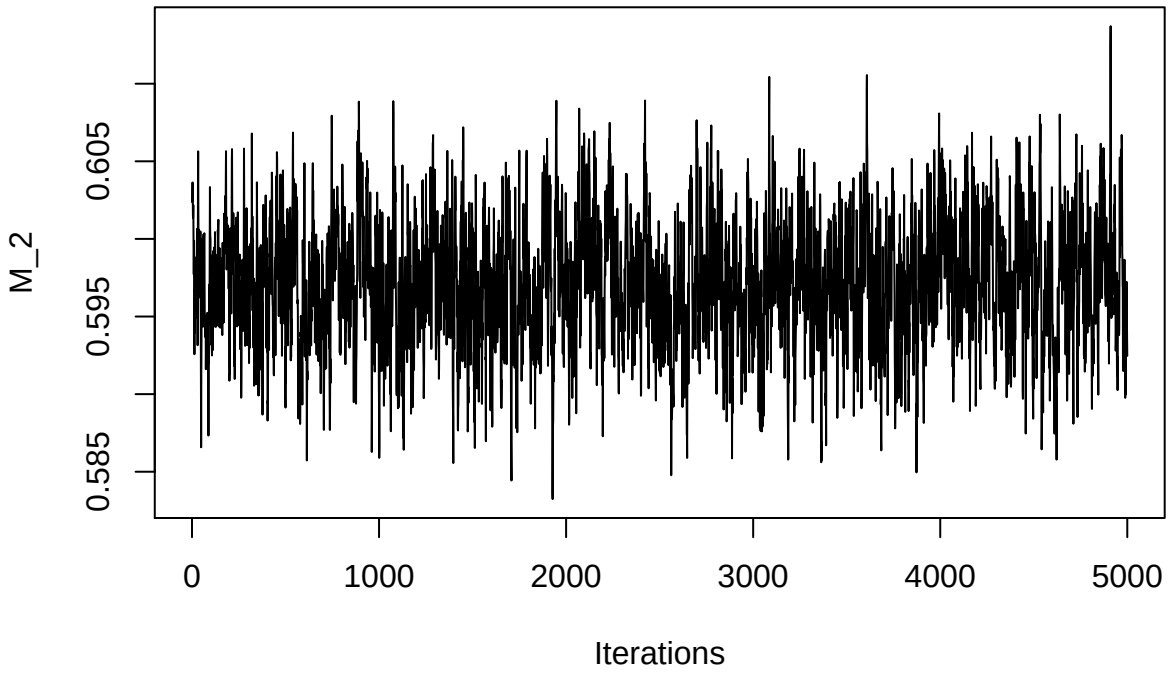

```
##true value of beta1 is -0.4
traceplot(x=as.mcmc(beta_keep[-(1:burnin),1]), ylab="beta_1")
```



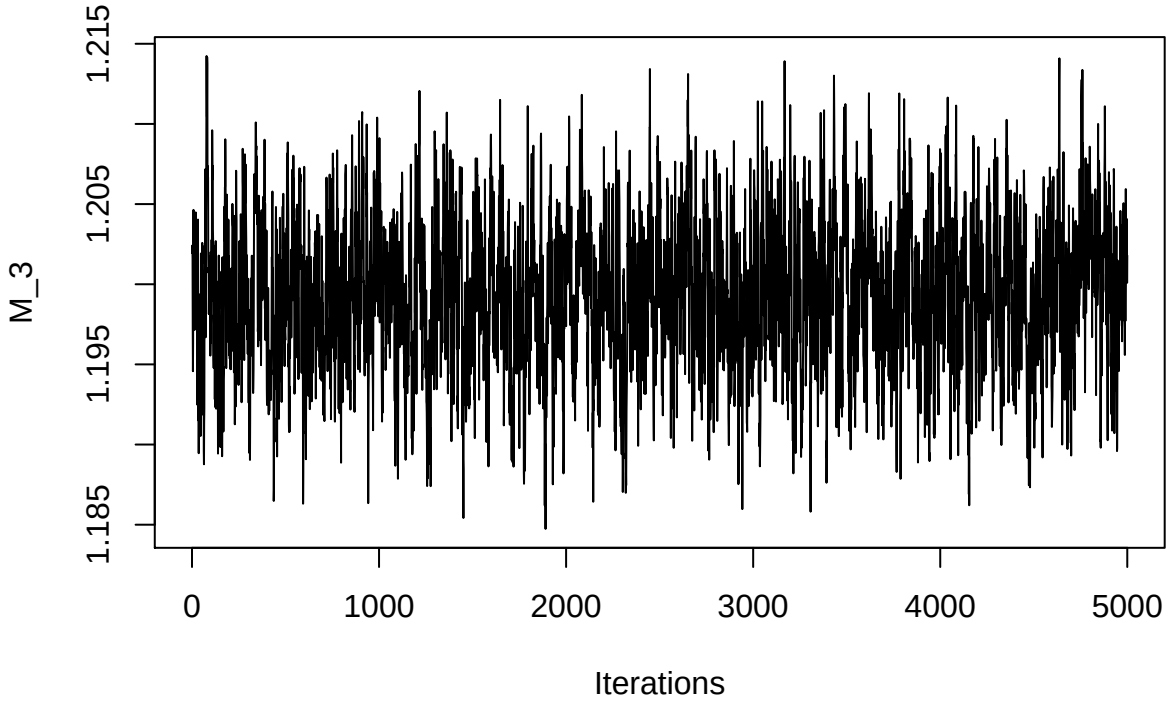

```
##true value of beta2 is 0.5
traceplot(x=as.mcmc(beta_keep[-(1:burnin),2]), ylab="beta_2")
```



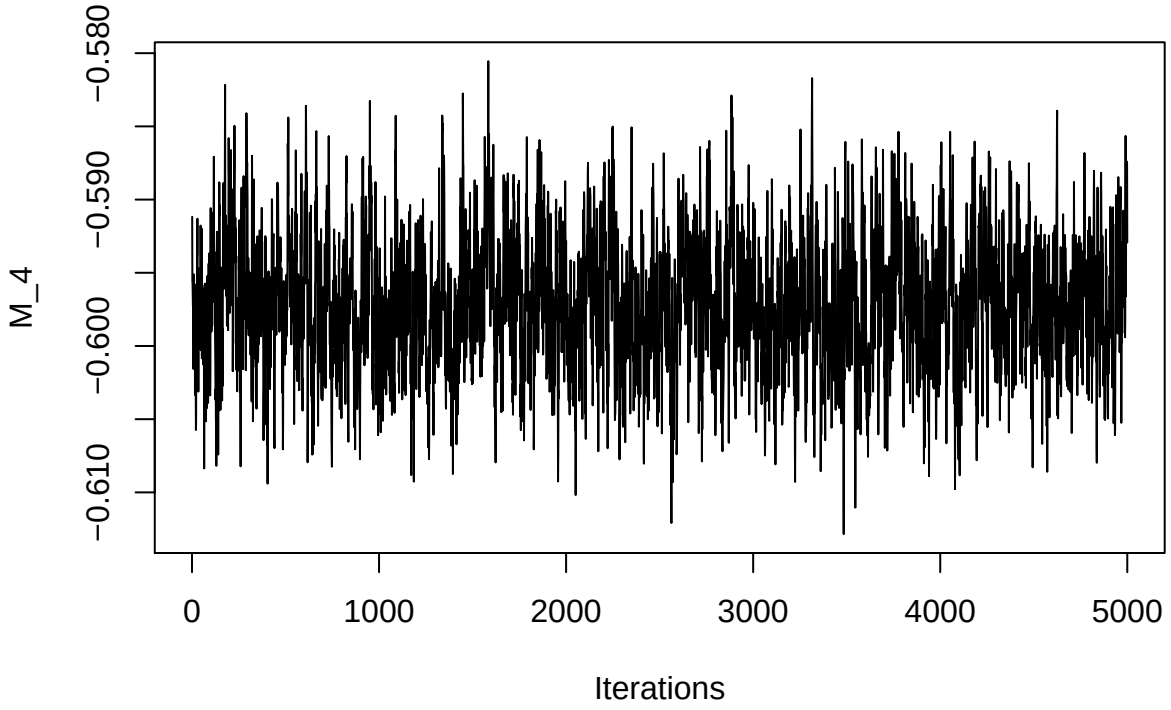

```
##true value of M2 is -0.6
traceplot(x=as.mcmc(M_keep[-(1:burnin),2]), ylab="M_2")
```



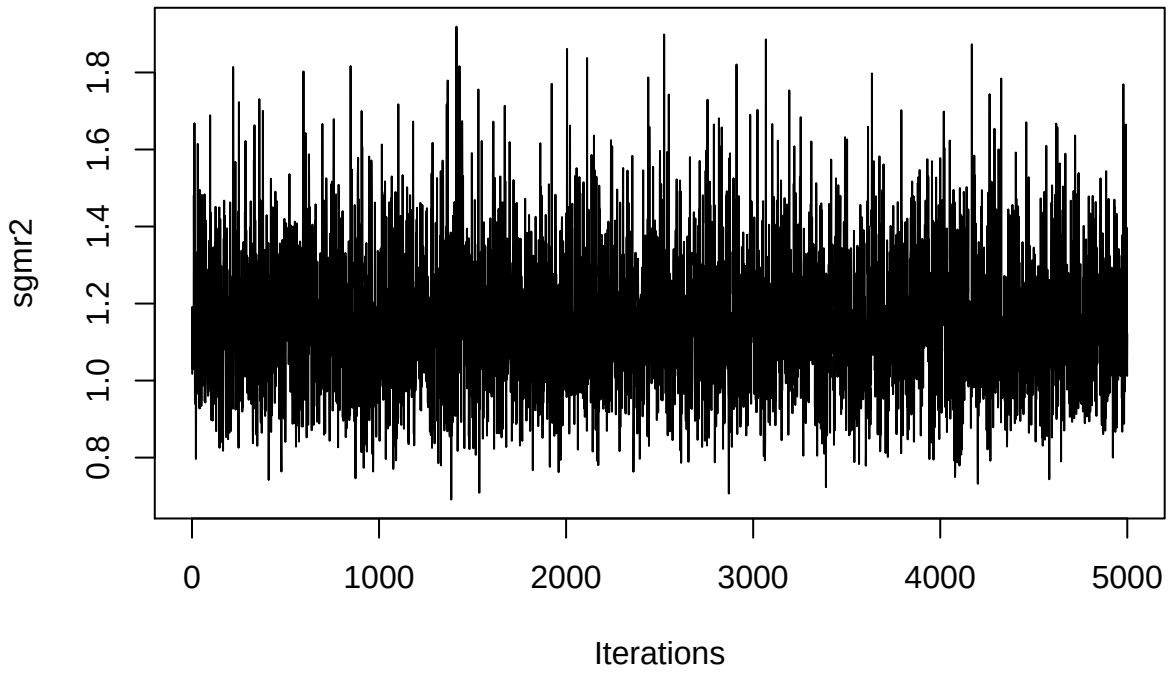

```
##true value of M3 is 0.6
traceplot(x=as.mcmc(M_keep[-(1:burnin),3]), ylab="M_3")
```



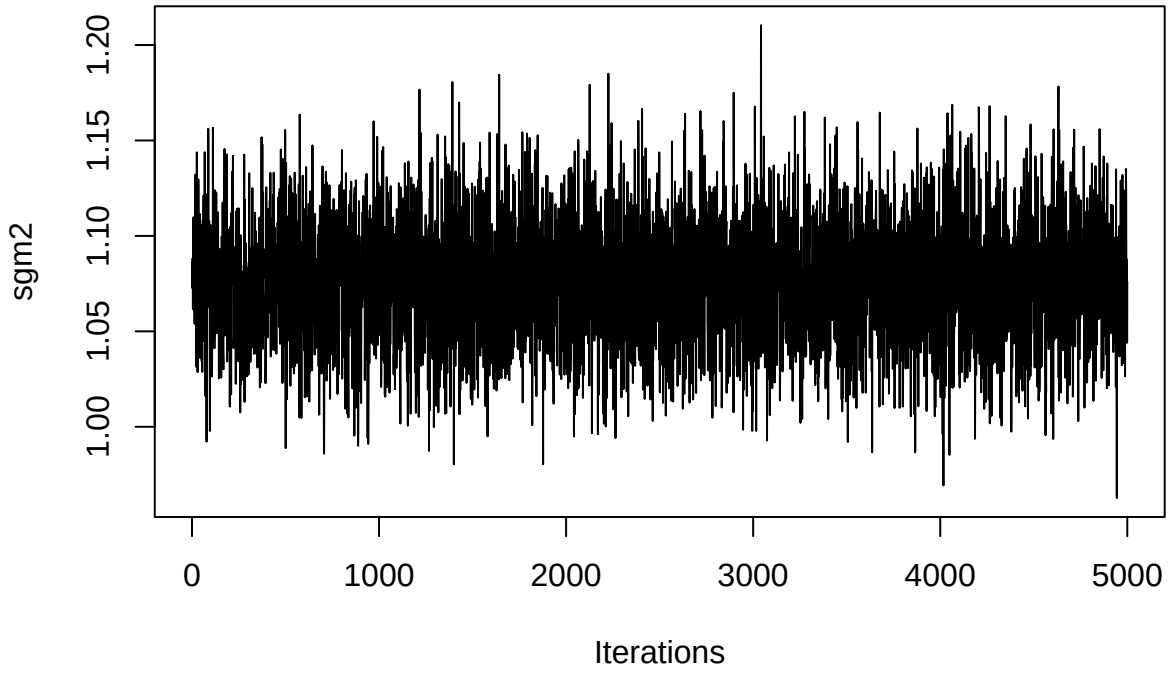

```
##true value of M4 is 1.2
traceplot(x=as.mcmc(M_keep[-(1:burnin),4]), ylab="M_4")
```



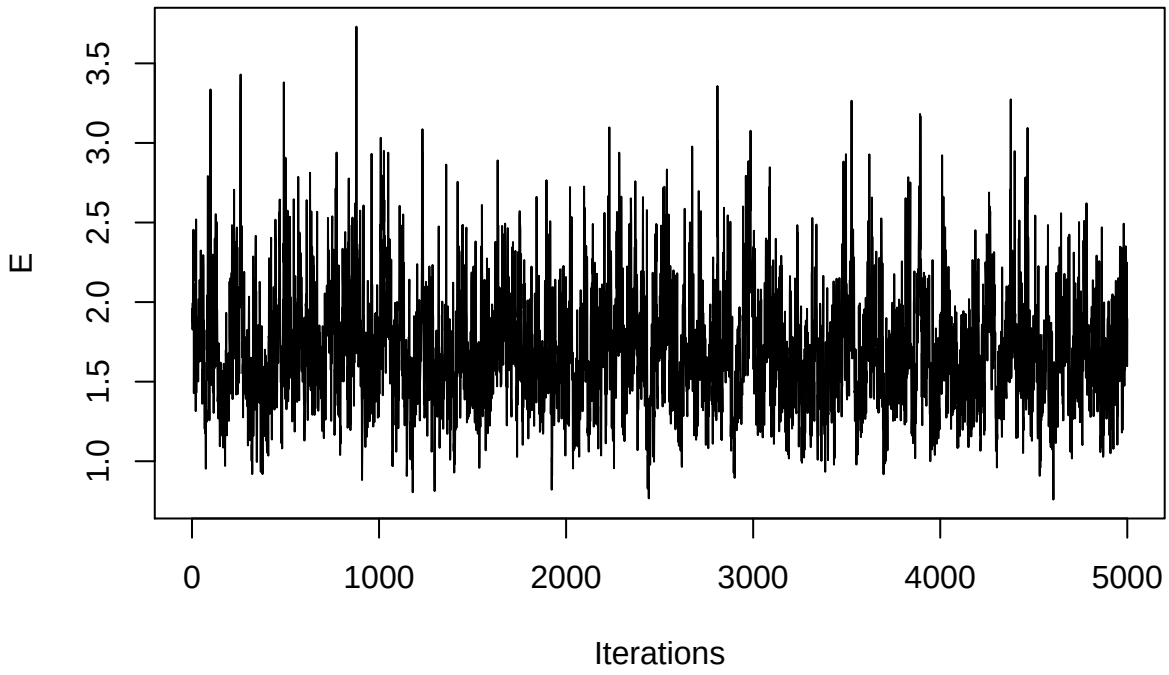

```
##true value of sgmr2 is 1
traceplot(x=as.mcmc(sgmr2_keep[-(1:burnin)]), ylab="sgmr2")
```




```
##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
0
1000
2000
3000
4000
5000
Iterations