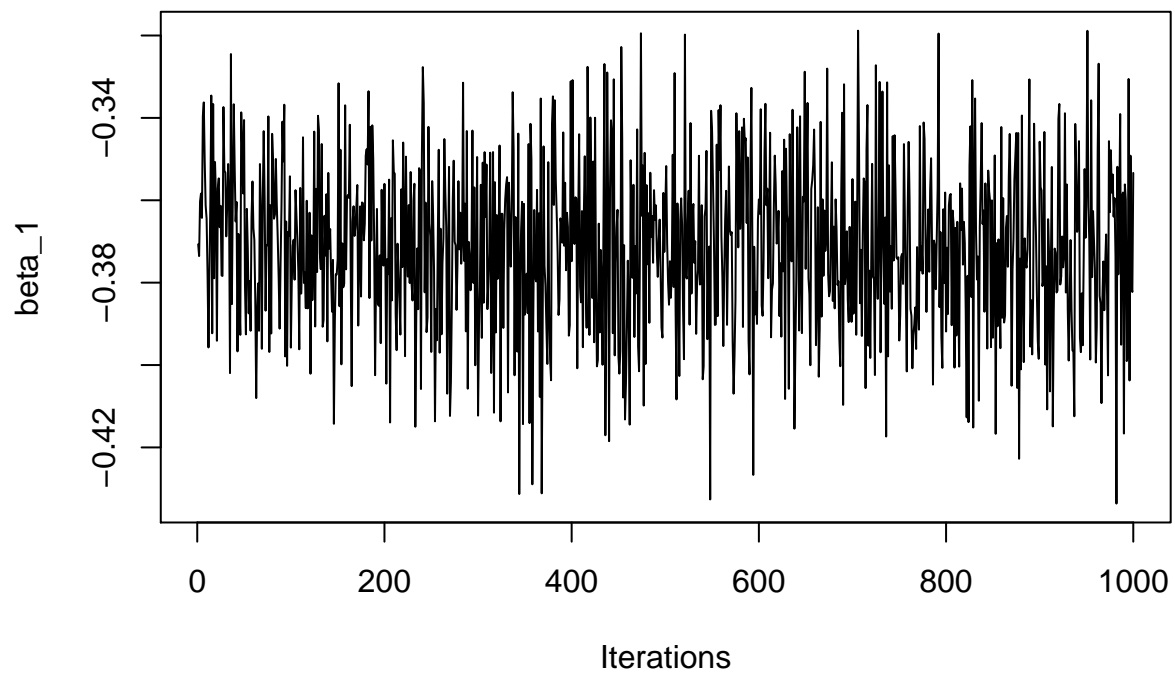


# Check Beta

```
#-----  
# This file is used to  
# 1.check beta  
# Last updated date: 7/11/2017  
#-----  
  
##set other parameters equal their true values  
eta=eta_sim  
v=v_sim  
M=M_sim  
sgmr2=sgmr2_sim  
sgm2=sgm2_sim  
E=E_sim  
c=c_sim  
b=b_sim  
e=e_sim  
X=X_sim    ##rename the simulated complete data X_{it}  
  
##sample beta from its posterior distribution  
var_beta=solve((1/beta_pri)*diag(2)+(1/sgm2)*sum_D)  
sum_beta=rep(0, 2)  
for (i in 1:n){  
  sum_beta=sum_beta+t(D[1:T[i],c(2*i-1, 2*i)])%*(X[1:T[i], i]-D_star[1:T[i],i]*M[c[i]]-D_dstar[1:T[i],  
}  
mean_beta=(1/sgm2)*var_beta%*sum_beta  
beta=mvrnorm(n=1000, mu=mean_beta, Sigma = var_beta)  
posterior.mean.beta=c(mean(beta[,1]), mean(beta[,2]))  
posterior.mean.beta  
  
## [1] -0.3713706  0.4685139  
  
##traceplot  
traceplot(x=as.mcmc(beta[,1]), ylab="beta_1")
```



```
traceplot(x=as.mcmc(beta[,2]), ylab="beta_2")
```

