Answering sheet Asignment Bayesian Econometrics (in Finance) 2022-23

Student information

Name:
Student Number:
FEM21026 Bayesian Econometrics:
FEM21032 Bayesian Econometrics in Finance:

Details Data

Number of the dataset used for solving the exercise: 58

Details Prior

What is the lowerbound of your prior for β_1?: 1

Details Coding

Which computer language did you use?: Python 3

Details MCMC sampler:

How many simulations in total did you do (including burn-in))? : 60000
How many burn-in simulations did you use ? : 10000
What is your thin value? : 1

Posterior Results:

Fill in the percentiles of the posterior distribution in the next table based on your MCMC output:

parameter	10% percentile	median	90% percentile
β_0	3.07450828179405	3.20924504465216	3.34425159656935
β_1	1.00319929797417	1.02040308940319	1.06681817053025
β_2	-0.2339503047183	-0.0051979141059	0.22023199540877
β_3	-1.6775893539054	-1.0077304585351	-0.3349710277753
σ^2	0.19992490759628	0.23491854721778	0.27827955847039

Posterior Probability:

Compute the posterior mean of $\ln \sigma^2$ using the MCMC output

$$E[\ln \sigma^2 | y]$$

My answer is -1.4462879372344