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: 45

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	2.65924083920527	2.99321092222372	3.30416127776098
β_1	1.01723764739359	1.11144713234340	1.33884796514604
β_2	0.12426387986836	0.30885278308799	0.49523132114997
β_3	-3.5170277890459	-2.8389639699985	-2.1604466506351
σ^2	0.42646340907116	0.50072020118216	0.59295750908356

Posterior Probability:

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

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

My answer is -0.6890954487575