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: 24

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	3.96527715855972	4.17273028953352	4.37870828725443
β_1	1.00192786451798	1.01241227824621	1.04156752695093
β_2	0.22953334047119	0.37434733907868	0.51879113975656
β_3	-0.3264580602598	0.01682676195102	0.35822833520272
σ^2	0.17599315189095	0.20688522998253	0.24546787779734

Posterior Probability:

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

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

My answer is -1.5724699375732