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: 1

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	2.04616371520249	2.21460274875193	2.38122316430927
β_1	1.00496262182294	1.03214085289163	1.10156367754085
β_2	0.23273801685029	0.41959414618014	0.60530023116623
β_3	-4.1064500806605	-2.9376658911463	-1.7817424915335
σ^2	0.55166820602529	0.64904976344640	0.77034654874627

Posterior Probability:

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

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

My answer is -0.4299402417925