Review ISZ_11

reviewers

Imię i Nazwisko 1	Jan Szałek	Points:	21/27
Imię i Nazwisko 2	Filip Wójtowicz	Percent:	78%

Problem formulation [4.5 | 5 pts]:

- is the problem clearly stated   **[1/1 pt]**

Problem is clearly stated in the problem formulation paragraph.

- what is the point of creating model, are potential use cases defined   **[1/1 pt]**

Purpose of creating a model and use case is defined in problem formulation paragraph.

- where do data comes from, what does it containt   **[1/1 pt]**

Data source was mentioned and content was descirbed really precisely.

- DAG has been drawn   **[1/1 pt]**

DAG is drawn.

- confoundings (pipe, fork, collider) were described   **[0.5/1pt]**

Confoundings are mentioned, but not described enough.

Data preprocessing [2 | 2 pts]:

- is preprocessing step clearly described   **[1/1 pt]**

Data preprocessing and imputation steps are presented in the report with all details needed.

- reasoning and types of actions taken on the dataset have been described **[1/1 pt]**

Reasoning for each step is clearly stated.

Model [4 | 4 pts]

- are two different models specified   **[1/1pt]**

Yes, two models are specified.

- are difference between two models explained **[1/1pt]**

Yes, in second model vector of alpha was used to specify it for each country.

- is the difference in the models justified (e.g. does adding aditional parameter makes sense?) **[1/1pt]**

Yes, it was justified in the description before second posteriori model.

- are models sufficiently described (what are formulas, what are parameters, what data are required) **[1/1pt]**

Models were desribed for priori. Both posteriori use almost identicall parameters and formulas.

Priors [3.5 | 4 pts]

- Is it explained why particular priors for parameters were selected **[1/1pt]**

Priors for parameters was chosen so that every of them is trated equally.

- Have prior predictive checks been done for parameters (are parameters simulated from priors make sense) **[0.5/1pt]**

Priors for parameters were mentioned and calculated, but no presented clearly enough (lack of histogram).

- Have prior predictive checks been done for measurements (are measurements simulated from priors make sense) **[1/1 pt]**

Prior predictive check were done and histogram is presented for measurements.

- How prior parameters were selected **[1/1 pt]**

It is desribed in the introducion to the prior paragraph.

Posterior analysis (model 1) [2.25 | 4 pts]

- were there any issues with the sampling? if there were what kind of ideas for mitigation were used **[1/1 pt]**

There were no issues with sampling.

- are the samples from posterior predictive distribution analyzed **[0.25/1pt]**

Samples coming from each prediction are just mentioned in tab, but not displayed or analyzed.

- are the data consistent with posterior predictive samples and is it sufficiently commented (if they are not then is the justification provided) **[1/1 pt]**

Histogram of prediction is displayed and well described.

- have parameter marginal disrtibutions been analyzed (histograms of individual parametes plus summaries, are they diffuse or concentrated, what can we say about values) **[0/1 pt]**

No marginal distributions analysis.

Posterior analysis (model 2) [2.25 | 4 pts]

- were there any issues with the sampling? if there were what kind of ideas for mitigation were used **[1/1 pt]**

There were no issues with sampling.

- are the samples from posterior predictive distribution analyzed **[0.25/1pt]**

Samples coming from each prediction are just mentioned in tab, but not displayed or analyzed.

- are the data consistent with posterior predictive samples and is it sufficiently commented (if they are not then is the justification provided) **[1/1 pt]**

Histogram of prediction is displayed and well described.

- have parameter marginal disrtibutions been analyzed (histograms of individual parametes plus summaries, are they diffuse or concentrated, what can we say about values) **[0/1 pt]**

No marginal distributions analysis.

Model comparison [2.5 | 4 pts]

- Have models been compared using information criteria **[1/1pt]**

Yes, both criteria were used.

- Have result for WAIC been discussed (is there a clear winner, or is there an overlap, were there any warnings) **[0.75/1pt]**

Yes, factors coming from criterion were descibed (not all). Clear winner chosen.

- Have result for PSIS-LOO been discussed (is there a clear winner, or is there an overlap, were there any warnings) **[0.75/1pt]**

Yes, factors coming from criterion were descibed (not all). Clear winner chosen.

- Whas the model comparison discussed? Do authors agree with information criteria? Why in your opinion one model better than another **[0/1 pt]**

Comparison was not summarised. Authors didn't state their opinion about the information criteria and did not compared it to model they built.