

working paper

DB

June 17, 2016

simple model

$$\begin{aligned} \ln(\text{ftemp}_{2012,k}) \\ &= \beta_{0,\text{state}_k,\text{code}_k,\text{type}_k} \\ &\quad + \beta_{1,\text{state}_k,\text{code}_k,\text{type}_k} \times \ln(\text{ftemp}_{2007,k}) + \varepsilon_k \end{aligned}$$

with all fixed parameters, normal prior on all the β . inverse gamma prior on variance parameter.

```
library(pubBonneryLahiriTran2016)  
demo(mcmc1)
```

The model used is

Model discussed

$$\begin{aligned} \ln(\text{ftemp}_{2012,k}) \\ = \beta_{0,\text{state}_k,\text{code}_k,\text{type}_k} \\ + \beta_{1,\text{state}_k,\text{code}_k,\text{type}_k} \times \ln(\text{ftemp}_{2007,k}) + \varepsilon_k \end{aligned}$$

With β mixed effects. $\beta_{i,\text{state}_k,\text{code}_k,\text{type}_k} = \gamma_{i,\text{state}_k,\text{code}_k,\text{type}_k}$

R code