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Conclusion

In this paper, I propose a time varying parameter approach to synthetic control. Working in a Bayesian state space framework allows for additional flexibility in the parameters and credible inference. However, the model applies additional restrictions. These restrictions include parametric assumptions on the errors and prior distributions on the parameters. There are no safeguards against mispecified models. In a Bayesian setting, this may become a point of contention. I recommend varying the prior distribution on the parameters β_j and $\sqrt{\theta_j}$ form Bayesian Lasso to other shrinkage methods like horseshoe to test for model sensitivity. This method would be in addition to the in-state and in-time placebo tests initially proposed by [@abadie_synthetic_2010].

In the event of poor pre-treatment fit, *BL-TVP* provides an alternative estimation strategy. I have shown the model performs similarly in two paper recreations outperforming the leading state space model in terms of pre-treatment Mean Squared Error. In addition, I compare *BL-TVP* against @brodersen_inferring_2015 in a Monte Carlo setting.