Comments on the revision of "Locally time-varying parameter regression", submitted to *Econometric Reviews*

Summary In my opinion, this paper has been successfully revised and all my concerns have been addressed. I appreciate the effort of the author (a) to improve MCMC estimation by applying interweaving methods and (b) to compare the LTVP model to the various competitors through cumulative log predictive likelihoods. There are only a few minor issues that need to be addressed.

Minor issues

- p.6, l.5: global factor $\Rightarrow$ global shrinkage factor
- p.10, formula at the bottom of the page is mathematically not correct, since the conditioning argument has to be the same for all three densities and cannot switch from $\Theta_{-\theta_q}$ to Θ.
- p.11: The sampler suggested by the author at the top of p.11 is a partially marginalzed sampler in the sense of Park and van Dyk (2009). It would be better to remove the equation on p.10 and introduce the sampler as such a partially marginalzed sampler:

  (a) sample $p(z|\mathbf{y}, \Theta)$;

  (b) sample $p(\theta_q|z, \mathbf{y}, \Theta_{-\theta_q})$

  (c) sample $p(\beta^*|z, \mathbf{y}, \Theta)$;

  and to explain the various steps in detail as before.
- p.11: the notation ρ^* is not defined in the main paper, only in the Appendices E and G. Explain ρ^* also in the main part or subsitute by ρ.
- From p.13 onwards in many places (e.g. Section 5 and caption of Figures 1,2,5,8): it is confusing that you use the notation β_t for a single coefficient $\beta_{j,t}$. Please change!
- p. 18, l.2: what does ,,of note" mean?
- Figure 9 and 10: I really like these pictures and they significantly add to the relevance of the paper. To emphasize more clearly, how the LTVP model performs in relation to all alternatives, the cumulative

log predictive likelihoods should be put on the exactly the same scale on the y-axis for all models, i.e. from a bit below 0 to 3 in Figure 9 and from -0.5 to 25 in Figure 10.

- Throughout Appendix F: $i + 1^{th} \Rightarrow (i+1)$-th draw

References

Park, T. and D. A. van Dyk (2009). Partially collapsed Gibbs samplers: Illustrations and applications. *Journal of Computational and Graphical Statistics 18*, 283–305.