Corrections for *Bayesian Estimation of DSGE Models*

Edward Herbst
Federal Reserve Board

Frank Schorfheide*
University of Pennsylvania
CEPR, and NBER

March 19, 2018

This document contains corrections of typos in our book. Thanks to everybody who pointed out these typos.

- Page 9, Eq. (1.21) (Boragan Aruoba): the β in front of the expectation operator should be deleted. Note that this typo does not affect the computations in the paper, which are all based on the linearized version of the DSGE model in Eq. (2.1).
- Page 33, 34: The penalty term that appears in (3.12) and the subsequent discussion is $|\mathcal{I} + \tau^2 X'X|^{-1/2}$. In the formula in the text there appears a 1 instead of $\mathcal{I}$ which is only correct for $p = 1$.
- Page 37, after Eq. (3.22) (Ivo Tavares): ... that equals one if $x \leq a$ and equals zero otherwise. If $\delta_l \leq h(\theta) \leq \delta_u$ then ...
- Page 50: The numerical example incorrectly states that $\bar{V} = 100$. Instead, it should read that $\bar{V}_\phi = 1/100$.
- Page 57, Eq. (3.67) (Dongho Song):

$$\xi^i = (1 - k_{22}) + \lambda_2(K)\xi^{i-1} + \nu^i$$

*Correspondence: E. Herbst: Board of Governors of the Federal Reserve System, 20th Street and Constitution Avenue N.W., Washington, D.C. 20551. Email: edward.p.herbst@frb.gov. F. Schorfheide: Department of Economics, 3718 Locust Walk, University of Pennsylvania, Philadelphia, PA 19104-6297. Email: schorf@ssc.upenn.edu.

- Page 69, line 19 (Xu Zhandong): Similarly, if the chain rejects too frequently, it may get stuck in one region of the parameter space, again resulting in inaccurate estimates.

- Page 77, Figure 4.5 (Jacob Warren): The IRF of output to a technology shock $\epsilon_{z,t}$ is incorrect. We plotted the response of $\hat{y}_t + \hat{z}_t$ instead of the response of $\hat{y}_t + \ln A_t = \hat{y}_t + \sum_{\tau=1}^{t} \hat{z}_t$. All other output responses are correct, because $\hat{z}_t$ does not respond to $\epsilon_{g,t}$ and $\epsilon_{R,t}$.

- Page 82, Algorithm 6, Step 2 (Xu Zhandong): Draw $\vartheta_b \sim q\big(\cdot \,\big|\, [\theta^i_{<b}, \theta^{i-1}_b, \theta^{i-1}_{>b}]\big)$. In the subsequent definition of α, there is a , in the formula for $q(\theta^{i-1}_b|\cdot)$ that should be deleted.

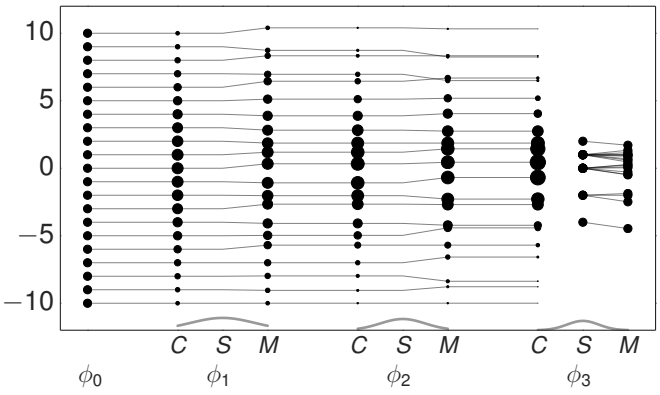
- Page 84, Figure 4.6 (Xu Zhandong): Intersections of the dashed lines ...

- Page 84, Equation (4.6) should read $\mu(\theta^{i-1}) = \ldots$.

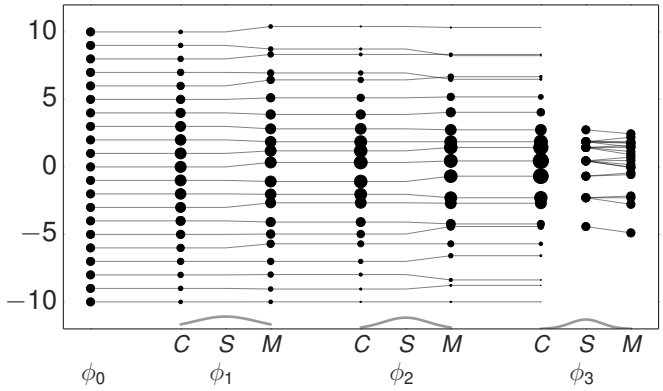
- Page 85, Equation (4.7) should read $\Sigma(\theta^{i-1}) = \ldots$.

- Page 104, last sentence of Section 5.1.1 (Xu Zhandong): (...) there are only five distinct particle values, three of which have multiple copies.
  Once Figure 5.1 is replaced by the corrected one (see below), the sentence should read: (...) there are only seven distinct particle values, five of which have multiple copies.

- Page 105, Figure 5.1 (2016 Econ 722 class): this is the figure in the book:



and here is the corrected figure:



Can you see the difference in the selection step at stage $n = 3$? Here the particle values have to be a subset of the particle values in the previous correction step. Resampling does not change particle values.

- Page 123, Equation (5.32) (Xu Zhandong):

$$\hat{h}_{n,N} \xrightarrow{a.s.} \int \dots$$

- Page 132, unnumbered set of equations above (6.1) (Xu Zhandong): the subscript for the second innovation is incorrect. It should be $\epsilon_{g,t} \sim N(0, \sigma_g^2)$.

- Page 134, second half of last complete paragraph; Page 135, notes to Figure 6.2; Page 136, notes to Figure 6.3 (Xu Zhandong): the conditions should be $\rho_{zg} > 0$ and $\rho_{zg} < 0$.

- Page 144 in Table 6.3 and 245 in Table A-1: replace l by $\bar{l}$ and π by $\bar{\pi}$.

- Page 148, third paragraph **Results.** (Xu Zhandong): (...) the policy rule coefficient on output growth $r_{\Delta y}$, (...).

- Page 189, sentence after (8.41) (Xu Zhandong): The Monte Carlo approximation in (8.42) (...)

- Page 228, first complete paragraph (Xu Zhandong): While the pooled posterior means (...) reported in Table 9.2 are very similar (...)

- Page 243, Equation (A.27) (Xu Zhandong): $\hat{k}_t^{ss} + \hat{k}_{t-1}^* + \hat{z}_t^*$.

- Page 242, Equation (A.20) (Drew Creal): replace ρ_r by ρ_p.

- Page 243, Equation (A.32) (Xu Zhandong): by $h/\gamma\hat{c}^*_{t-1}$ we mean $\frac{h}{\gamma}\hat{c}^*_{t-1}$.
- Page 244, Equation (A.45) (Drew Creal): replace $\hat{R}_t$ by $\hat{r}_t$.
- Page 245, Table A-1 (Drew Creal): replace γ by $\bar{\gamma}$.
- Page 254, last (unnumbered) equation: replace INT_t by $INTPAY_t$.