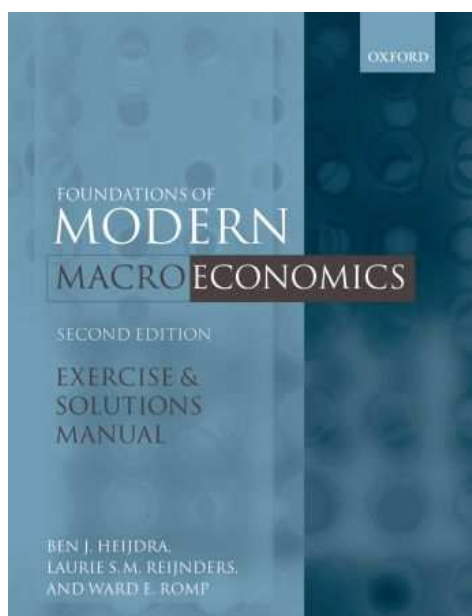


# Errata, addenda, and typos

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**Note:** in square brackets I occasionally comment on the particular correction.



- page 3, eqn (Q1.10) should feature  $F_{NN}$  and  $F_{NK}$
- page 11, eqn (A1.9) should feature  $W$  and  $Z_0/P$ . Three more equations are affected. Also,  $\partial\hat{U}/\partial N$  should appear twice.
- page 13, unnumbered eqn should feature  $F_{NN}$
- page 14, first eqn  $(1 + t_C)PC = WN$
- page 77, first expression for  $E_{t-2}p_t$  should have as the final term  $-\frac{1}{2}E_{t-2}u_t$
- page 80, first line of eq. (A3.22). Delete the 2 in front of  $E_t Y_{t+1}$ .

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\*Please send any errata and typos you may find to: [info@heijdra.org](mailto:info@heijdra.org). My gratitude will be genuine, profound, and eternal.

- page 120, Figures A4.6 and A4.7 are wrong. They deal with an anticipated and permanent shock. See correct figures.
- page 123, Figure A4.9: delete the dotted lines and references to points C. These are for item (f)
- page 138, directly above item (c): change  $\phi(\kappa)$  to  $\phi(P)$  [three times]
- page 151, last sentence of item (g). “like to consume at point  $E_0$  ... endowment point  $E_1$ ”
- page 158. Delete  $\Delta$  in eqn (Q6.7) and change  $>$  to  $\geq$
- page 160, below eqn (A6.4): delete second  $\Delta$
- page 160, eqn (A6.5) second expression  $Z_S F_{SS} / \Delta$
- page 161, eqn (A6.8), numerator  $Z_S [F_{SU} F_{SS} - F_{SU} F_{SS}] N_S$
- page 175, formula below item (c) and text: write  $AF(L, \bar{K})$  [once] and  $AF_L(L, \bar{K})$  [twice]
- page 181, eqns (Q8.2) and (Q8.3): strictly speaking we should write  $K(Z_0, r + \delta)$  [twice]
- page 182, Question 2(b) is the same as 2(f).
- page 186, eq. (A8.1) and the third equation: replace  $a$  by  $\alpha$ .
- page 189, first paragraph “a reduction in the marginal product of labour.” (not capital)
- page 217, Question 2. Set  $P = P_0$  and add  $k_Y > 0$  and  $l_r < 0$  in (Q10.5).
- page 221, eqn (Q10.20) should feature  $\bar{y}_t$
- page 226, just above (A10.10): “by substituting (Q10.8) into (Q10.10)...”
- page 236, first paragraph “in Chapter 10 we show that” (not 11)
- page 251, above eqn (A10.95) “the nominal exchange rate under”
- page 268, eqn (A11.48): replace  $C(t)$  by  $X(t)$
- page 269, eqn (A11.58): replace  $\tau$  by  $t$
- page 269, below eqn (A11.58): “Equation (A11.57) is obtained from”
- page 272, above eqn (A11.66): “a time index refer to constants”
- pages 283, 302, and 304: replace  $\beta^i$  by  $\beta_G^i$  where  $\beta_G$  is the policy-maker’s discount factor (such that  $0 < \beta_G < 1$ ). [ $\beta$  in eqn (Q12.18) is an unrelated parameter]

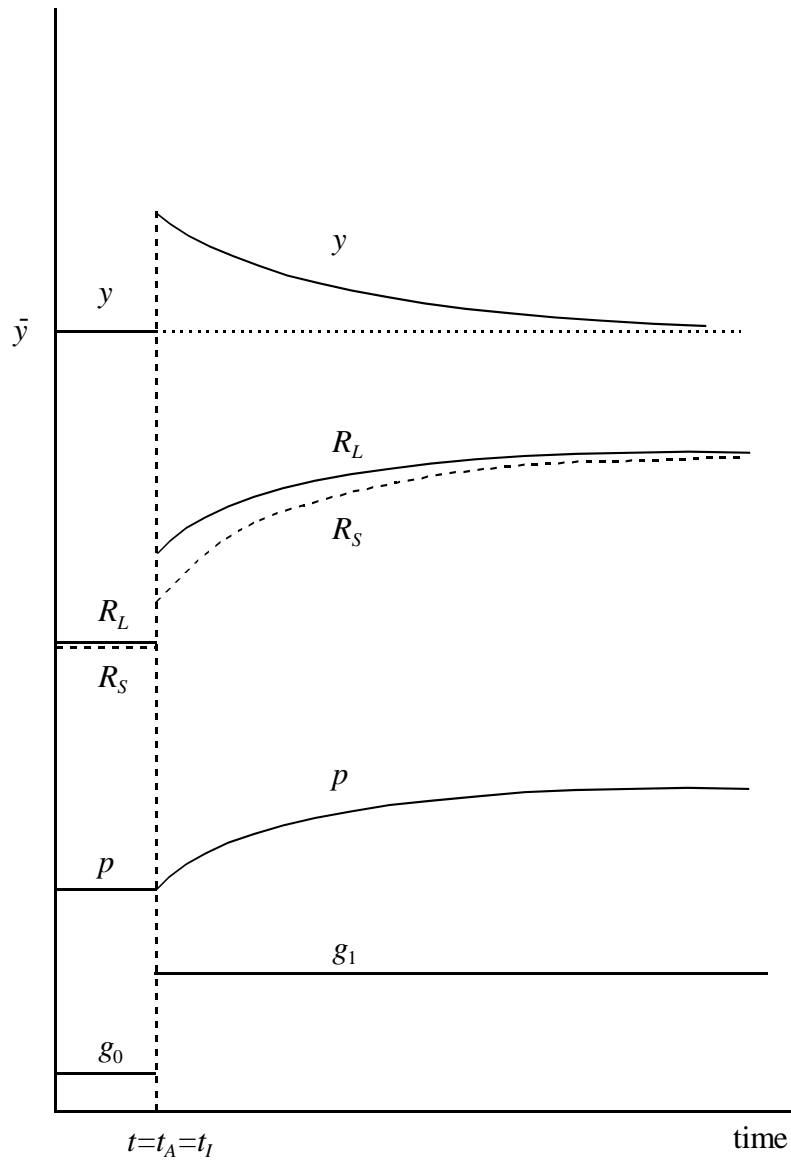


Figure 1: Correct Figure A4.6

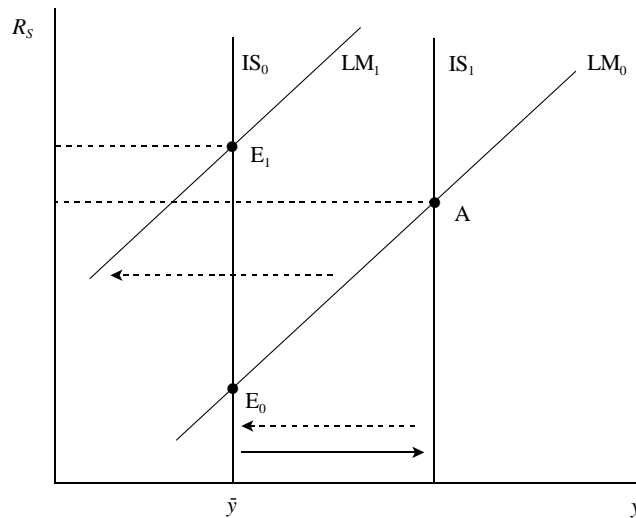


Figure 2: Correct Figure A4.7

- page 313, eqn (Q13.26) should feature  $e^{-\rho\tau}$
- page 318, eqn (A13.18): add  $(1 - \alpha)$  on the right-hand side
- page 333, penultimate paragraph “According to (A13.117)”
- page 335, below eqn (A13.126) “namely equations (A13.124) and”
- page 337, first line “We use (A13.135) and (A13.136)”
- page 337-8, Cases 1, 2, and 3
- page 343, below (A13.169): “combining (A13.167) and (A13.168)”
- page 352, third line:  $\dot{L}(t)/L(t) = n_L > 0$
- page 361, below eqn (A14.23): “we have used (Q14.2) and (Q14.7)”
- page 362, last formula on page should be:

$$\frac{\partial \gamma_k(t)}{\partial g} = -\frac{s}{k(t)} < 0$$

- page 363. Delete  $\gamma_k = \dots$  formula. Also  $sg/k(t)$  missing from the downward sloping loci
- page 373, eqn (Q15.20) should feature:

$$\ln(C_\tau + \alpha G_\tau)$$

- page 378, halfway on the page: “Substituting these results into (A15.20) we find:”
- pages 379-80:  $\varepsilon_H$  should be  $\eta$ .  $\eta_L$  should be  $\theta$
- page 385, eqn (A15.54) should feature  $[\cdot]^{1/(1-\sigma_{CL})}$ . Same with formula at bottom of page 384
- page 386, FONC for leisure should feature  $[(1 - \varepsilon_C) - \lambda_\tau w_\tau]$
- page 386, eqns (A15.58)-(A15.59):  $G_t$  (twice on the LHS) and  $G_{t+1}$  (once on the RHS)
- page 386, eqn (A15.65). Delete  $= T_\tau$ . The GBC is  $G_\tau = T_\tau$  (separate formula)
- pages 388-9, stop reading the material on this question after eqn (A15.73). It is wrong. The model should be solved by noting that its fundamental difference equation is:

$$\begin{bmatrix} \tilde{K}_{t+1} \\ E_t \tilde{C}_{t+1} \end{bmatrix} = \Delta \begin{bmatrix} \tilde{K}_t \\ \tilde{C}_t \end{bmatrix} + \Gamma \tilde{G}_t,$$

with:

$$\Delta \equiv \begin{bmatrix} 1 - \delta + \frac{\delta}{\omega_I} & -\frac{\delta}{\omega_I} \frac{(1-\alpha)\theta_C + \alpha\omega_C}{\alpha} \\ 0 & \phi_C \end{bmatrix}, \quad \Gamma \equiv \begin{bmatrix} -\frac{\delta}{\omega_I} \frac{(1-\alpha)(1-\theta_C) + \alpha\omega_C}{\alpha} \\ \phi_C \frac{1-\theta_C}{\theta_C} \left[ 1 - \xi_G - \xi_G \frac{\rho + \delta}{1 + \rho} \frac{1-\alpha}{\alpha} \right] \end{bmatrix}.$$

This model is saddle-point stable with characteristic roots  $0 < \lambda_1 < 1$  and  $\lambda_2 > 1$ . It can be solved easily with the method of undetermined coefficients. Hint: try  $\tilde{C}_t = \pi_0 + \pi_K \tilde{K}_t + \pi_G \tilde{G}_t$ .

- page 398, item (e) “in terms of efficiency units”
- page 404, above (A16.11): “line is given by:”
- page 404, “reaches a maximum for the golden rule capital stock,  $k^{GR}$ , where the interest rate”
- page 408, text below eqn (A16.32). ...leads to a **decrease** in consumption relative to the capital stock which in turn causes an **increase** in the rate of economic growth.
- page 410, item (e): explanation is nonsense.
- page 412, above eqn (A16.61): “is obtained as follows”
- page 433, above eqn (Q17.8). The probability of death is  $1 - \pi$
- page 435, eqns (Q17.17)-(Q17.18): add  $(1 + t_{Ct})$  and  $(1 + t_{Ct+1})$
- page 448, the Lagrangian should feature  $\lambda[\Omega - C_t^Y - \frac{C_{t+1}^O}{1+r_{t+1}}]$