

Errata, addenda, and typos

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

- page 20, Figure 1.10: in the bottom panel the right-hand AD curve should be labeled AD(G₁). Points B should line up vertically. [See correct figure below]
- pages 21-22, final sentence should read: “The short-run effects on employment and output are small if the AD curve is relatively flat and the AS curve is relatively steep.” [The slopes refer to $\partial P/\partial Y$ as P is measured on the vertical axis. With a flat AD curve, a demand shock has a small effect on P even if AS is steep.]
- page 24, equation (1.34): denominator of term for \bar{K} should be $\epsilon_D + \epsilon_S$.
- page 33, Figure 2.1. The IS-LM diagram is incorrect. Point A should be on an LM curve based on M_0/P' (not on M_0/P_0). The correct figure is given below.
- page 34, first line: “..., the denominator of ...”
- page 34, three lines below (2.13): ...on the right-hand side of (2.13) ... [we mean the second line of (2.13)]
- page 48, two lines above (2.49): “...effect (2.48) and the...”
- page 48, equation (2.49). [The derivation of this equation is perhaps somewhat cryptic.]

*Please send any errata and typos you may find to: b.j.heijdra@eco.rug.nl. My gratitude will be profound and eternal.

Some intermediate steps can be shown] “...for a rise in public spending:

$$\begin{aligned}
 \mu \frac{dY}{dG} \uparrow_{LR} &= AD_K \mu \frac{dK}{dG} \uparrow_{LR} + AD_G \\
 &= AD_G I_K \mu \frac{dK}{dG} \uparrow_{LR} + 1 \\
 &= \frac{(\delta - I_K)AD_G}{-[I_R H_K + I_K + I_Y AD_K - \delta]} \\
 &= \frac{l_R(I_K - \delta)}{l_R(I_K - \delta)[1 - C_{Y-T}(1 - T_Y)] - \delta[l_Y I_R - l_R I_Y]} > 0, \quad (2.49)
 \end{aligned}$$

where the denominator...”

- page 49, four lines below Figure 2.6: “Since the numerator of expression (2.49) is positive as well, ...”
- page 51, two lines above equation (2.56): ...by combining (2.52)-(2.55) with...
- page 55, Figure 2.8: in the upper diagram E_0 should be at the intersection of $LM(B_0/P_0)$ and $IS(G_0, B_0)$.
- page 60, line from the bottom: ...output increases to Y' , and...
- page 85, first line of equation (e): $...-r\lambda K$
- page 91, six lines below Figure 4.4: ...Formally, an anticipated shock is one...
- page 102, line 5 from bottom: ...below R_S , equilibrium...
- page 140, 2 lines below equation (a): ...i.e. $V_i \equiv \partial V / \partial C_i > 0$ and...
- page 142, equation (i)-(j): partial derivatives should be $\partial C_1 / \partial r_1$ and $\partial C_2 / \partial r_1$. In (j) the final term should be $V_2 / |\Delta|$.
- page 143, line 1: ... then $\partial C_1 / \partial r_1 > 0$ and $\partial C_2 / \partial r_1 > 0$...
- page 143, line 3: ...that $\partial C_1 / \partial r_1 < 0$ and $\partial C_2 / \partial r_1 > 0$...
- page 150, first line of equation (6.53) should read: $dB_2^O = \frac{\alpha(1+r)d\Omega^O - dH^Y}{1+\alpha}$
- page 150, equation (6.54): $... - \frac{Y_3^Y}{1+r} - \frac{Y_1^O(1+r)^2}{Y_3^Y} dt_1 = 0...$ [add dt_1]
- page 181, Figure 7.11: RW_1 should rotate counterclockwise [not shift]. See new Figure 7.11.
- page 222, first line of equation (9.21): delete Ω from terms in round brackets.

- page 228, Figure 9.3: WS_1 should rotate clockwise. See new Figure 9.3.
- page 234, line 2: ...ratio ($\tilde{\theta} < 0$) as is illustrated...
- page 238, line 4: ...output ($y^* > \bar{y}$) ...
- page 248, line 8: ...no other agent i such that β_i is preferred...
- page 249, footnote 5: ...demonstrate that $\beta > \beta_M$ is to...
- page 251, equation (10.54): ... $G_2 = \beta^{\epsilon_3}$.
- page 261, directly below (11.1): ... I is investment,
- page 277, three lines above (11.29): delete one minus sign between EX and (EP^*/P) .
- page 284: ϵ_{MW} should be ϵ_{MY} in the expression for p^* in (11.49) (twice)
- page 287, directly below Figure 11.10: delete “affect”
- page 288: delete ϵ_{YR} from equations (11.52) and (11.53)
- page 293: Figure 11.14 contains some incorrect labels and point C is drawn in the wrong place. See below for the correct figure. The intercepts of the first-order conditions (11.62)-(11.63) lie at points A and B respectively. The first-order conditions cross at point C.
- page 298, equation (11.73): coefficient for $[p^* + e - p]$ should be $\epsilon_{MY}\epsilon_{YQ}$. In (11.74) ϵ_M should be ϵ_{MY} (10 times).
- page 301, equations (11.79)-(11.80): denominator should be $\epsilon_{YR} + \epsilon_{YQ}\epsilon_{MR}$.
- page 307, equation (11.89): ϵ_M should be ϵ_{MY} (5 times). The coefficient for p should be $-[1 - \delta - \epsilon_{MY}\epsilon_{YQ}]$.
- page 322, two lines above Figure 12.2: ...is only $AE_0^Y D$ [point D is on the horizontal axis vertically below E_0^Y in Figure 12.2]. See new Figure 12.2 below.
- page 339, Figure 12.7, top panel: the flatter straight line goes through A, E_1 , and B' . See new Figure 12.7 below.
- page 382, equation (13.60): coefficient in front of M/P should be $\alpha/(1 - \alpha)$.
- page 414, 2 lines below (14.24): ...given by $\omega_K \equiv \alpha[f(k(t))/k(t)]^{(1-\sigma_{KL})/\sigma_{KL}}$, which....
- page 417: in equation (14.32): ... $-(\delta + n)k(t)$... and in (14.33):... $-(\delta + n)h(t)$...
- page 420, line below (14.42): ... with the aid of (14.42) alone ...

- page 421, equation (14.48): $\dots = \frac{\delta+n-sf'}{(1-s)\xi} > 0\dots$
- page 428, equation (14.77): the label $(\cdot)_{\dot{k}(t)=0}$ should be deleted.
- page 429, last text line: ... so that (14.80)-(14.81) can ...
- page 431, 13 lines from bottom: ... the Ramsey model predicts even faster ...
- page 446, Figure 14.12. The vertical asymptote as $c \rightarrow \infty$ is not k^{KR} (as drawn now) but is defined implicitly by the condition $r \dot{k}^{ASS} \equiv f' \dot{k}^{ASS} - \delta = \rho$. Since $r \dot{k}^{KR} \equiv f' \dot{k}^{KR} - \delta = \rho + n$ and $n > 0$ we have that $k^{ASS} > k^{KR}$. See new Figure 14.12.
- page 447, equation (14.138): the second and third lines of (14.138) are incorrect. The correct argument would run like this:

$$\begin{aligned} a(t) + h(t) &\equiv k(t) + \int_t^\infty b(\tau) + h(\tau) \\ &= k(t) + \int_t^\infty [W(\tau) - g(\tau)] e^{-R(t,\tau)} d\tau + \Omega(t), \end{aligned} \quad (14.138a)$$

where $\Omega(t)$ is defined as:

$$\Omega(t) \equiv \int_t^\infty [g(\tau) - \tau(\tau)] e^{-R(t,\tau)} d\tau - \int_t^\infty [g(\tau) - \tau(\tau)] e^{-[R(t,\tau) - n(t-\tau)]} d\tau. \quad (14.138b)$$

$\Omega(t)$ vanishes for all paths of $\tau(\tau)$ if and only if $n = 0$.

- page 449, line below (14.144): Equations (14.143)-(14.144) show that
- page 460, line below equation (14.181): $\dots D_K(t) \equiv \mu_K(t) (F_K [K(t), N(t)] - \delta)$ is the...
- page 464, footnote 40 should read: The first-order conditions are $\partial \mathcal{H} / \partial C = 0$ and $-\partial \mathcal{H} / \partial N = \dot{\mu}_N - \rho \mu_N$.
- page 465, line below (14.205): ... (14.203) expresses ...
- page 465, equation (14.207): it should be $\frac{\dot{L}_X(t)}{L_X(t)}$ on the right-hand side
- page 466, equation (14.209): it should be $\frac{\dot{L}_X(t)}{L_X(t)}$ on the left-hand side
- page 470, 4 lines below (14.227): ... parameters like σ ,
- page 472, 2 lines below equation (14.235): ...right-hand side of (14.235) with respect to....
- page 473, line below (14.237): ...condition (14.201) ...
- page 473, line below (14.238): ...By using the R&D equation ...

- page 482, 9 lines below Table 15.1: ... (15.17), (15.16), ...
- page 485, 1 line below (15.19): ... from (15.19) into (15.18) ...
- page 489, 1 line below (15.25): ... the effects of intertemporal ...
- page 494, 1 line above (15.46): ... combining (T1.4) and (T1.7) we ...
- page 498, 3 lines from bottom: ... also studied in Figure 15.3 ...
- page 506, 1 line above Loglinearized model: ... respectively, (15.17) and (15.16).
- page 516, 5 lines from bottom: ...permanent technology shocks, ...
- page 523, 5 lines from bottom: ... $\rho(Y_t/L_t, Y_t) = 0.98$...
- page 528, 22 lines from bottom:unit-elastic model...
- page 533, footnote 25: ...are between zero and one because $\rho > 0$ and...
- page 548, line 1: ...lifetime utility (16.16)
- page 548, 6 lines below (16.21): ...following (14.60) above)...
- page 573, 5 lines above (16.77): ...are all zero ($T(t) = B(t) = G(t) = 0$).
- page 592, line above (17.14):rewrite (17.10)-(17.11) and....
- page 592, line 3 of footnote 2: ...depreciates within the period....
- page 599, equation (17.39): T (not T_t) should enter the equation
- page 604, equation (17.54): derivative is $d\bar{\Lambda}^Y/dT$. 12 lines below (17.54) we should also use $d\bar{\Lambda}^Y/dT$. Similarly, in the first line of (17.85) on page 613, and on the last line of that page, we should have $d\bar{\Lambda}^Y/dt_L$. [Of course, since $\bar{\Lambda}^Y = \Lambda^Y$ the expressions in the book are not incorrect.]
- page 611, 7 lines below (17.74): ...supply decision is...
- page 616, two lines from bottom: ...It is downward sloping ...
- page 620, 1 line above (17.103): ...and (17.53), and noting that...
- page 620, equation (17.103): derivative is $d\bar{\Lambda}^Y/dn$.
- page 621, line 4 of Human capital and growth: ...in the 1980s are Paul Romer (1986) [The Romer (1986) reference is not unique].
- page 634, 4 lines above (17.149): ...with $0 < \eta < \epsilon_L < 1$.

- page 643, line 10: "...of welfare" (Auerbach et al., 1991, p. 57) and that...
- page 644, footnote 18: ... factor in (17.177)...
- page 680, Table A.1: the Laplace transform for $(ae^{at} - be^{bt})/(a - b)$ is $s/[(s - a)(s - b)]$.
- page 688, 5 lines above (A.111): ...Also, since $|\Delta| = \lambda_1 \lambda_2 < 0$ it...
- page 709, Bovenberg and Heijdra (forthcoming): has appeared in E&RE, April 2002, 21: 45-84. The references on pages 529, 554 and 583 are changed accordingly.
- page 718, Heijdra and Meijdam (forthcoming): has appeared in JEDC, May 2002, 26, 707-735. The reference on page 583 is changed accordingly.
- all even pages: header should be Foundations of Modern Macroeconomics

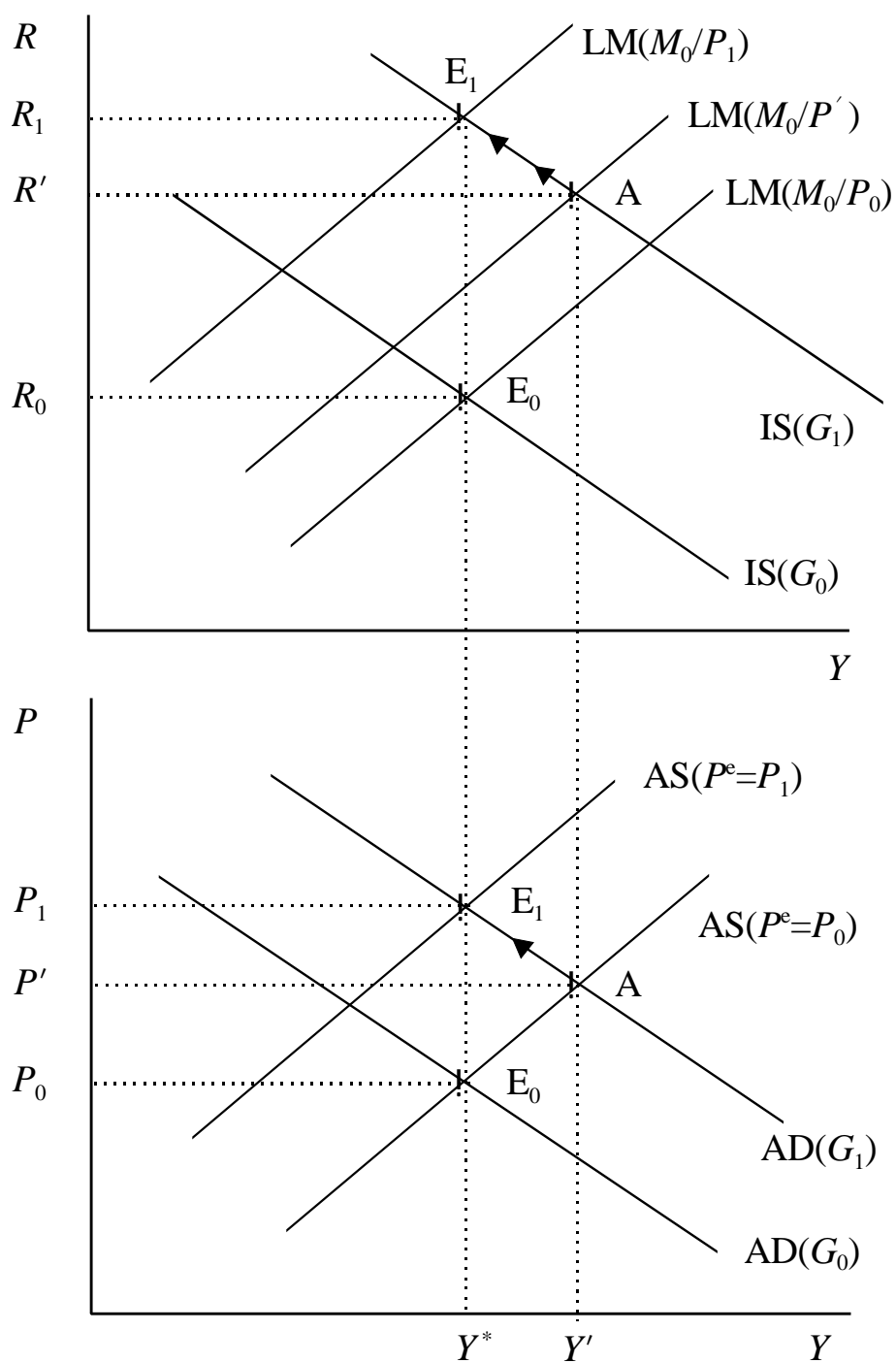


Figure 2.1: Fiscal policy under adaptive expectations

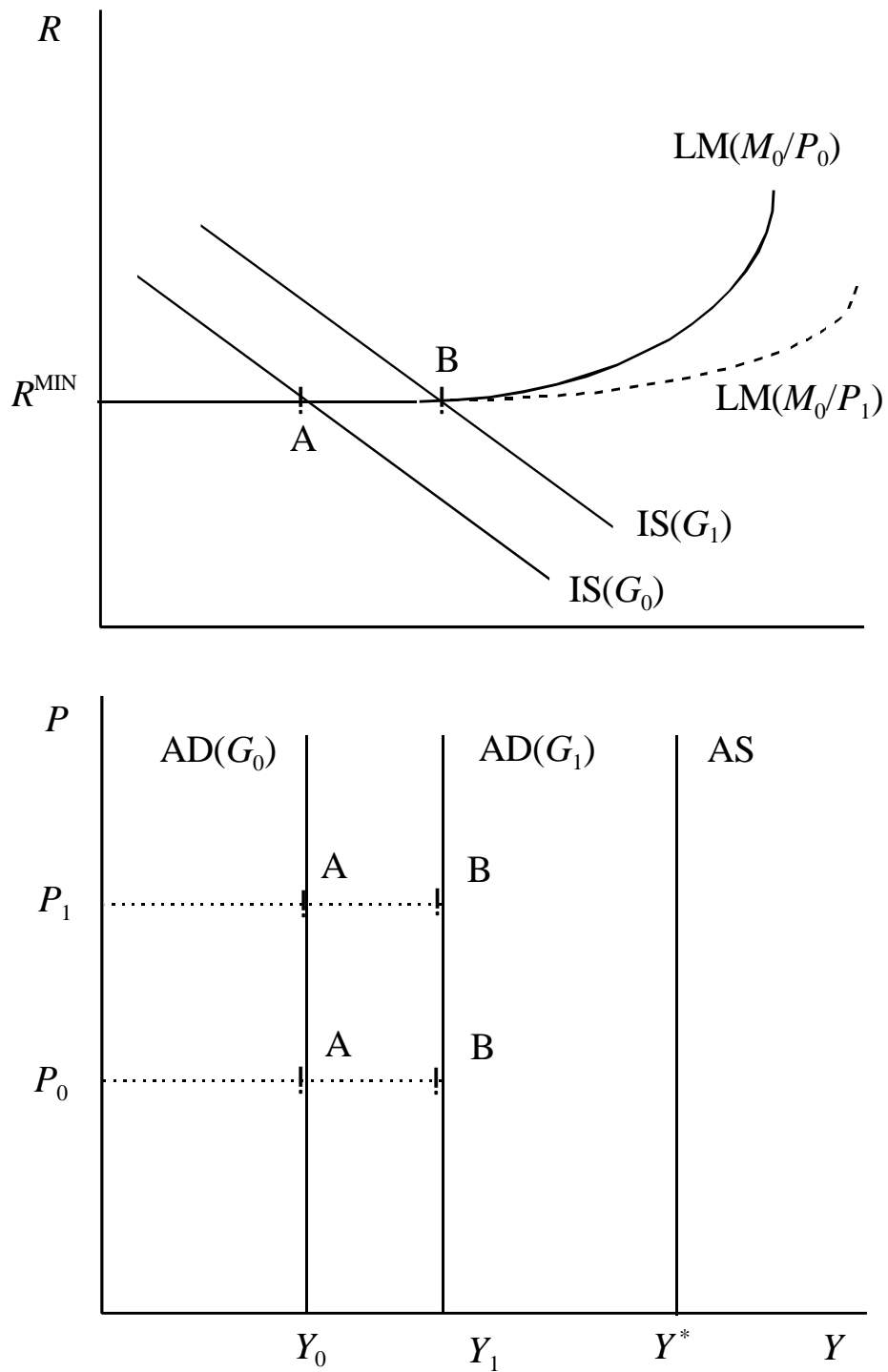


Figure 1.10: Monetary and Fiscal Policy in the Keynesian Model

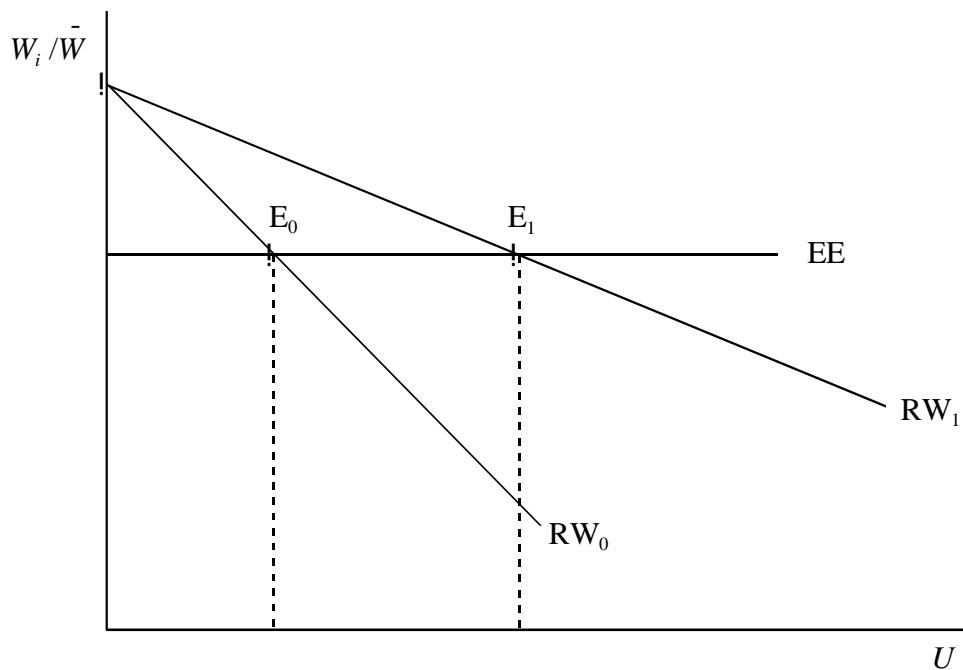


Figure 7.11: The relative wage and unemployment

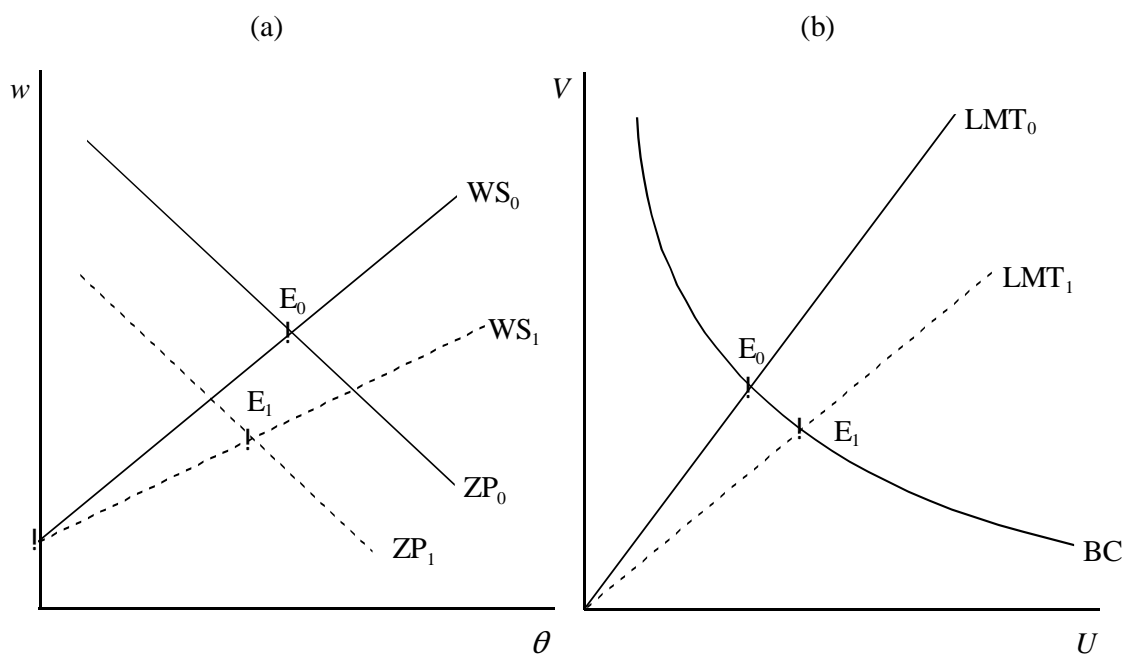


Figure 9.3: The effects of a payroll tax

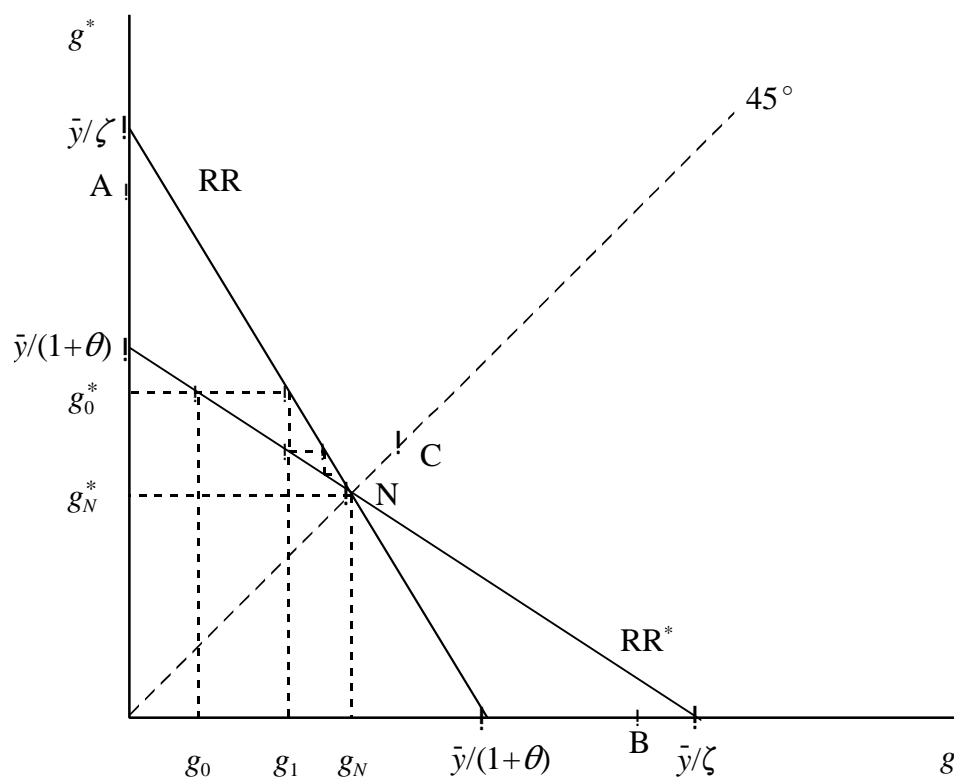


Figure 11.14: International coordination of fiscal policy under nominal wage rigidity in both countries

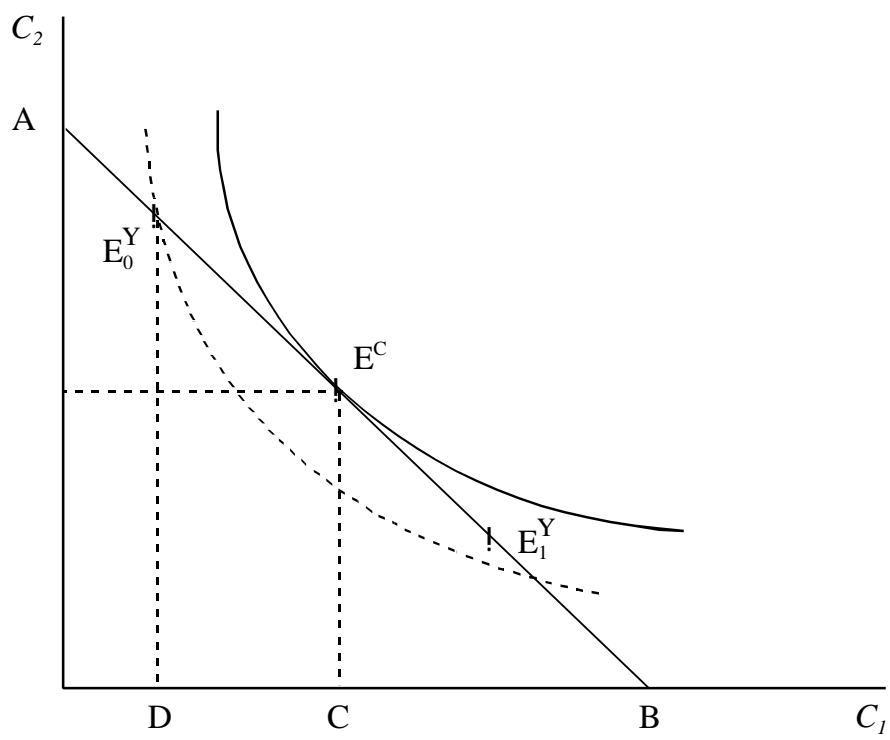


Figure 12.2: Money as a store of value

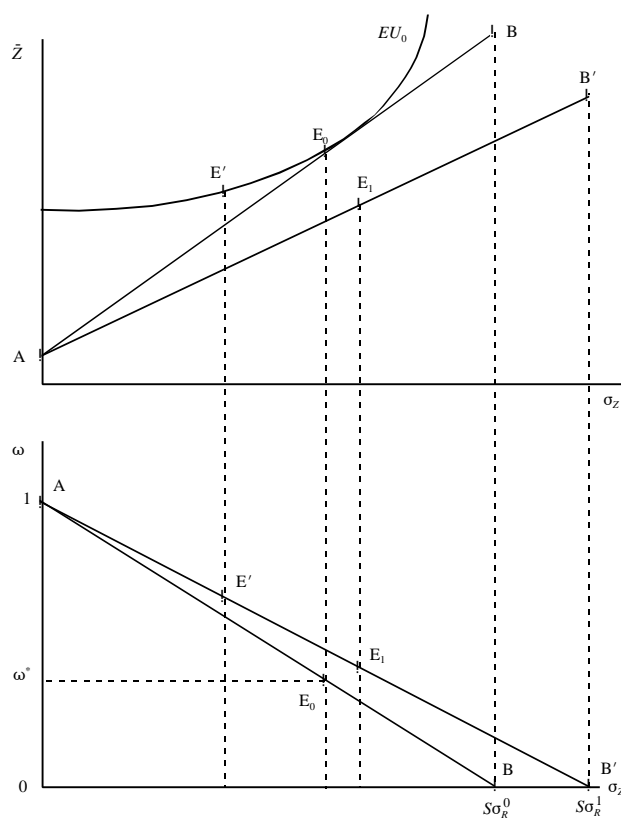


Figure 12.7: Portfolio choice and an increase in the volatility of the risky asset

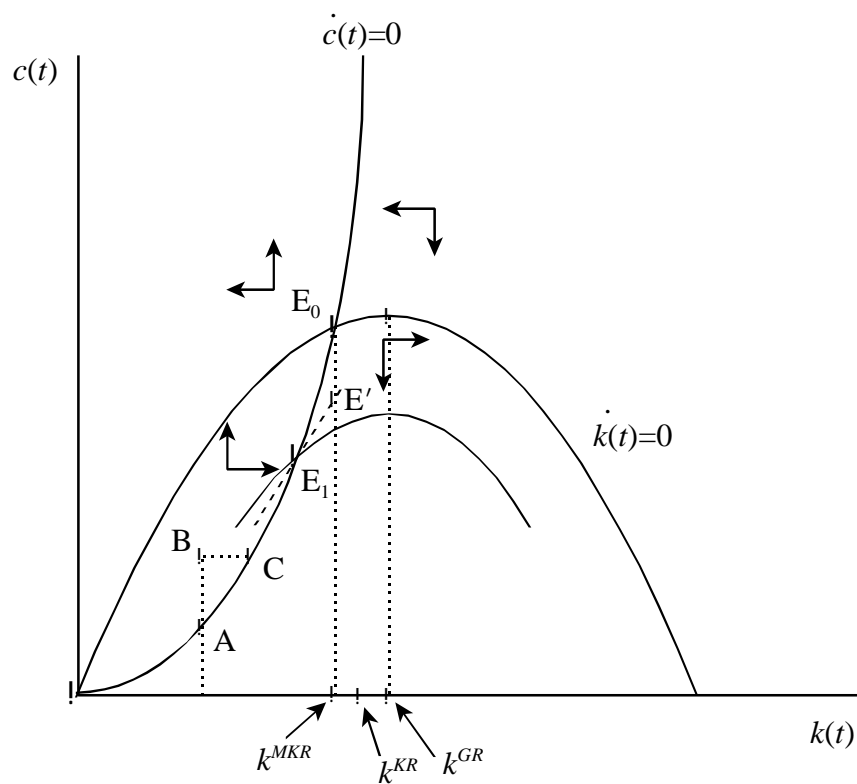


Figure 14.14: Fiscal policy in the overlapping-generations model