Economics 314 — Spring 2019

Daily Problem #16 — February 28

The following equations describe Romer's basic RBC model

1. $Y_t = K_t^{\alpha}\left(A_t L_t\right)^{1-\alpha}$
2. $K_{t+1} = K_t + Y_t - C_t - G_t - \delta K_t$
3. $w_t = MPL = (1-\alpha)\left(\frac{K_t}{A_t L_t}\right)^{\alpha} A_t$
4. $r_t + \delta = MPK = \alpha\left(\frac{A_t L_t}{K_t}\right)^{1-\alpha}$
5. $N_t = e^{\bar{N}+nt}$
6. $L_t = l_t N_t$
7. $C_t = c_t N_t$
8. $l_t = l\left[\underset{+?}{w_t}, \underset{-}{w_{t+1}^e}, \underset{-}{w_{t+2}^e}, \ldots, \underset{+?}{r_t}, \underset{-}{\text{wealth}}\right]$
9. $c_t = c\left[\underset{+}{w_t}, \underset{+}{w_{t+1}^e}, \underset{+}{w_{t+2}^e}, \ldots, \underset{-?}{r_t}, \underset{+}{\text{wealth}}\right]$

1. Suppose that there is an exogenous, positive shock to $A_t$. Describe how each of the endogenous variables of the model would be directly affected based on the equations above.

2. For each of the direct effects, describe what secondary effects would be transmitted to each of the endogenous variables.