

Problem Set #3

Econ 381, Prof. Evans

Due Monday, Feb. 2

(1:35 pm for Section 001) and (4:30 pm for Section 002)

NOTE: You are encouraged to work on this problem set in a group of up to four members. When finished, each group should turn in one copy of the problem set to the class inbox in 130 FOB. Each completed problem set should list the names of the group members who worked on the assignment. As noted in the syllabus, no late assignments will be graded.

1. **Chapter 5, “Problems and Applications” (4 points): #2, #7, #10**
2. **Chapter 6, “Problems and Applications” (3 points): #1, #5, #7**
3. **Chapter 6, Professor Evans made-up problem: Steady State Unemployment (3 points):**
 - Assume that the job separation rate s is 0.01 (1%) per month and that the job finding rate f is 0.2 (20%) per month.
 - Assume that the labor force is 100 million.
 - (a) What is the steady state unemployment rate for this economy?
 - (b) Given that $L = 100$ million, what is the steady state number of employed E^* and unemployed U^* ?
 - (c) If U.S. immigration policy changed today (period $t = 1$) such that we allowed more people to enter the country and L increased to 110 million from its initial value of 100 million. Assume that these new entrants would be unemployed first and then find jobs at the job finding rate f . That is, at time $t = 1$, the number of unemployed is $U_1 = U^* + 10$ million, and the number of employed equals $E_1 = E^*$. Create a table (maybe in Excel) that shows how E_t , U_t , and U_t/L evolve over time, given $s = 0.01$ and $f = 0.2$, starting at $t = 1$ and ending when the unemployment rate reaches its steady state U^*/L rounded to the nearest thousandth (tenth of a percent).
 - (d) In the table from the previous scenario, how many periods does it take for the unemployment rate to reach its steady state level rounded to the nearest thousandth (tenth of a percent)?