

In class exercise: Unemployment and Inflation

EC201: Principles of Macroeconomics

Spring 2022

Q1. Consider the data below:

- Full time employed: $20m$
- Not working but looking for work: $2m$
- Part time employed: $10m$
- Discouraged workers: $1m$

A. Compute the Labor force and unemployment rate

1. Labor force
2. Unemployment rate

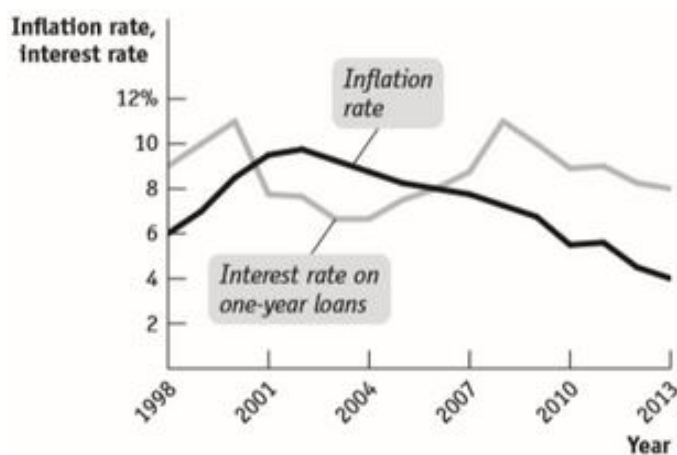
B. Re-do the calculations including discouraged workers in the labor force.

1. Labor force
2. Unemployment rate

C. Re-calculate unemployment rate counting half of the part time workers as unemployed and including discouraged workers in the labor force.

D. Comparing your answers in part A, B, and C, what can you say about the official unemployment numbers published by the BLS?

Q2. The accompanying diagram shows the interest rate on one-year loans and inflation during 1995–2010 in the economy of Albernia.



Answer the following questions based on this graph. Provide the economic reason based on the concept of real interest rate you learned in class. (Hint: $r = i - \pi$.)

- Consider one year loans. During which years would the loans have been especially attractive for the borrowers?
- During which years would the loans have been a especially attractive for the lenders?

Q3. Classify the people described in each of the following scenarios as either frictionally, structurally, or cyclically unemployed.

1. Phil is currently unemployed because the tire factory where he used to work installed robots, which replaced 500 laborers, including Phil.
2. Jessica is unemployed because she is in the process of reentering the labor force after taking time off to have a baby.
3. Mary is unemployed because she lost her job at McDonald's after the state increased the minimum wage.
4. Barry is unemployed because he was laid off by the automobile factory when the economy entered a severe, prolonged recession.
5. Sandy left her former job at an accounting firm a month ago. She is in the process of interviewing for a similar position at six different accounting firms, although she has not yet accepted a job.
6. When Sam and her co-workers refused to accept pay cuts, her employer outsourced their programming tasks to workers in another country. This phenomenon is occurring throughout the programming industry.

Q4. How will the following affect the NRU?

- Instead of paying unemployment benefits for up to 26 weeks, government declares that it will pay only up to 20 weeks.
- More teenagers focus on their studies and do not look for jobs until after college.

Q5. What type of net inflation cost are the following activities imposing on the economy?

- Ryan is reimbursed by his company for his work-related travel expenses. Sometimes, however, the company takes a long time to reimburse him. So when inflation is high, he is less willing to travel for his job.
- In response to unexpectedly high inflation, the manager of Cozy Cottages of Cape Cod must reprint and resend expensive color brochures correcting the price of rentals this season.

Q6. What kind of problem is inflation creating in the following situation? [Hint: Who wins and who loses?]

- Hector Homeowner has a mortgage with a fixed nominal 6% interest rate that he took out five years ago. Over the years, the inflation rate has crept up unexpectedly to its present level of 7%.

Q7. Total population is 350 million, population aged 16 and older is 260 million, employed population is 155 million. Assuming labor force participation rate is 70%, what is the number of unemployed adults?