

Exercise 1

Introduction to Macroeconomics

1. What are the four macroeconomic agents? What are the three markets in which the agents interact?
2. What is sticky price? Explain why price may be sticky.
3. Explain the four main categories of unemployment.
4. Classify the following events into the categories of unemployment.
 - Some friends just graduated from college and have been looking for jobs.
 - Christine lost her job as a biologist at a biotech-company when the whole industry went into recession.
 - Gerhard, who used to be a taxi driver, stopped looking for a job three months after he lost his job.
 - Dirk used to work as a wooden-doll maker. Now all kids want plastic dolls, so he is out of work.
 - The hotel part-timers were laid off during low season.
 - Aditi, a high-tech engineer, just decided to quit her job; she is being interviewed for a better-paid job in a multinational company.
 - A man lost his job as a public reader as literacy has increased in his village.
5. Suppose there are 100 people in labor force and 60 people currently in employment. Find the unemployment rate. Can we find labor force participation rate? If not, what information do we need?
6. What is the discouraged-worker effect? How can it affect the unemployment rate?
7. On average, nations in Europe pay higher unemployment benefits for longer periods of time than the US. How would this affect the unemployment rates in these nations? Explain which type of unemployment is most directly affected.

1.) 4 agents including Households, Firms, The Government, and the rest of the world.

3 markets that 4 agents interact to are Goods & Services market, labor market, and financial market.

2.) Sticky price is the price that change too long to the equilibrium. The reason why price may be sticky is sellers (or buyers) of certain goods are reluctant to change the price, despite changes in demand patterns. The cause of price stickiness due to minimum wage policy, employment contract, and labor union.

3.) • Frictional unemployment is a normal turnover in the labor market
ex. the normal unemployment when people are looking/switching jobs.
• Structural unemployment is a result of changes in structure of certain industries making people loss their jobs. One of the example that some jobs & skill can be replaced by machine is ticket machines in train stations reduce the needs for ticket officers.
• Cyclical unemployment is frictional + structural unemployment due to fluctuation in cycle business or recession period.
• Seasonal unemployment is unemployment due to changing season
ex. hotel employee loss their jobs during low season

4.) • frictional unemployment
• cyclical unemployment
• frictional unemployment
• structural unemployment
• seasonal unemployment
• frictional unemployment
• cyclical unemployment

5.) unemployment rate formula :

$$\frac{U}{LF}$$
$$= \frac{40}{100}$$
$$= 0.4$$

Labor Force participation rate = can't find cuz don't have information about population outside the labor force.

6.) Discouraged - worker effect is people who wants to work but cannot find a job become discouraged and stop looking for work. Since these people exit labor force, unemployment rate fall. However, it can mislead us into thinking that more people have got their jobs.

7.) In my opinion, having less period of time giving employment benefits is better than having long period of time giving employment benefits because it's encourage people to find jobs, get in labor force, decrease unemployment rate for better economy. On the one hand, if people gain unemployment benefits more than their salary during unemployed period, they will not find new jobs and exit labor force. Then, economics will not constant. In this case, structural unemployment will be the most affected since they have to find new jobs quickly. On the other hand, in case of cyclical unemployment is affected the most, it will be great if there is long period of time giving unemployment benefits especially during recession and depression period for the reason that people want to work but cannot find any jobs.

8. What is inflation? It is often said that inflation reduces one's purchasing power, and hence inflation is bad. How can inflation reduce one's purchasing power? Is there a case where inflation may not be bad?
9. Who – lender or borrower – is better off, given unanticipated deflation? Explain with examples.
10. When inflation is anticipated, what will the central bank do with the interest rate? (Hint: Fisher Equation)
11. The CPI is 120 in year 1 and 150 in year 2. All inflation is anticipated. If the bank charges an interest rate of 30%, what is the bank's real interest rate?
12. Explain why inflation is necessary to a growing economy with reference to the money supply.
13. What are the two administrative costs of inflation? Explain.
14. Draw a diagram of business cycles and the trend line. Label the four phases of business cycles. Answer the following questions.
 - Which phase do you expect to see inflation?
 - Which phase do you expect to see high unemployment?
 - Which phase should the government use expansionary policy? Give example.
 - Which phase should the government use contractionary policy? Give example.
 - What factors determine the trend line?
15. An article states that capital stock and labor force are both increasing at an annual rate of 7%. The same article also states that real output is growing by 11%. Explain why this is possible.

8.) Inflation is an increase in the overall price level. Inflation can reduce our purchasing power if our wages are fixed. It's because giving fixed income making people can buy less goods due to their higher price. Inflation will not be bad in the situation like it increases both goods price and income.

9.) Lender will be better off because, in real income point of view, deflation decreases price level. After the lender receives money back, it seems like they receive more value of money than before.

10.) Central bank will increase interest rate considered by Fisher equation.

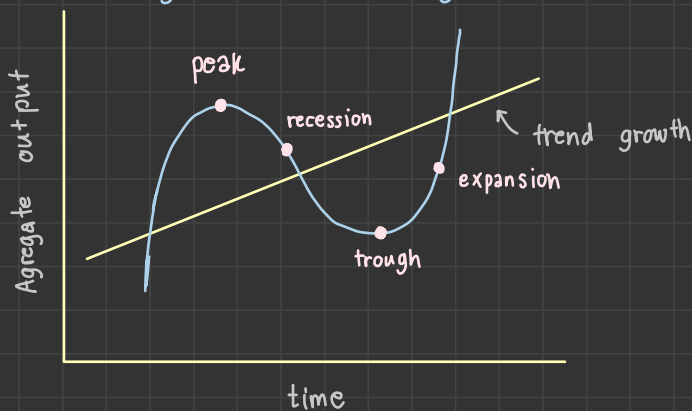
11.) $CPI_1 = 120$	inflation rate = % Δ of CPI	Fisher equation
$CPI_2 = 150$	$\frac{\text{new} - \text{old}}{\text{new}} \times 100\% = \frac{150 - 120}{150} \times 100\%$	$i = r + \pi$
	$\pi = 25\%$	$30 = r + 25$
		$r = 5\% \#$

12.) Inflation helps increase production. More money supply translates to more spending, which causes more demand. More demand triggers more production to meet that demand.

- 13.)
- menu cost is the cost associated with anticipated inflation such as costs from changing menus / price lists frequently.
 - Shoe leather cost is interest rate tend to rise with anticipated inflation. When interest rate are high, the opportunity cost of holding cash outside bank is high. Name of "Shoe leather cost" came from opinion that, in the past, people needs to go to the bank more often.
 - Therefore, there is a need for price stability.

14.)

Diagram of business cycle



- inflation during expansion phase.
- unemployment rate increases during recession and trough phase.
- Government should use expansionary policy in recession phase e.g. in covid-19 situation, Gov. give งบช่วยเหลือ project to raise spending to boost economy.
- Government should use contractionary policy in expansion phase to avoid inflation and to stabilize output. For Instance, Gov. increased taxer on high-income taxpayers and decreased gov. spending. As a result, gov. went from being debt to having a budget surplus.
- quality and quantity of factors of production.

15.) Long-run growth due to quality and quantity of labor and capital