Problem set 5

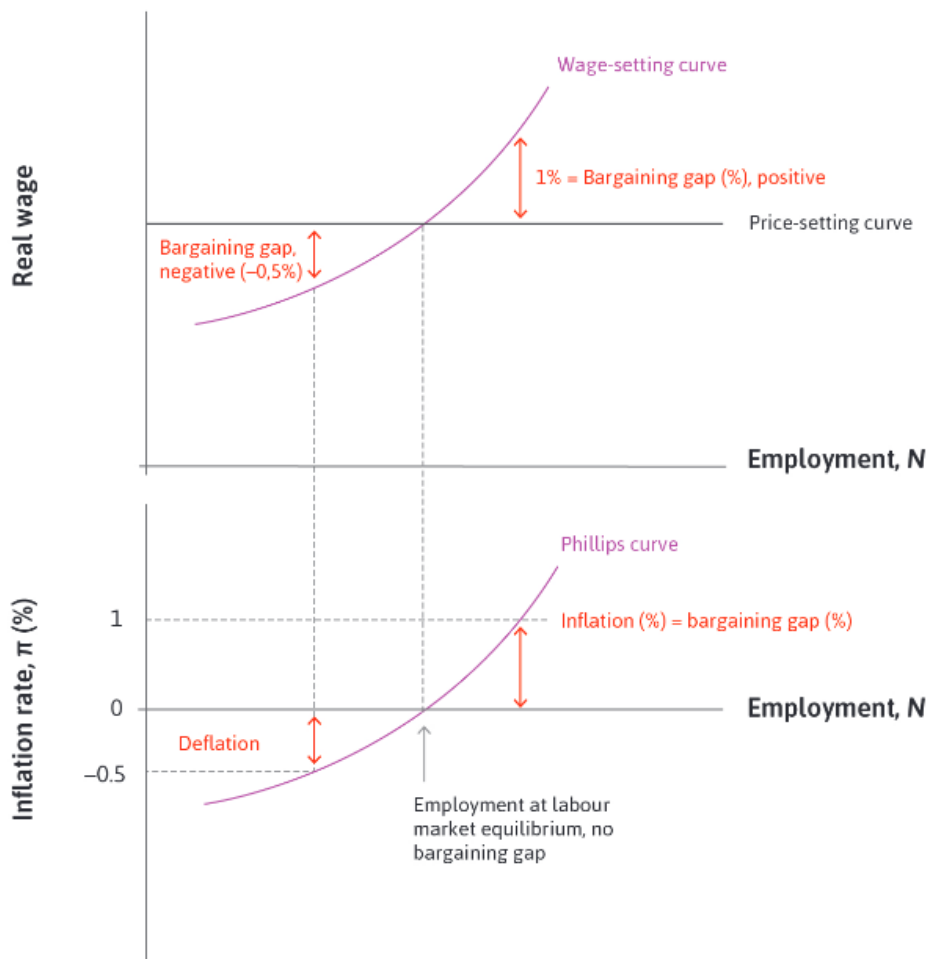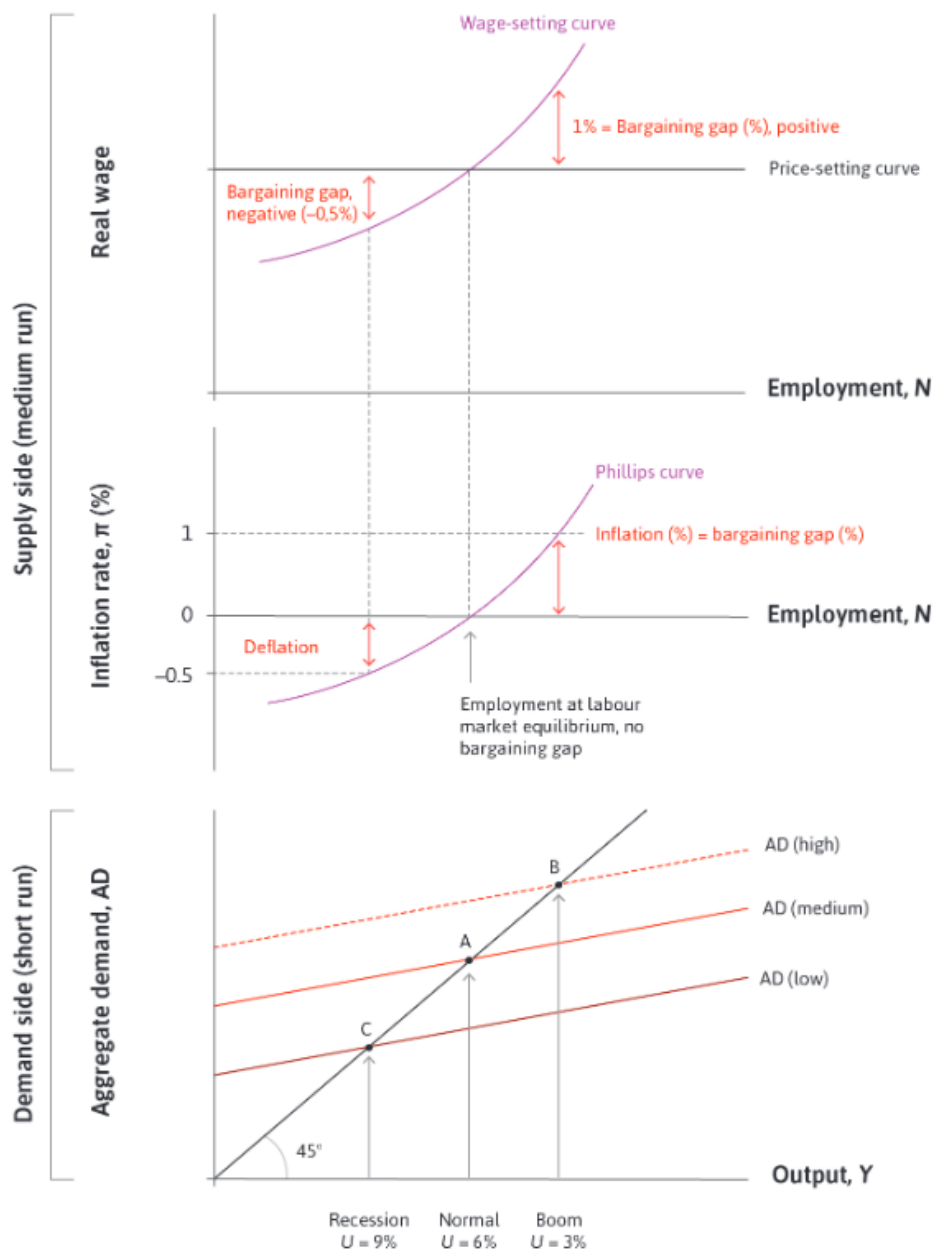**Instructor: Mitri Kitti**

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Question 1:

a) In the first case with the positive demand shock, the bargaining gap will also be positive. In the second case, the bargaining gap is negative, but smaller than the previous case because the wage-setting curve is convex (as it is shown in the figures above).

b) In the first case, prices will increase (inflation) while in the second case prices will decrease (deflation), but the inflationary pressure in the first case is greater than the deflationary one in the second case.
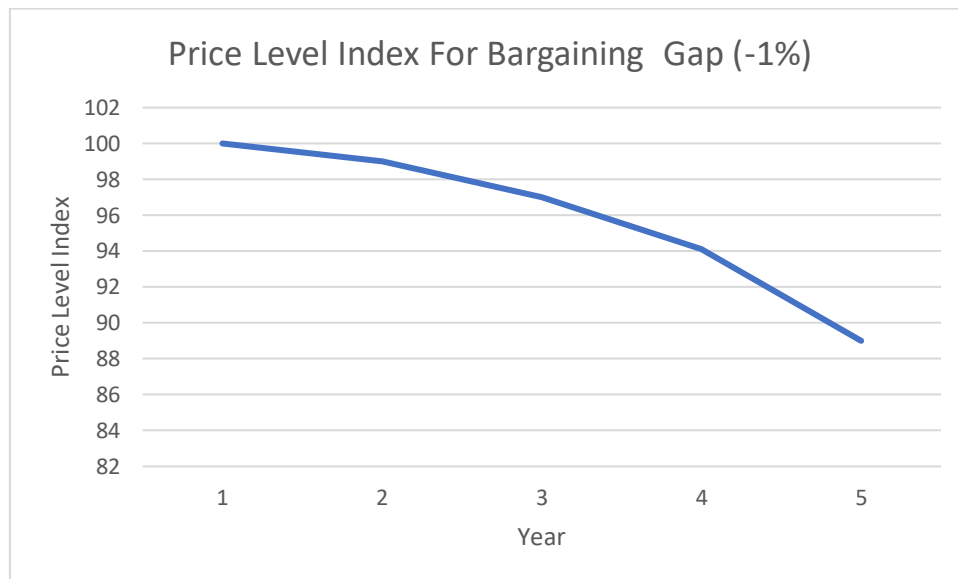
Question 2:

Supply side (medium run)

Real wage

Wage-setting curve

1% = Bargaining gap (%), positive

Price-setting curve

Bargaining gap, negative (−0,5%)

Employment, N

Inflation rate, π (%)

Phillips curve

1   Inflation (%) = bargaining gap (%)

0   Employment, N

Deflation

−0.5

Employment at labour market equilibrium, no bargaining gap

Demand side (short run)

Aggregate demand, AD

AD (high)

B

AD (medium)

A

AD (low)

C

45°

Output, Y

Recession   Normal   Boom
U = 9%   U = 6%   U = 3%

a) The investment decline reduces aggregate demand so that we are at a point such as C in the bottom diagram of above Figure. Due to the higher level of unemployment, there is more competition for jobs and the expected duration of unemployment may rise. As a result, employment rents rise and the wages that firms need to offer falls. This creates a downward pressure on wages. The real wages needed to secure workers' effort is now lower than the real wages consistent with the markup that firms wish to secure. This bargaining gap leads to a downward pressure on output prices and deflation.
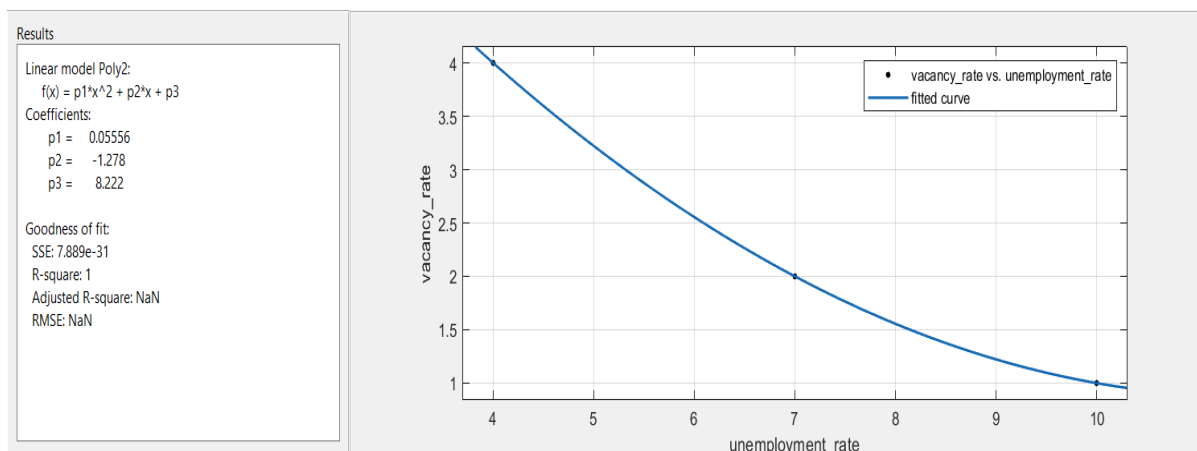
b)

year	Price Level	Absolute Amount Decrease
1	100.00	
2	99.00	1.00
3	97.02	1.98
4	94.11	2.91
5	89.00	3.76

Price Level Index For Bargaining Gap (-1%)

Price Level Index vs Year (Year on x-axis from 1 to 5, Price Level Index on y-axis from 82 to 102)

c) Deflation increases the value of cash holdings and savings so it benefits those with savings i.e. lenders. On the other hand, debts denominated in nominal terms will increase in real terms so that borrowers will be worse off.

Question 3:

a) The Beveridge curve of Phinland:

Results

Linear model Poly2:
$f(x) = p1*x^2 + p2*x + p3$
Coefficients:
p1 = 0.05556
p2 = -1.278
p3 = 8.222

Goodness of fit:
SSE: 7.889e-31
R-square: 1
Adjusted R-square: NaN
RMSE: NaN

In the Economic boom we have lower rate of unemployment and higher rate of vacancy and vice versa.

b) By introducing the unemployment insurance, we will increase the rate of unemployment since there are some workers who prefer to be unemployed and enjoy the benefits. As the result, the matching market will be less efficient and the Beveridge curve will be shifted to the right.

c) The Beveridge curve shifts when there is a change in the labor market matching efficiency. In here we do not change the efficiency of the market so we will move along the curve. As the result of the recession, the unemployment will be increased and the vacancies will be decrease.

d) By planning public employment services we increase the efficiency of the matching market in the sense that more workers will be able to find their suitable jobs. As the result, we might have a shift in the curve but more importantly the curve will be steeper since it is easier to find the job and the vacancies will be filled faster.

Question 4:

a) Using France and the US as an example, our answer depends on the assumptions we make about the relative preferences over free time and GDP per capita, and whether these preferences differ across countries. More work and less free time may sound like a poor deal, but life satisfaction in the US would not necessarily be worse if its residents place a higher weight on consumption than French residents, and if US residents have chosen freely to work. By contrast, the French may feel just as happy by using technological change to deliver more leisure if they place a higher weight on free time than consumption.
In general, the sources from which we draw life satisfaction vary from person to person. For example, income and leisure are important, but other factors like community or civil engagement also matter. Furthermore, it is clear that citizens of different countries place different weights on each of these conditions. Therefore, it is impossible to provide a straight forward answer.

b) The answer depends on the student's preferences over working hours and GDP per capita, as well as preferences over specific aspects of each country, such as the weather, sense of community, and availability of particular cultural or leisure activities.

Question 5:

a) The US had higher unemployment rates than many European countries between 1960 and 1980. Since then, most European countries have tended to suffer unemployment rates higher than those in the US, the only European countries with rates below those of the US in this later period have been Austria, Norway, and the Netherlands.
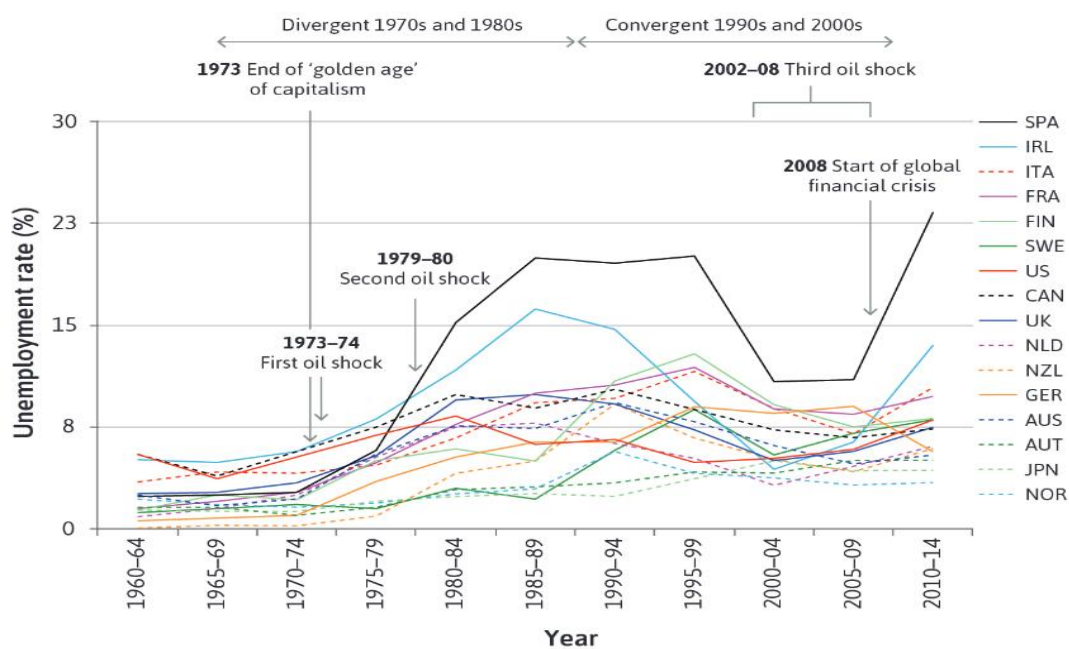
b) If rigid labour market institutions were the reason for high unemployment rates in Europe, we would like to see a positive relationship in Figures 16.14 and 16.16 i.e. the higher the union wage bargaining coverage and unemployment generosity, the higher the unemployment rate. Such a relationship cannot be clearly seen in these figures.

In Figure 16.14, for example, the USA has a very small fraction of employees covered by union wage bargains (around15%), amongst the lowest in the sample, But its average unemployment rate (around 6.4) is close to the middle of the sample. Similarly, Figure 16.16 shows the US towards the bottom end of the sample when it comes to its unemployment benefit replacement ratio (around 12%), while its unemployment rate is near the middle of the sample values (around 6.4%).
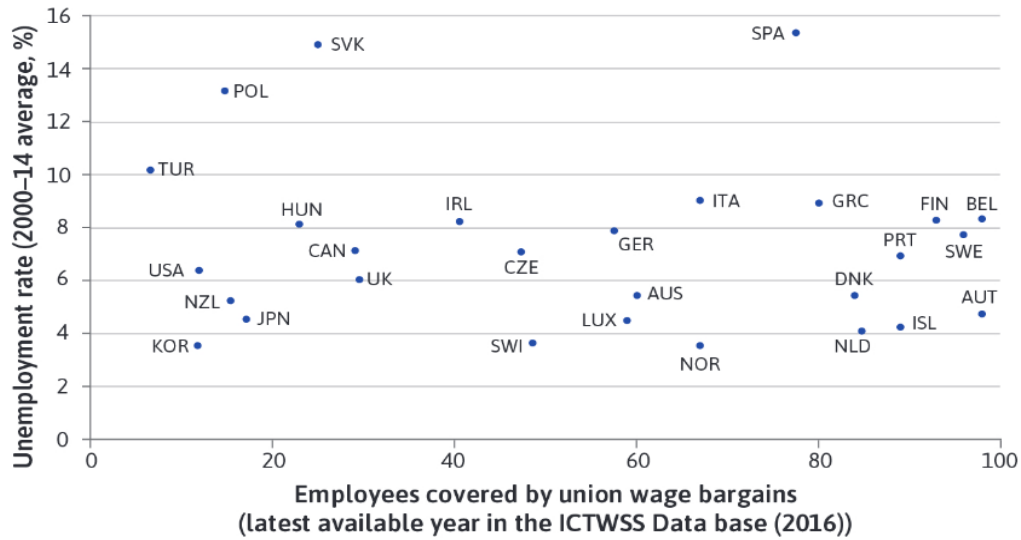
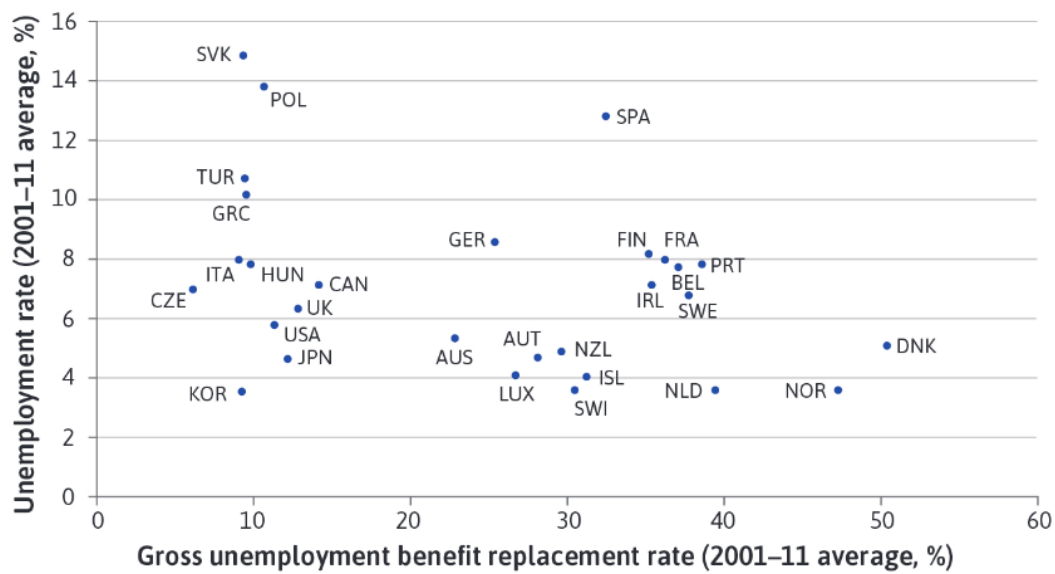Figure 16.14: Union wage bargaining coverage and unemployment across the OECD (2000-2014)

Figure 16.16: Unemployment benefit generosity and unemployment rates across the OECD (2001-2011)