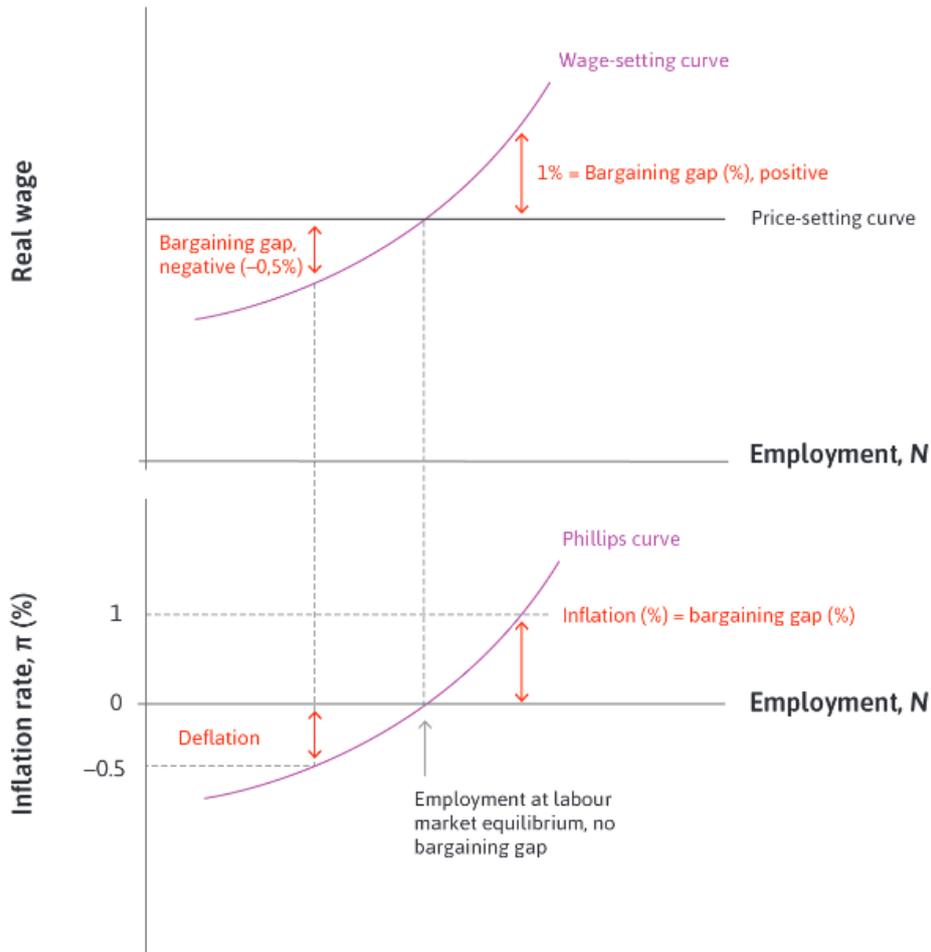


Problem set_4 Solution:

Instructor: Tuukka Saarimaa

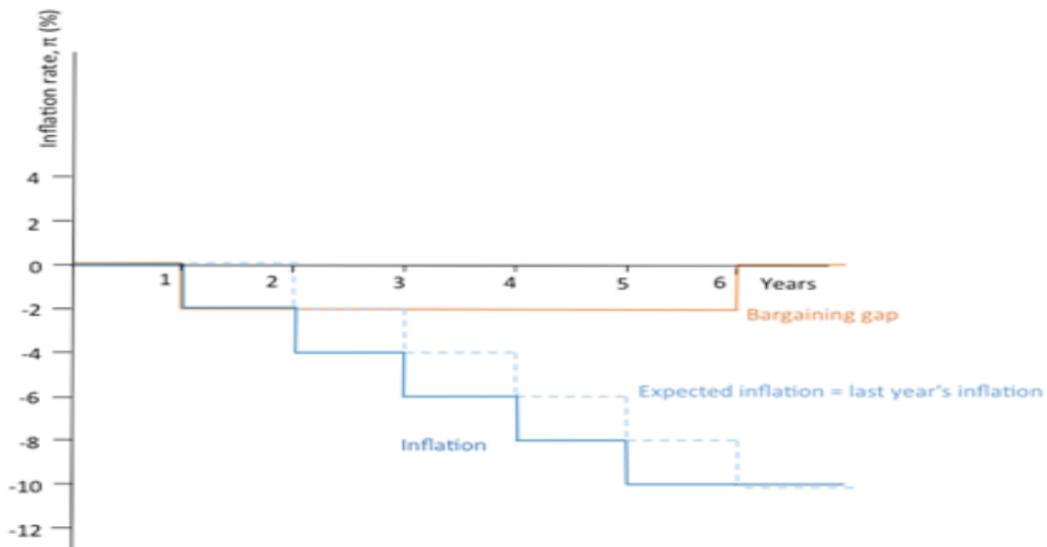
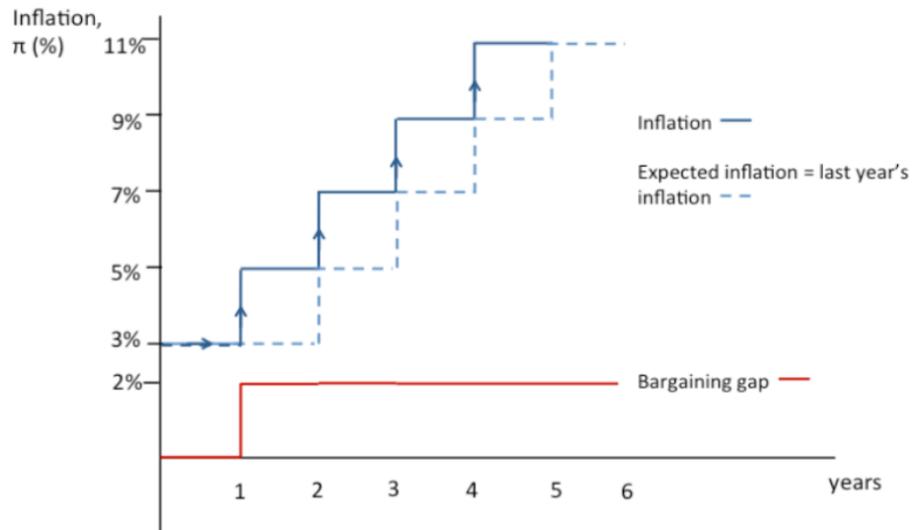
Teacher Assistant: Amin Mohazab

Question 1:



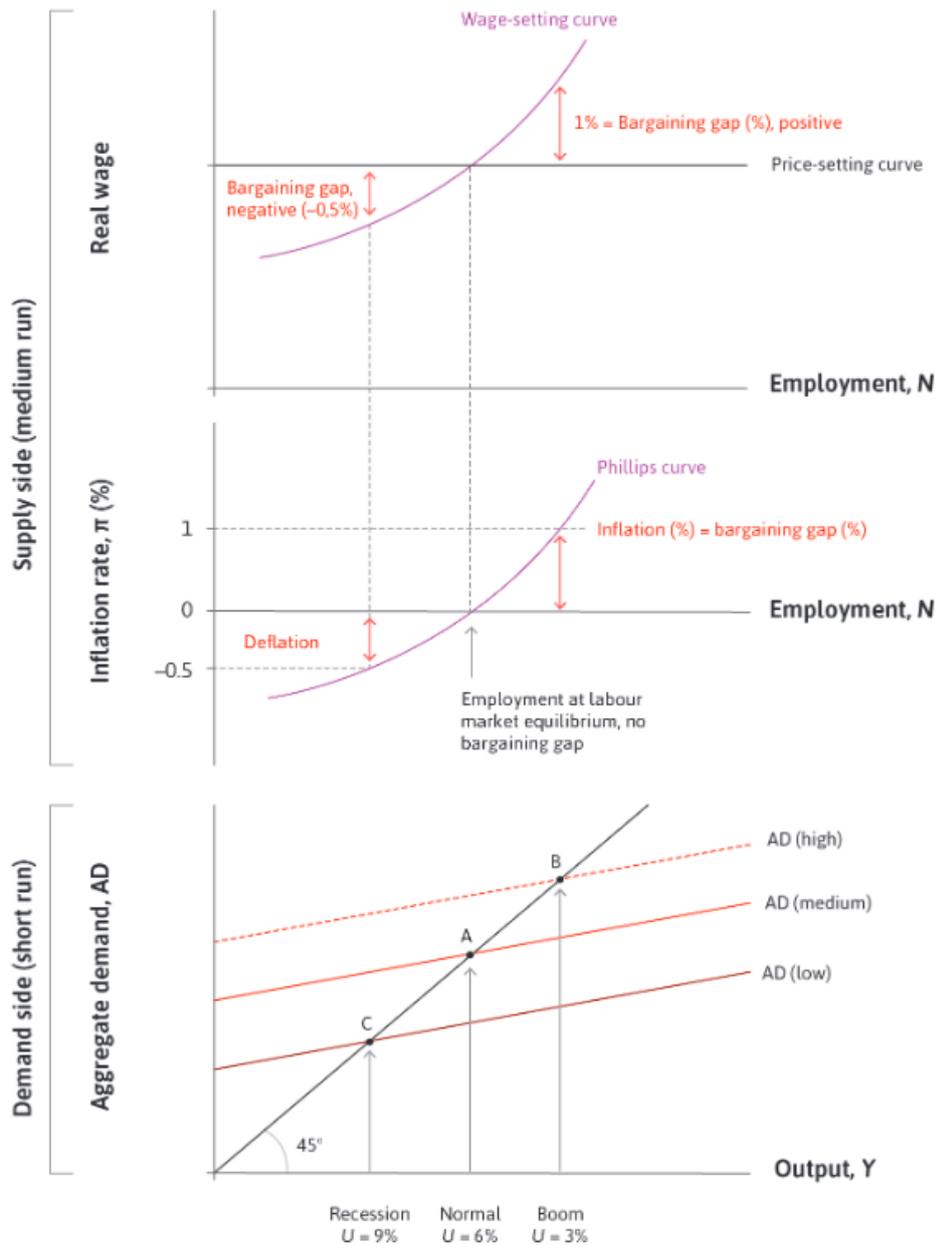
- In the first case with the positive demand shock, the bargaining gap will also be positive. In the second case, the bargaining gap is negative, but smaller than the previous case because the wage-setting curve is convex (as it is shown in the figures above).
- In the first case, prices will increase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



- The path of the bargaining gap is shown in yellow
- In here because of the negative bargaining gap and unlike the previous case inflation will drop every period. Moreover, we know that the expected inflation is equal to the inflation in the former period.
- With the bargaining gap disappearing, the expected inflation rate will be stabilized at -10% from period 6 (although the price level would continue to fall), assuming no further shocks to the economy. The disappearance of the gap could be because of an exogenous increase in aggregate demand such as a rise in exports, or because of the operation of monetary policy or fiscal policy to halt the process of deflation and reduce unemployment.

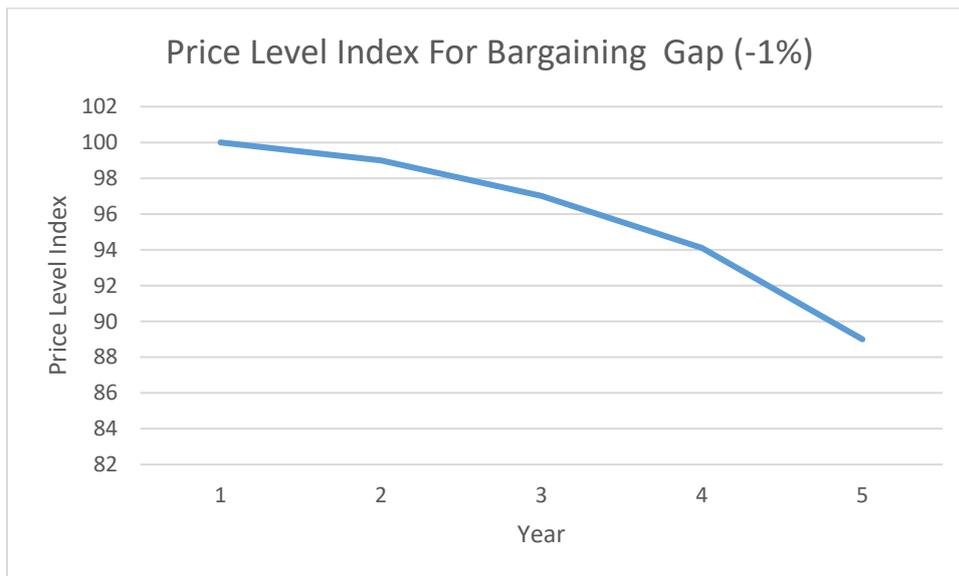
Question 3.



- 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



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.

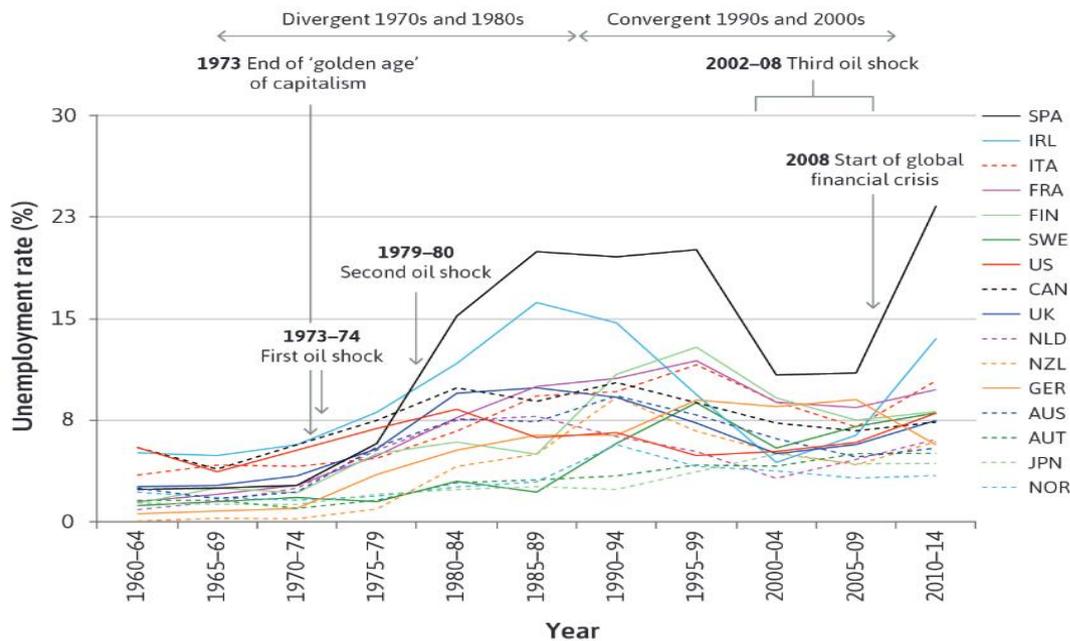
Question 4.

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 (around 15%), 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%).

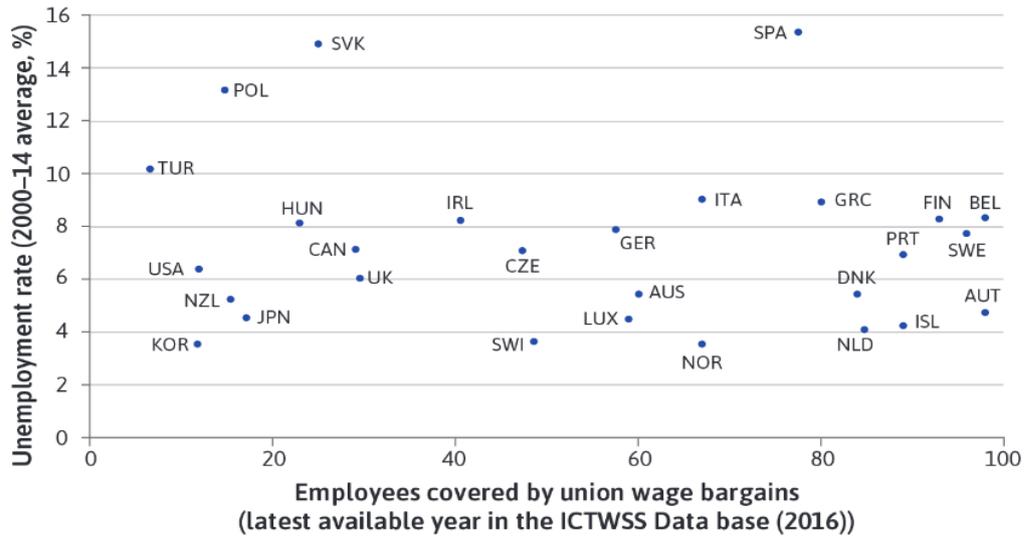


Figure 16.14: Union wage bargaining coverage and unemployment across the OECD (2000-2014)

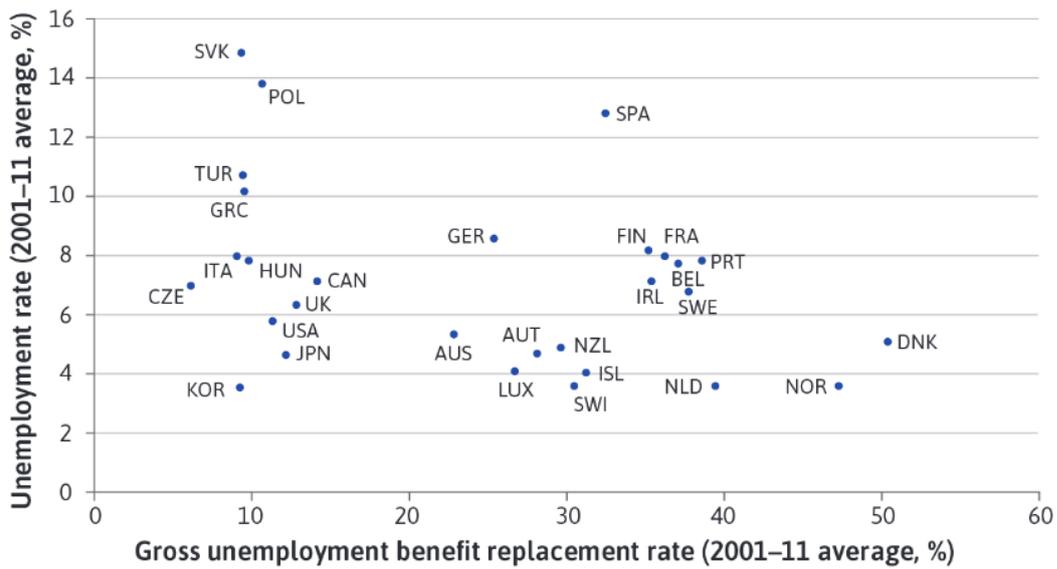


Figure 16.16: Unemployment benefit generosity and unemployment rates across the OECD (2001-2011)