Problem set 2

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1-

    a) $R = 1000 * 20 = 20000 \; (£/year)$
    where R is the annual total rent that the landowner receives.

    b) $V = \frac{R}{1+0.04} + \frac{R}{(1+0.04)^2} + \cdots = \sum_{t=1}^{\infty} \frac{R}{(1+0.04)^t} \approx \frac{R}{0.04} = 20000 * \left(\frac{1}{0.04}\right) = 500{,}000$

    c) $V' = \sum_{t=1}^{\infty} \frac{R-T}{(1+0.04)^t} \approx \frac{R}{0.04} - \frac{T}{0.04} = (20000 - 500) * \left(\frac{1}{0.04}\right) = 487{,}500$

Obviously, the landowner bears the total burden of the tax.

2-

    a) taco vs burger ⟶ taco wins (Miri and Matti)
       taco vs pizza ⟶ pizza wins (Miri and Cristina) ⟶ pizza wins overall

    b) taco vs pizza ⟶ pizza wins (Miri and Cristina)
       pizza vs burger ⟶ burger wins (Cristina and Matti) ⟶ burger wins overall

    c) pizza vs burger ⟶ burger wins (Cristina and Matti)
       taco vs burger ⟶ taco wins (Miri and Matti) ⟶ taco wins overall

    d) Cristina prefers burger to pizza and taco. Moreover, he knows the preferences of Miri and Matti. Consequently, he prefers the order of the pairwise majority voting to be:
    First pizza vs taco and then the winner vs burger, because with this order the burger will be chosen as the meal.

3-

    a)
        She will not stand between the sellers and she will be exactly after one of the sellers on the right or left.
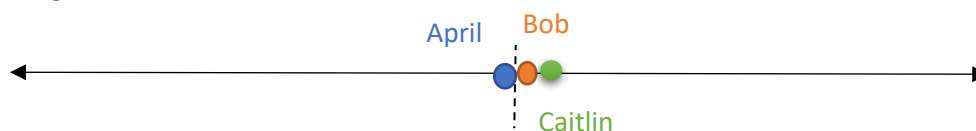
    b)
        In this case, Bob is not happy at all about his position (he gets zero), so he will change his place to the just right of the Caitlin or just left of the April.
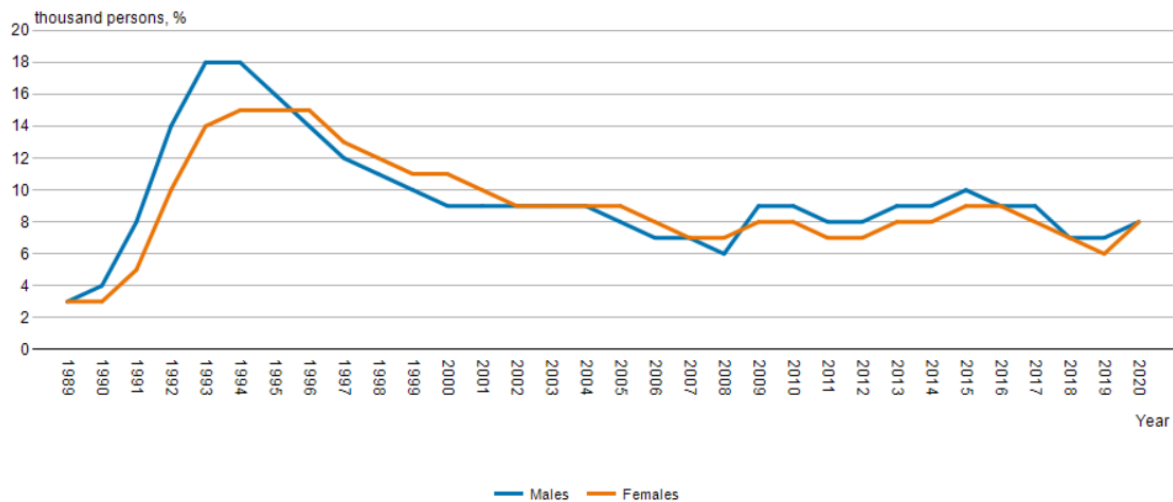
    c)
        In either case, one of April or Caitlin is not going to be happy about her place so she will do the same. In other words, none of the players wants to be at the middle of other two players, because she will get nothing.

d) According to part 3, there is no Nash equilibrium in this case because none of the players has any incentives to be at the middle of the other two players.

4-

a)

Source: Labour force survey, Statistics Finland

b) Average employment, unemployment and activity rate for every one (17-74) between 2000-2005.

Average employment rate	Average unemployment rate	Average activity rate
60.8	8.4	66.3

c)

	Finland	Slovakia	Germany[1]
Employment Rate	60.8	51.5	57.4
Unemployment Rate	8.4	13.2	5.0
Participation Rate	66.3	59.4	60.4

Average employment rate: Finland is the highest with 60.8%, after that it is Germany with 57.4% and Slovakia with the 51.5% is the last.

Average unemployment rate: Germany is the best with only 5%, after that it is Finland with 8.4% and at last, it is Slovakia with 13.2%.

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[1] It seems like that there is a mistake in Germany's data in this table. You can find the correct data in link.

Average participation rate: Finland has the highest rate 66.3%, after that Germany with 60.4% and after that Slovakia with 59.4%.

The reason for these differences:

Unions:

The first thing we consider is the effect of the unions.

Following figure depicts the share of employees covered by collective bargaining agreements:
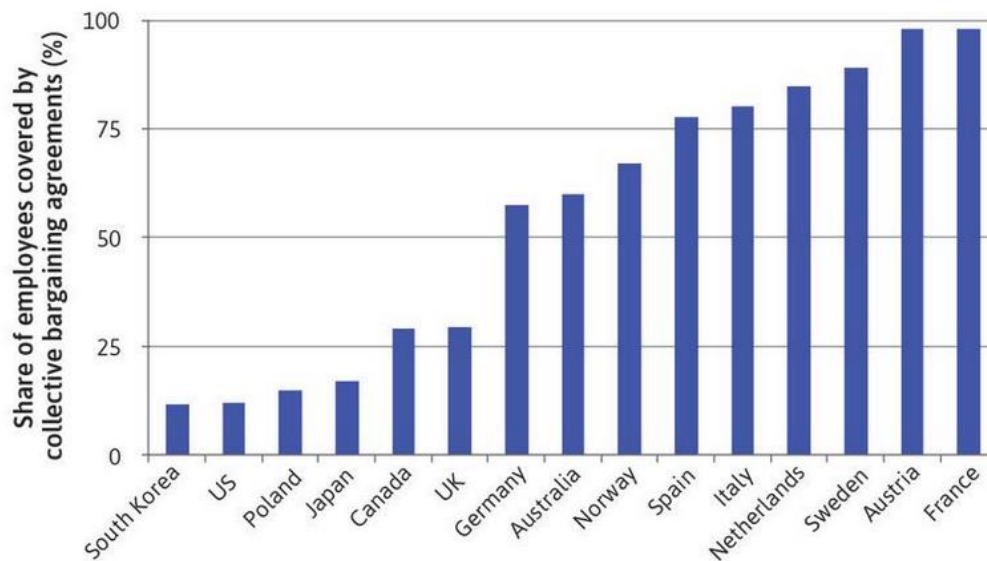

Figure 2

In the next figure, we see the Unemployment rate as a function of the share of the covered workers for different countries:
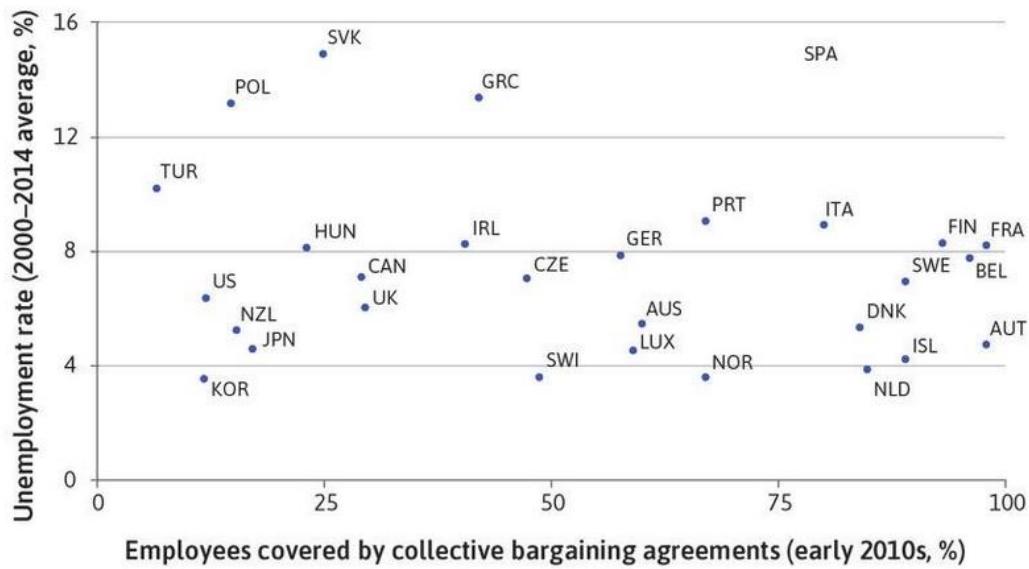
Figure 3

Effect of policies:

Education and training: they can increase the productivity of the labour and as we know it can cause for the real wage to increase and the unemployment to decrease.

Wage subsidy: Wage subsidy can move the equilibrium to up and right, so it will increase wage and decrease unemployment. Although, it will make the government to collect tax to pay the subsidy.

There are many important policies that can have major impacts on the unemployment and real wages such as Immigration policies, policies to enhance women's employment opportunities, reduction of discrimination and many more.