Exam - SØK2011 Public economics and economic policy

December 2020

The exam consists of five assignments, all of which must be answered. Weight when grading is given in parentheses.

Task 1 (20%)

In many countries, parents who provide for children under the age of 18 receive benefits (child benefit), but the design of the benefits for families with children may vary. Consider individuals with a child under the age of 18 years old. Individuals face a given pay rate per week, can freely choose how much he or she wants to work and have no other income other than salary and child benefit.

Formulate the individual's budget constraint and explain how working hours are affected by the introduction of child benefit in the following situations:

a) A child benefit of NOK 400 per week per child regardless of the individual's weekly employment income.

b) The child benefit is means-tested at NOK 400 per week per child and is only given to individuals with a weekly employment income below NOK 3000. If the income from employment is equal to or above this amount, the individual loses the right to child benefit. If the income from employment per week is less than NOK 3000, the child benefit is reduced by 40 cents per krone of income from employment.

c) The child benefit is means-tested of NOK 400 per week. For those with employment income above NOK 1,000 per week, the child benefit is reduced by NOK 1 per krone of income from employment.

Task 2 (20%)

a) A representative of a business organization makes the following statement: "Reduced employer's National Insurance contributions will be an effective mean of increasing employment because it will reduce corporate labor costs." Provide an assessment of this

statement based on economic theory.

b) The same representative also proposes reducing the taxation of interest income and justifies that this will stimulate private saving in households. Give an assessment of this proposal.

Task 3 (20%)

A political party proposes lowering taxes on the two groups of alcoholic goods and tobacco products. Use economic theory to assess whether taxes should be reduced equally on the two item groups and how to justify any deviations from equal reduction.

Task 4 (25%)

a) A US politician makes the following statement: "Reducing the income tax rate will not only benefit wage earners, but it will also increase the tax revenues of the public sector since wage earners will increase their working time when they are allowed to keep more of the money they earn." Discuss this statement in light of economic theory.

b) The politician argues as an additional argument that reducing the income tax rate will also reduce the scope of tax evasion. Discuss whether this is a valid argument for a reduced income tax rate.

c) Assume that a representative wage earner in the United States has a utility function defined over income I (which can be used for the purchase of consumption goods) and nonworking time F of the form $U(I, F) = I + 400 \ln F$. He/she faces an hourly wage rate of \$25 and has 60 hours at his/her disposal for free time and work over the course of a week. Find an expression of the number of hours he or she will work when there is a proportional tax on labor income with a tax rate of t. Calculate the number of working hours for tax rate of 10%, 30%, 50% and 60%, respectively.

Find an expression of public tax revenue from this taxpayer. Is there a tax rate that maximizes tax revenue? Justify your answer and, if necessary, calculate this tax rate.

Task 5 (15%)

The government of an EU country wants the country to leave the EU. Suppose the matter is decided in the country's National Assembly by majority decision. There are three options:

EU: (No opt-out). The country remains an EU member

A: (Opt-out agreement). The country leaves the EU in accordance with an agreement negotiated by the Government and the EU

B: (Abrupt opt-out). The country is leaving the EU, but without any agreement with the EU on how this will take place.

It will be voted on as follows: Two of the options are first set up against each other. One of these options that gets the most votes is then set against the third option.
The winner of the final vote will be the final winner.

Suppose that all members of the National Assembly belong to one of the following equal groups:

Group 1: EU supporters: Thinks the EU is best, A second best and B is worst

Group 2: Conservative opt-out supporters. Thinks A is best, B second best and EU is worst

Groupe 3: Radical opt-out supporters. Thinks B is best, A is second best and EU is worst

Suppose the government can determine the voting order in the National Assembly. Will the government be able to determine the outcome of the vote by choosing an appropriate voting order? Why/why not? Justify your answer.