

Exam SØK2006 – Spring 2022

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For each of the questions in this exam you should keep in mind always:

- Models, graphs, and theory are ALWAYS necessary and good. Even better when explicit.
- Short and clear answers are encouraged.
- Keep your mind open to ideas from every side.
- Note: I can only give points to non-blank answers

1. (15pts) Norwegians are more efficient in producing lamb and bread than the Finish, therefore there would never be any trade of these products between these two countries unless Norway is forced. Discuss solving a model learned in the class (choose the right model).

Answer: A perfect answer uses the Ricardian model of trade. The student must create an example with labor requirements for both countries so that Norway has absolute advantage. If that is properly done, noticing a comparative advantage for Finland (i.e., lower opportunity costs) is enough to get full credit.

2. (35pts) Take an economy with three factors (labor, land, and capital) and producing two goods (A and B). Good A is produced using labor and land, and Good B is produced using labor and capital. Given the supply of labor we know that this economy's production can be described as follows:

Labor input	Labor output A	Labor output B
0	0	0
10	25	110
20	44	200
30	57.5	275
40	67.5	340
50	75	395
60	82	440
70	88	470
80	93	490
90	97	496
100	100	500

- a) Graph the production possibilities frontier (PPF) for this economy and explain the reason behind its shape.

Answer: draw the points into a graph (although inverting 1 column, i.e., total labor input should always be 100). Full credit requires the graph to be properly drawn and labeled (not just any PPF though, must be the one implicit in the table). 8pts

2pts if only end points are marked. Can be given 4 points if at least one middle point is marked

- b) Determine wages and labor allocations if the price of good A relative to good B is 4. ($P_A/P_B=4$)

Labor employed	MPL good A	MPL good B
10	1.90	9.00
20	1.35	7.50
30	1.00	6.50
40	0.75	5.50
50	0.70	4.50
60	0.60	3.00
70	0.50	2.00
80	0.40	0.60
90	0.30	0.40
100	0.20	0.20

Answer: Use the FOC on profits to show that the MPL ratio should be 4, since wages must be the same. The optimal labor allocation will then be 40/60 (0.75:3 equivalent to 1:4). 9pts

- c) Suppose the price of good A relative to good B falls to 2. Explain what happens with the labor allocation and with the income of each specific factor? (you can answer this correctly even without answering b)

Answer: If b) is answered, then the answer should notice that the allocation moves to 30/70. The good that becomes relatively more expensive (B) will be more attractive, motivating us to devote more resources (labor) in its production. Income will increase for capital owners and decrease for land owners.9pts

- d) Suppose this country opens up to trade with another country, relatively rich in land. Show -or explain succinctly- how this affects the owners of each factor and local consumers.

Answer: Show that trade with a land-rich country will make land owners poorer and capital owners richer in the home country. Saying consumers are better off is acceptable, but an answer that is not certain about this is also good, as long as they notice that the welfare is up generally.9pts

3. (10pts) According to the Heckscher-Ohlin model goods may be produced with different combinations of labor and capital (according to their relative prices). Then, we may conclude that trade has no distributional effects, as owners of the factors (capital and labor) need only to shift their supply to the production of the more attractive good. Show -or explain succinctly- how this statement is wrong.

Answer: The student must make the argument that both factors are needed for the production of the goods, either by using the production functions ($Q=f(L,K)$) or by using the labor requirement graph and noticing that the more one uses of one factor, the more expensive it is to substitute the less used factor out.

4. (40pts) You are an advisor to a top Norwegian politician. Your boss asked you to write an essay clearly explaining the pros and cons of taking a strong stance against Russia in response to the

war in Ukraine. What welfare effects may follow if Norway breaks all commercial ties with Russia? And if it does nothing? Do the effects depend on what the rest of Europe does? Should Norway attempt to influence the EU somehow?

Note: your boss couldn't care less about your morals, ethics, or politics; keep that in mind.
Recommendation: stick to the two scenarios proposed (doing nothing or severing all ties) and remember what we learned.

Answer: The perfect answer understands that there are local consumers and producers. We have Sanctions/No sanctions, Consumers/producers,with EU/without EU. An intelligent and well thought out answer may analyze each of these scenarios separately. No data is required for a perfect answer, but the use of actual trade data is acceptable and even desirable. The essay should be descriptive (positive, not normative) of the situations that may arise in each scenario. The student should understand that his/her views on non-economic issues may be irrelevant. The mentioning of interesting ideas -regardless of their actual practicality- can also be a plus.