NTNU

KANDIDAT

10013

PRØVE

SØK2006 1 Internasjonal handel

Emnekode	SØK2006
Vurderingsform	Skriftlig eksamen
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Seksjon 1

Oppgave	Tittel	Oppgavetype
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4	4 Internal economies of scale and firm differences [15]	Langsvar
5	5 The instruments of trade policy and the political economy of trade [25]	Langsvar

1 Standard trade model [35]

Fill in your answer here

1a) Since Norway has comparative advantage (from now CA.) in energy that means that Norway has to give up more energy for each unit of agriculture it produces as the PPF reflects the countries opportunity cost of production. When it comes to spain, they automatically have an CA in agriculture and hence a steeper production possibility frontier (from now PPF.).

1b)
In autarky no trade is done, and the consumption of a country is equal to it's production. Therefor the consumption will be at the point where the PPF reach the highest indifference-curve. Given that the two countries preferences are equal (U-0 in graph is the same in N and S) they will end up with a different production mix in autarky due to their differences in the PPF. As Spain has a steeper PPF, their relative price-line is also steeper, and energy is more scarce there. Spain will produce relatively more agriculture in equilibrium and Norway relatively more energy, while energy will be relatively more expensive in Spain compared to Norway and agriculture relatively more expensive in Norway.

1c)
As Spain produce relatively more agriculture at all price levels, their RS-curve lies beyond the one for Norway. With the assumption that both countries are equally large the new world relative supply lies in the middle between the two countries. It is worth noting that since Spain is much larger than Norway this is not given to be the case in the real world. However, the new world relative price is also between the two countries relative prices, for Pa/Pe it goes down for N and up for S. Energy is now worth more in N and agriculture is worth relatively more in S. The new relative price is (Pa/Pe)^W.

1d)
As shown graphically Norway will export energy and import agriculture, while the opposite is true for Spain. This is done due to the change in relative prices, and makes both countries better off.

1e)
With the same illustration as task d it is shown that due to trade and the change in relative prices, both countries reach a higher indifference-curve and therefore reach higher utility. Both countries gain from trade due to specialization and a change in relative prices.

1f)
Spain can now produce more A, and the PPF shifts upwards. This also changes the relative prices as Spain now can produce even more A at every price level. The world relative price falls and Norway therefor gets a terms-of-trade gain as their energy now is worth more when trading with Spain. Norways indifference curve shifts from U0 to U1.

1g)
When the productivity in A increase in Norway there is a shift in their PPF. This also shifts the world relative price as shown, since Norway can produce more A at all price levels. A is therefor now worth relatively less. Spain therefor gets a worsend t-o-t effect and lose utility as they now trade A with N and recieve less E than before. Norway however gain as they can now produce more and get the t-o-t improvement. The change is shown illustrated from U0 to U1 in both countries.

Ord: 522

Knytte håndtegninger til denne oppgaven?
Bruk følgende kode:

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Håndtegning 1 av 4

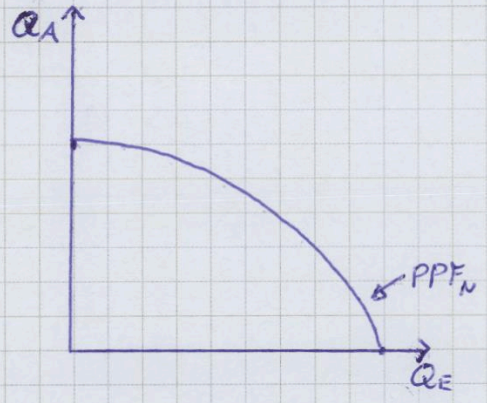
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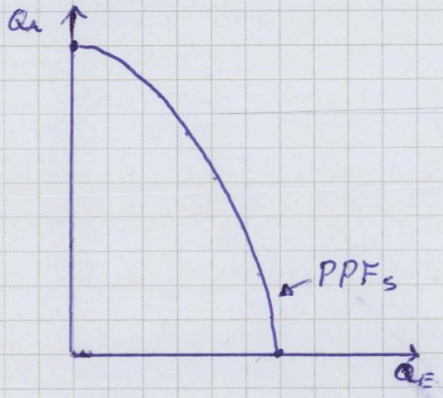
Writing area Skriveområde

1. - Two countries: Norway (N) and Spain (S)
- Two sectors: Agriculture (A) and energy (E)
- Identical preferences
- N has comparative advantage in E.

1a) Norway

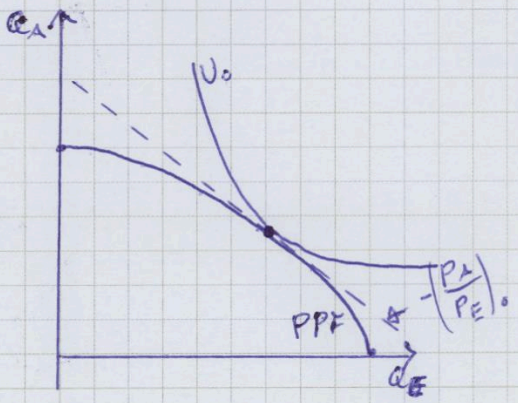


Spain

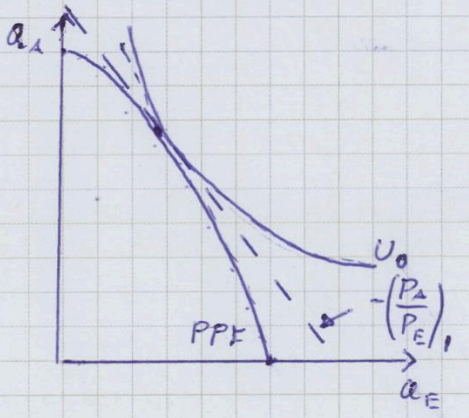


1b) Autarky

Norway



Spain



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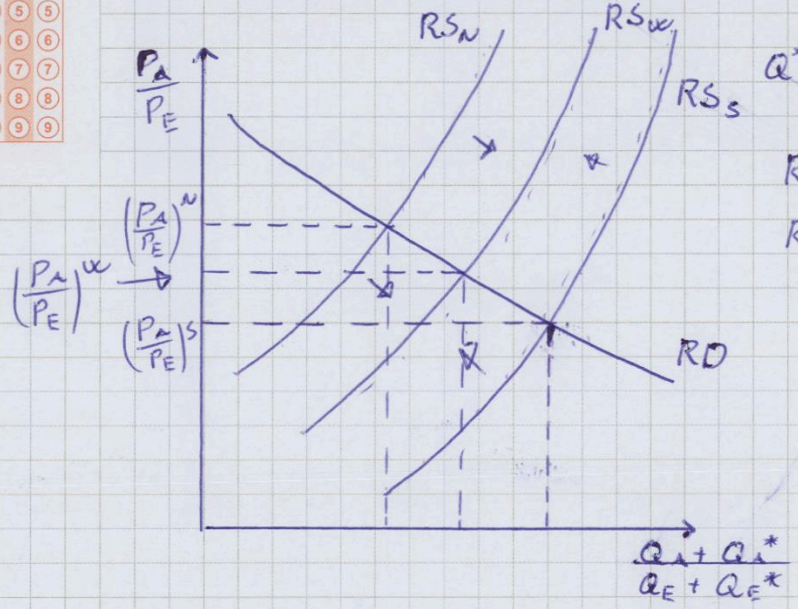
Håndtegning 2 av 4

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Writing area Skriveområde

1c) Relative supply curves

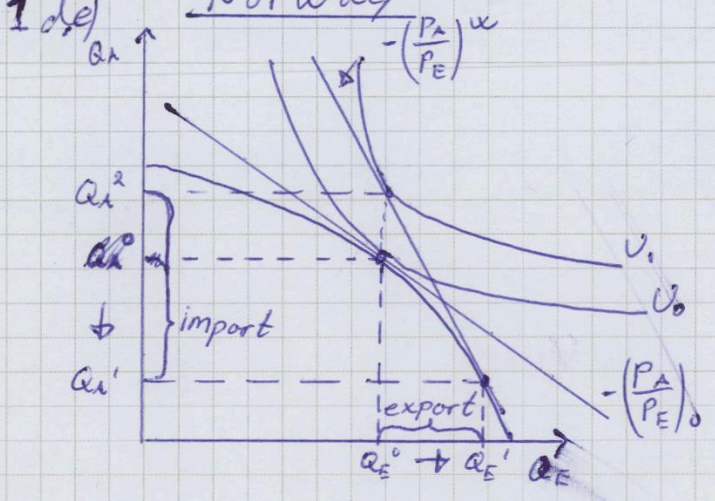


Q* = Quantity Spain

RS = Relative Supply

RD = Relative demand

1d/e) Norway



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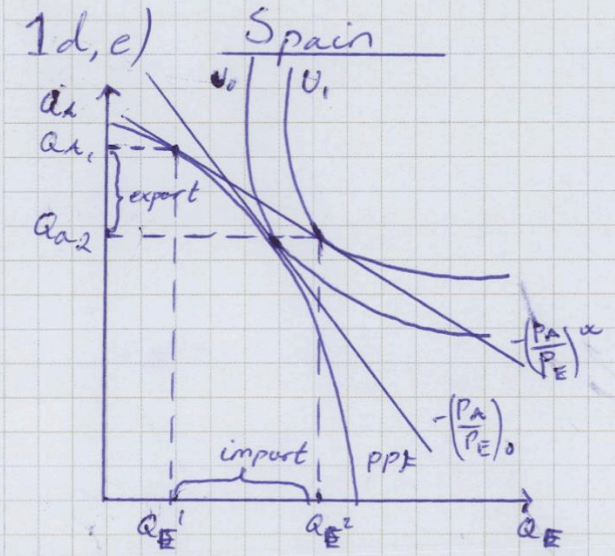
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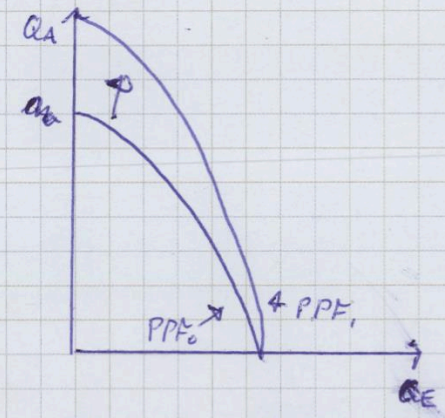
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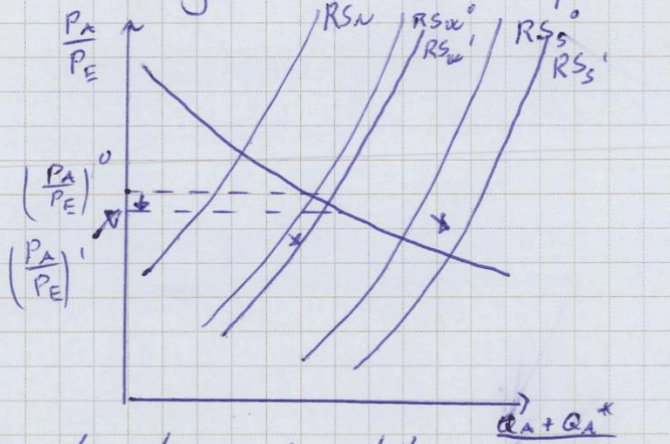
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1d, e)

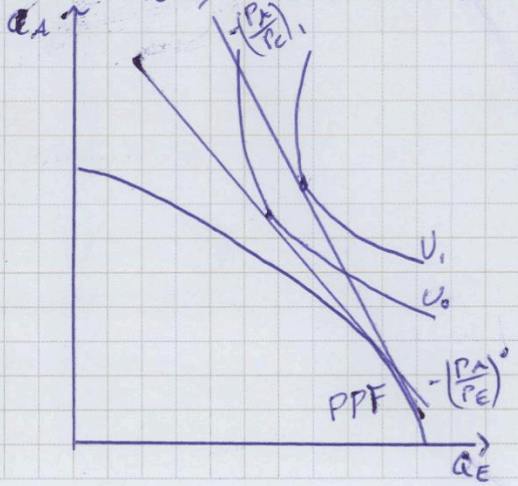


1f)





Norway benefits due to change in relative prices.



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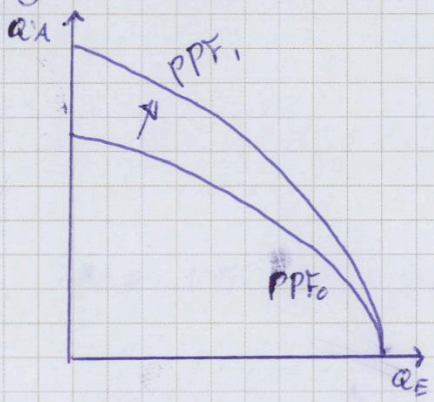
Håndtegning 4 av 4

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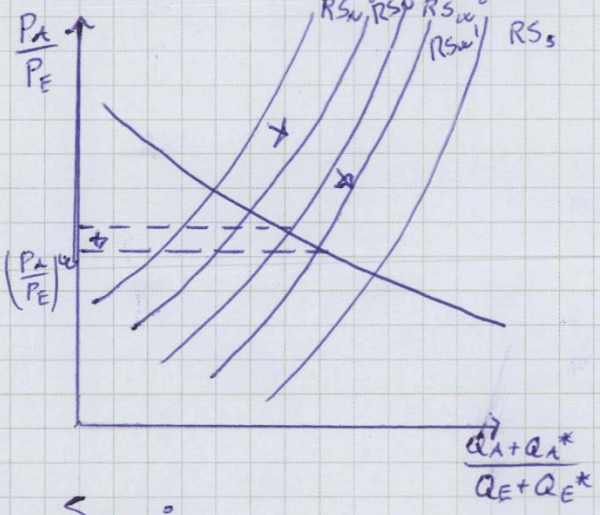
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Writing area Skriveområde

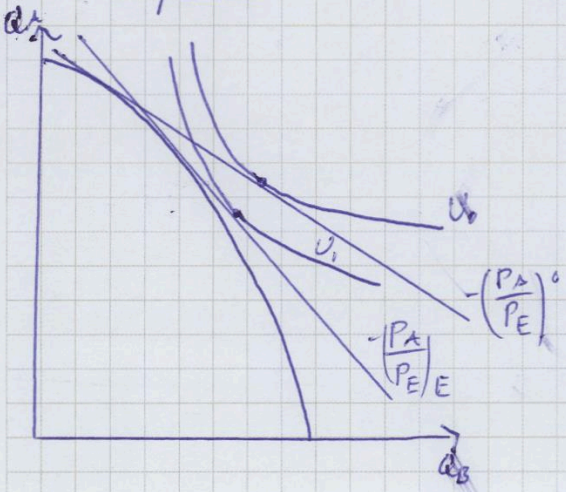
1g) Norways productivity in A increases



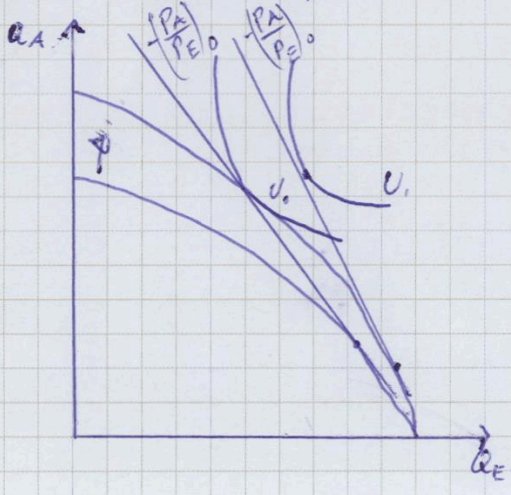
Shift in relative prices



Spain



Norway



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2 2 Heckscher-Ohlin model [10]

Fill in your answer here

2a)

Capital abundance means that Norway has relatively more capital than Spain, and a country cannot be both capital abundant and labor abundant as this is in relative terms.

C / L > C* / L* means that Norway is capital abundant and can be re-written to show that Spain is labor abundant: L* / C* > L / C. (* = Spain)

2b)

As the production of energy is capital intensive and therefor agriculture labor intensive, a change in the relative prices which makes energy relatively more expensive favors capital owners. As shown in task 1, trade makes the relative price of energy higher in Norway as they can sell it to Spain for relatively more agriculture in return then what would be possible without trade. This makes the intensive factor more scarce as there is more demand for capital and at the same time less demand for labor as Norway is better off importing the labor intensive good.

Less demand for labor in Norway and higher demand for capital is negative for workers and positive for capital owners and therefor workers are against trade and capital owners in favor of trade. This is a know result as the intensive factor of a countrys CA will gain from trade and the other will lose.

2c)

As workers migrate from Spain to Norway, N has a shift in it's PPF where Qa shifts more than Qe as A is the labor-intensive good. In Spain the PPF shifts inwards, mostly at Qa, but some at Qe also due to A being labor intensive.

Norway can now produce relatively more A at every price level and its RS-curve shifts to the right, while Spain can produce relatively less and the curve shifts to the left. The two countries now have a more equal relative supply. Shifts from RS1 to RS2 in graph.

Ord: 310

Knytte håndtegninger til denne oppgaven?
Bruk følgende kode:

9 4 2 0 5 1 4

Håndtegning 1 av 1

Fill out Question Code and Test Information on every sheet. Fyll inn oppgavekode og emneinformasjon på alle skisseark.

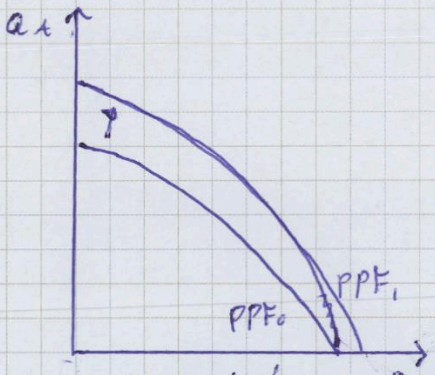
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Writing area Skriveområde

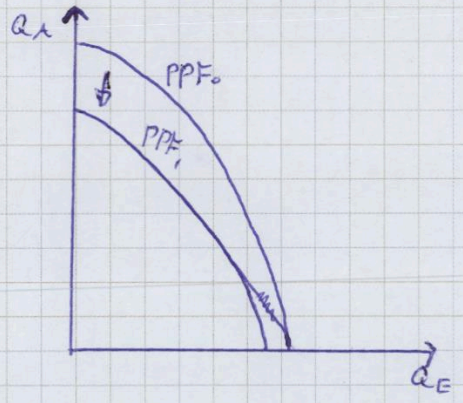
2a) - Norway (N) and Spain (S)
- Agriculture (A) and energy (E)
- N has CA in E.
- Labour and Capital
- E is capital intensive and N capital abundant.

2c) Migrants workers from S to N.

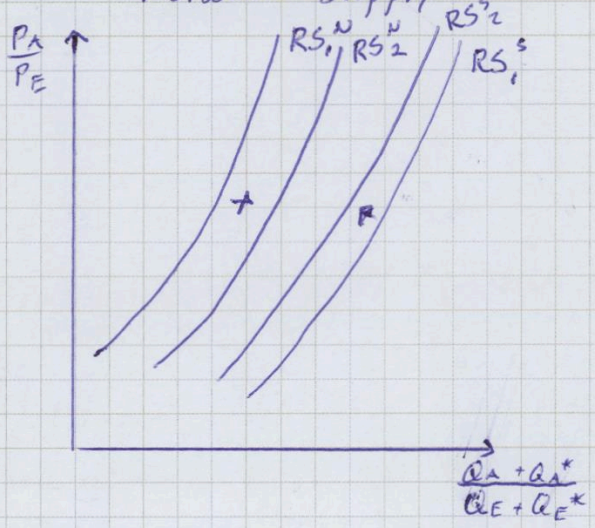
Norway



Spain



Relative supply



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3 3 External economies of scale and efficiency [15]

Fill in your answer here

3a)
External economies of scale is when the average cost of firms decline due to the sector increasing. This is expected due to knowledge spillover effects, labor market pooling and also capital pooling. Examples of this is technology in Silicon valley, clothes in south-east asia and manufacturing in China. When trade is possible such solutions is possible and drive costs down as countries benefit from eos.

3b)
If the sectors where to "begin" today the world market equilibrium would be that Vietnam produce buttons as they achieve the lowest average cost.
However the problem arises if the production of buttons already is in place in China a point 1 due to historical reasons. If that would be the case, firms in Vietnam would not enter the market even though they would be able to reach lower costs when enough firms enter the market. This is because C0 > 1 and firms would make a loss if they where to enter the market. It is therefor not possible to determine the world market equilibrium without knowing where production of buttons is now.

3c)
It is not certain that a world market equilibrium in 2 is efficient as it depends on comparative advantage and not absolute advantage. Vietnam has the absolute advantage of production of buttons as they can produce more at every price-level, however the world might be better off if Vietnam produce something else they are even better at speaking in relative terms. If the difference in productivity is even larger in production of bicycles, the world could be better of by Vietnam producing bicycles and China buttons.

Ord: 268

Knytte håndtegninger til denne oppgaven?
Bruk følgende kode:

4 7 8 5 5 3 3

4 4 Internal economies of scale and firm differences [15]

Fill in your answer here

4a)
Internal economies of scale is when the average cost of firms is declining with an increase in firm size. This could be due to larger more productive factories as the enormous Tesla factory is an example off. Also an example could be if a city had 10 pizza shops vs 1. In one shop the fixed costs would be relatively lower than 10 separate stores and the shop could take advantage of buying bulk at a cheaper cost.

4b)
As the relationship between operating profits and marginal cost changes the graph also changes. Those with low operating costs (those to the left) gain as there is now new markets to enter and they benefit from trade. The middle group lose from trade, but will stay in the market as they still make profits, while those with high marginal costs exit the market. Both these two groups will be against trade as it damages their revenues.

Ord: 156

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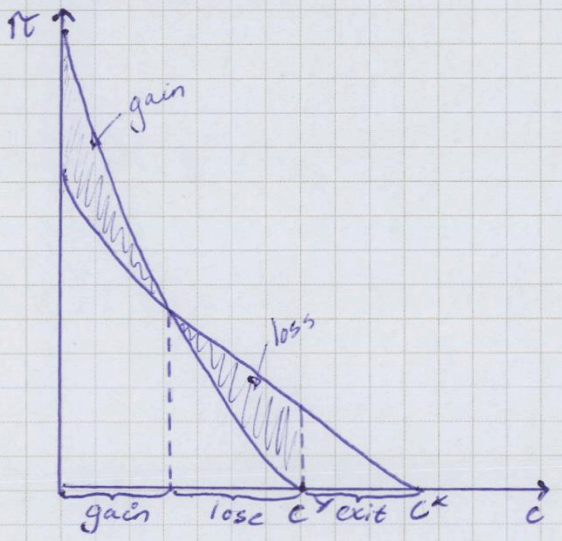
Håndtegning 1 av 1

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184542 7	22.05.25	Søk 2006_1	10013	4b	6	7

Writing area Skriveområde

π = Operating profits
c = marginal costs



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5 5 The instruments of trade policy and the political economy of trade [25]

Fill in your answer here

5a)
Yes the country would be better off abolishing the tariff, given that there are no market failure and with the assumption that due to being a small country they will not be able to affect the world market price when introducing the tariff. This is shown on paper as the tariff raises the price of a good from P^w to P^t. Since the new price is higher, consumers can now buy less of the good at a higher price, and they lose the area; **a + b+ c+ d**. Producers on the other hand gain the area **a** as they now obtain a higher price for their goods, and the government gains the area **c** as the tariff revenue.

Due to the fact that consumers lose they will be against the tariff, while producers will be for tariffs as they gain. The total result is net negative and equal to; **- b - d**, where **b** is the cost of having inefficient producers in the market, while **d** is a loss due to less consumption.

b)
No, I would not recommend replacing the tariff with an import quota. When replacing the tariff with an import quota where imports are the same as in the tariff case, the result is the same as in the case with tariffs, only that the government doesn't get the revenue from the tariff (**c**), instead this revenue is collected by the firms who obtain quotas. That means this is even worse than tariffs, unless the government is able to correctly price the quotas, which is very hard. If they were able to do that correctly, quotas are equal to tariffs. There is therefor no reason to use import quotas instead of an tariff.

c)
Even tough free trade is better for a country in a perfect market, there exist market failure where protective means might happen and even make sense. There are a few arguments where the infant industry-, national security- and government revenue argument are the most prominent.

Infant industry argument: The argument that specific sectors needs protection so that it can obtain economies of scale/higher productivity and then the protection can be lifted. This could be the case in task 3 if China were producing buttons and Vietnam wanted to take over the production knowing that through eos they would be able to reach a lower marginal cost than China.
National security: Arguments that countries should produce part of or everything of their own defense, energy and food supply. This to not be reliant on other countries from a national security stand.
Government revenue: Tariffs can be used by poor countries to obtain government revenue if the tax system is not functioning well. This is not common for developed countries, but an argument for some others.

The following last case in more an explanation of why inefficient tariffs can persist, which is due to the *collective action* problem. As all consumers lose a little, they do not have the same incentive to protest as those producers who gain a lot from a tariff. This makes so producers can be louder and be more active lobbying compared to consumers even though consumers in total lose more. There is also a common misbelief that tariffs only punishes foreign countries and it can therefore be a popular political move.

Ord: 554

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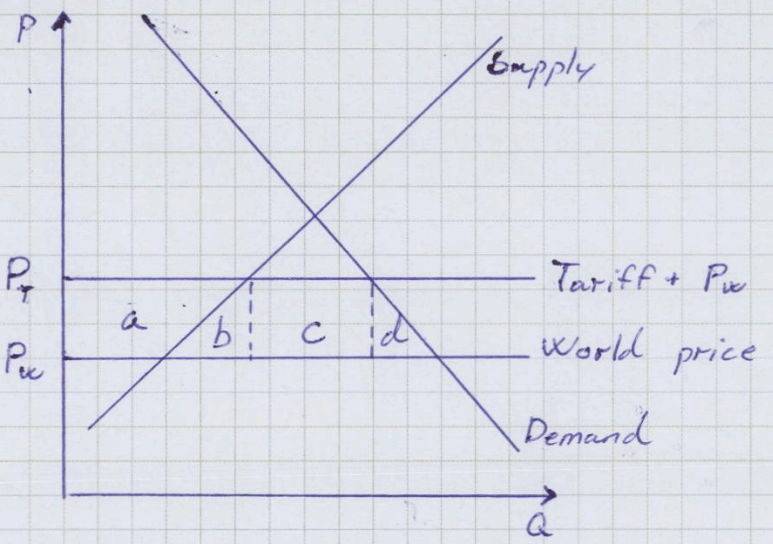
Håndtegning 1 av 1

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Writing area Skriveområde

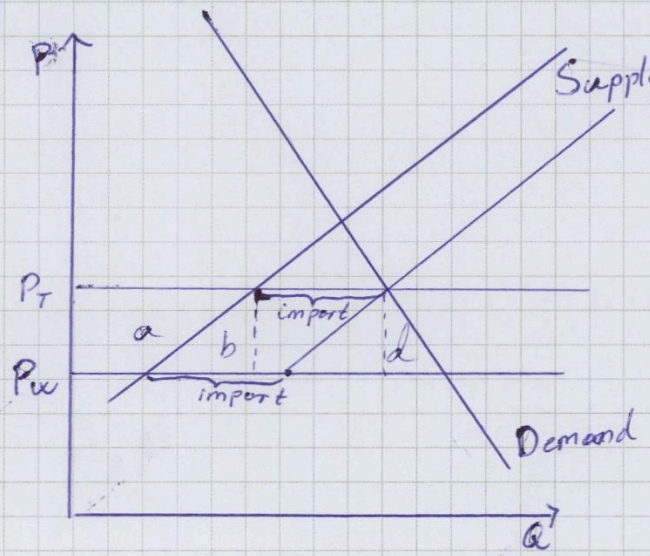
5a) Price = P Q = Quantity



- Producer gain = a
- Consumer loss = a+b+c+d
- Government gain = c

Net = a + c - a - b - c - d = -b-d

5b)



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