Economics 220
Homework 2
January 2022

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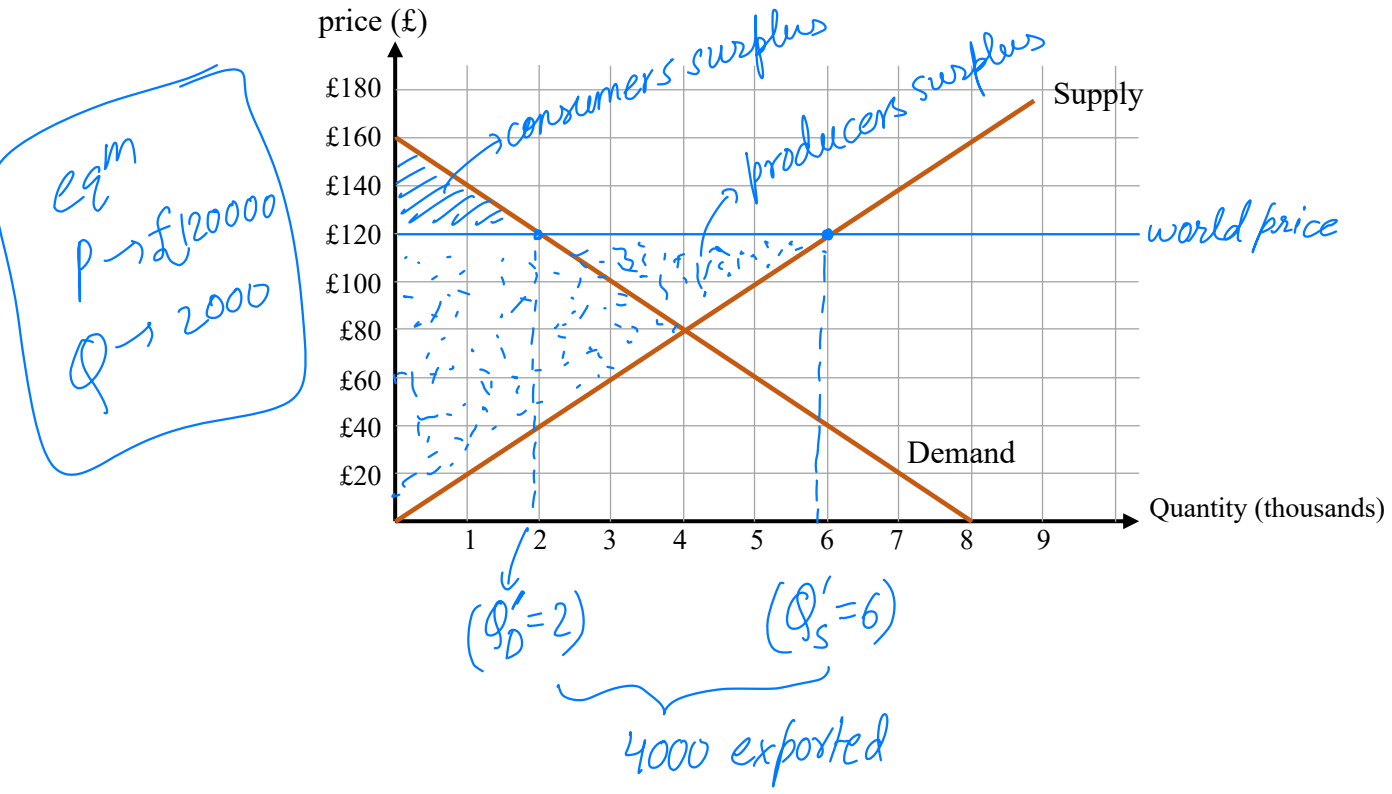
Consider the Market for woolen jackets in Britain, depicted below. The world price of woolen jackets is £120. Now that Britain is leaving the EU, the British government is trying to decide between several options going forward. These are:

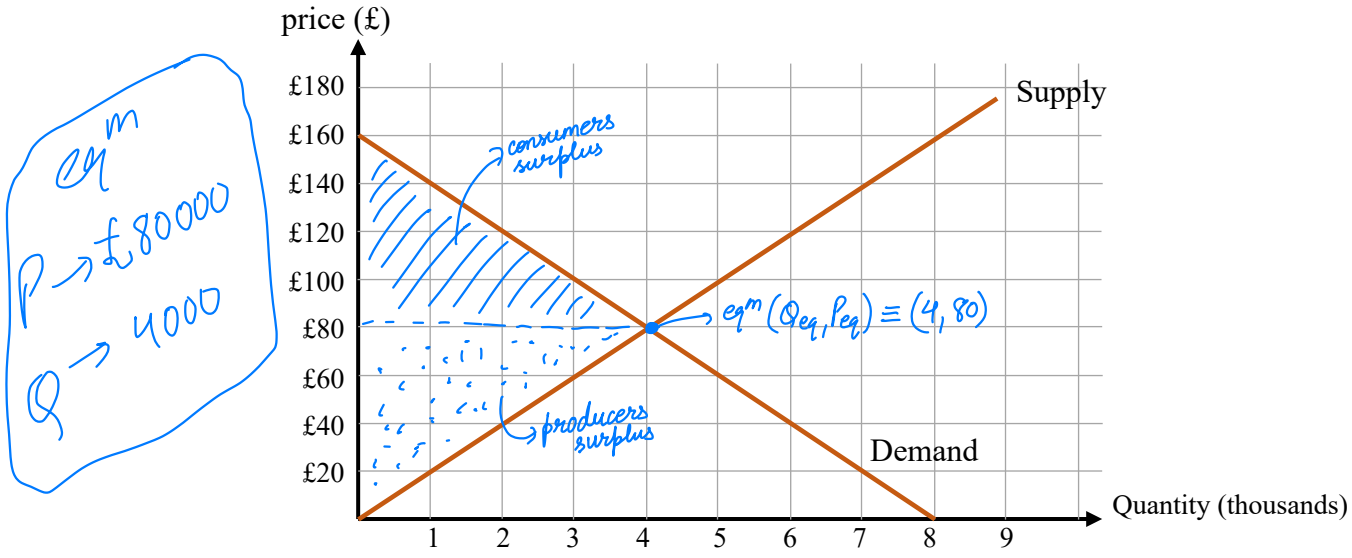
- O: **O**pening the market to international free trade
- A: **A**utarky (no trade)
- C: Autarky and a price **C**eiling of £40
- F: Autarky and a price **F**loor of £120
- T: Autarky with a **T**ax of £80

Sketch the effects of each of these policies would have on equilibrium prices, quantities, consumer (/buyers) surplus and producer (/sellers) surplus.

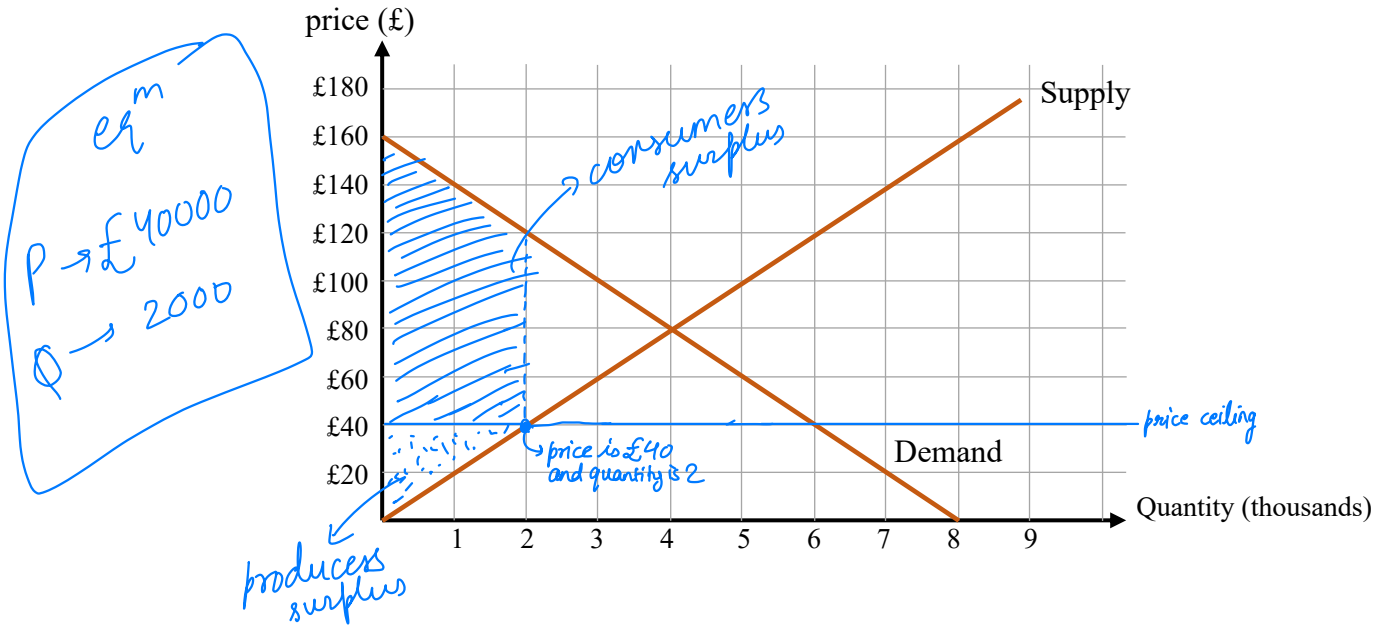
Option O: Opening to free trade



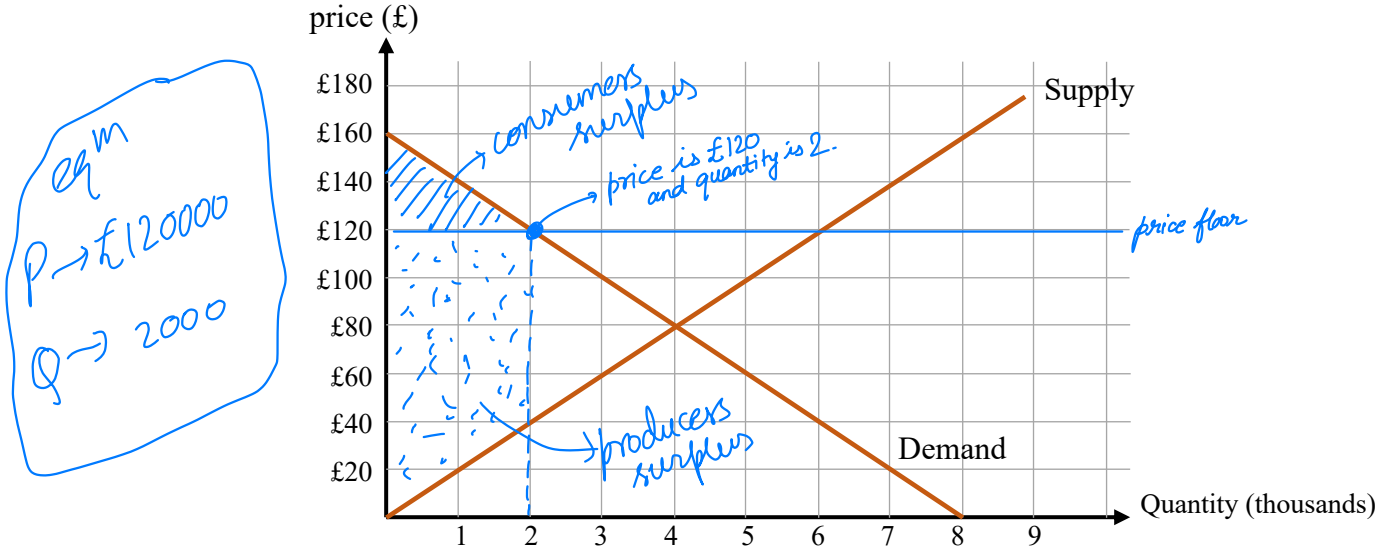
Option A: Autarky



Option C: price ceiling of £40

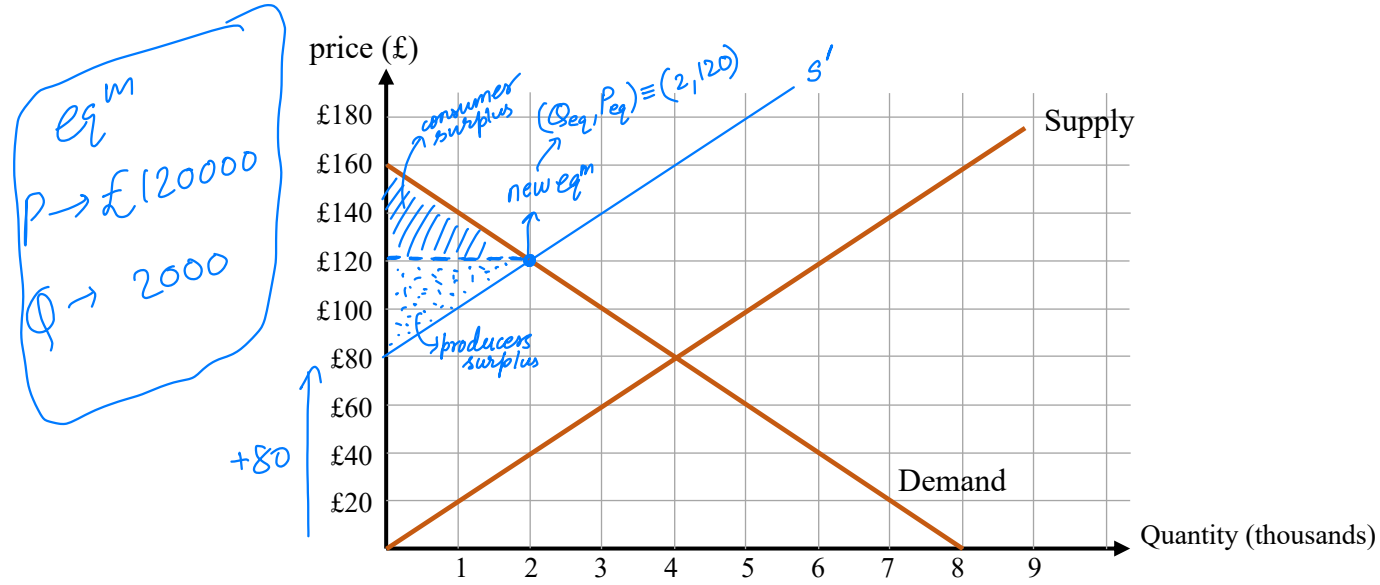


Option F: price floor of £120



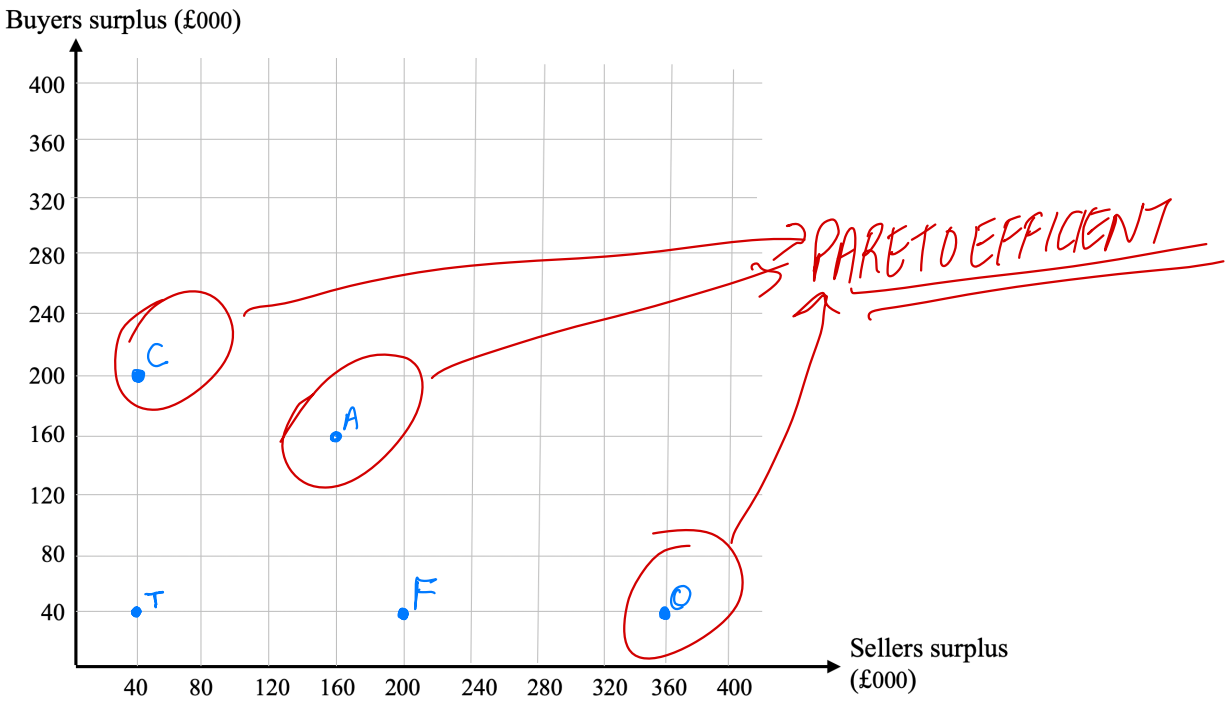
eqm
P → £120000
Q → 2000

Option T: tax of £80



eqm
P → £120000
Q → 2000

Now consider the effect of these policies on buyers and sellers' welfare. Below, plot the buyers' and sellers' surplus that would result from each policy and label each point.



If the government wishes to maximize the value of the following "Social Welfare" functions, which policy should it choose?

SWF_1 = buyers surplus + sellers surplus

O: 40+360=400
A: 160+160=320
C: 200+40=240
F: 40+200=240
T: 40+40=80

In case of SWF_1, O policy maximizes SWF_1.

SWF_2 = 2*buyers surplus + sellers surplus

O: 80+360=440
A: 320+160=480
C: 400+40=440
F: 80+200=280
T: 80+40=120

In case of SWF_2, A policy maximizes SWF_2

$SWF_3 = \sqrt{buyers\ surplus * sellers\ surplus}$

O: $\sqrt{40 * 360} = 120$

A: $\sqrt{160 * 160} = 160$

C: $\sqrt{200 * 40} = 40\sqrt{5}$

F: $\sqrt{40 * 200} = 40\sqrt{5}$

T: $\sqrt{40 * 40} = 40$

In case of SWF_3, policy A maximizes SWF_3.

Limiting our analysis to the welfare of buyers and sellers, which subset of these policies are "Pareto-efficient"?

From the given policies, C, A and O are pareto efficient because there is no other way we can benefit one person without hurting others, which in this case are producers and consumers.

To evaluate the welfare effects of these policies, is it sufficient to consider buyers and sellers surplus, or are there other welfare effects we should include, (and if so, what)?

There might be other externalities which are beyond the scope of just the buyers and sellers of a certain product. Moreover, the tax revenue collected from the buyers and sellers by the government is used for other things. This is not taken into consideration and this should be considered as a part of total welfare although it is not direct, but it still affects the welfare of people outside the transaction in addition to the people who are directly in the transaction because they are also part of the larger societal framework.