

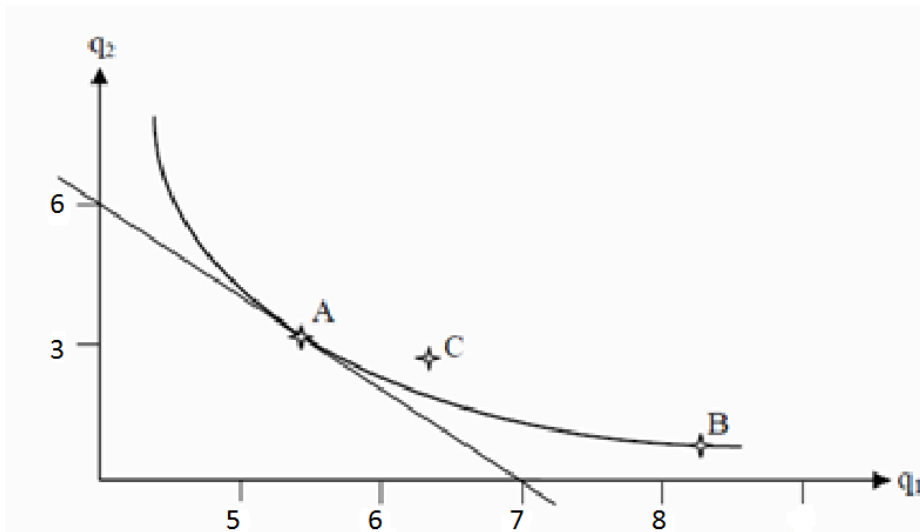
Economics Lecture Summary Exercise

2016-17

Sebastiano Vitali

Exercise A

Calculate MRS in point A, which point is preferred?



Exercise B

Explain what the budget line is.

Suppose we have two goods. Price of good 1 is 5 and price for good 2 is 10. Income is 30. Construct a diagram with quantities on the axis and draw the budget line.

How do the prices and the income affect the shape of the graph? What happens if the price of one good rises? What if income increases?

Exercise C1

Assume that you are dealing with the following utility function

$$u(x, y) = 3x^2y.$$

Price for good x is 7 and for good y is 2, income is 30.

Can you find uncompensated demand?

Exercise C2

Assume that you are dealing with the following utility function

$$u(x, y) = 3x^2y.$$

Price for good x is 7 and for good y is 2, utility is set at 100.

Can you find compensated demand?

Exercise C3

Assume that you are dealing with the following utility function

$$u(x, y) = 3x^2y.$$

Price for good x is 7 and for good y is 2.

Can you find income effect for good x?

Can you find substitution effect for good x?

Exercise C4

Related to previous calculus, find the expenditure function.

And prove Shephard's lemma.

Exercise C5

Related to previous calculus, find the own price elasticity of uncompensated demand of good x .

Related to previous calculus, find the own price elasticity of compensated demand of good x .

Exercise D1

Given the initial situation having the A point as equilibrium point. Answer following question about what happen after an increase in price of x_2 :

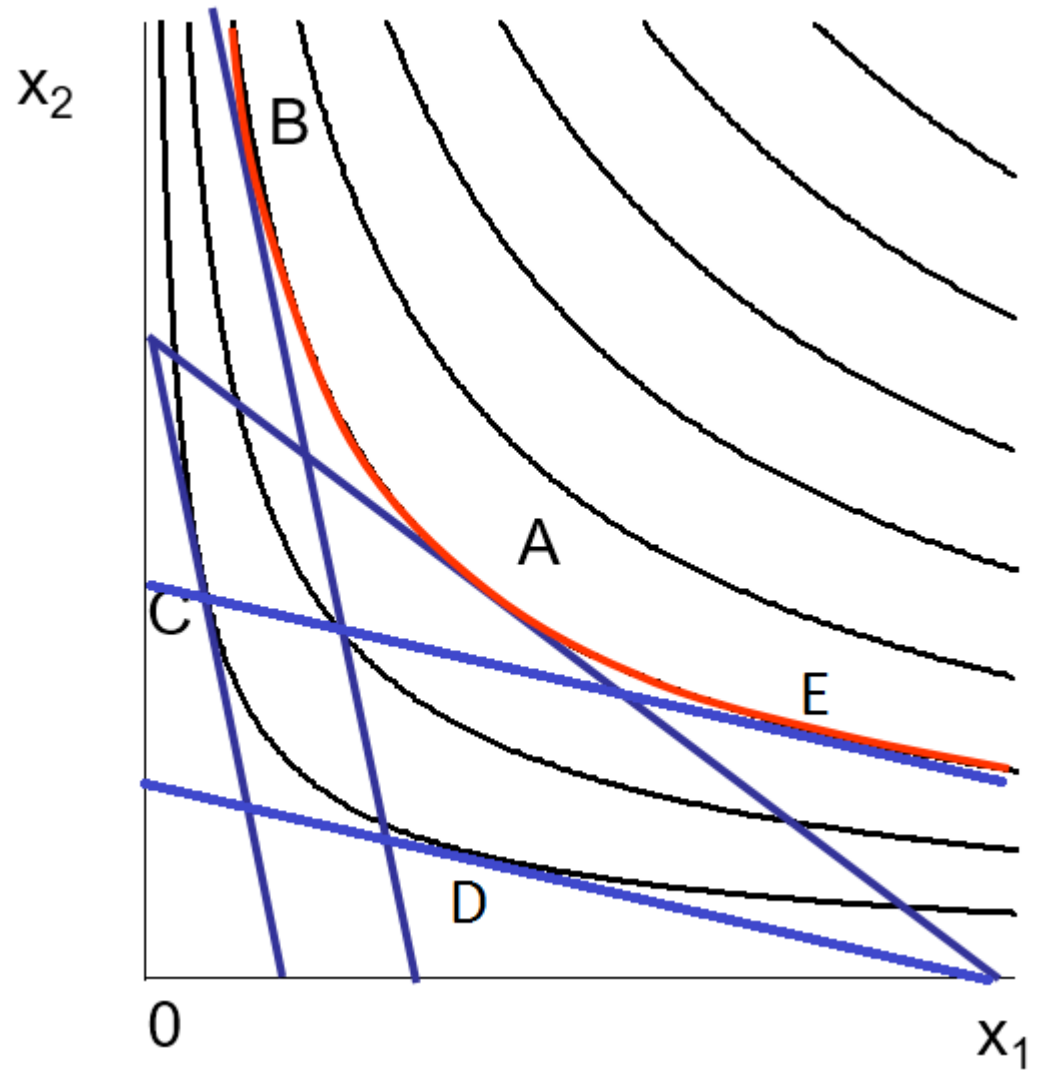
New optimal point will be:

B

C

D

E



Exercise D2

Given the initial situation having the A point as equilibrium point. Answer following question about what happen after an increase in price of x_2 :

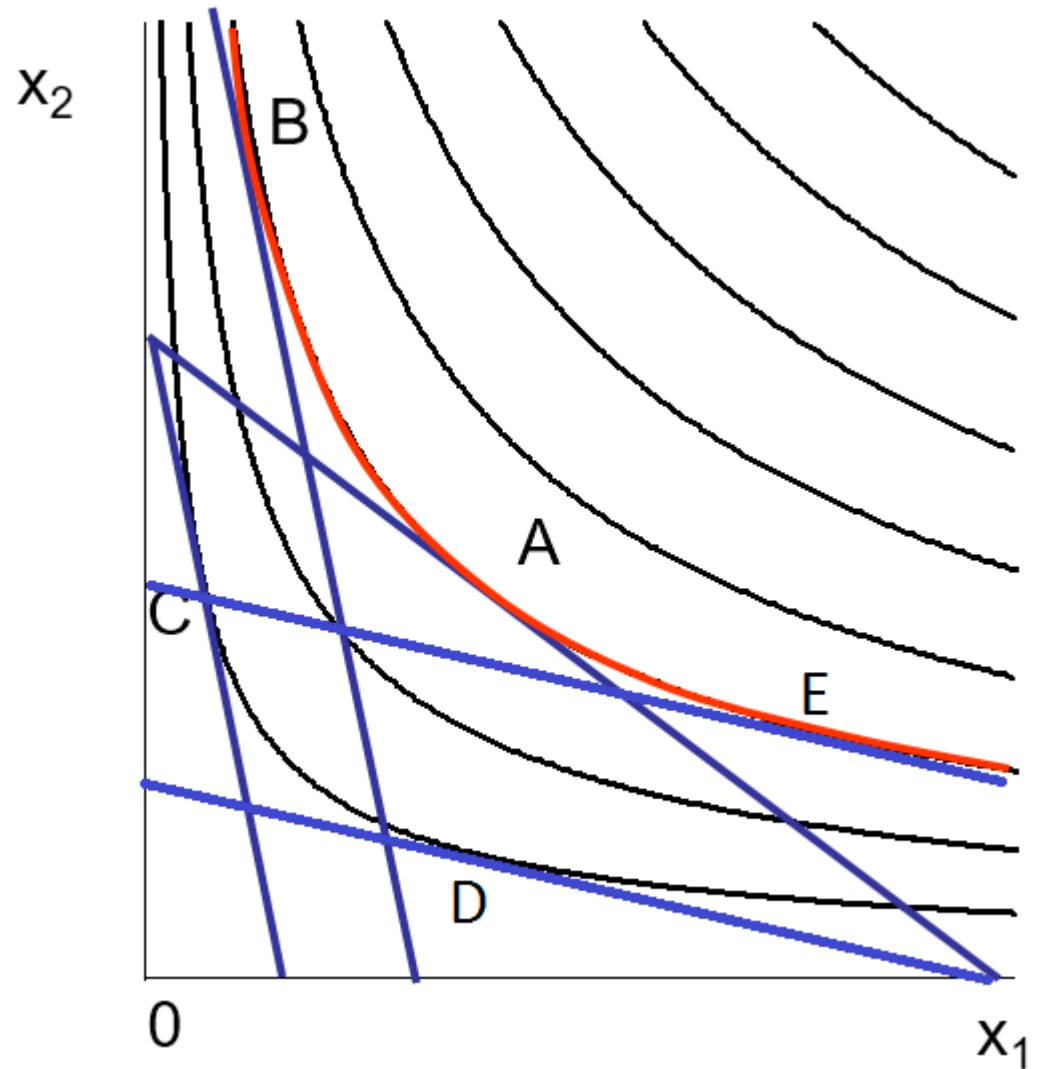
Substitution effect is:

from A to B

from A to E

from A to C

from A to D



Exercise D3

Given the initial situation having the A point as equilibrium point. Answer following question about what happen after an increase in price of x_2 :

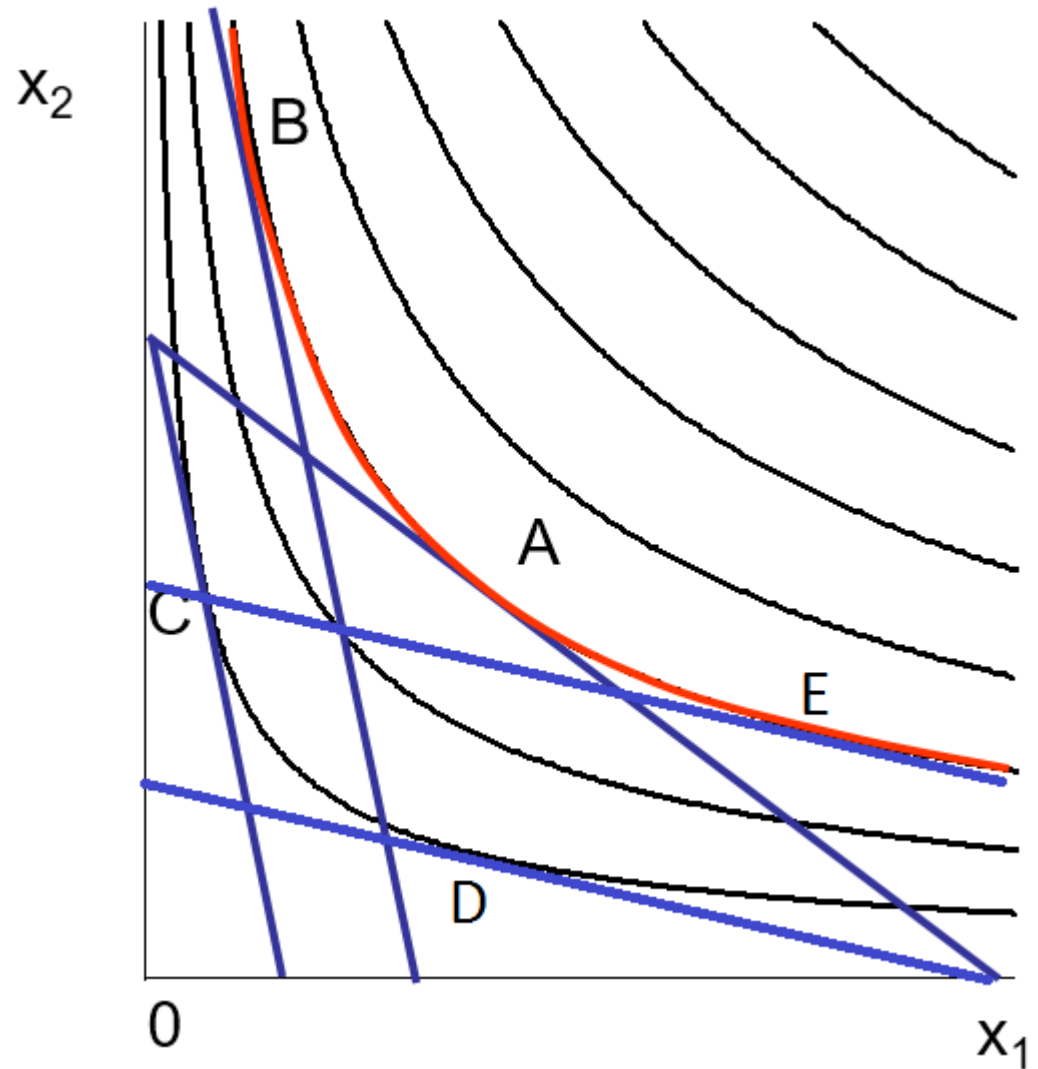
Income effect is:

from A to B

from B to C

from A to E

from E to D



Exercise D4

Given the initial situation having the A point as equilibrium point. Answer following question about what happen after an increase in price of x_2 :

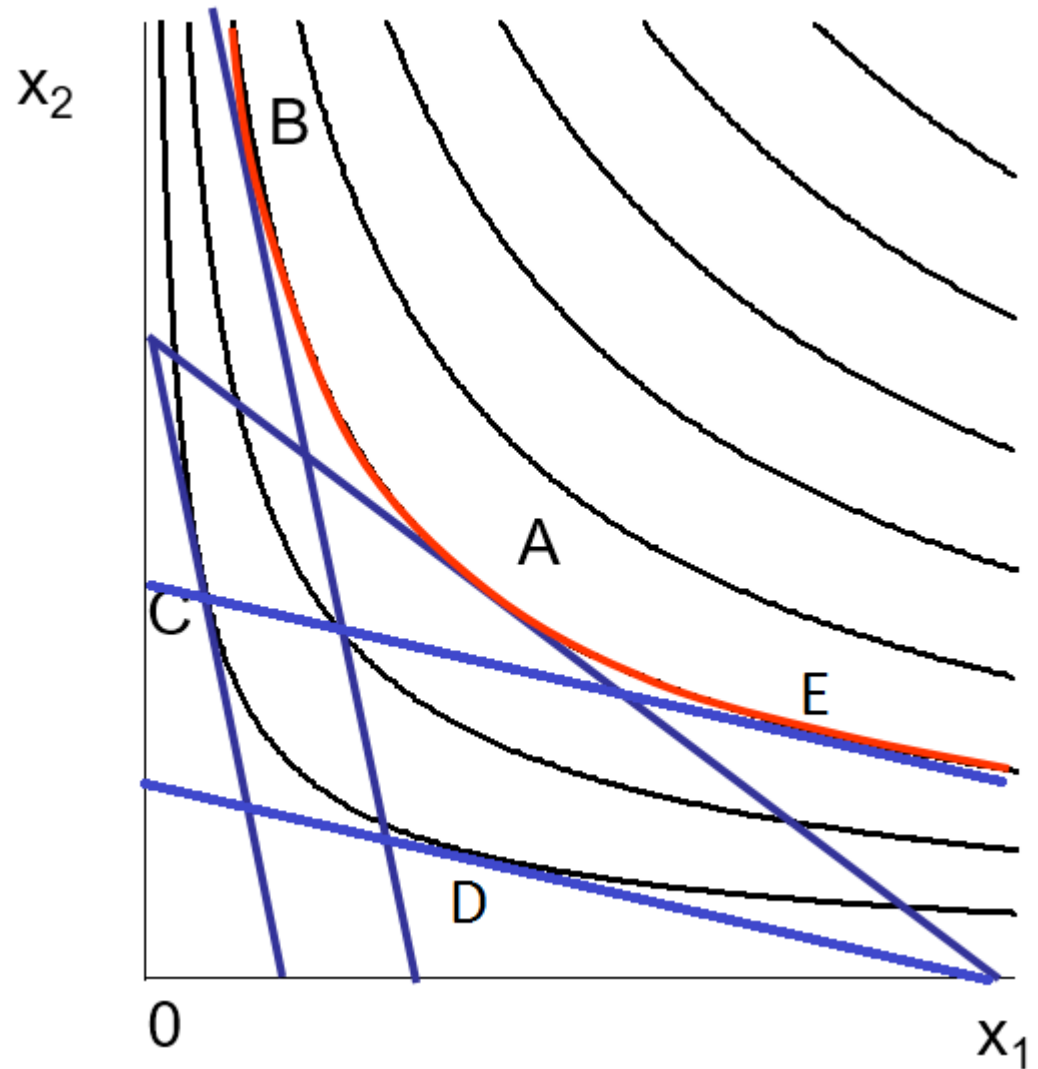
Total effect is:

from A to C

from B to C

from A to D

from E to D



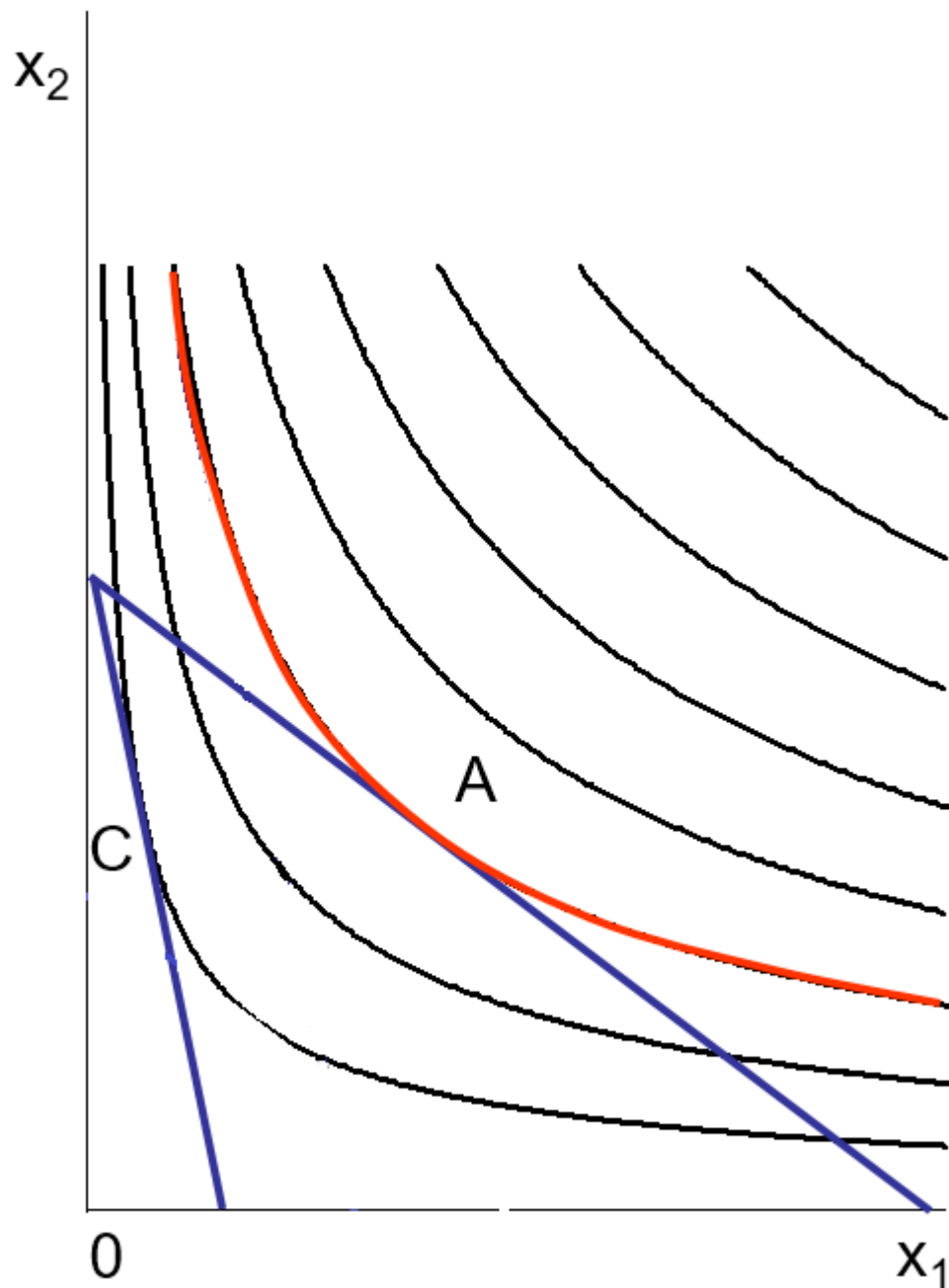
Exercise E

Draw a graph with work on the y-axis and leisure on x-axis, a budget line and a tangent indifference curve.

Let's assume that the salary decreases. How can you represent such situation on the graph? In the case you depict, is the income effect on the leisure positive or negative? Is the substitution effect on the leisure positive or negative?

Exercise F

Given the original situation described by the figure with optimal point in A, we have a new optimal in C after a increase of price of x_1 . Identify on the figure the magnitude of the compensated variation (CV) and of the equivalent variation (EV).



Exercise G

Given an initial budget line, describe graphically what happens after a reduction of the excise tax on good 1. Represent the equivalent variation and the excess burden.

Exercise H

Given the following table representing the outcome of the strategies of two players you should find, if possible, a Nash Equilibrium. Is it also a Dominant Strategy Equilibrium?

		PLAYER 2		
		A	B	C
PLAYER 1	YES	1,0	1,2	0,1
	NO	10,10	0,1	2,0

Exercise I

Given the following table representing the outcome of the strategies of two players you should find, if possible, a Dominant Strategy Equilibrium. Is it also a Nash Equilibrium?

		PLAYER 2		
		LEFT	MIDDLE	RIGHT
PLAYER 1	UP	1,3	1,2	3,1
	DOWN	0,3	0,1	2,0