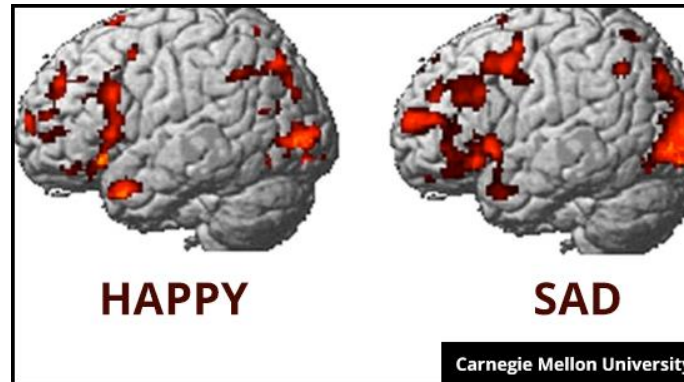




a) Simple objectives

b) Rationality

Rationality?



functional magnetic resonance imaging



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Keith Chen and Freud: context-dependent choices?



a) Mandatory markers for the future.

“Tomorrow it rains” or “tomorrow it will rain”?

High Savings – Low Savings

b) Societal context and the brain:

the simple goal of becoming rich honestly?



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Simple goals, irrational agents?





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Simple goals, irrational agents? Noisy traders





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Prices



Price?





The relative **price of a unit** of good (or service) expresses the so-called exchange value of the latter, which indicates

- the ability of a **unit** of the good (if we are in possession of it) to allow us to obtain other goods or
- (if we are not in possession of it) the measure of renunciation of other goods that we **must** accept to purchase a **unit** of the good in question.

If the price of a pair of sports shoes is 120 euro and that of one chicken is 40 euro, the ratio between the price of the pair of shoes and that of the chicken, also called the relative price of a pair of shoes in terms of a chicken, that is 3, tells us that by possessing 1 pair of shoes we can acquire 3 chickens or that, to buy 1 pair of shoes **we must give up** 3 chickens.

Formally, the price of a commodity A in terms of the price of good B, or relative price of good A in terms of good B, (P_A/P_B) is the amount of good B that **we have to give up to obtain a unit of good A.**



**A mechanism for allocating
(scarce) resources**

What forces determine Price?



Queues?

Merit?

Need?

Lotteries?

Randomness?



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Exchange Value of a Good: an OBJECTIVE notion



The relative **price of a unit** of good (or service) expresses the so-called exchange value of the latter, which indicates the measure of renunciation of other goods that we **must** accept to purchase **a unit** of the good in question.

If the price of a pair of sports shoes is 120 euro and that of one chicken is 40 euro, the ratio between the price of the pair of shoes and that of the chicken, also called the relative price of a pair of shoes in terms of a chicken, that is 3, tells us that to buy 1 pair of shoes **we must give up** 3 chickens.



«the importance that the good assumes for us, for the fact that, in meeting our needs, we are aware of depending from the availability of such goods»

Menger, 1892



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Smith's paradox



1 liter

?



1 kilo



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Costs matter?



1 liter

?



1 liter



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Costs matter?



1 watch

>>



1 concert



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Costs matter?



1 watch

<<



1 concert



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Use value matters?



1 liter

?



1 liter



Exchange value of 1 unit (price)

=

A (specific) concept of use value of 1 unit

=

A (specific) concept of the cost of 1 unit



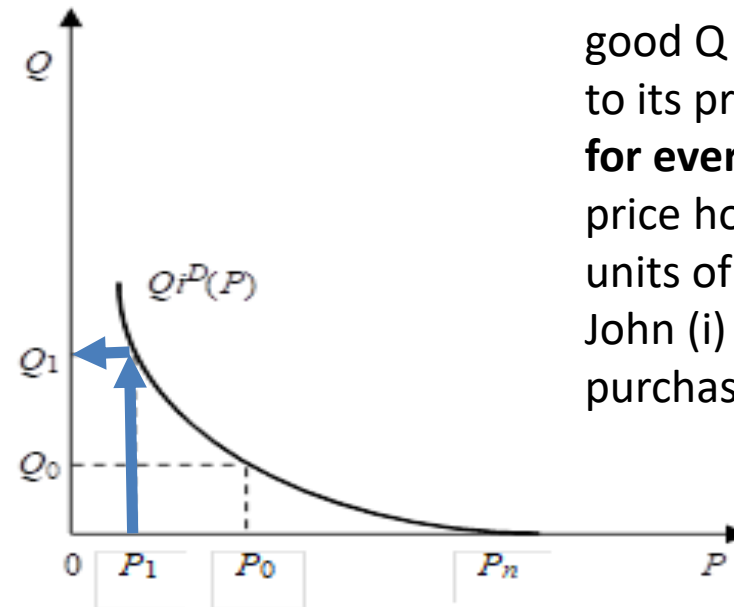
A Direct Demand Curve of Individual «i»



At price P_1 John buys
 Q_1 units of good Q.

$Q_i^d(P)$

1 only firm



The (direct) demand curve for an individual «i» for good Q with respect to its price tells us **for every possible** price how many units of that good Q John (i) desires to purchase.

At price P_1 John desires to buy Q_1 units of good Q.

At price P_1 John buys Q_1 units of good Q if there is somebody willing to sell them to him at that price.



John (i)



A Direct Demand Curve of Individual «i»



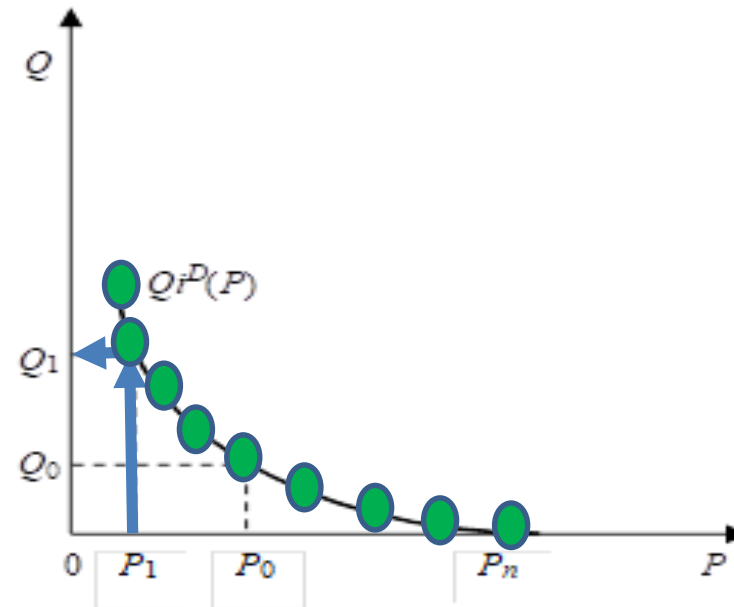
Distinguish:

$(Q_0; P_0)$ **or** $(Q_1; P_1)$
which are **points** of the
demand curve

from

$(Q_0; P_0)$ **and** $(Q_1; P_1)$
and $(Q_n; P_n)$ and....
Which, all together,
represent the demand
curve of the good Q.

$Q_i^d(P)$



1 only firm



John (i)



An Inverse Individual Demand Curve

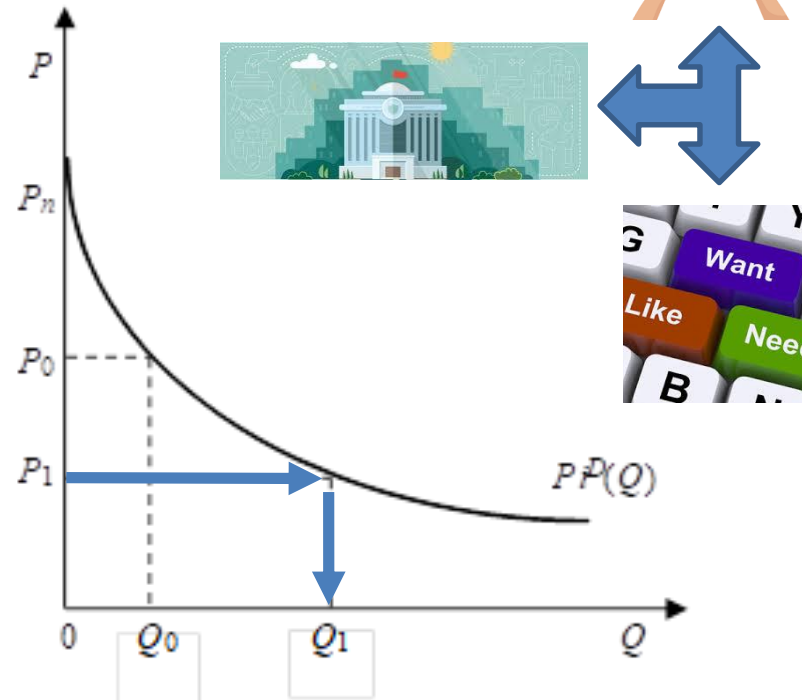


$$P_i^d(Q)$$

The (inverse) demand curve of an individual for good Q with respect to price tells us **for every possible price** how many units John (i) desires to buy of good Q.

The risk of reading it from Q to P...

John, (i),
again



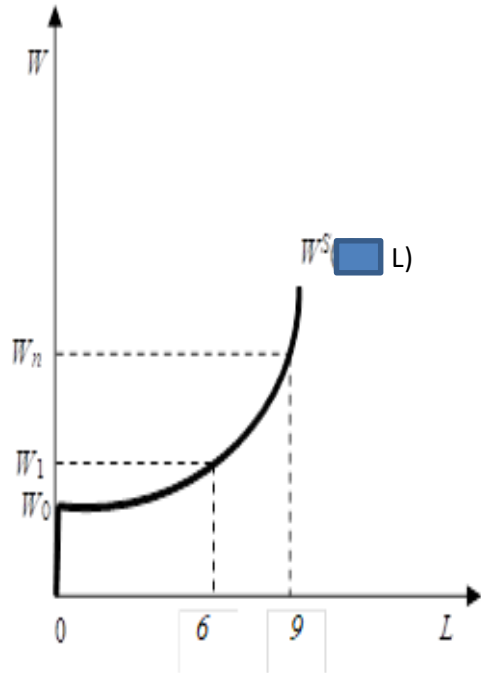
«For Q_1 units
John is willing to
pay P_1 »:
 $P_1 * Q_1$: true?



I often ask **during the exam**: *can you build for me a demand curve?* Many students immediately draw Fig. 2, some draw Fig. 1. They are both right, but then I will ask them: *ok, but where does that demand curve you just drew come from? Why did you draw it this way and not slightly different?* We will learn during these chapters that when I ask you to build a demand curve, **the last, not the first, thing you will draw is Figure 2**. Before that you will take your time to show me what we will slowly learn in Chapter 2 and 3, i.e. **how to build a demand curve**.



Another Inverse Demand Curve



The individual supply curve of labor tells us **for every possible wage** how much Jane desires to supply of her leisure time (and therefore how much she desires to instead demand it for herself).

A **daily** Labor (L , hours) inverse **Supply** curve of a worker, Jane, $W^s(L)$

Wage per hour = W = price of leisure H

Can you draw her inverse daily **leisure** $W^d(H)$ **demand curve**?

For $W = W_1$ what is H ? and for $W = W_n$?

Hint 1: there are 24 hours in a day

Hint 2: $(24-6)$ and $(24-9)$...



Note that in each choice the individual decides to give up on something for what she chooses.

The highest value of what we give up when we make a certain choice is called the opportunity cost of that choice.

Our every choice (free time, savings, consumption of a good, request for services by a factor of production) implies a cost due to a renunciation that we do simultaneously (the wage if we intend to rest or study, consumption today if we intend to save, the price of the good if we intend to consume today, the remuneration of a factor of production instead if we intend to produce...).



An Inverse Demand Curve



Movements **ALONG** the inverse demand curve:

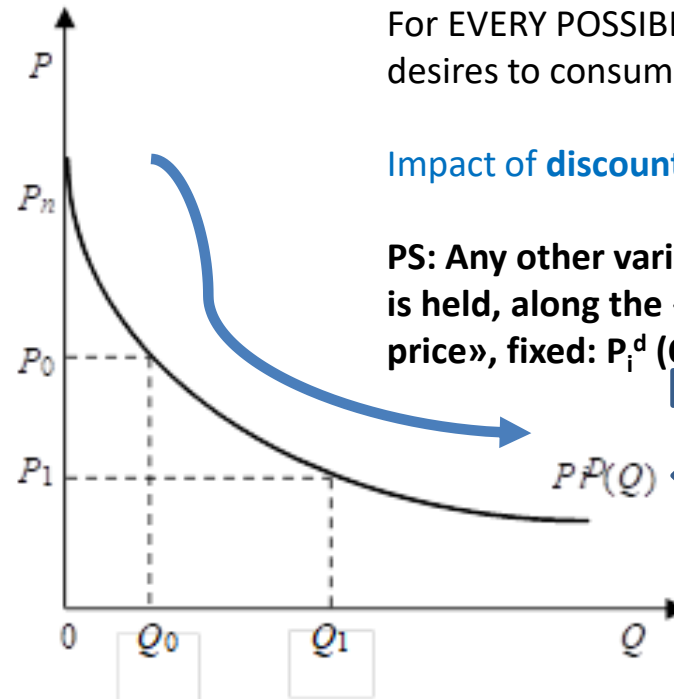
For EVERY POSSIBLE PRICE P , how much this individual desires to consume of good Q .

Impact of discounts



PS: Any other variable that impacts on desired consumption is held, along the «inverse demand curve with respect to price», fixed: $P_i^d(Q; A^\circ, B^\circ, C^\circ, D^\circ \dots)$

The (inverse) demand curve of an individual for good Q with respect to its price tells us **for every possible price** how many units John (i) desires to buy of good Q .





But doesn't the individual demand curve also depend on



$$P_i^d (Q; \dots, \dots, \dots, \dots)$$

$$P_i^d (Q; \text{taste}_i^\circ, \dots, \dots, \dots)$$

$$P_i^d (Q; \dots, \text{income}_i^\circ, \dots, \dots)$$

$$P_i^d (Q; \dots, \dots, \dots, \text{«rival» goods}^\circ)$$

$$P_i^d (Q; \dots, \dots, \dots, \dots, \text{complementary goods}^\circ)$$

$$P_i^d (Q; \dots, \dots, \dots, \dots, P \text{ of other goods}^\circ)$$

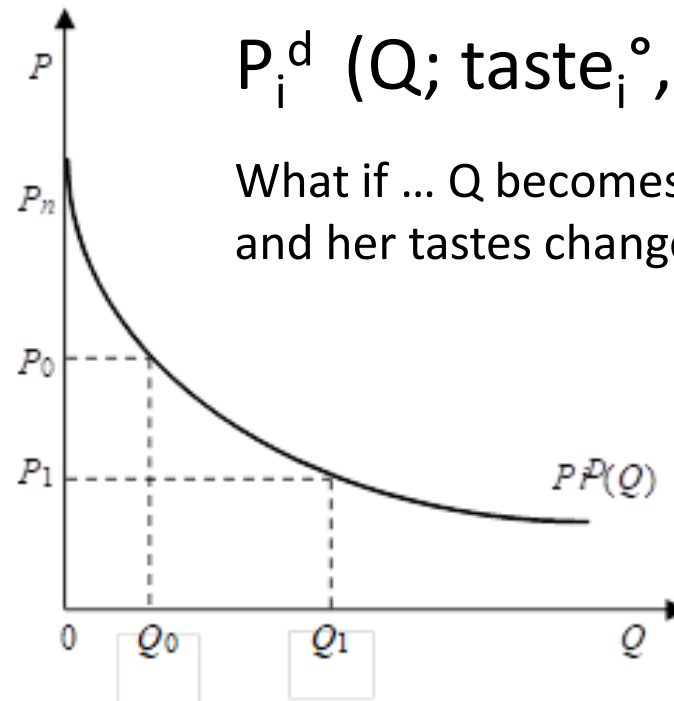


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What happens to the Inverse Demand Curve if...



☺



$P_i^d (Q; \text{taste}_i^0, \dots, \dots, \dots)$

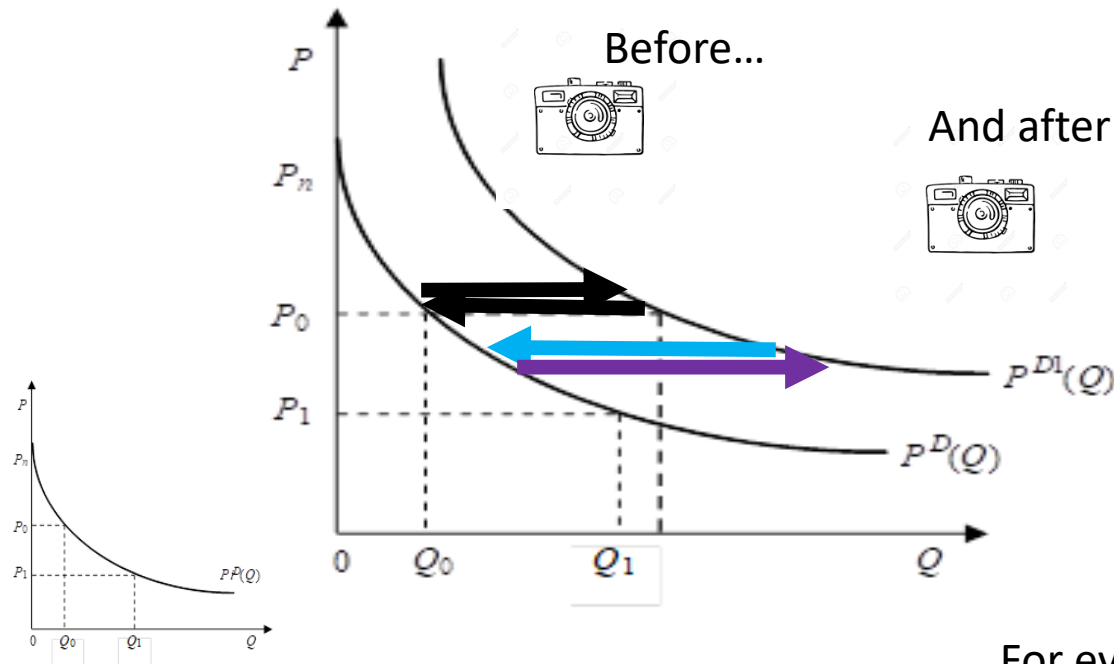
What if ... Q becomes more fashionable for « i »
and her tastes change to taste taste_i^1 ?



What happens to Inverse Demand Curve if...



From $P_i^d (Q; \text{taste}_i^0, \dots, \dots, \dots)$ to $P_i^d (Q; \text{taste}_i^1, \dots, \dots, \dots)$



Movements NOT «along» the curve but ... «OF» the curve.

Impact of taste change?

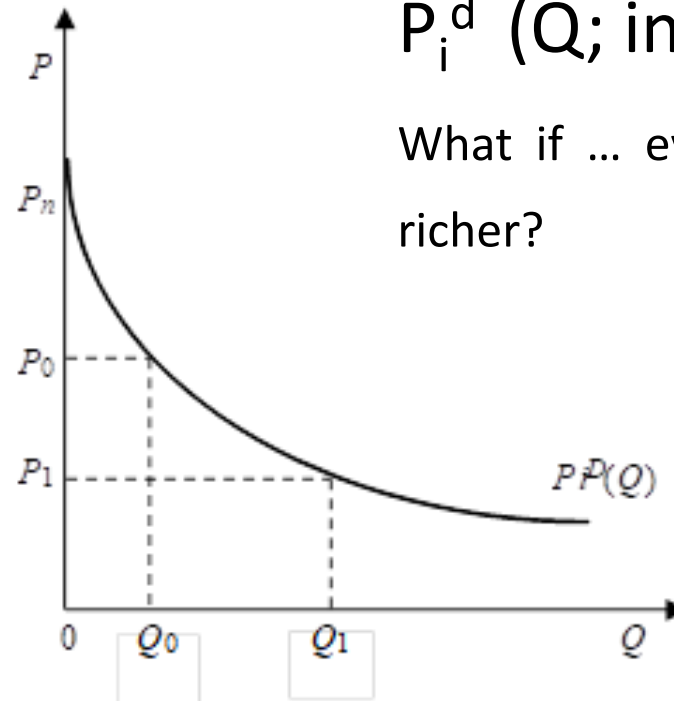
Coronavirus: demand of «masks»

Mad cow disease: demand of «beef».

For every possible price now we demand **more** (**less**) of good Q



The (inverse) demand curve of an individual for good Q with respect to price tells us **for every possible price** how many units John (i) desires to buy of good Q *when her/his income is*



$$P_i^d (Q; \text{income}_i^o, \dots, \dots)$$

What if ... everything else equal «i» become richer?



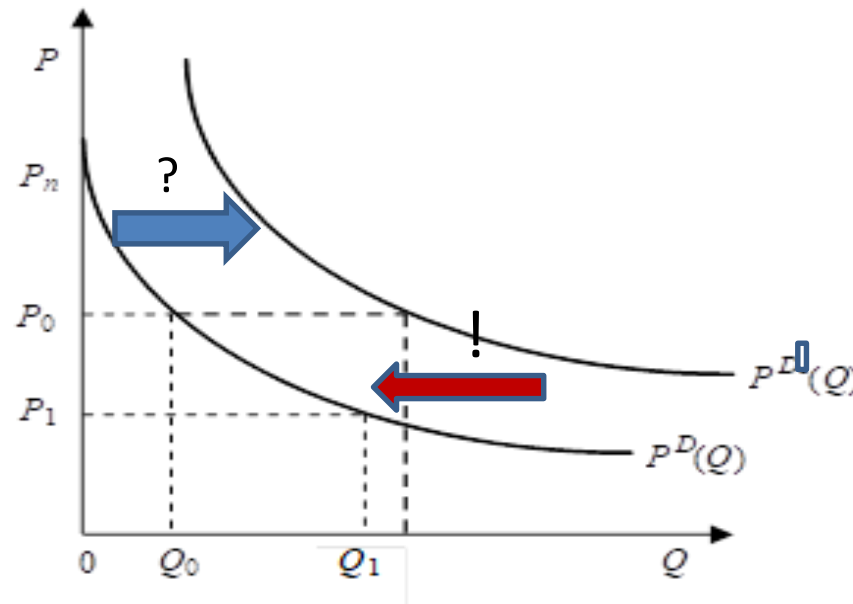
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What happens to the Inverse Demand Curve if, everything else equal, ...



From $P_i^d (Q; \text{income}_i^0, \dots, \dots, \dots)$ to $P_i^d (Q; \text{income}_i^1, \dots, \dots, \dots)$
With $\text{income}_i^1 > \text{income}_i^0$

What strategy is
needed by the firm
in the **red case**?





But doesn't the individual demand curve also depend on



$$P_i^d (Q; \dots, \dots, \dots, \dots)$$

$$P_i^d (Q; \text{taste}_i^\circ, \dots, \dots, \dots)$$

$$P_i^d (Q; \dots, \text{income}_i^\circ, \dots, \dots)$$

$$P_i^d (Q; \dots, \dots, \dots, \text{«rival» goods}^\circ)$$

$$P_i^d (Q; \dots, \dots, \dots, \dots, \text{complementary goods}^\circ)$$

$$P_i^d (Q; \dots, \dots, \dots, \dots, P \text{ of other goods}^\circ)$$



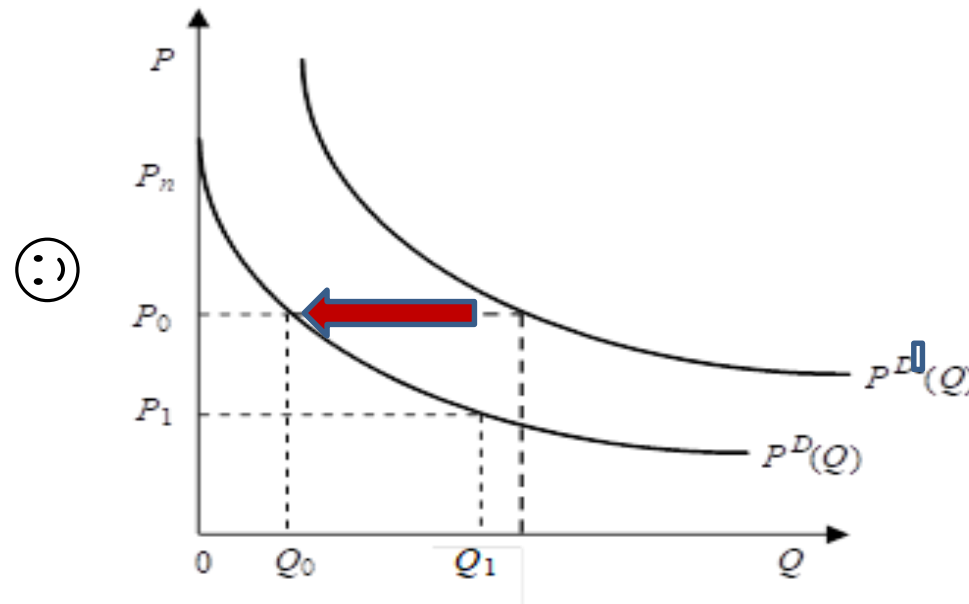
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What happens to the Inverse Demand Curve if, everything else equal, ...



$P_i^d (Q; \dots \text{price of a rival good?})$

... the price of a
«rival»
(substitute) good
were to change
everything else equal?



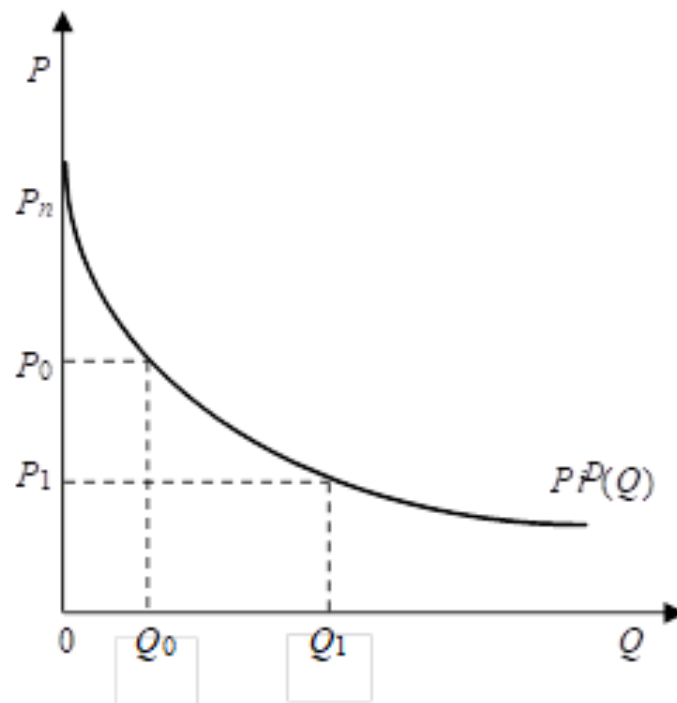
If for every price (P_0 , P_1 , P_n etc.), the rival would lower his/her price, what would happen to the quantity that «i» desires of good Q?

What happens to the Inverse Demand Curve of Smarts if...



PS: We are not anymore in a monopoly!

If I lower the price of Smarts from P_0 to P_1 , selling more Smarts, from Q_0 to Q_1 , to «John».



But lowering the price of Smarts from P_0 to P_1 , will induce reactions in rival producer Fiat? Will Fiat truly hold its price constant?

PS: Keeping in mind that all the other things which affect the demand of Smarts is kept constant. Including the price of my rival, the producer of Fiat!

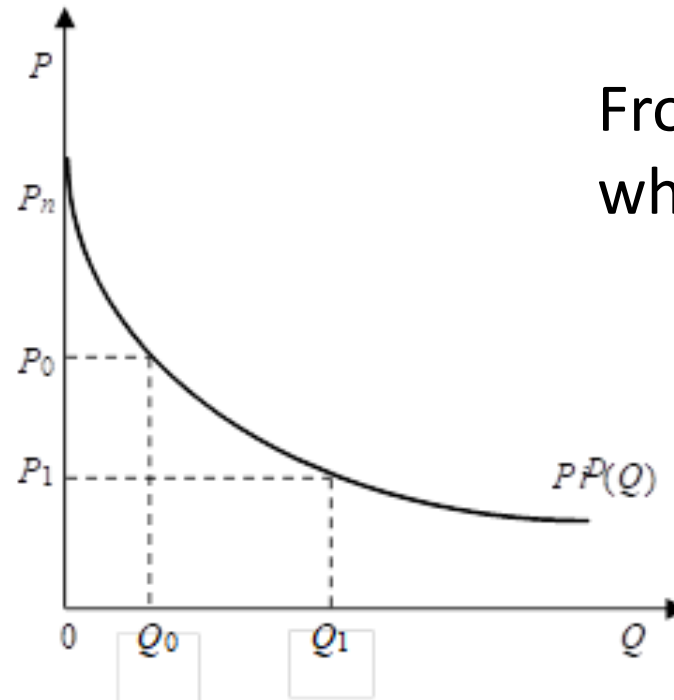


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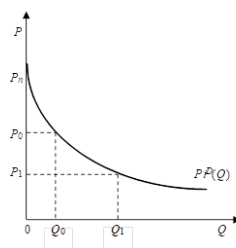
The demand curve of Smarts for a given price of Fiat 500



PS: Oligopoly



From P_0 to P_1 ,
what will Fiat do?



Price of Smart \searrow
Conjecturing my rival's move



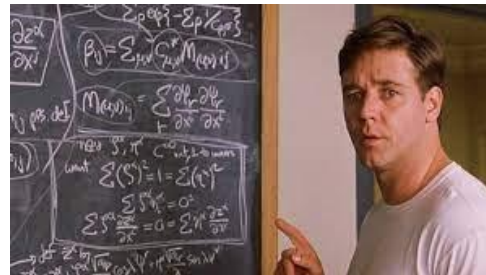
Price of a Smart \searrow



Fiat production constant
Price of Fiat \searrow



Price of Fiat constant
Production Fiat \searrow





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The information content of the consumer demand curve for the firm



Total Revenues $\equiv TR \equiv P \times Q$

$TR(Q) \times P \times Q$

$TR^f(Q) = P^d(Q) \times Q$

Total Expenditure $\equiv TE \equiv P \times Q$

btw...

$TR^f(Q) = TE^c(Q) = P^d(Q) \times Q$



Sometimes students say that revenues are expressed in terms of quantities.

No, they are expressed in units of account, for example euro.

So if at price of 6 euro per unit I sell 2 units, my revenues from these 2 units, the amount of euro I receive from the consumer, is 12 euro:

$$TR (Q=2) = 12 \text{ €}$$

(2;12) a point of the revenue function

But how about the revenue function?

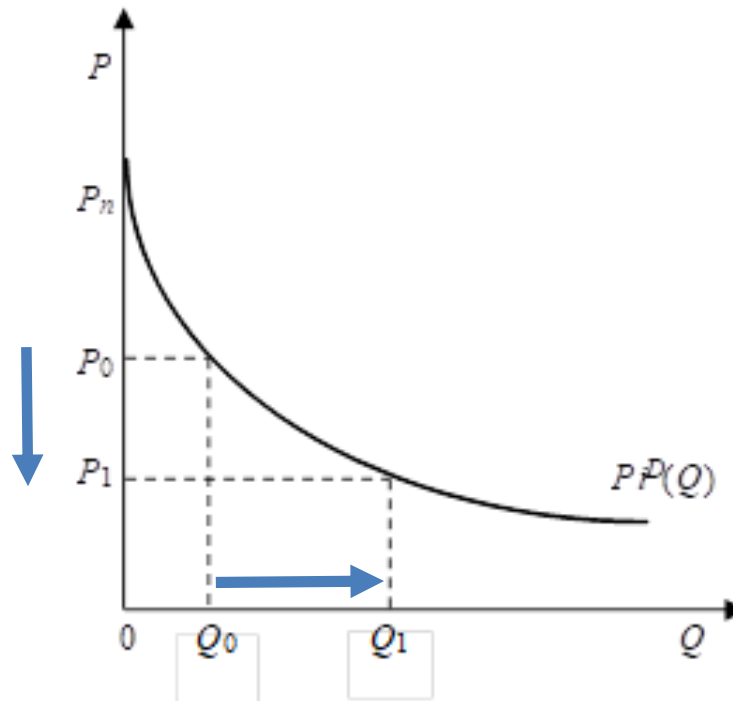
For every possible quantity sold, what is the revenue earned?

How do revenues change with the change in quantity?

$$P_i^d (Q) = 10 - 2 Q$$



The revenue dilemma, from Q_0 to $Q_1=Q_0+1$

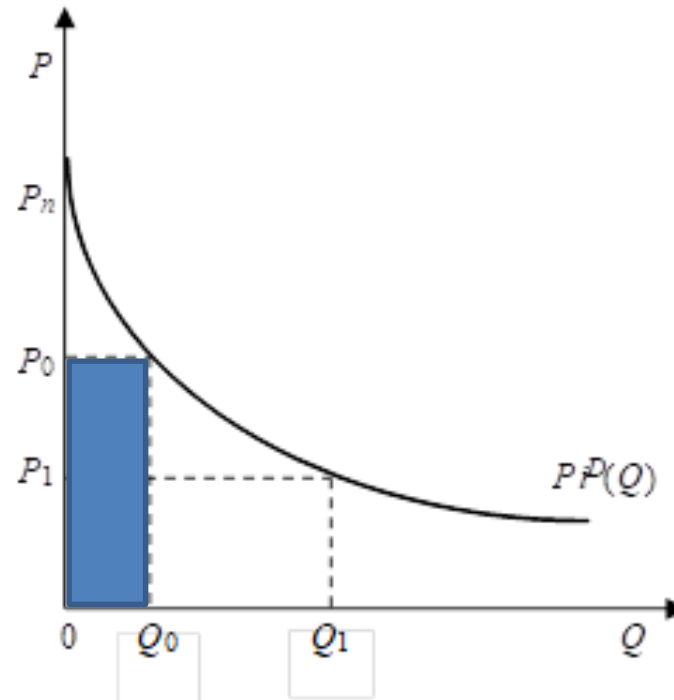


Imagine a monopolist and her demand curve

PS: it is not hers!

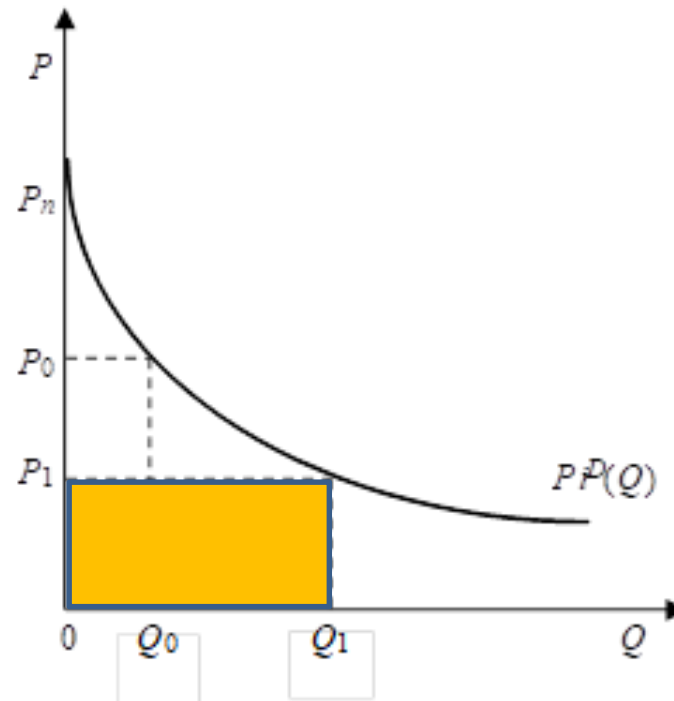


The revenue of selling Q^0 (at P^0)





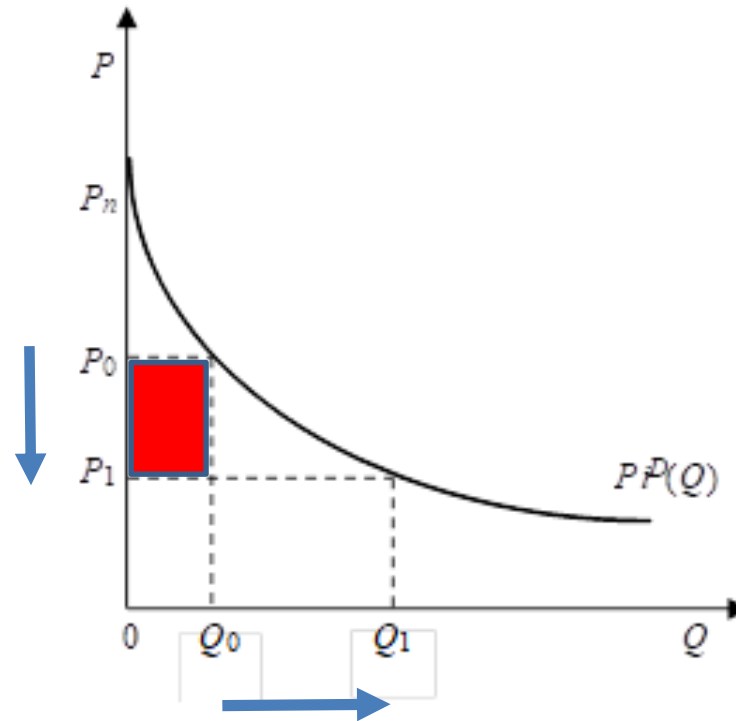
The revenue of selling $Q_1=Q_0+1$





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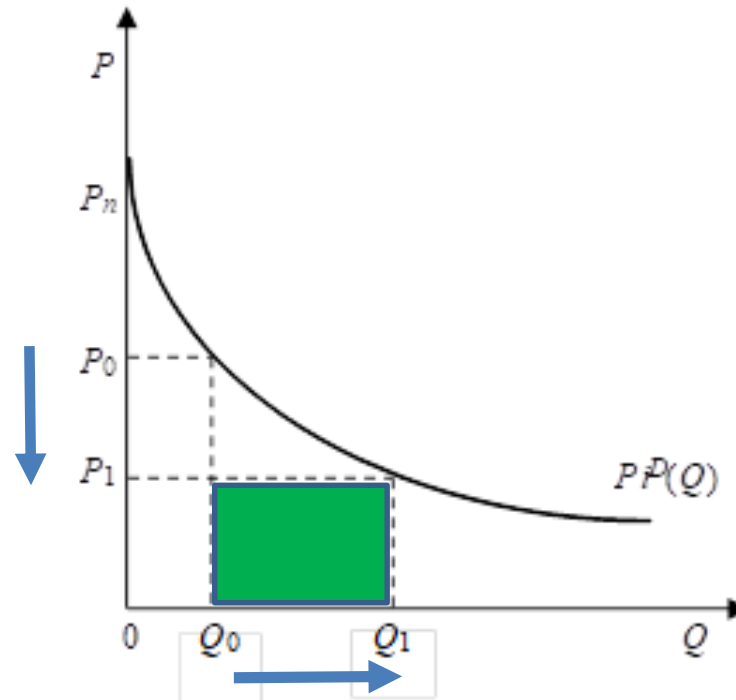
The revenue dilemma, from Q_0 to $Q_1=Q_0+1$





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The revenue dilemma, from Q_0 to $Q_1=Q_0+1$





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The revenue dilemma, from Q_0 to $Q_1=Q_0+1$

