

9/25/18

## Income Substitution Effects.

When  $P$  changes, obviously there is a change in quantity demanded. People change their consumption as the result of two separate effects.

We isolate these two effects in a model of consumer's behavior by adding a hypothetical (or imaginary) budget line.

\* We add a hypothetical budget line PARALLEL to the new (after price change) budget line, and TANGENT to the original indifference curve!

Substitution effect - the change in consumption that results from the change in relative prices.  
e.g., when the  $P_{\text{beer}}$  falls, it becomes cheaper relative to other stuff, compared to before the price change. So you'll buy more beer than before.

Income effect - the change in consumption that results from the change in real income (or purchasing power).

e.g., when the  $P_{\text{beer}}$  falls, and you consume beer, then your purchasing power increases

- (a) you'll buy more beer if it's a normal good for you
- (b) you'll consume less beer if it's an inferior good

### 317: Income & Substitution effects, cont.

9/25/12

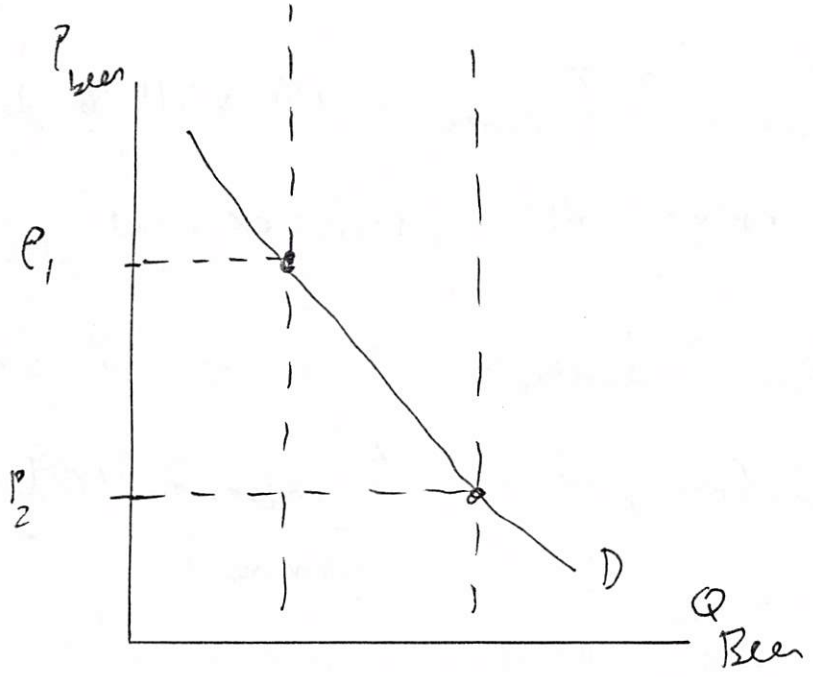
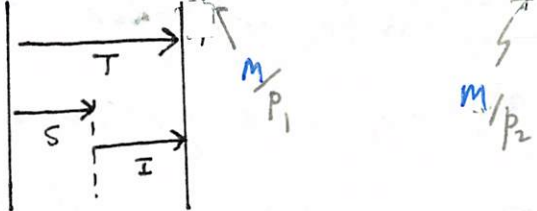
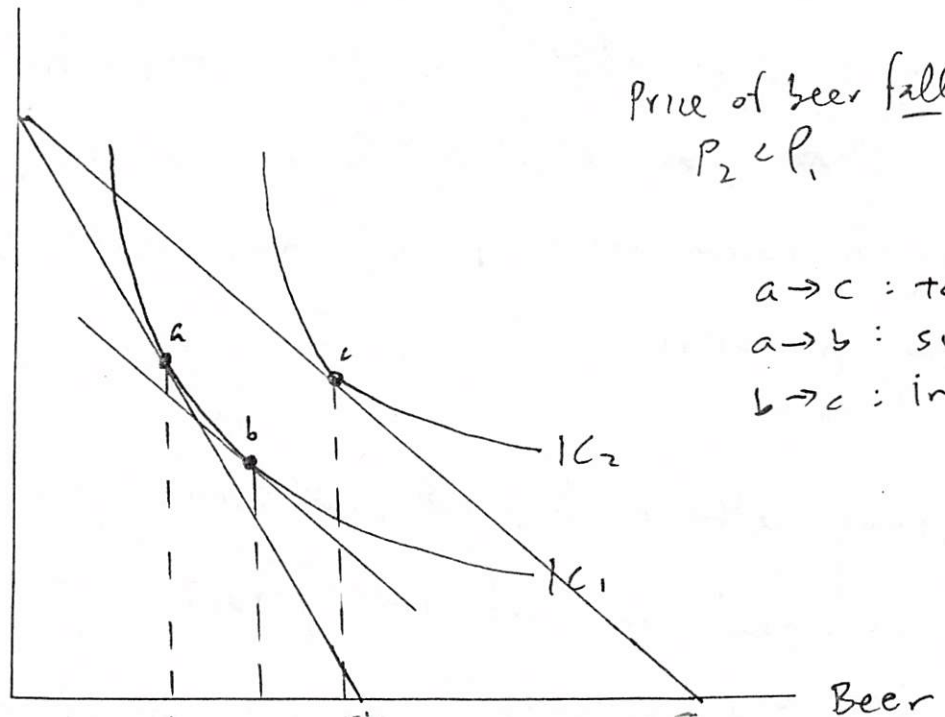
- Substitution effect always conforms to law of demand; it's shown by sliding down an IC, so "flattening" means lower price of  $x$ , and will always mean more  $x$  consumed.
- Income effect depends, of course on whether it's a normal or inferior good.
  - If it's an inferior good, then  $P$  falling means income  $\uparrow$ ; so consumption will fall. So this effect offsets the substitution effect.
  - When  $S_{\text{effect}} > I_{\text{effect}}$ , it's still a downward-sloping  $D$  curve, just an inferior good.
  - When  $I_{\text{effect}} > S_{\text{effect}}$ ,  $D$  is upward-sloping, called a Giffen good. (Potatoes in Ireland during famine)

Other Stuff

Normal good ( $P \downarrow$ )

Price of beer falls  
 $P_2 < P_1$

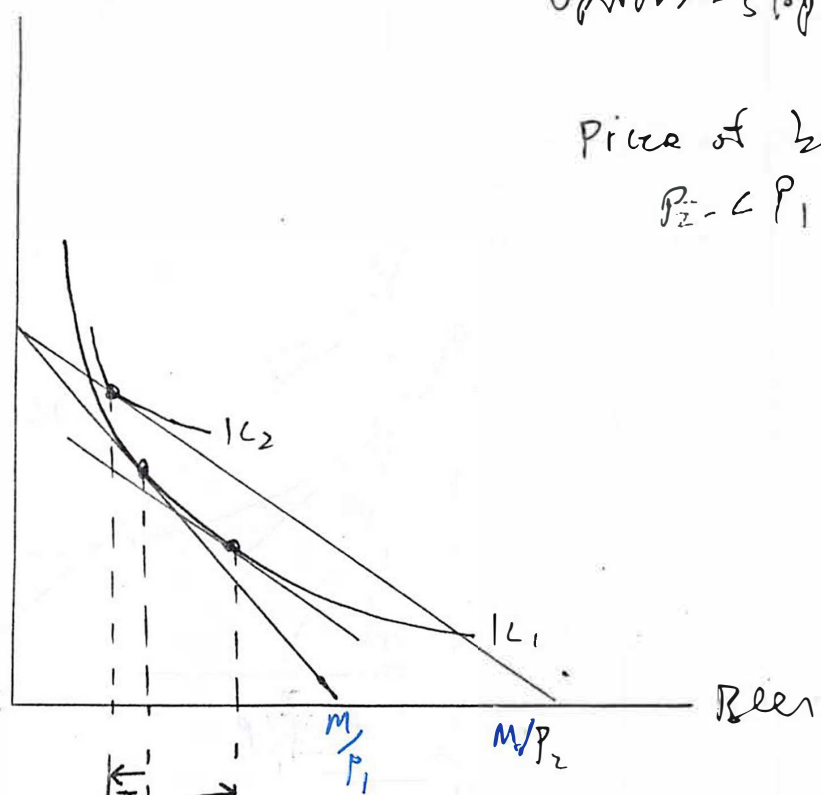
$a \rightarrow c$  : total  
 $a \rightarrow b$  : subst.  
 $b \rightarrow c$  : inc.



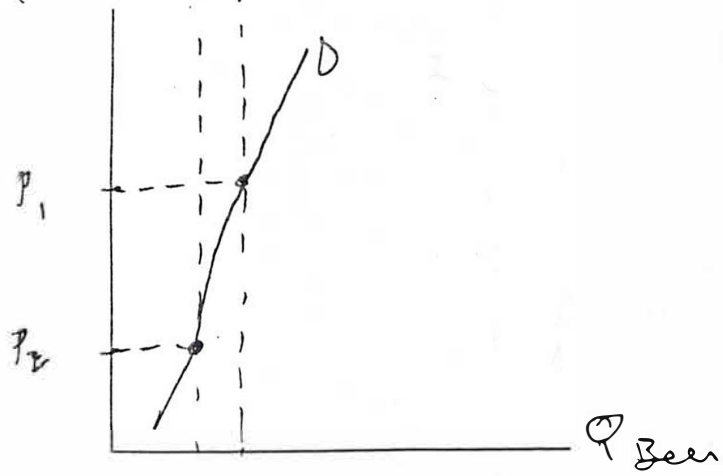
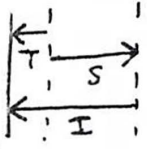
Inferior (Giffen) good  
 upward-sloping D curve

Other  
 Stuff

Price of beer falls  
 $P_2 < P_1$



$P_{Beer}$



Other  
stuff

Inferior good ( $P \downarrow$ )  
normal D curve

Price of beer falls  
 $P_2 < P_1$

$a \rightarrow c$  : total  
 $a \rightarrow b$  : subst.  
 $b \rightarrow c$  : inc.

