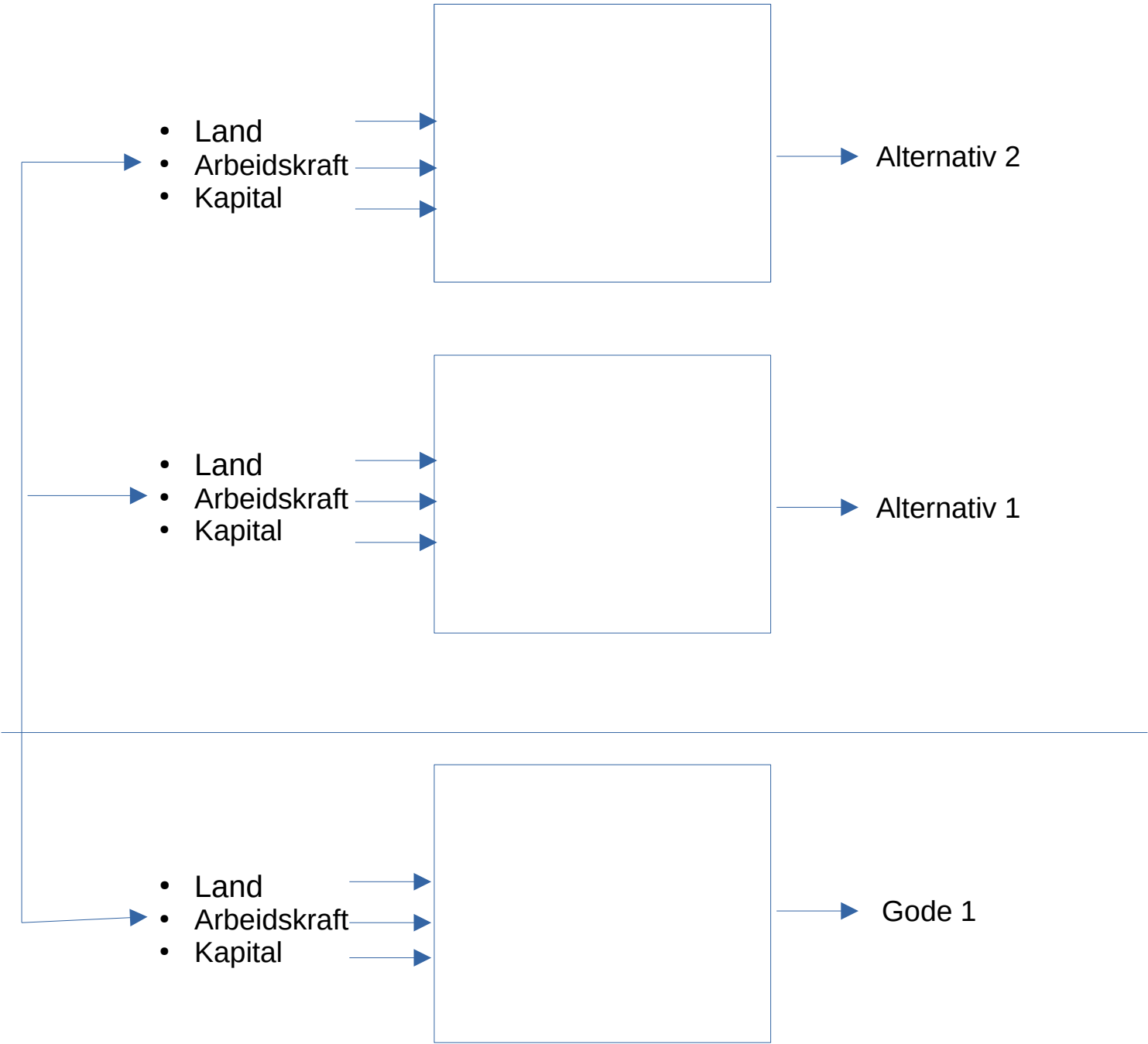
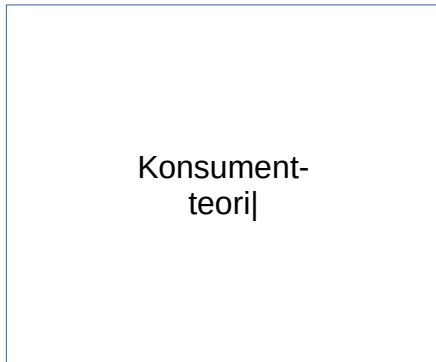


Alternativkostnad



# Mikroøkonomi oppbygging

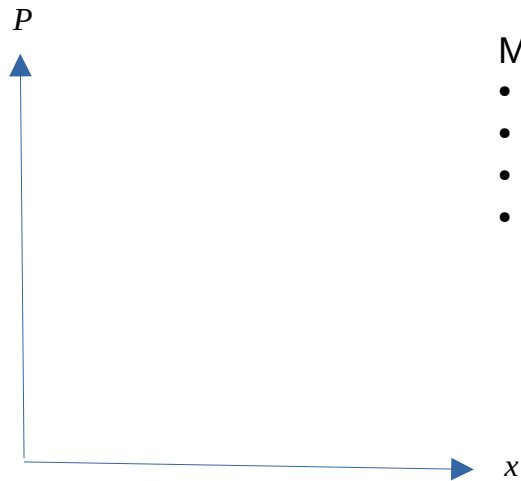
Behov



Ressurser



Partiell  
Likevekt  
(ett marked)



Markedsformer:

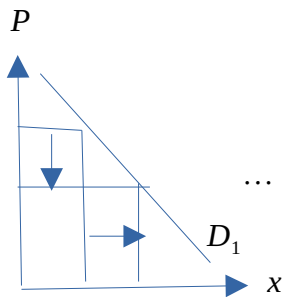
- Fullkommen konkurranse
- Monopol
- Monopolistisk konkurranse
- (Kartell, duopol, oligopol)

Andre emner:

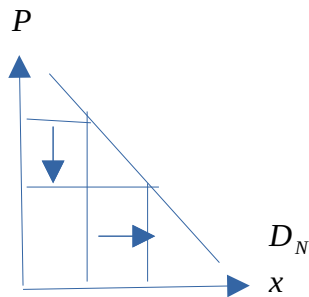
- Prisdiskriminering
- Markedssvikt
  - Markedssvikt
  - Eksternaliteter
  - Kollektive goder
- Internasjonal handel

# Oversikt: Markedet for fullkommen konkurranse

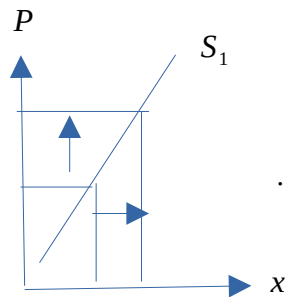
Konsument 1



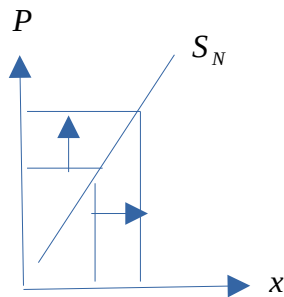
Konsument N



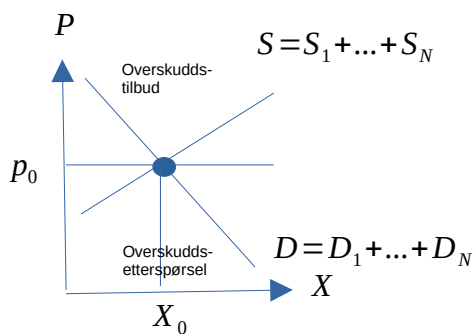
Produsent 1



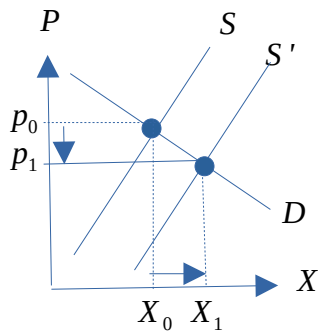
Produsent N



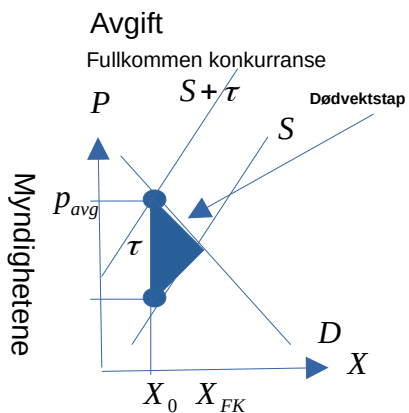
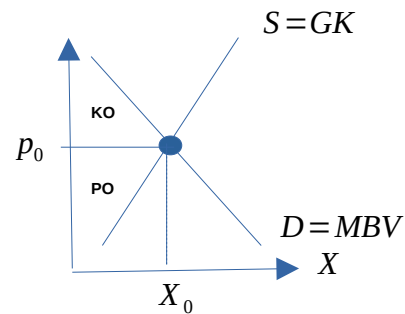
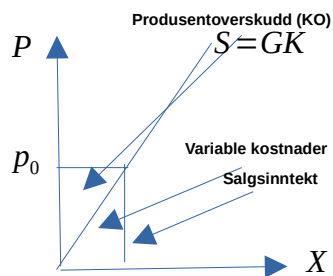
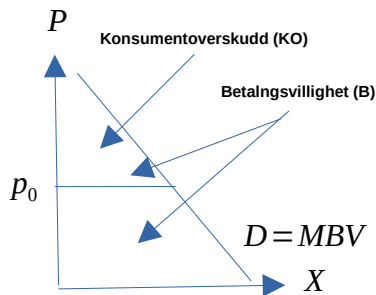
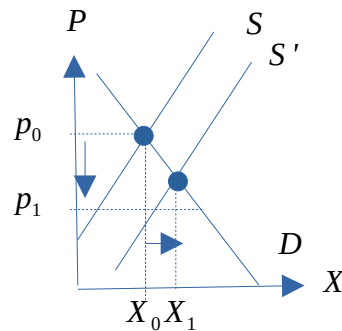
Fullkommen konkurranse



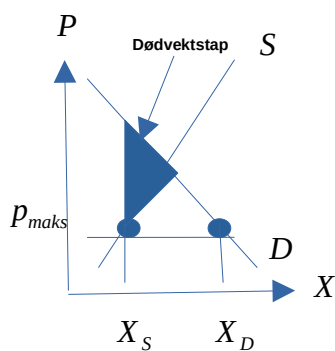
Skiftanalyse (slak etterspørselskurve)



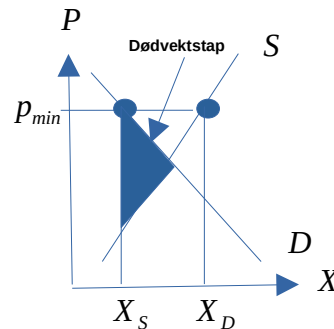
Skiftanalyse (bratt etterspørselskurve)



Maksimalpris



Minstepris

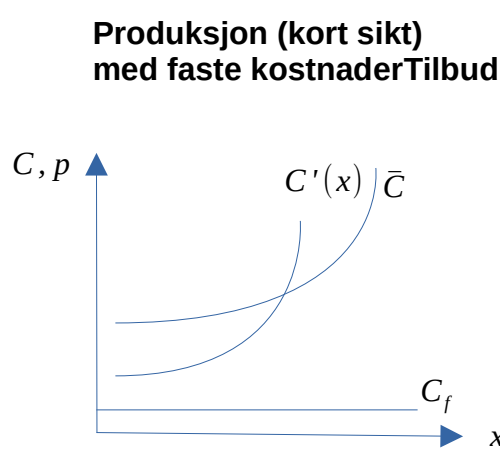
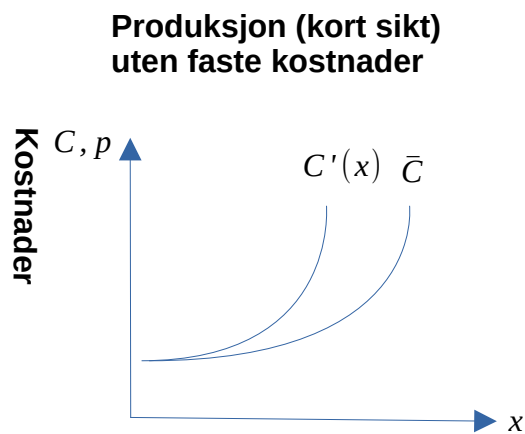
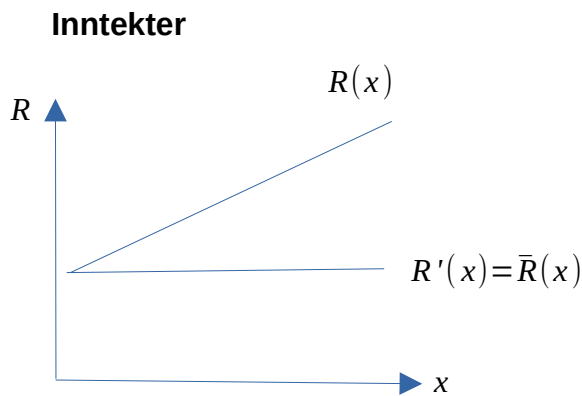
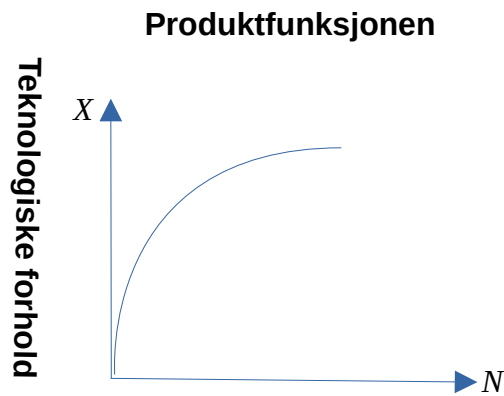


Produktfunktjonen

- N
- K



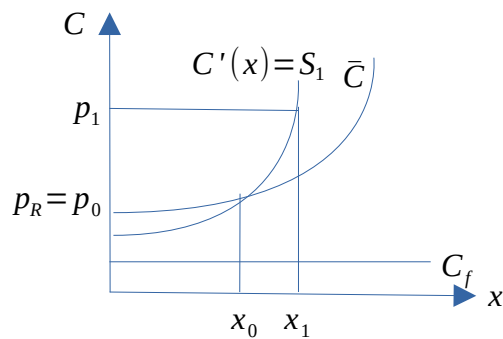
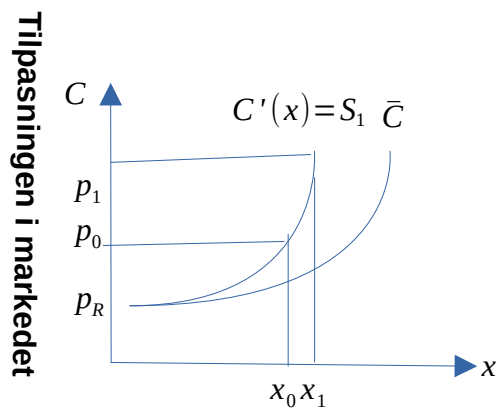
Produksjonsteori på kort sikt



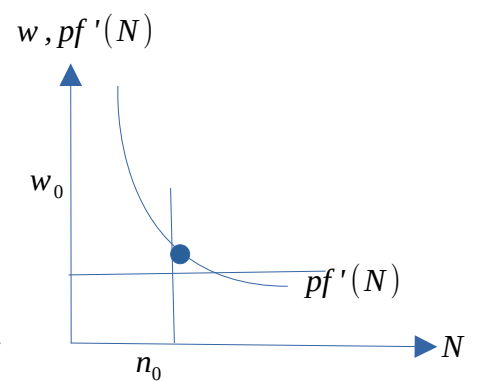
**Tilbudsfunksjonen fra en produsent**

Uten faste kostnader

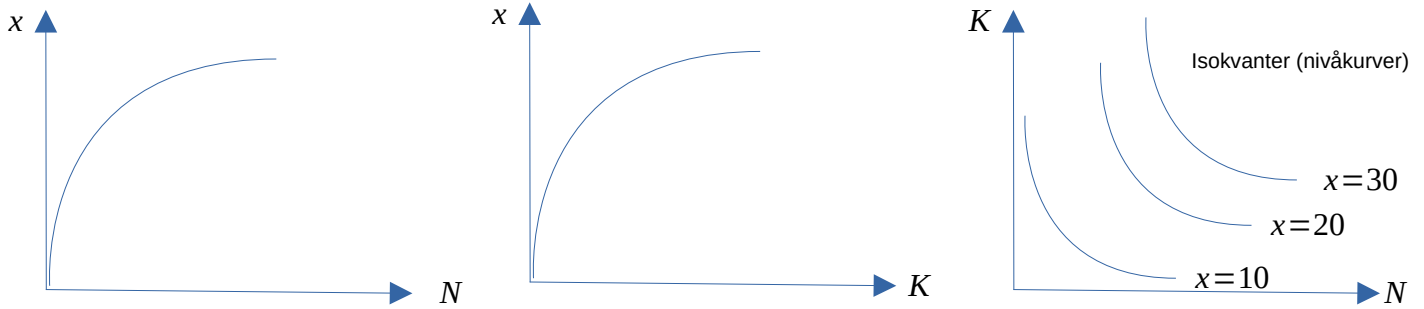
Med faste kostnader (reversible)



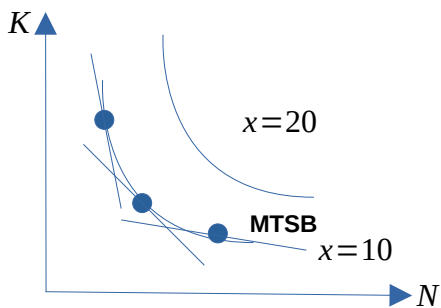
**Etterspørselen etter arbeidskraft**



# Produksjonsteori på lang sikt

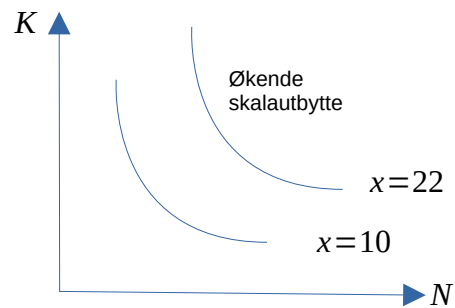


## Tekniske substitusjonsmuligheter

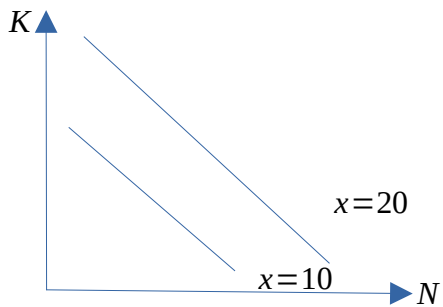


Normale substitusjonsmuligheter

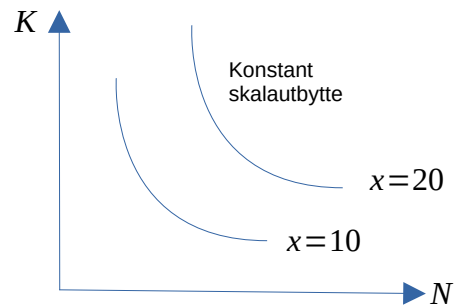
## Skalaegenskaper



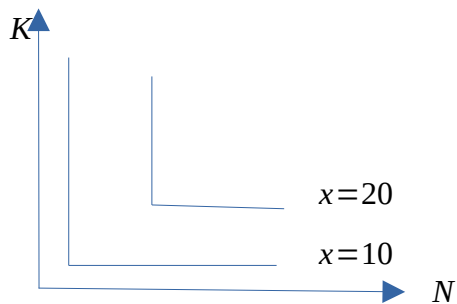
Økende skalautbytte



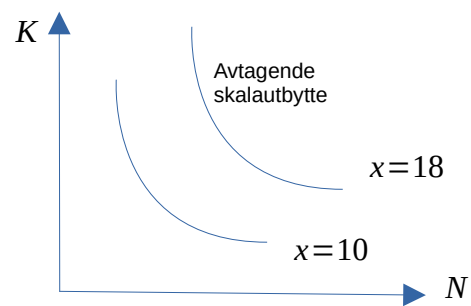
Perfekte substitusjonsmuligheter



Konstant skalautbytte



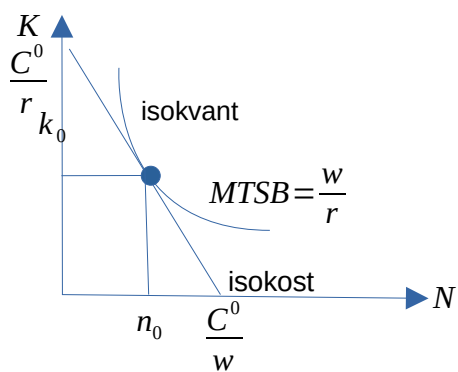
Ingen substitusjonsmuligheter



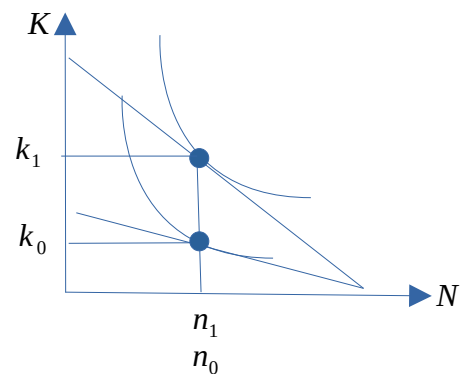
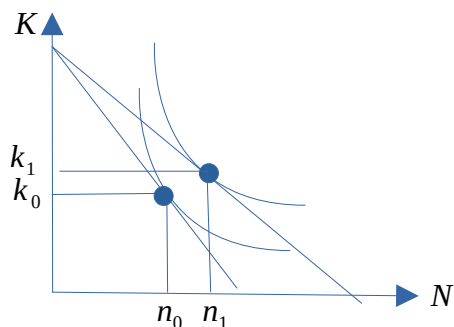
Avtagende skalautbytte

# Produksjonsteori på lang sikt

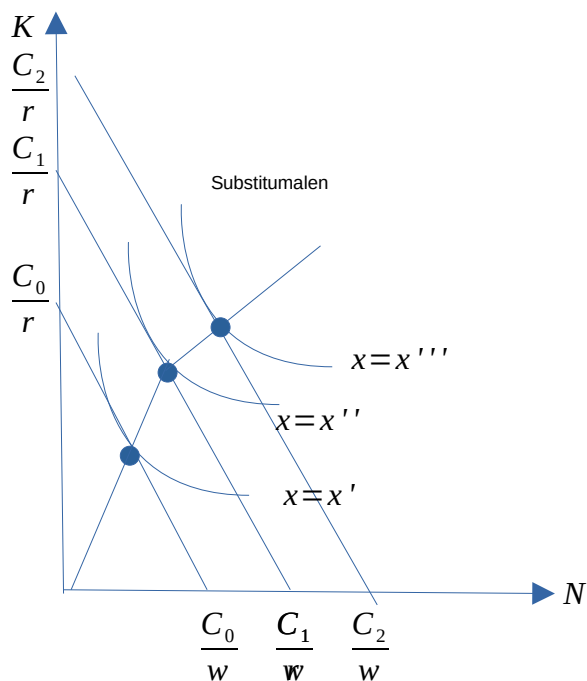
## Kostnadsminimering (lang sikt) - Billigere arbeidskraft



## - Billigere kapital

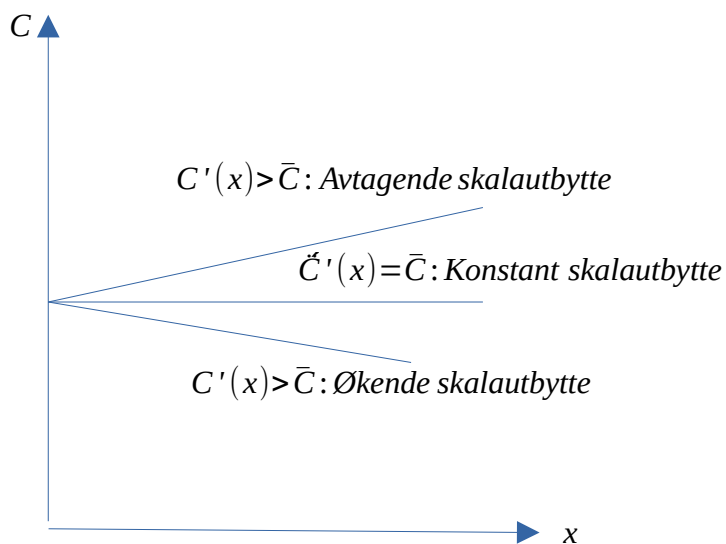


## Kostnadsminimering For et gitt budsjett



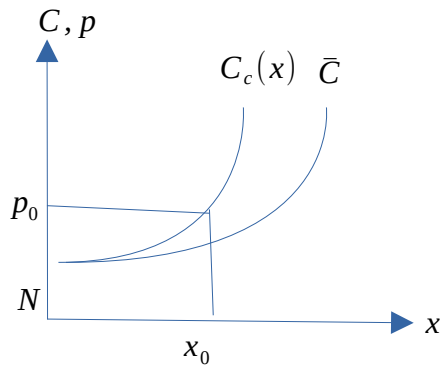
## Kostnadsfunksjonen for ulike antagelser om skalaufbytte

Kostnader (lang sikt)

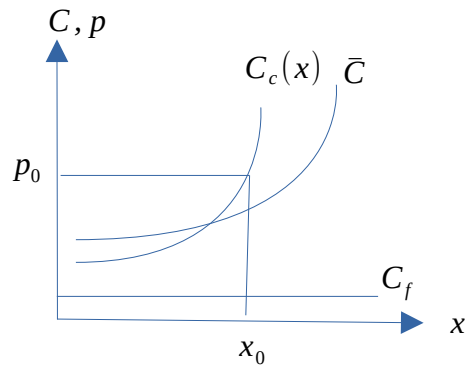


# Produksjonsteori: Produsentens økonomiske adferd i gode- og arbeidsmarkedet

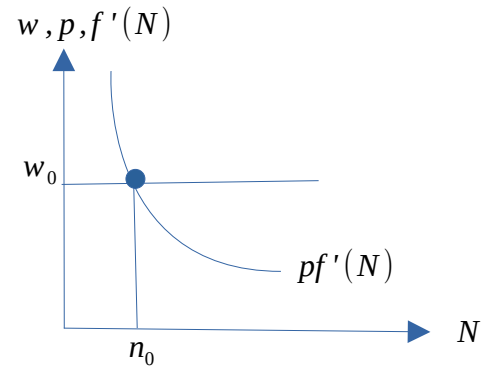
## Produksjon (kort sikt) uten faste kostnader



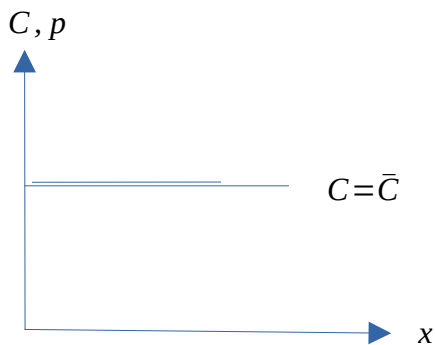
## Produksjon (kort sikt) med faste kostnader



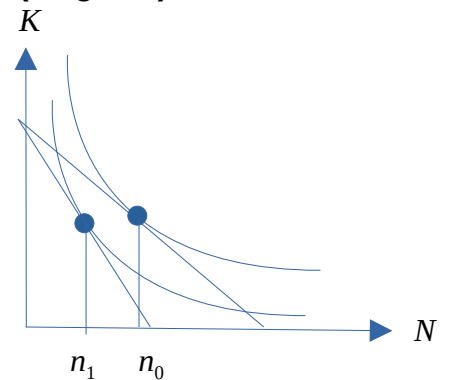
## Bruk av arbeidskraft (kort sikt)



## Produksjon (lang sikt), med konstant skalautbytte



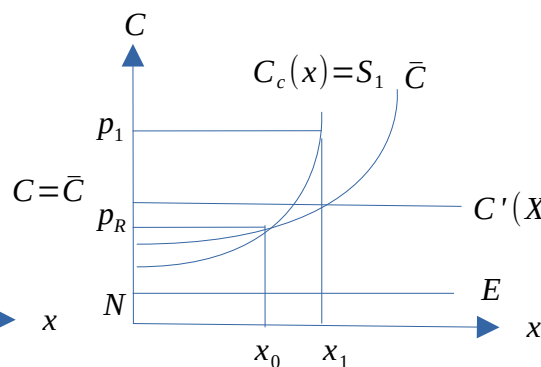
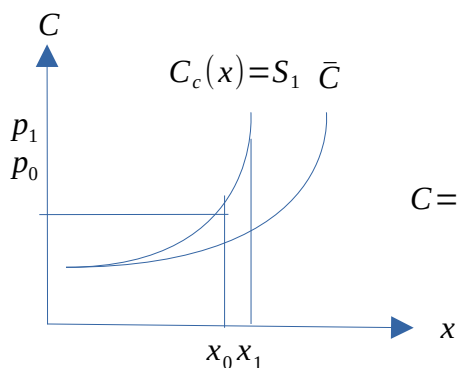
## Bruk av arbeidskraft (lang sikt)



## Tilbudsfunksjonen fra en produsent (kort og lang sikt)

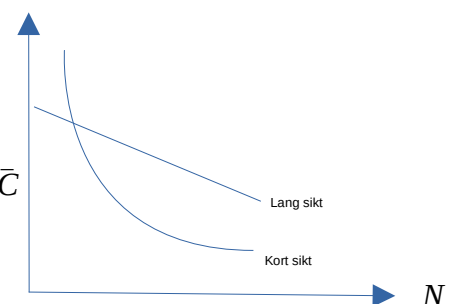
Uten faste kostnader

Med faste kostnader



## Etterspørselsfunksjonen etter arbeidskraft fra en produsent (kort og lang sikt)

$w, p, f'(N)$





# Konsumentteori: Konsumentens valg

Konsumenter: Gruppe av individer med samme preferanser

1. ⊙ *Determinitet*

Har at  
Entener  $A < B$   
eller  $B < A$   
eller  $A \sim B$

2. ⊙ *Ikke metning*

3. ⊙ *Transitivitet*

Gitt at  $B < A$   
og  $C < B$   
 $\rightarrow C < A$

De tre aksiomene gir oss:

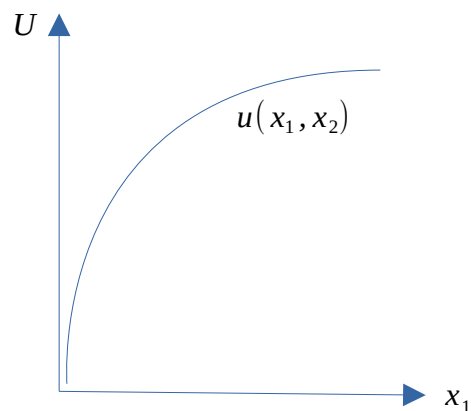
$$U = u(x_1, x_2)$$

Hvor vi antar at:

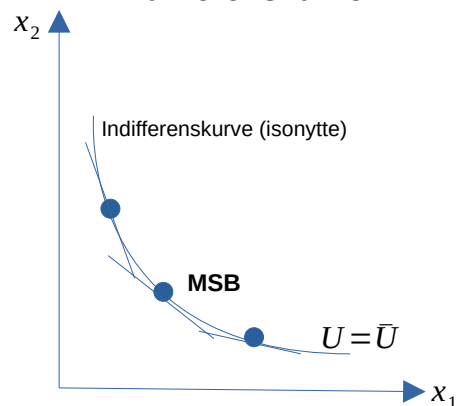
$$u'(x_1) > 0, u''(x_1) < 0$$

$$u'(x_2) > 0, u''(x_2) < 0$$

## Nyttefunksjonen

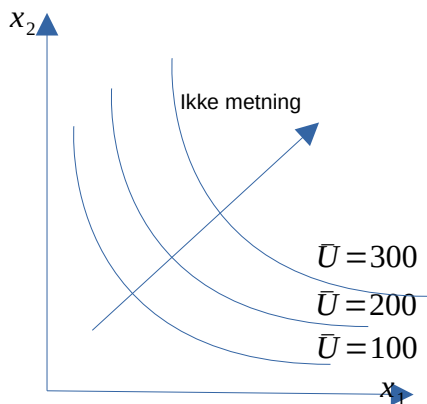


## Indifferenskurve

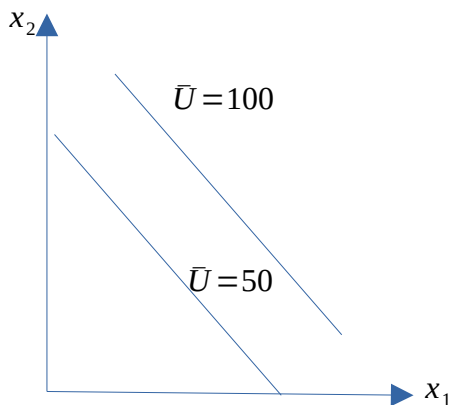


## Budsjettbetingelsen

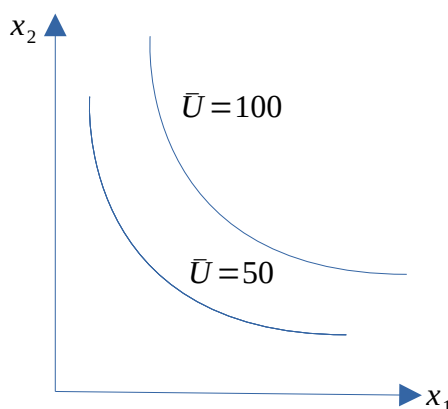
### Indifferenskart



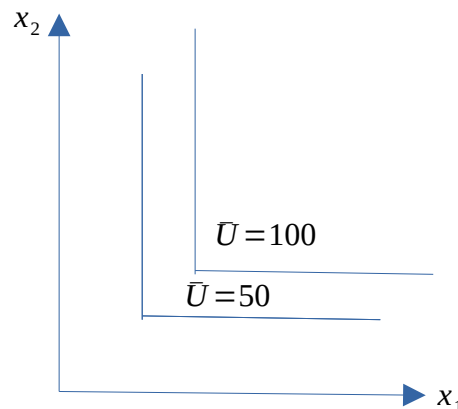
### Perfekte substitusjonsmuligheter



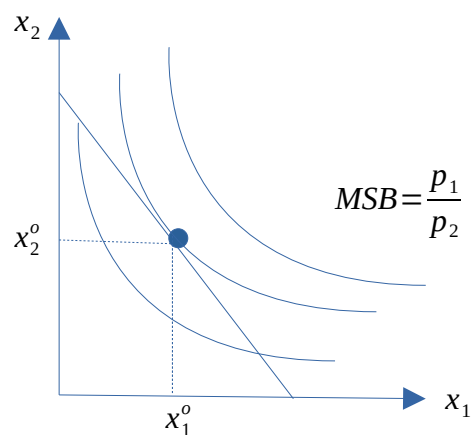
### Vanlige substitusjonsmuligheter



### Ingen substitusjonsmuligheter

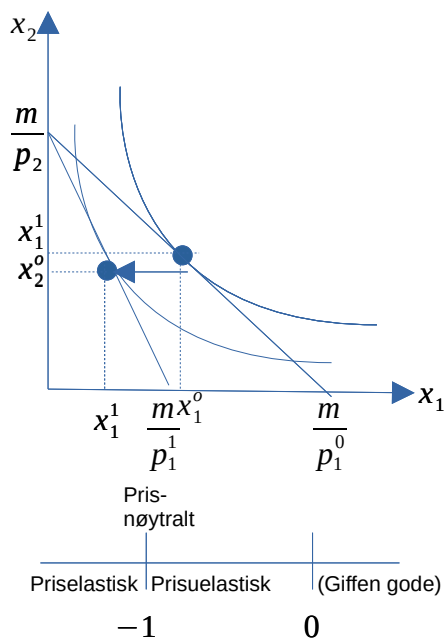


## Optimal tilpasning

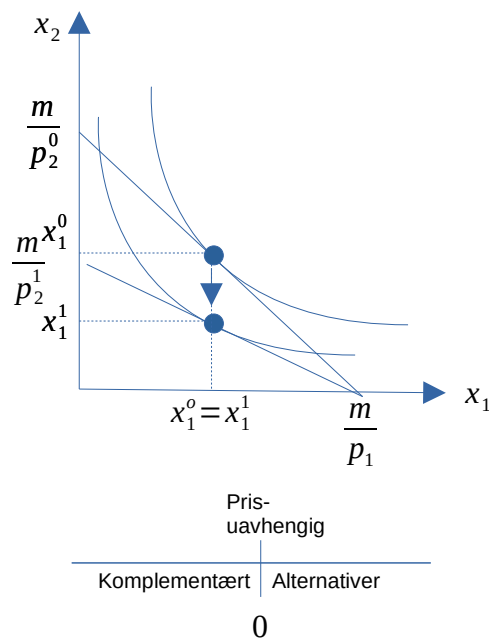


# Konsumentteori: Konsumentens økonomiske adferd i gode- og arbeidsmarkedet

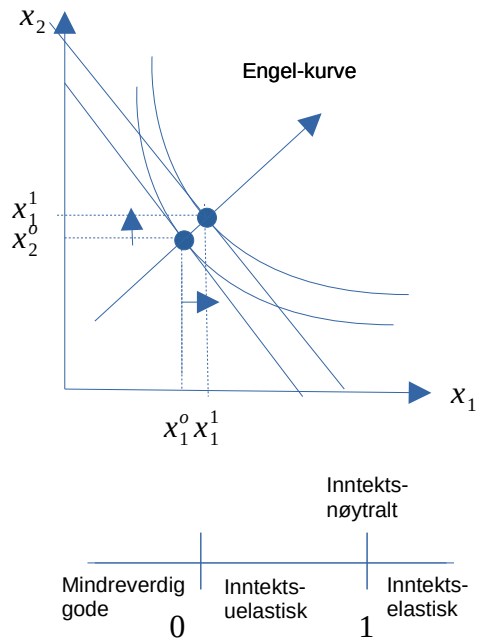
## Egenpriselastisitet



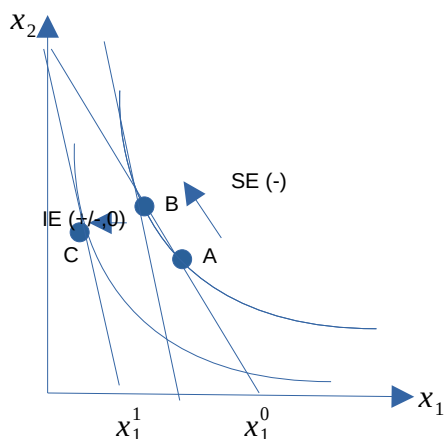
## Krysspriselastisitet



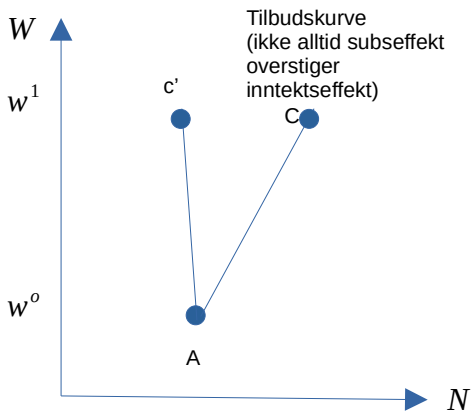
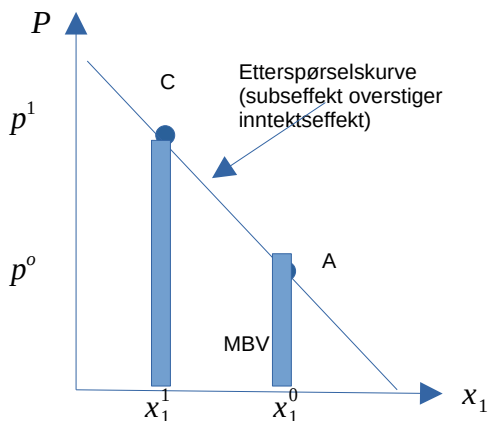
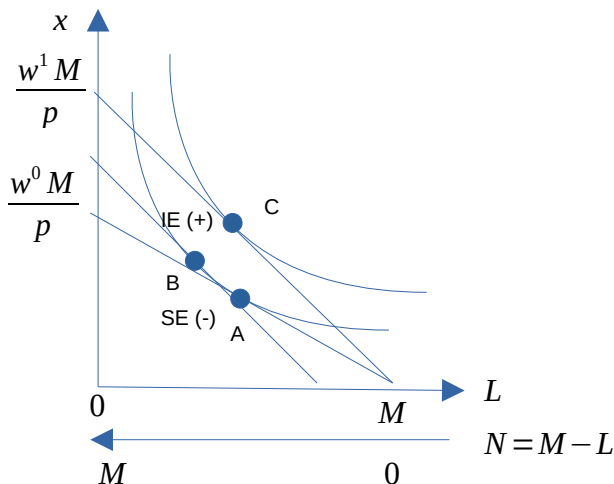
## Inntektselastisitet



## Utleddning av etterspørselskurven for gode 1



## Utleddning av tilbudskurven for arbeidskraft (ikke pensum)



# Fullkommen konkurranse

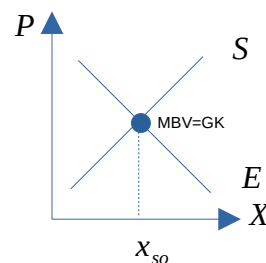
PLANLEGGING

*Produsent*  
 $GK = C'_v(X)$   
 $VK = C_v(X)$

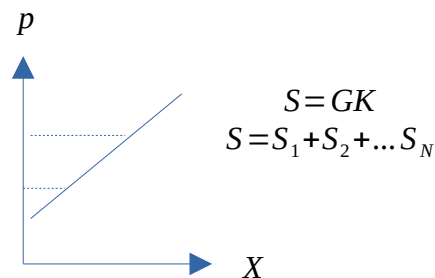
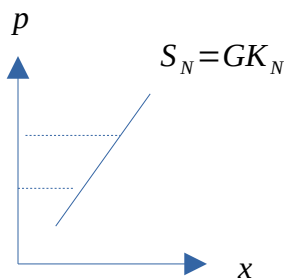
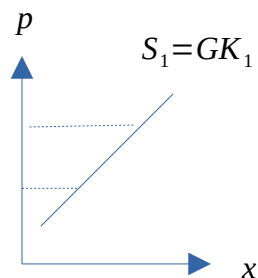
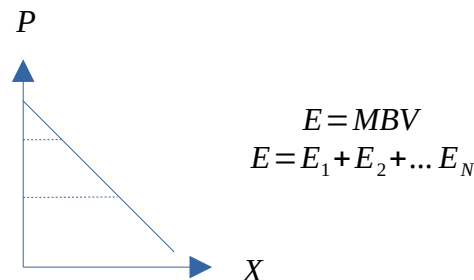
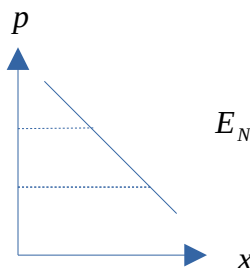
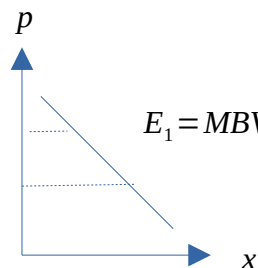
$PO(X) = PX - C_v(X)$      $KO(X) = B(X) - PX$

*Konsument*  
 $MBV = B'(X)$   
 $B = B(X)$

*Sosial planelegger*  
 $Velferd = SO = PO + KO$   
 $SO = (PX - C_v(X)) + (B(X) - PX)$   
 Maks SO mhp. X  
 $P - C'_v(X) + B'(X) - P = 0$   
 $C'_v(X) = B'(X)$   
 $MBV = GK$



AGGREGERING

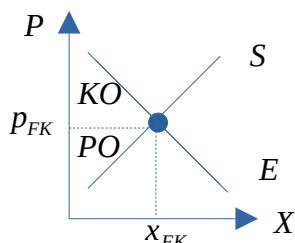


Markedslikevekt

Overskuddstilbud

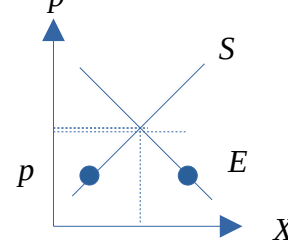
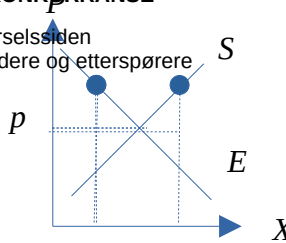
Overskuddsetterspørsel

MARKEDET

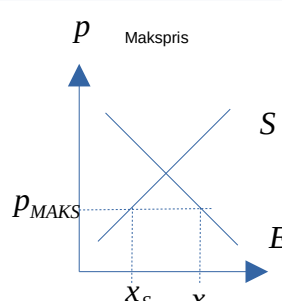
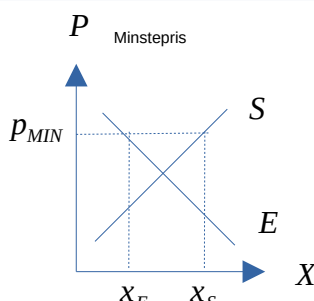
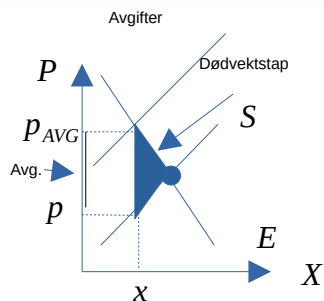


## FORUTSETNINGER BAK FULKOMMEN KONKURRANSE

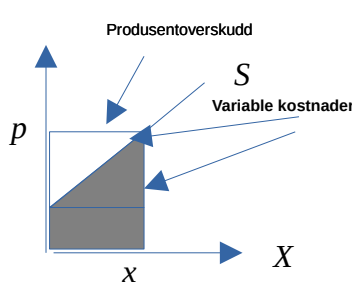
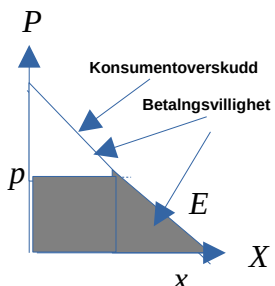
- 1) Mange aktører på både tilbuds- og etterspørselsiden
- 2) Prisen blir bestemt i et samspill mellom tilbydere og etterspørere
- 3) Homogene varer
- 4) Rasjonelle aktører: Maks nytte og profitt
- 5) Bruker all relevant informasjon
- 6) Ingen transaksjonskostnader



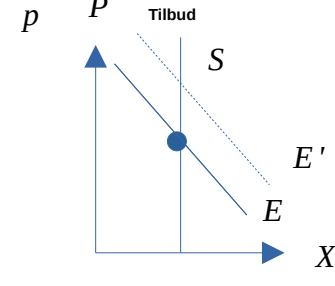
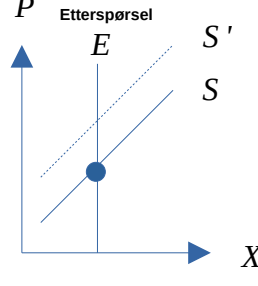
PRISREGULERING



OVERSKUDD

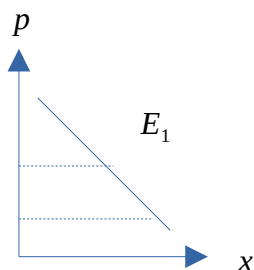


UELASTISK

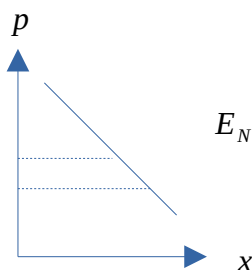
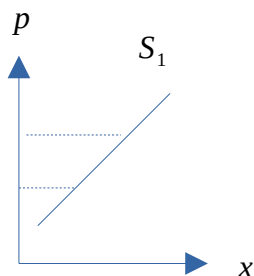
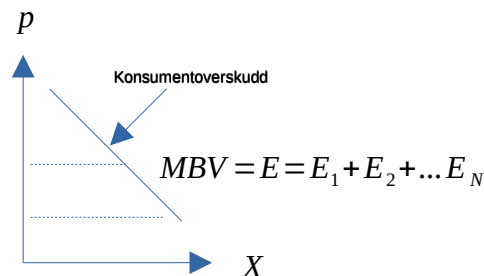


# PLANLEGGER

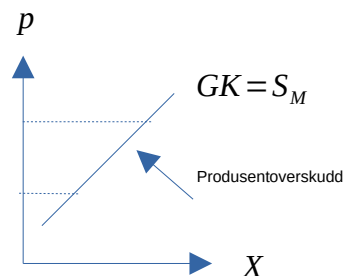
## AGGREGATING



...


$$=$$


- Lover og regler
- Patenter og rettigheter
- Tilgang til råvarer
- Geografisk avstand og andre hindre
- Fallende enhetskostnader

$$=$$


### Overskuddsetterspørsmål

# INTUITION

Lønner seg å øke produksjonen

- Finne det produksjonsnivået som gir maksimal fortjeneste
- $R'(x)$  Endring i inntekt ved å produsere én enhet mer
  - Høyere omsetning (+)
  - Tidligere enheter blir solgt til en lavere pri
- $C'(x)$  Endring i kostnad ved å produsere en enhet mer

### Optimal produksjon

$$R'(X) > C'(X)$$

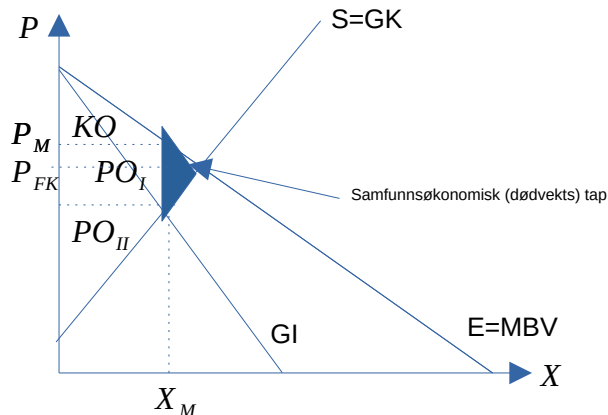
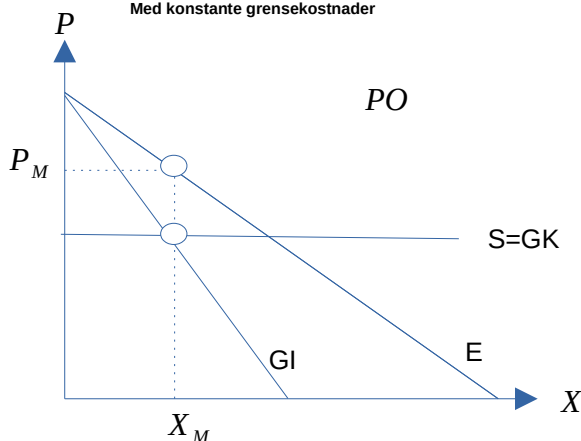
$$R'(X) < C'(X)$$

►  $R'(X_M) = C'(X_M)$

### Lønner seg å redusere produksjonen

## GRAFIK

**Med stigende grensekostnader (mer delta-jert figur)**



## SAMMENL.

- Redusert SO (dødvectstap)
- Omfordeling
  - Fra Konsument(KO)
  - Til Produsent (PO)

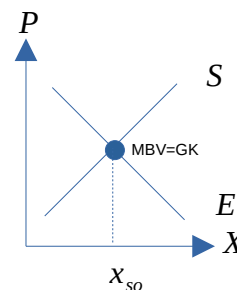
# Ufullkommen konkurranse: Kartel, duopol, oligopol og monopolistiks konkurranse

PLANLEGGER

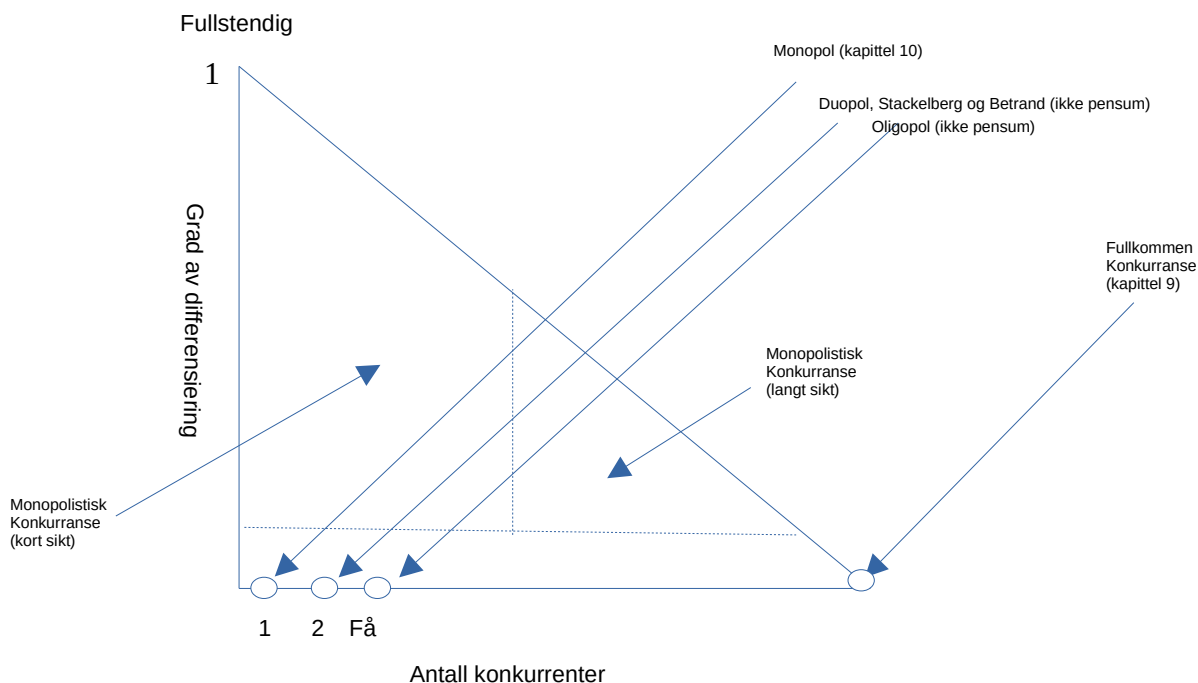
Produsent  
 $GK = C'_v(X)$   
 $VK = C_v(X)$

Konsument  
 $MBV = B'(X)$   
 $B = B(X)$   
 $PO(X) = PX - C_v(X)$     $KO(X) = B(X) - PX$

Sosial planelegger  
 Velferd =  $SO = PO + KO$   
 $SO = (PX - C_v(X)) + (B(X) - PX)$   
 Maks SO mhp.  $X$   
 $P - C'_v(x) + B'(X) - P = 0$   
 $C'_v(x) = B'(X)$   
 $MBV = GK$

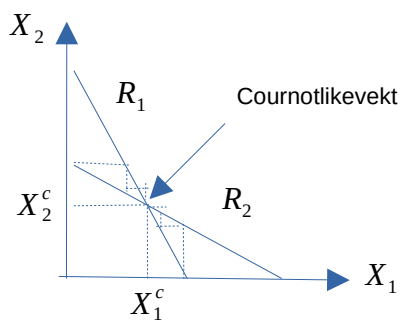


MARKEDSFORMER



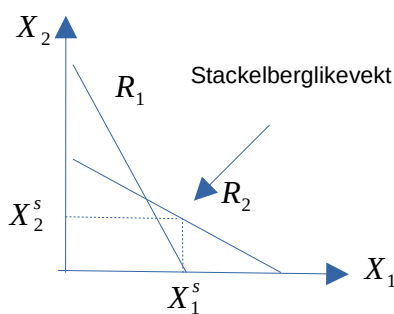
DUOPOL

Cournot



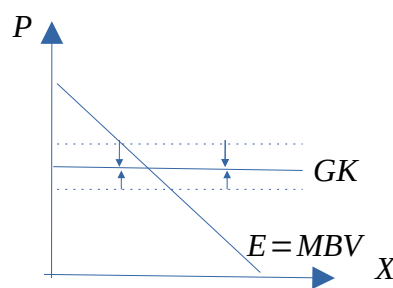
Kort sikt

Stackelberg



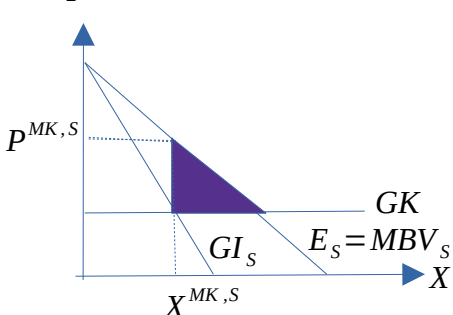
Lang sikt

Bertrand

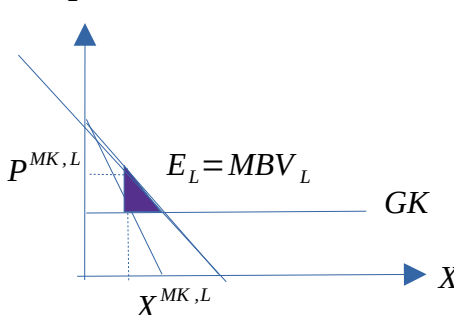


MKONNOKUPORLANSISK

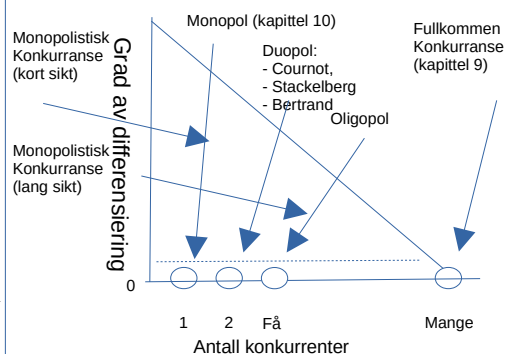
P



P



1 (fullstendig)



# Prisdiskriminering

F  
O  
R  
R  
U  
T  
S  
E  
T  
N

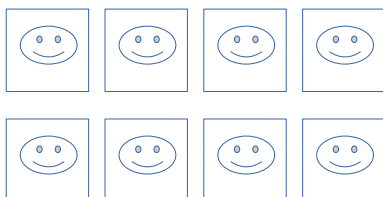
Vi har **prisdiskriminering** i et marked når en produsent har en fordel (dvs. kan få økt sin fortjeneste) ved å ta ulik pris til forskjellige etterspørere.

- 1) - Forskjellige etterspørere (eller gruppe av etterspørere) må ha ulik marginal betalingsvillighet (MBV).
- 2) - Produsentene må mulighet til å **skille** de forskjellige etterspørere fra hverandre.
- 3) - Videresalg mellom gruppene (dvs. fra konsumenter til konsumenter) er ikke mulig, alternativt kostbart å utføre.

Sorteringsmekanisme: Individuelle sortering

1.

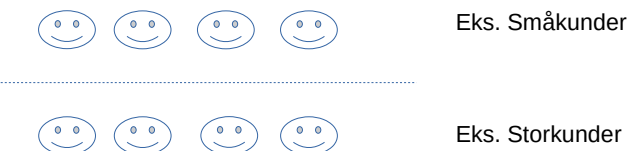
G  
R  
A  
D  
S



Sorteringsmekanisme: Selvsortering

2.

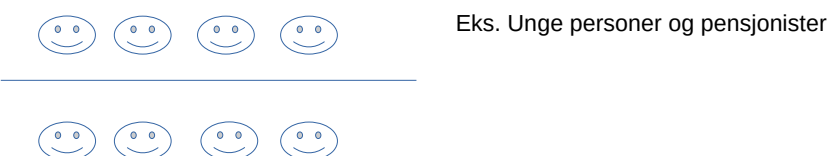
G  
R  
A  
D  
S



Sorteringsmekanisme: Separering

3.

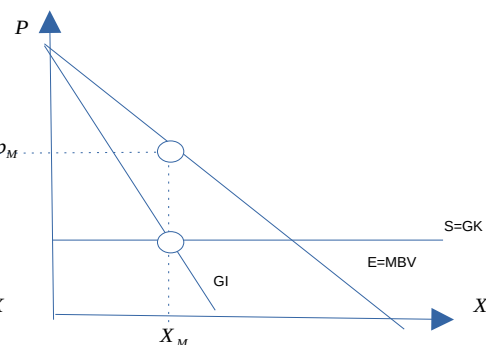
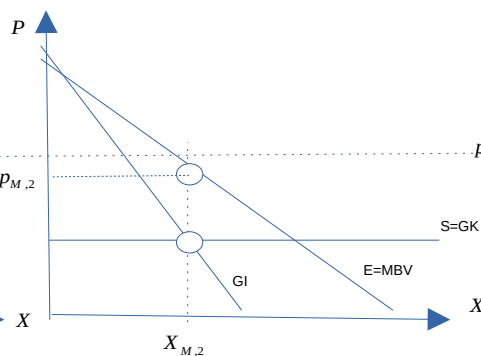
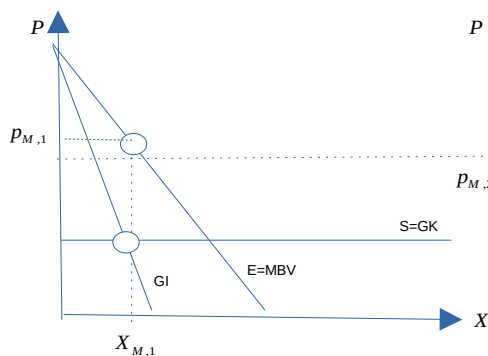
G  
R  
A  
D  
S



Segment 1:  
Prisufølsomme etterspørere

Segment 2:  
Prisfølsomme etterspørere

Monopolist (uten segmentering)



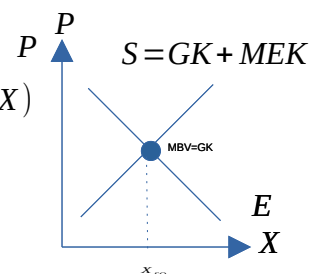
# Markedssvikt og offentlige virkemiddelbruk

PLANLEGGERE

**Produsent**  
 $GK = C'_v(X)$   
 $VK = C_v(X)$   
 $PO(X) = PX - C_v(X)$

**Konsument**  
 $MBV = B'(X)$   
 $B = B(X)$   
 $KO(X) = B(X) - PX$

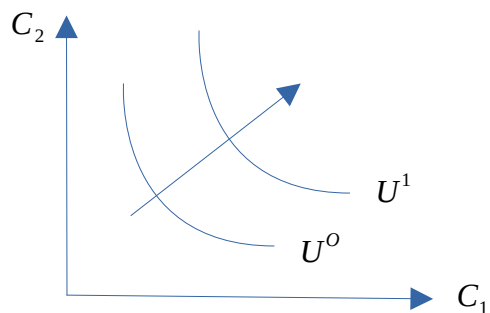
**Sosial planelegger**  
**Velferd**  $= SO = PO + KO$   
 $SO = (PX - C_v(X)) + (B(X) - PX) - E(X)$   
**Maks SO mhp. X**  
 $P - C'_v(x) + B'(X) - P - E'(X) = 0$   
 $C'_v(x) + E'(X) = B'(X)$   
 $MBV = GK + MEK$



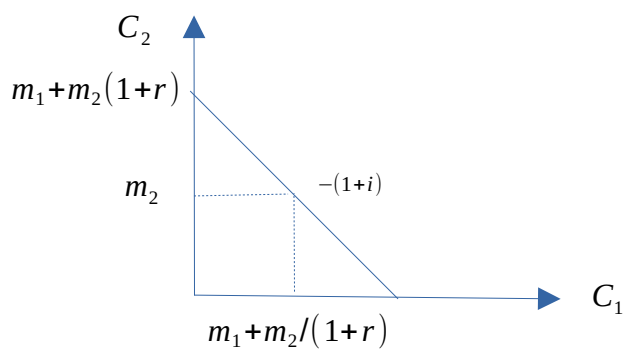
	Markedsmakt	Eksterne virkninger	Kollektive goder
Markedssvikt		<p><b>Eksternaliteter:</b> Er bivirkninger av andres konsum eller produksjon som den som forårsaker bivirkninger ikke tar hensyn til når man skal fatte beslutningen om hvor mye man skal produsere eller konsumere.</p>	<p><b>Kollektive goder:</b></p> <ul style="list-style-type: none"> <li>- Ikke rivaliserende</li> <li>- Ikke ekskluderende</li> </ul>
			<p><b>Andre tilfeller</b></p> <p><b>Formyndergoder:</b></p> <ul style="list-style-type: none"> <li>Merit goods</li> <li>Merit bads</li> </ul> <p><b>Ufullstendig informasjon</b></p> <ul style="list-style-type: none"> <li>- Assymterisk informasjon</li> <li>- Ufullstendig informasjon tilknyttet Godens beslutningsgrunnlag</li> </ul>
Løsninger	<ul style="list-style-type: none"> <li>• Lover og regler</li> <li>• Institusjoner og tilsyn</li> <li>• Andre tiltak som sikrer konkurranse</li> </ul>	<p><b>Avgifter og subsidider</b></p>	<p><b>Kollektive goder</b></p> <ul style="list-style-type: none"> <li>- Offentlige bør produsere inntil Summan av mbv er lik grensekostnad</li> </ul>
		<p><b>Direkte reguleringer: Kvoter</b></p>	<p><b>Kollektive goder</b></p> <ul style="list-style-type: none"> <li>- Offentlige bør produsere inntil Summan av mbv er lik grensekostnad</li> </ul>

# Optimal tilpasning over tid

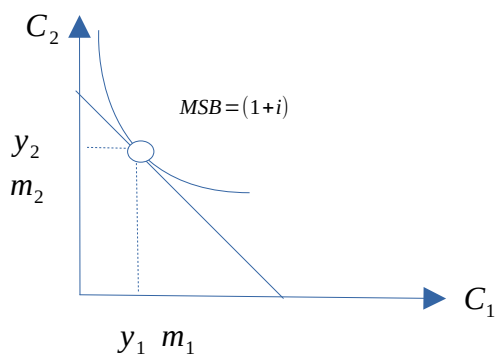
## Indifferenskart



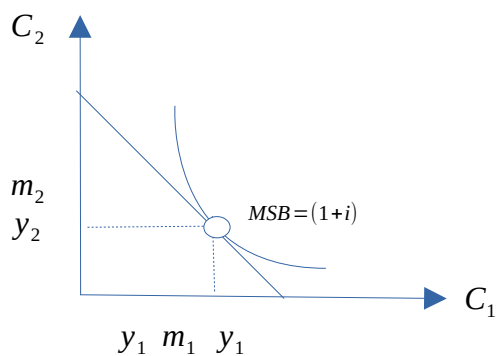
## Budsjettbetingelsen



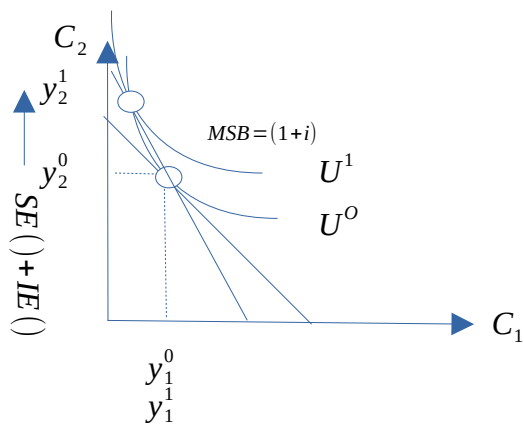
## Tålmodig husholdning (sparer)



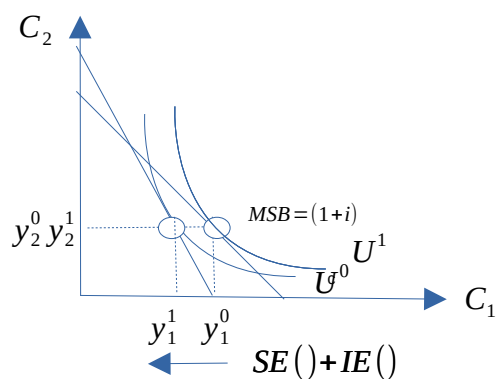
## Utålmodig husholdning (tar opp gjeld)



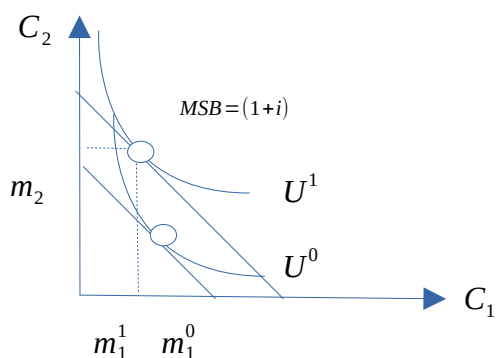
## Tålmodig husholdning (sparer)



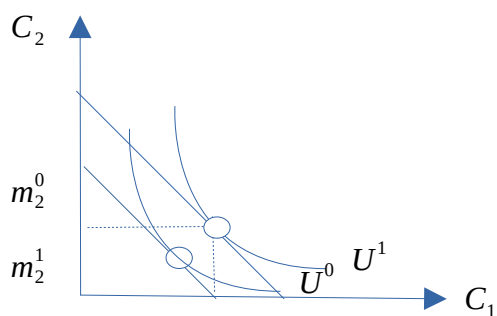
## Utålmodig husholdning (tar opp gjeld)



## For periode 1



## For periode 2



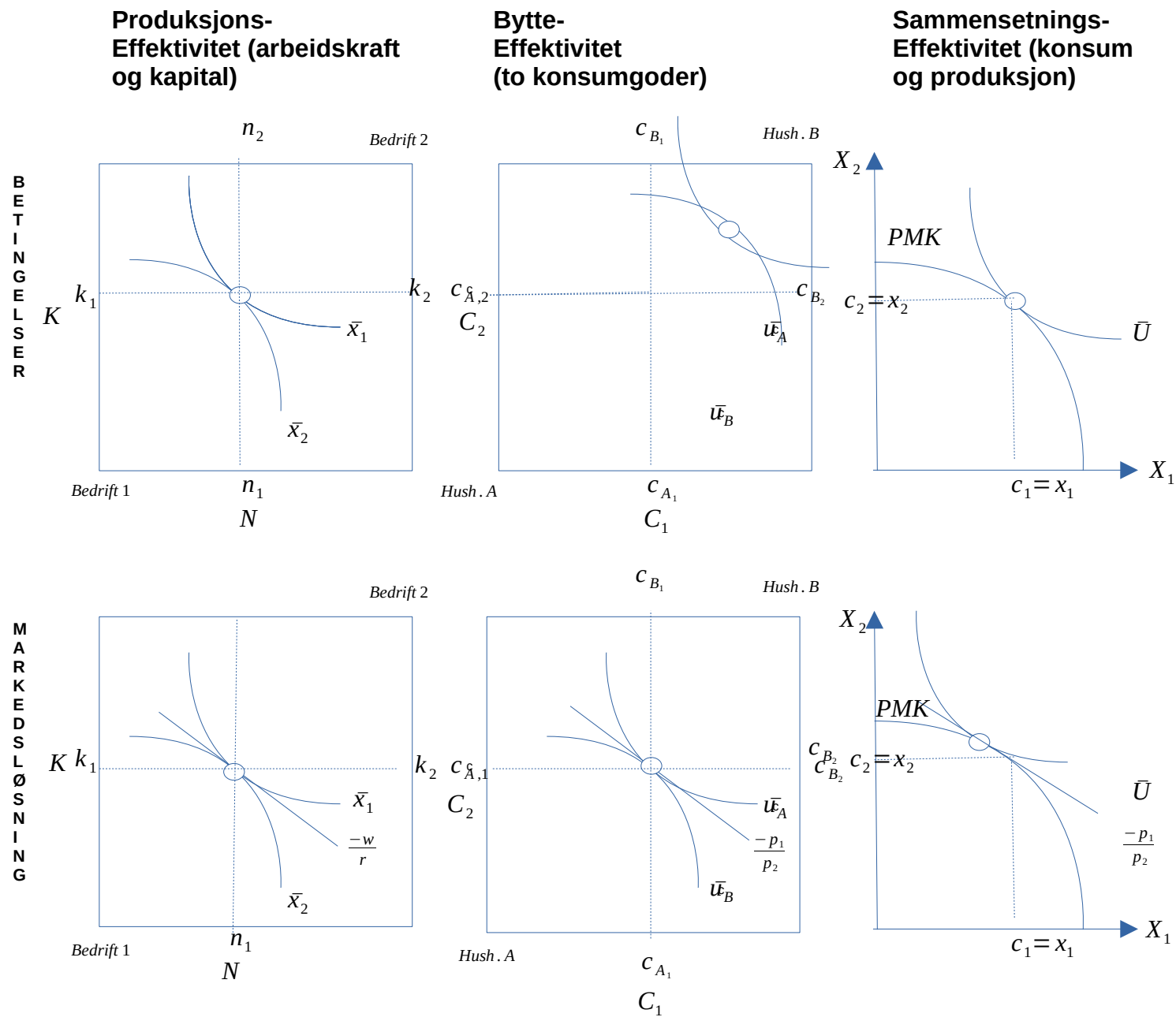
Optimal tilpasning

Rentekning

Intektsøkning



Effektivitet og velferd



**MARKEDSLØSNING**

Diagram showing production efficiency in an Edgeworth box, similar to the first diagram but with the addition of the slope  $-\frac{w}{r}$  at the allocation point, indicating market clearing.

Diagram showing exchange efficiency in an Edgeworth box, similar to the second diagram but with the addition of the slope  $-\frac{p_1}{p_2}$  at the allocation point, indicating market clearing.

Graph showing the relationship between production and consumption, similar to the third diagram but with the addition of the slope  $-\frac{p_1}{p_2}$  at the allocation point, indicating market clearing.