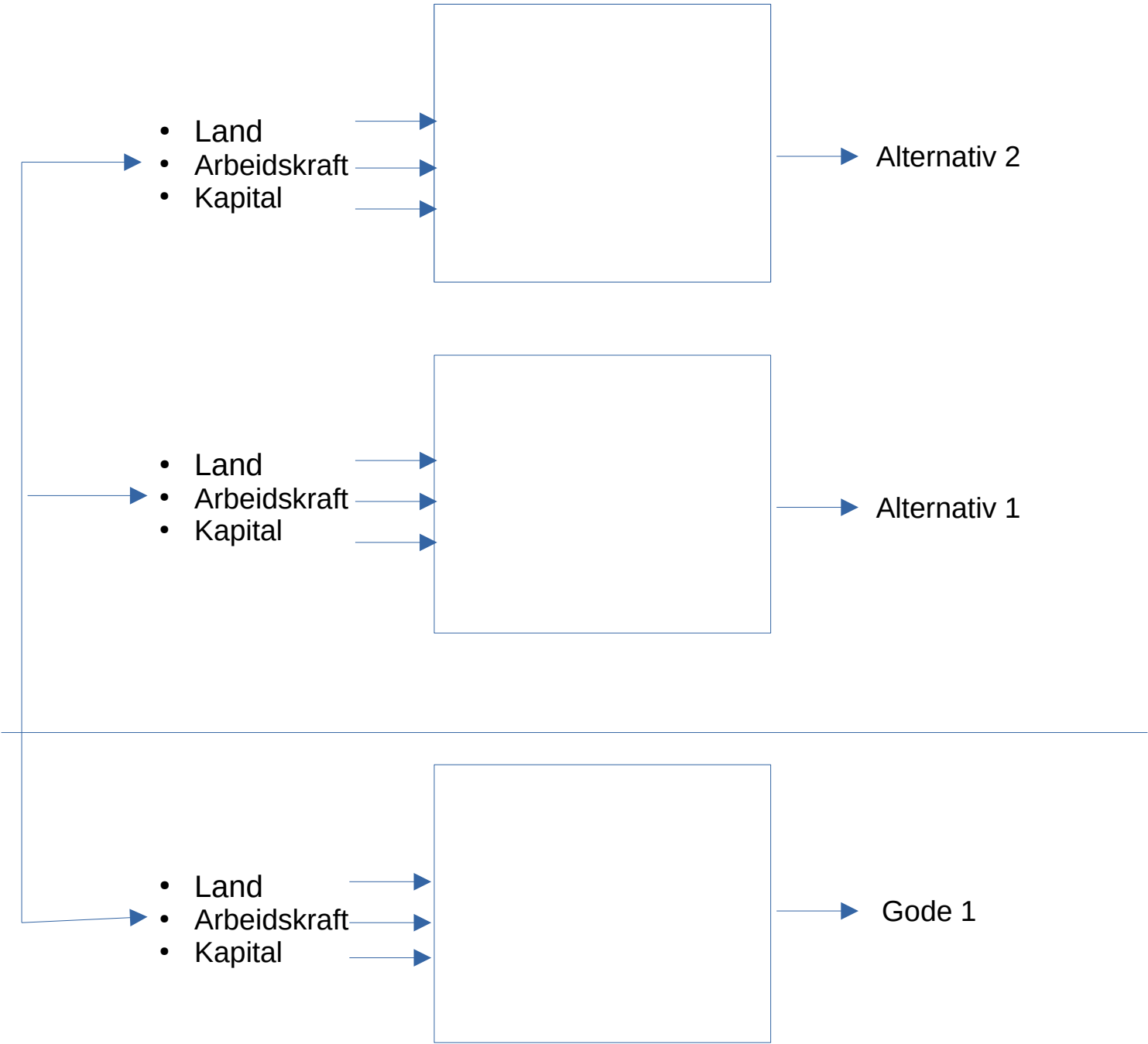
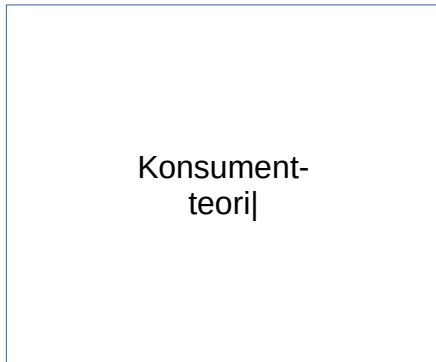


Alternativkostnad



# Mikroøkonomi oppbygging

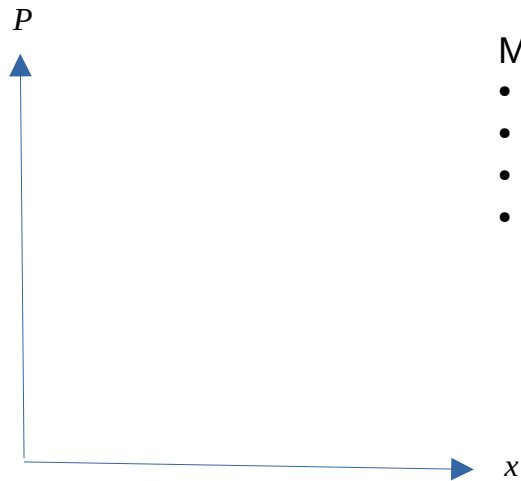
Behov



Ressurser



Partiell  
Likevekt  
(ett marked)



Markedsformer:

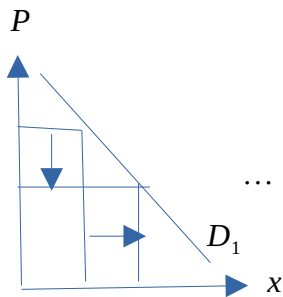
- Fullkommen konkurranse
- Monopol
- Monopolistisk konkurranse
- (Kartell, duopol, oligopol)

Andre emner:

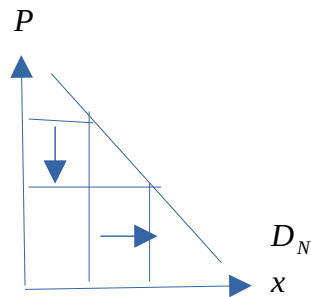
- Prisdiskriminering
- Markedssvikt
  - Markedssvikt
  - Eksternaliteter
  - Kollektive goder
- Internasjonal handel

# Oversikt: Markedet for fullkommen konkurranse

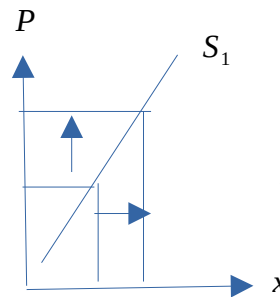
Konsument 1



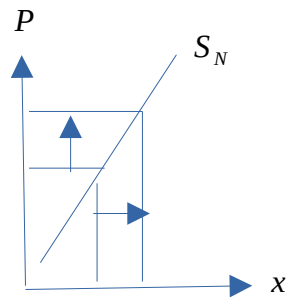
Konsument N



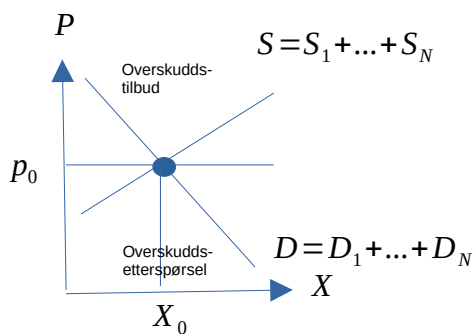
Produsent 1



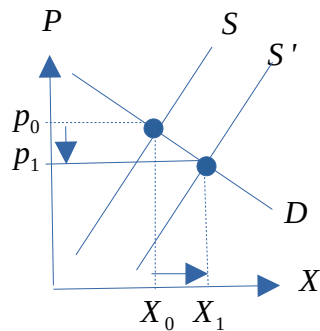
Produsent N



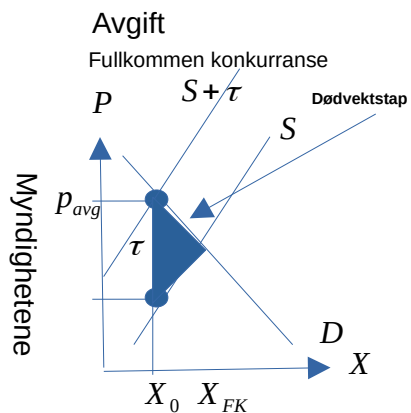
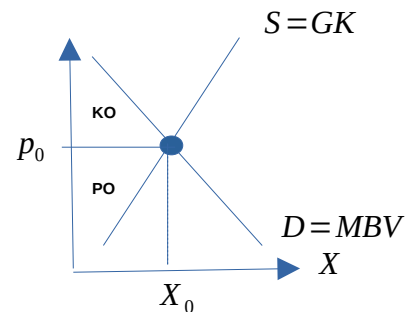
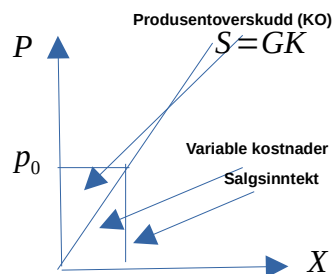
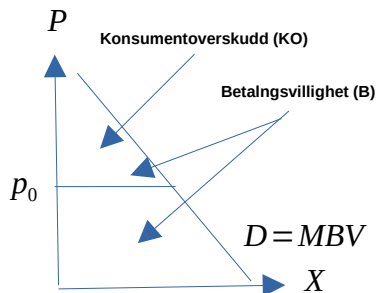
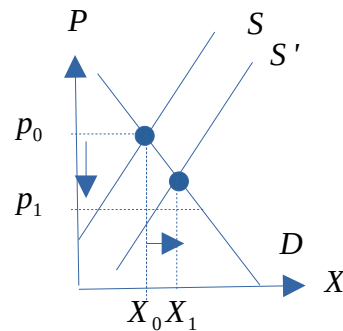
Fullkommen konkurranse



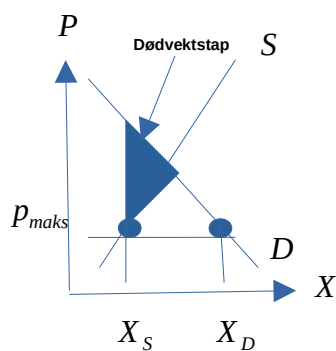
Skiftanalyse (slak etterspørselskurve)



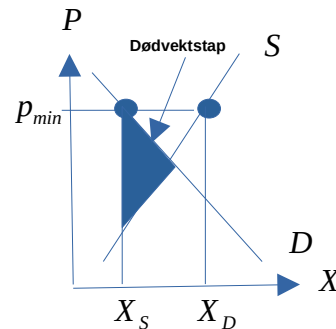
Skiftanalyse (bratt etterspørselskurve)



Maksimalpris



Minstepris



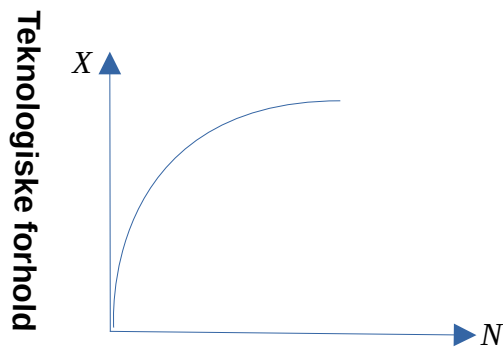
Produktfunktjonen

- N
- K

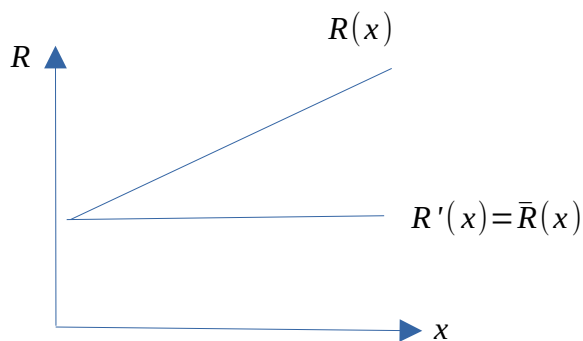


# Produksjonsteori på kort sikt

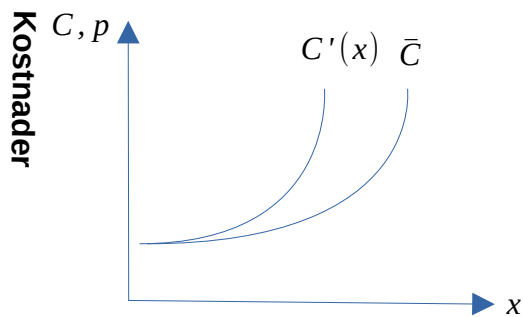
Produktfunksjonen



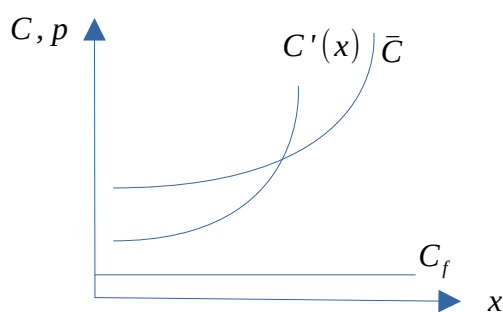
Inntekter



Produksjon (kort sikt)  
uten faste kostnader

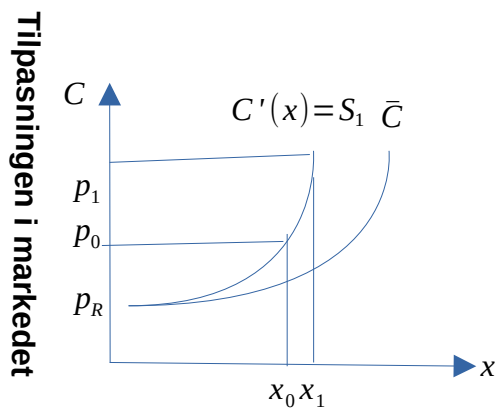


Produksjon (kort sikt)  
med faste kostnader

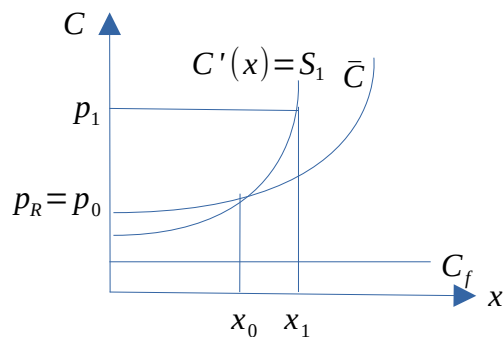


Tilbudsfunksjonen fra en produsent

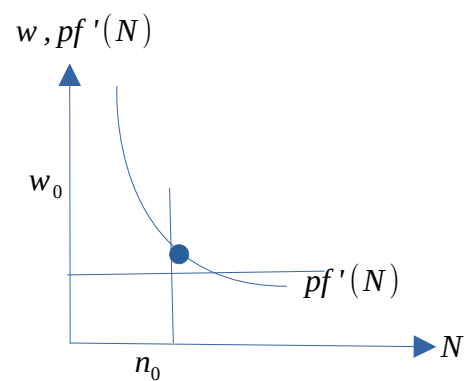
Uten faste kostnader



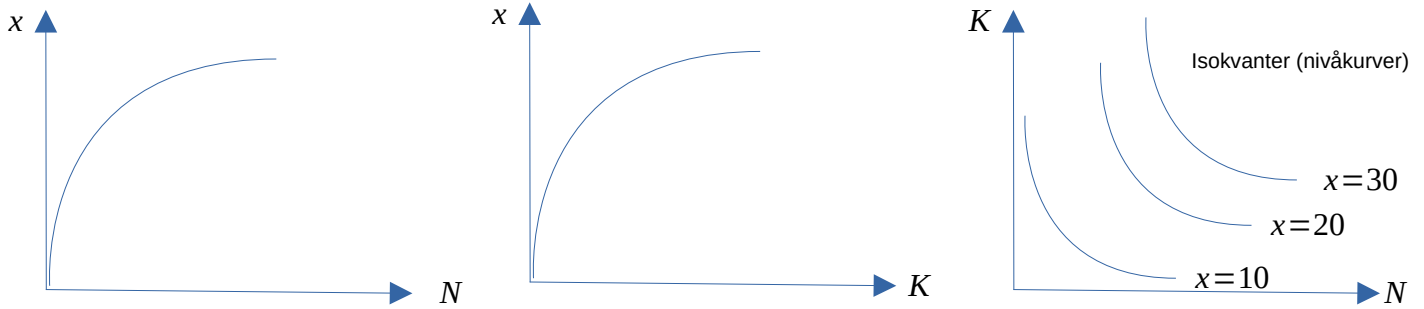
Med faste kostnader (reversible)



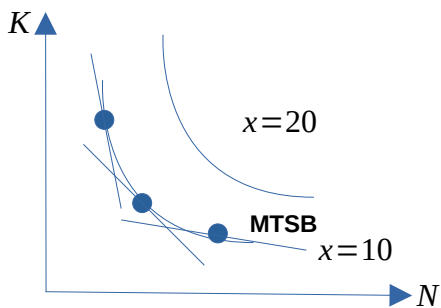
Etterspørselen etter  
arbeidskraft



# Produksjonsteori på lang sikt

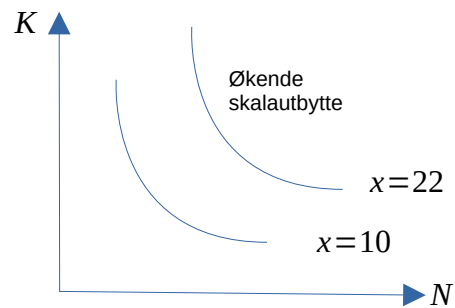


## Tekniske substitusjonsmuligheter

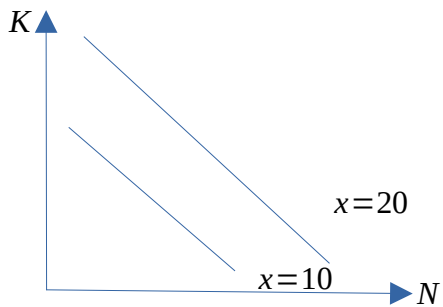


Normale  
substitusjonsmuligheter

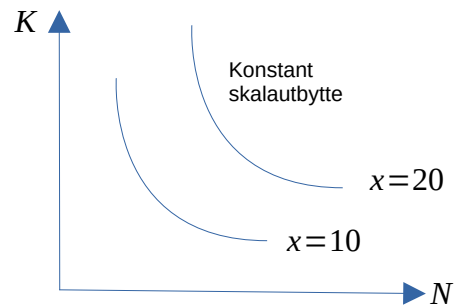
## Skalaegenskaper



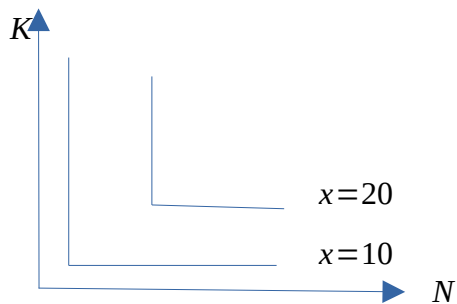
Økende  
skalaутbytte



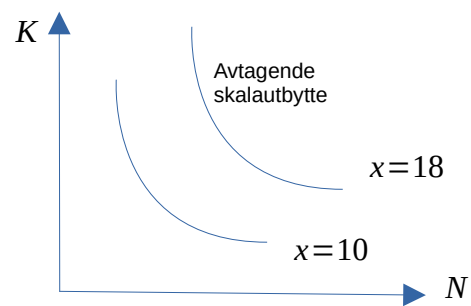
Perfekte  
substitusjonsmuligheter



Konstant  
skalaутbytte



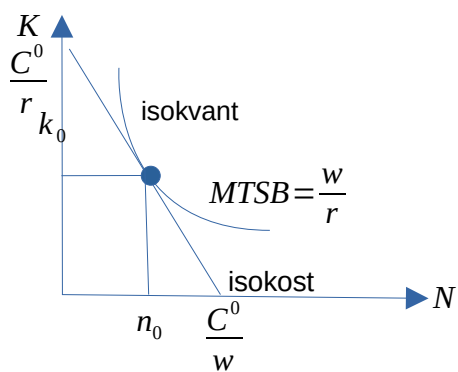
Ingen  
substitusjonsmuligheter



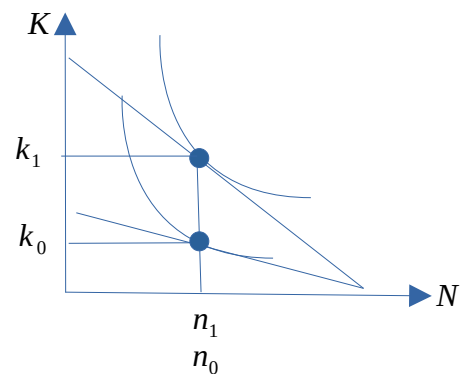
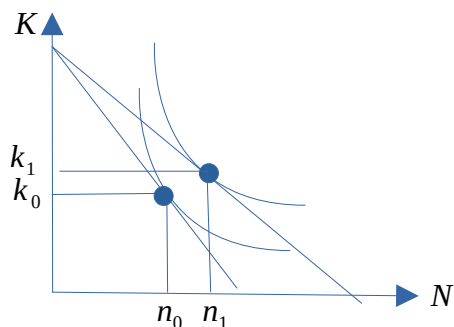
Avtagende  
skalaутbytte

# Produksjonsteori på lang sikt

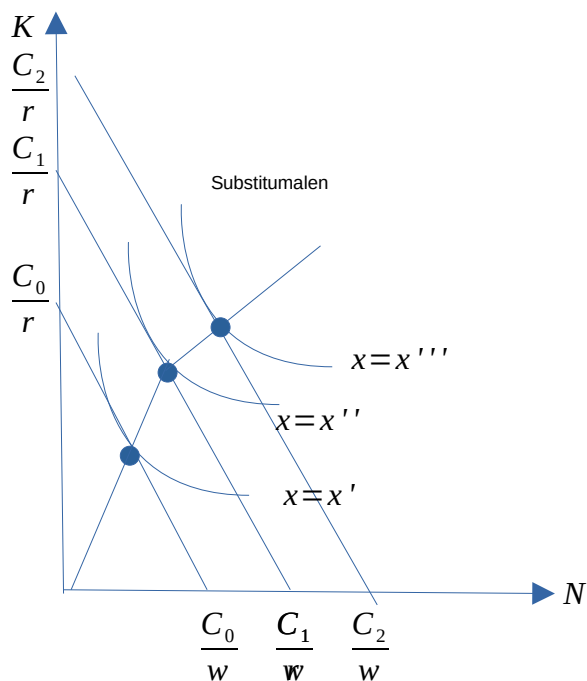
## Kostnadsminimering (lang sikt) - Billigere arbeidskraft



## - Billigere kapital

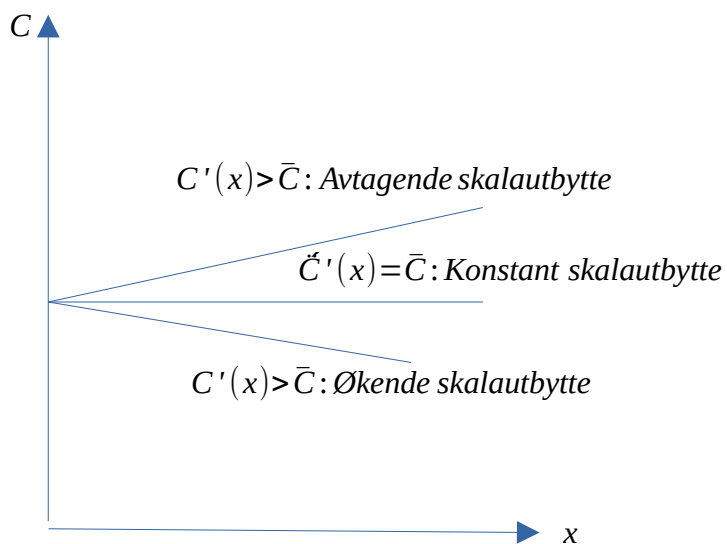


## Kostnadsminimering For et gitt budsjett



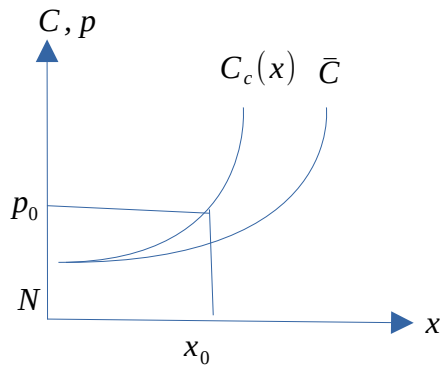
## Kostnadsfunksjonen for ulike antagelser om skalaufbytte

Kostnader (lang sikt)

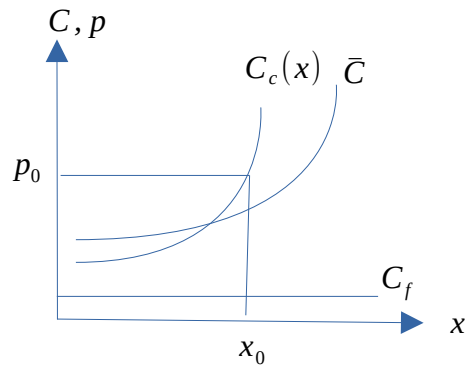


# Produksjonsteori: Produsentens økonomiske adferd i gode- og arbeidsmarkedet

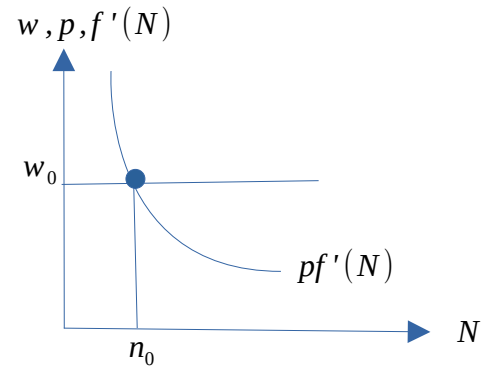
## Produksjon (kort sikt) uten faste kostnader



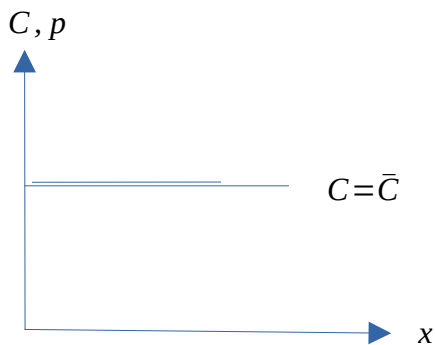
## Produksjon (kort sikt) med faste kostnader



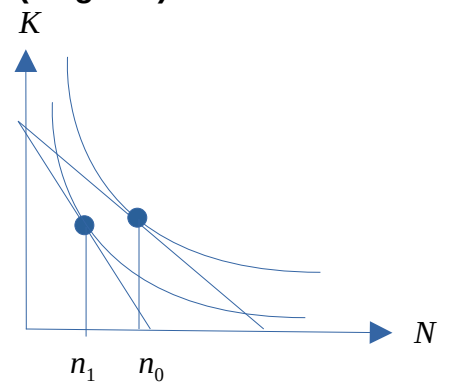
## Bruk av arbeidskraft (kort sikt)



## Produksjon (lang sikt), med konstant skalautbytte



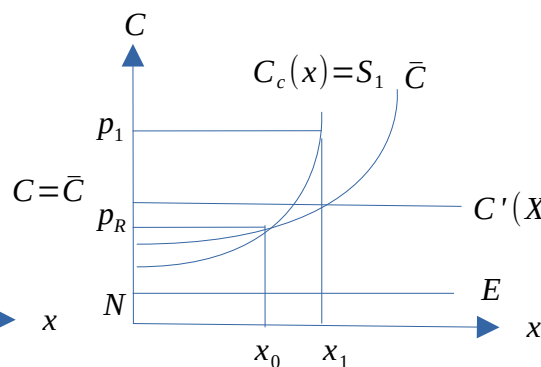
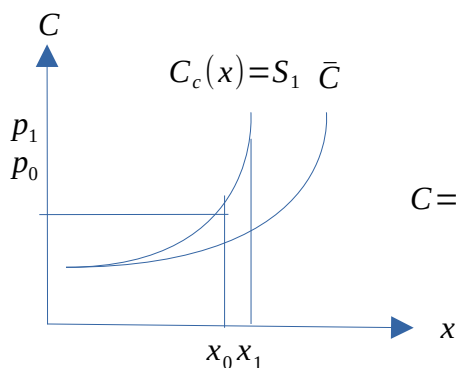
## Bruk av arbeidskraft (lang sikt)



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

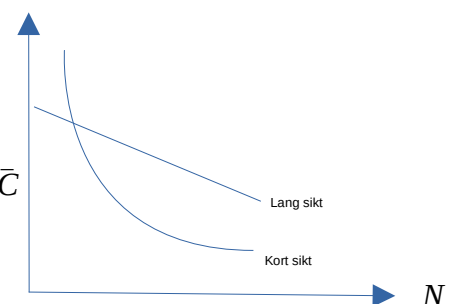
Uten faste kostnader

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:

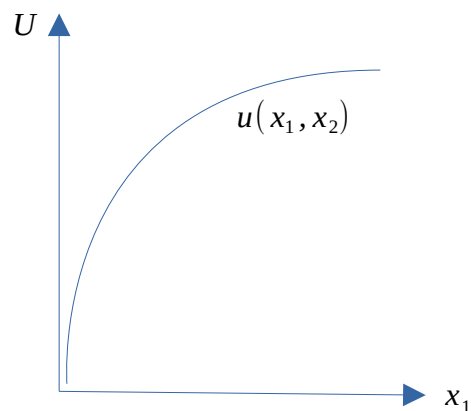
$$U = u(x_1, x_2)$$

Hvor vi antar at:

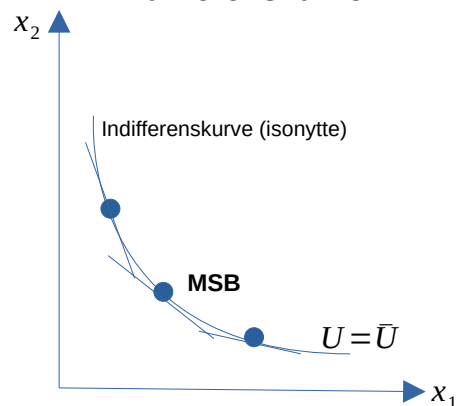
$$u'(x_1) > 0, u''(x_1) < 0$$

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

## Nyttefunksjonen

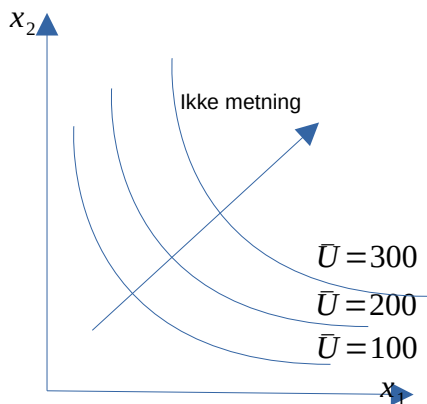


## Indifferenskurve

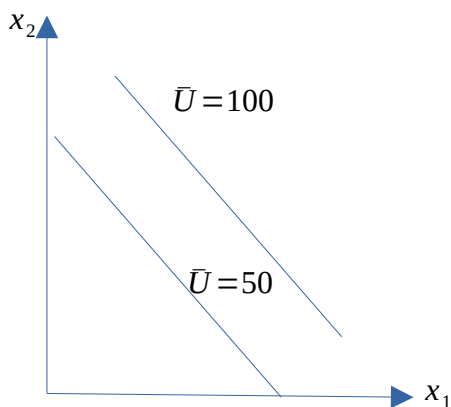


## Budsjettbetingelsen

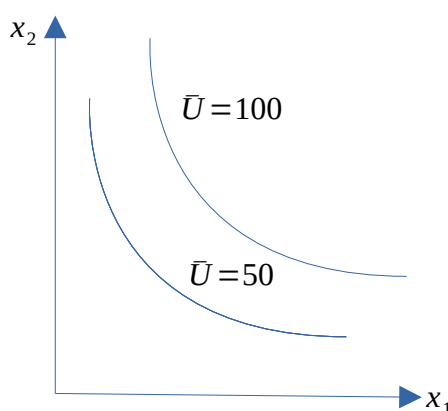
### Indifferenskart



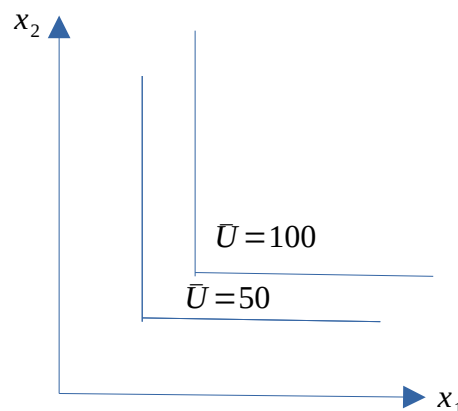
### Perfekte substitusjonsmuligheter



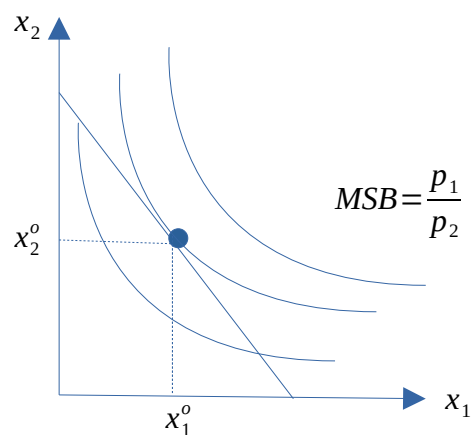
### Vanlige substitusjonsmuligheter



### Ingen substitusjonsmuligheter

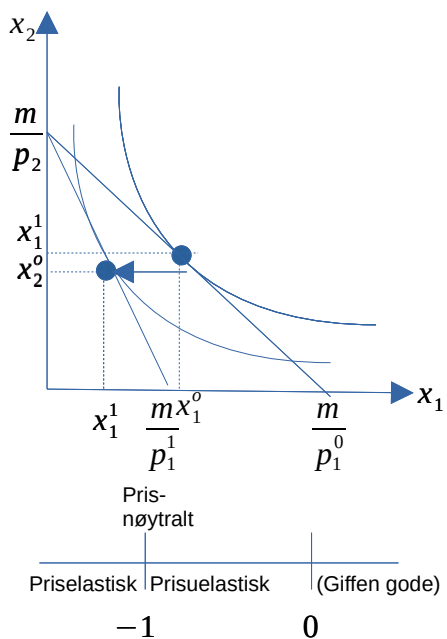


## Optimal tilpasning

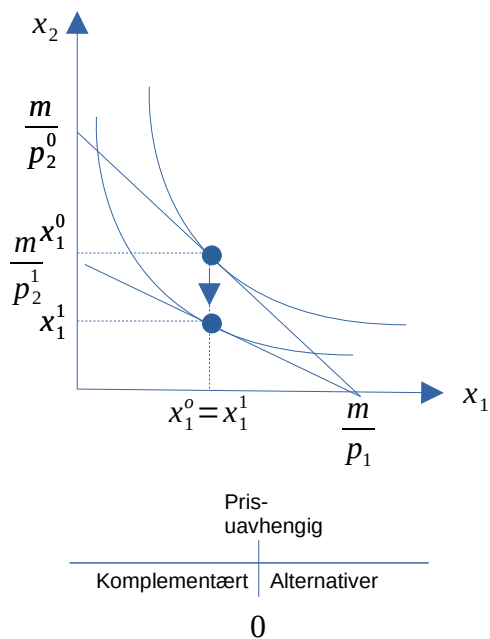


# Konsumentteori: Konsumentens økonomiske adferd i gode- og arbeidsmarkedet

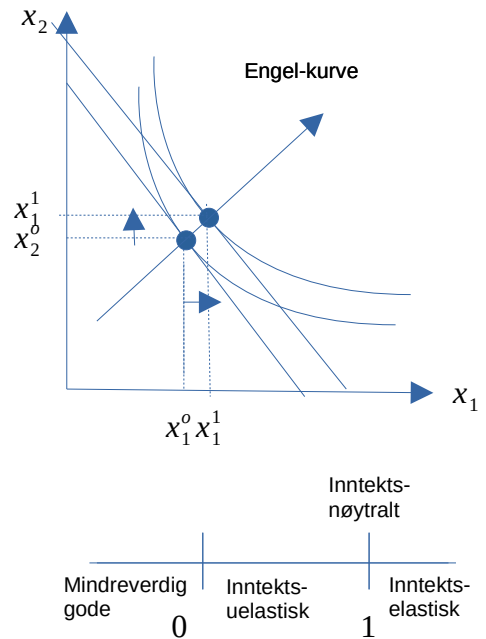
## Egenpriselastisitet



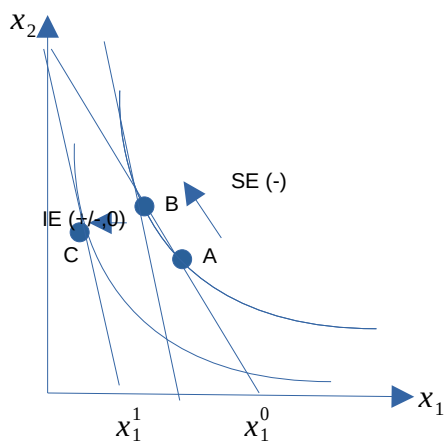
## Krysspriselastisitet



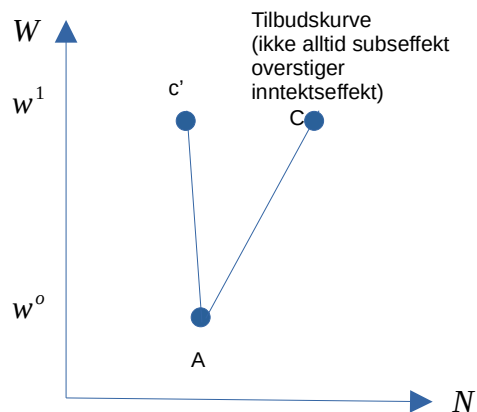
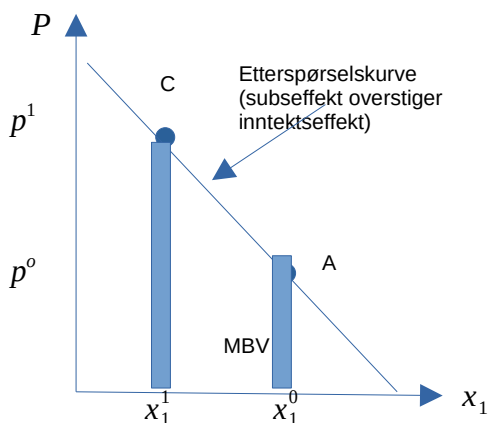
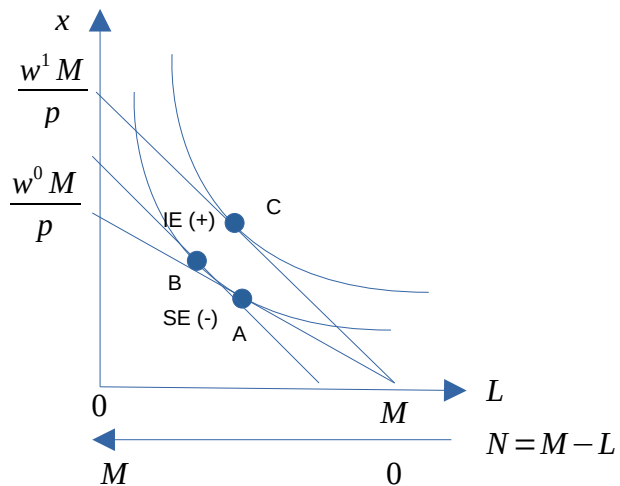
## Inntektselastisitet



## Utleddning av etterspørselskurven for gode 1



## Utleddning av tilbudskurven for arbeidskraft (ikke pensum)



# Fullkommen konkurranse

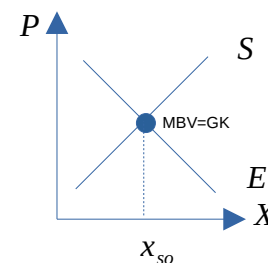
PLANLEGGING

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

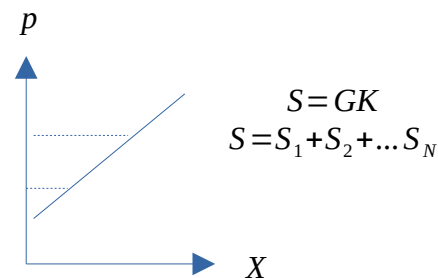
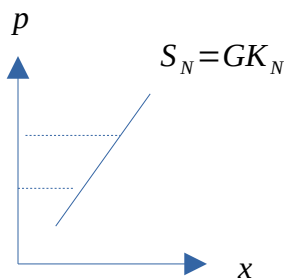
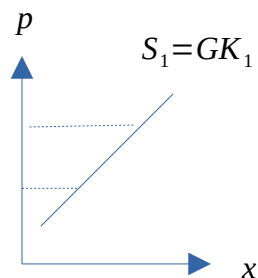
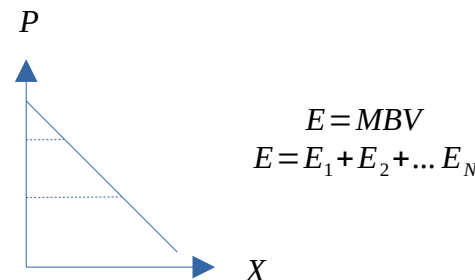
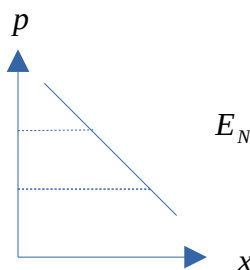
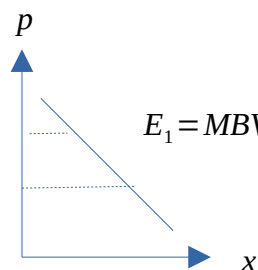
$PO(X) = PX - C_v(X)$      $KO(X) = B(X) - PX$

*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

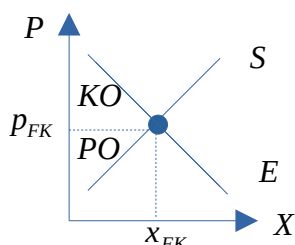


Markedslikevekt

Overskuddstilbud

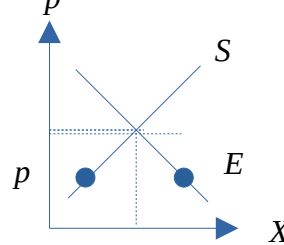
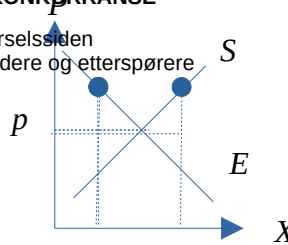
Overskuddsetterspørsel

MARKEDET

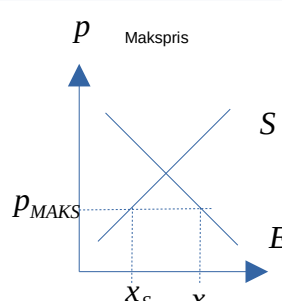
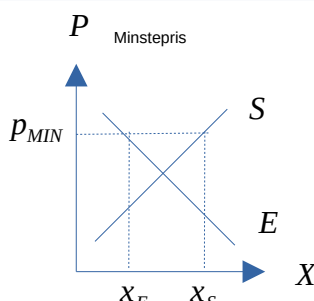
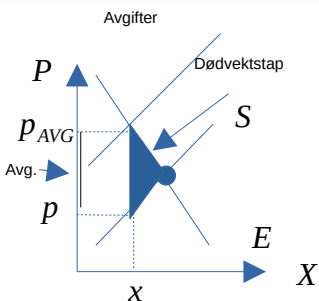


## FORUTSETNINGER BAK FULKOMMEN KONKURRANSE

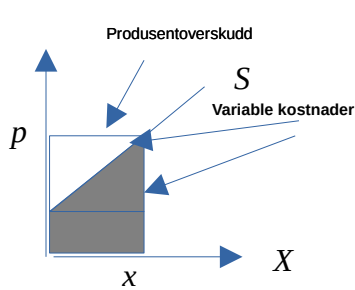
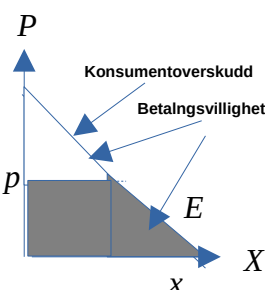
- 1) Mange aktører på både tilbuds- og etterspørselsiden
- 2) Prisen blir bestemt i et samspill mellom tilbydere og etterspørere
- 3) Homogene varer
- 4) Rasjonelle aktører: Maks nytte og profitt
- 5) Bruker all relevant informasjon
- 6) Ingen transaksjonskostnader



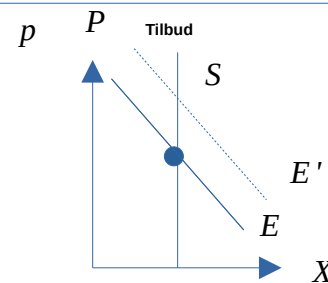
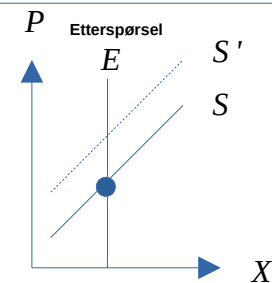
PRISREGULERING



OVERSKUDD

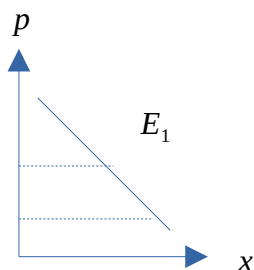


UELASTISK

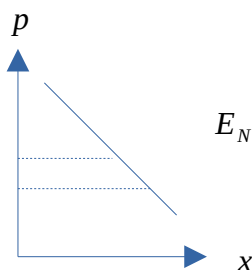
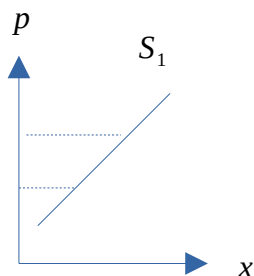
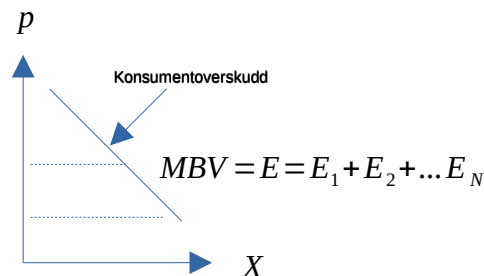


# PLANLEGGER

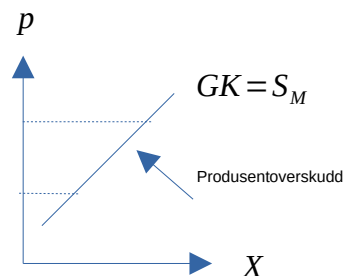
## AGGREGATING



...


$$=$$


- 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

$$R'(X) \succ C'(X)$$

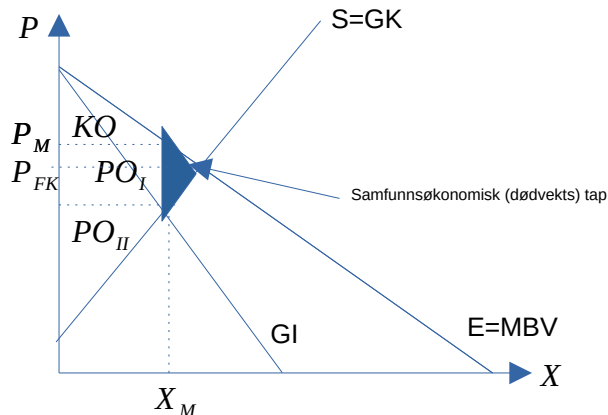
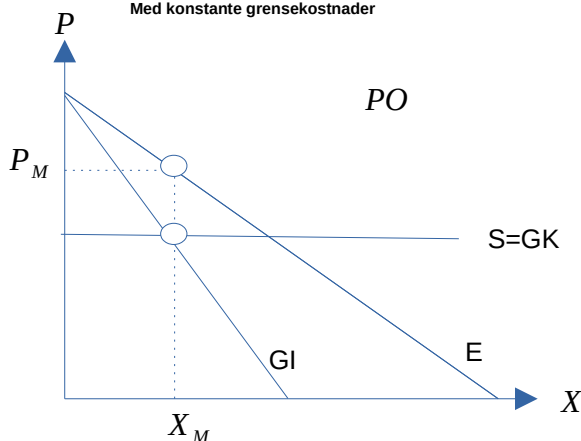
$$R'(X) < C'(X$$

►  $R'(X_M) = C'(X_M)$

### Lønner seg å redusere produksjonen

## GRAFIK

Med stigende grensekostnader (mer deltajert figur)



## SAMMENL.

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

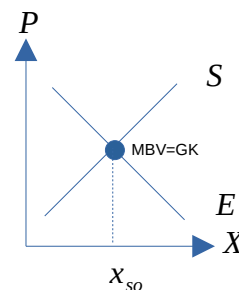
# Ufullkommen konkurranse: Kartel, duopol, oligopol og monopolistiks konkurranse

PLANLEGGER

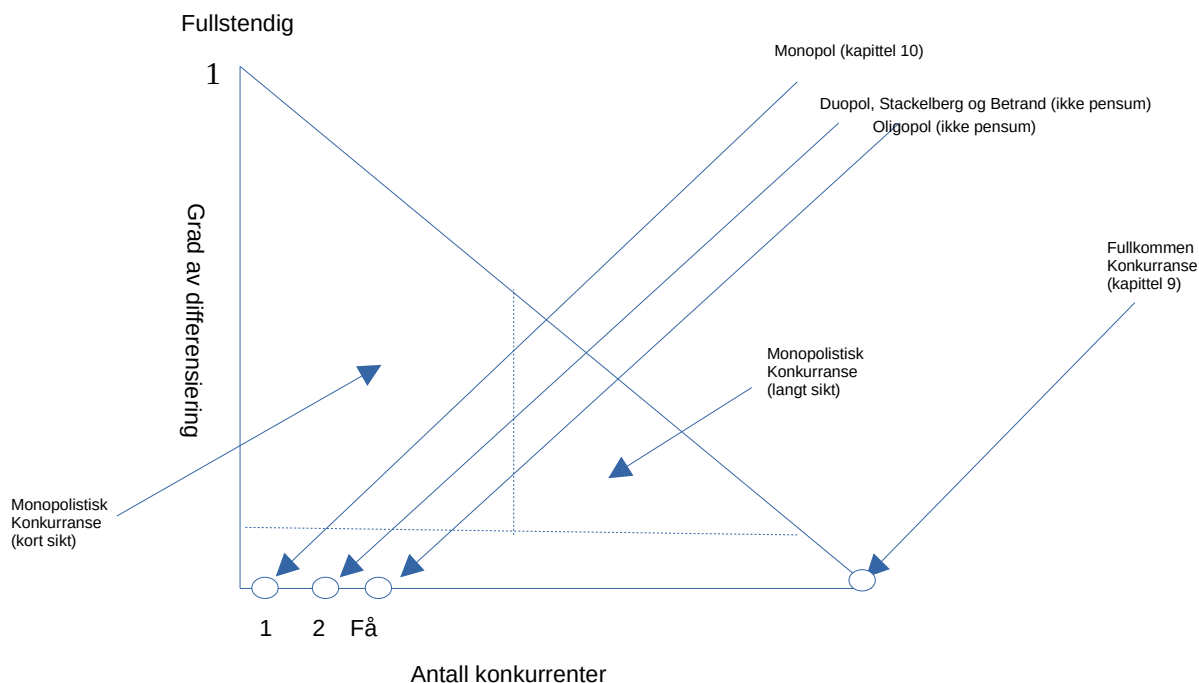
Produsent  
 $GK = C'_v(X)$   
 $VK = C_v(X)$

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.  $X$   
 $P - C'_v(x) + B'(X) - P = 0$   
 $C'_v(x) = B'(X)$   
 $MBV = GK$

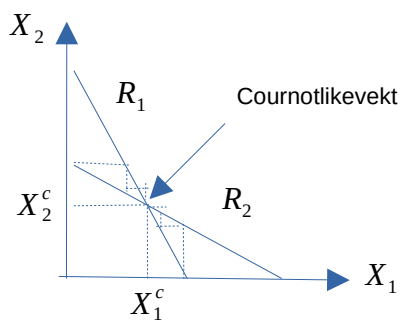


MARKEDSFORMER



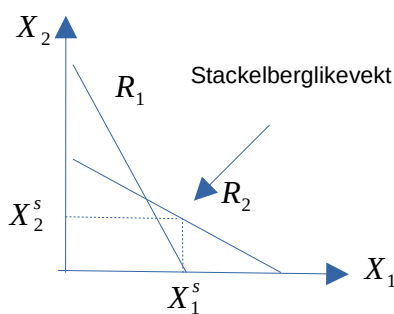
DUOPOL

Cournot



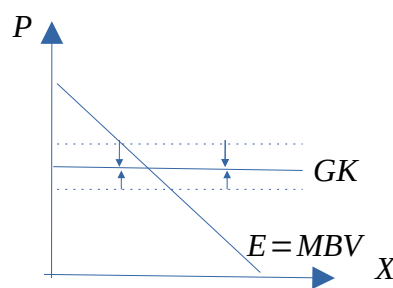
Kort sikt

Stackelberg

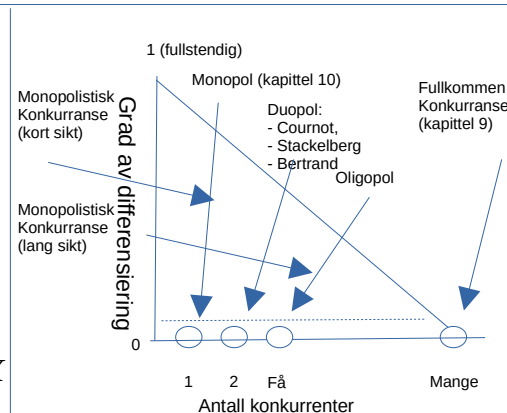
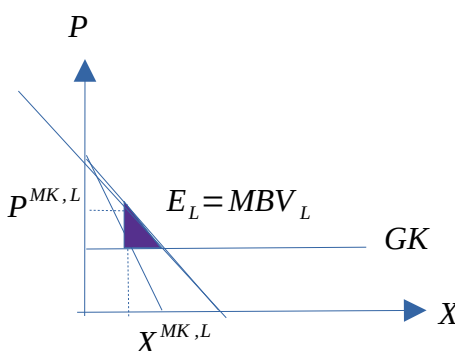
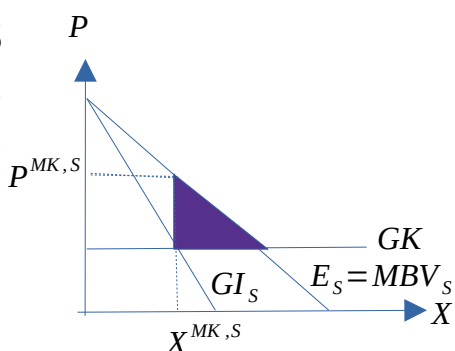


Lang sikt

Bertrand



MKONNOKUPORLANSISK



# Prisdiskriminering

F  
O  
R  
R  
U  
T  
S  
E  
T  
N

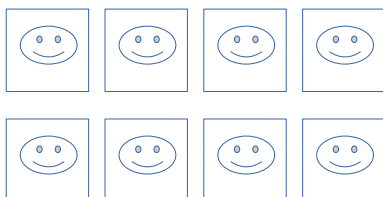
Vi har **prisdiskriminering** i et marked når en produsent har en fordel (dvs. kan få økt sin fortjeneste) ved å ta ulik pris til forskjellige etterspørere.

- 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.

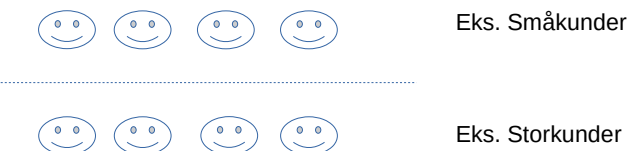
G  
R  
A  
D  
S



Sorteringsmekanisme: Selvsortering

2.

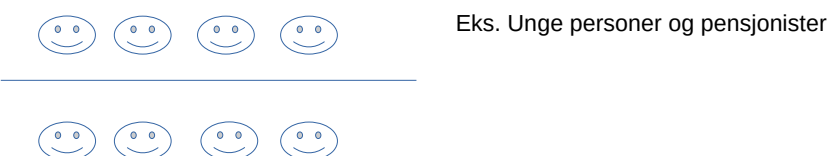
G  
R  
A  
D  
S



Sorteringsmekanisme: Separering

3.

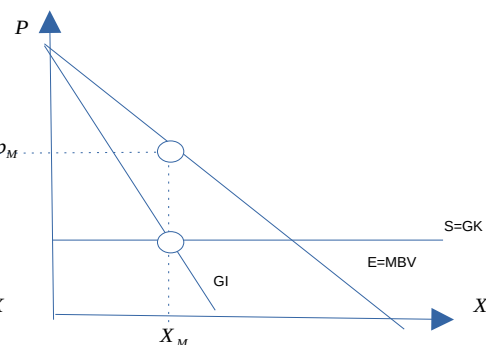
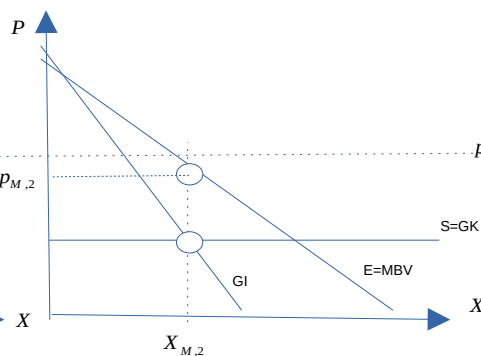
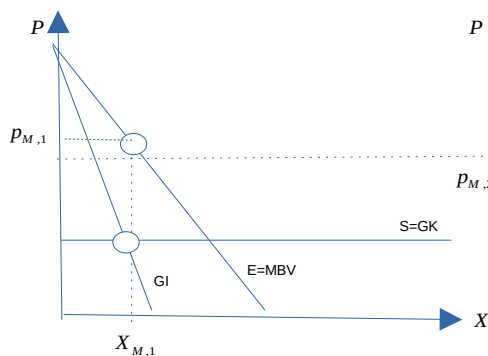
G  
R  
A  
D  
S



Segment 1:  
Prisufølsomme etterspørere

Segment 2:  
Prisfølsomme etterspørere

Monopolist (uten segmentering)



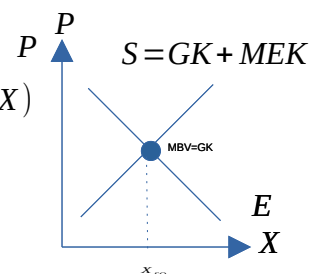
# Markedssvikt og offentlige virkemiddelbruk

PLANLEGGER

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

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

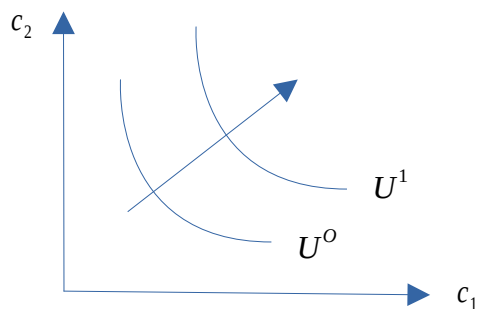
**Sosial planelegger**  
**Velferd**  $= SO = PO + KO$   
 $SO = (PX - C_v(X)) + (B(X) - PX) - E(X)$   
**Maks SO mhp. X**  
 $P - C'_v(x) + B'(X) - P - E'(X) = 0$   
 $C'_v(x) + E'(X) = B'(X)$   
 $MBV = GK + MEK$



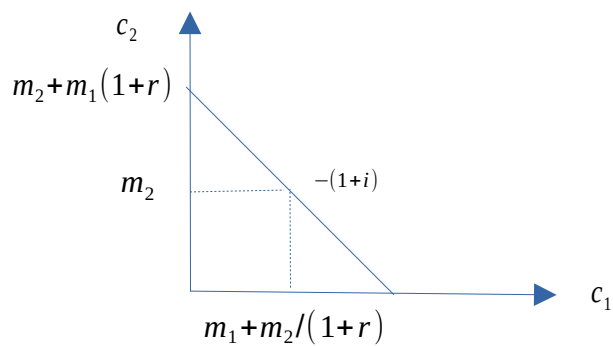
	Markedsmakt	Eksterne virkninger	Kollektive goder
Markedssvikt		<p><b>Eksternaliteter:</b> Er bivirkninger av andres konsum eller produksjon som den som forårsaker bivirkninger ikke tar hensyn til når man skal fatte beslutningen om hvor mye man skal produsere eller konsumere.</p>	<p><b>Kollektive goder:</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>- Assymetrisk 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 Summen av mbv er lik grensekostnad</li> </ul>
		<p><b>Direkte reguleringer: Kvoter</b></p>	

# Optimal tilpasning over tid

## Indifferenskart

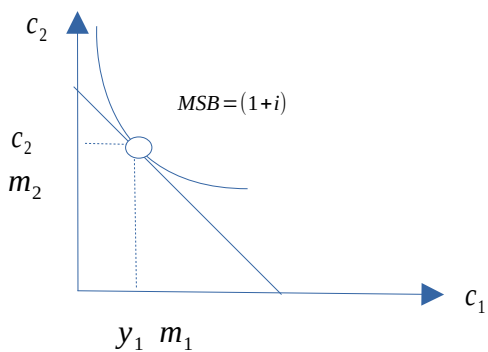


## Budsjettbetingelsen

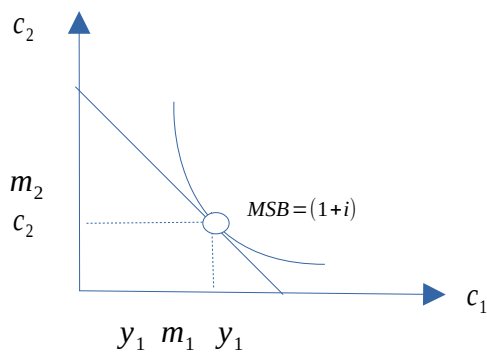


## Tålmodig husholdning (sparer)

Optimal tilpasning

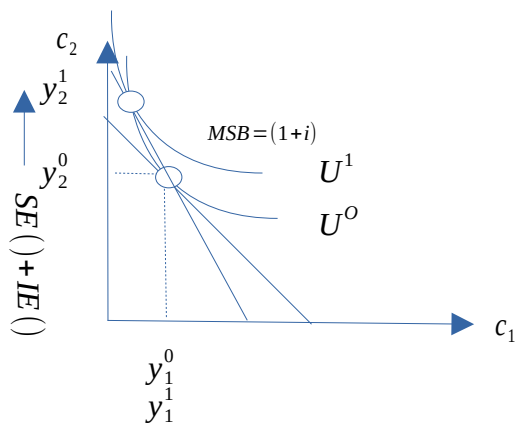


## Utålmodig husholdning (tar opp gjeld)

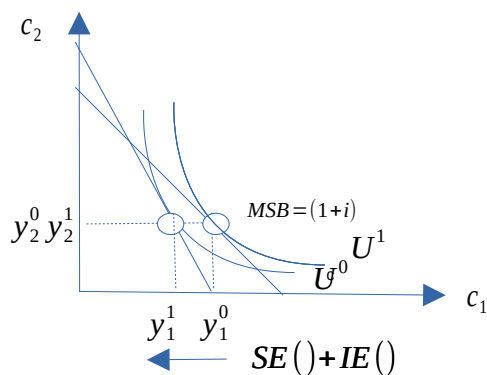


## Tålmodig husholdning (sparer)

Rentetøknning

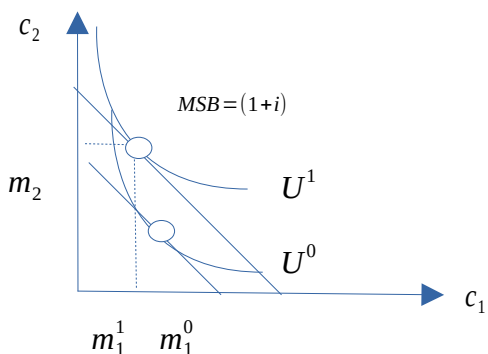


## Utålmodig husholdning (tar opp gjeld)

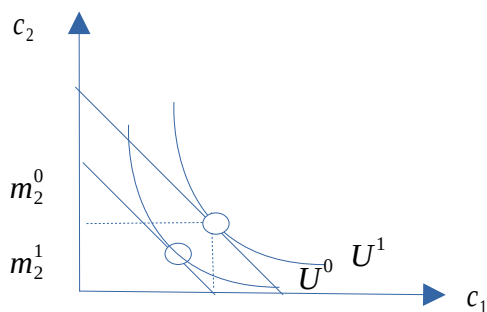


## For periode 1

Inntektsøkning

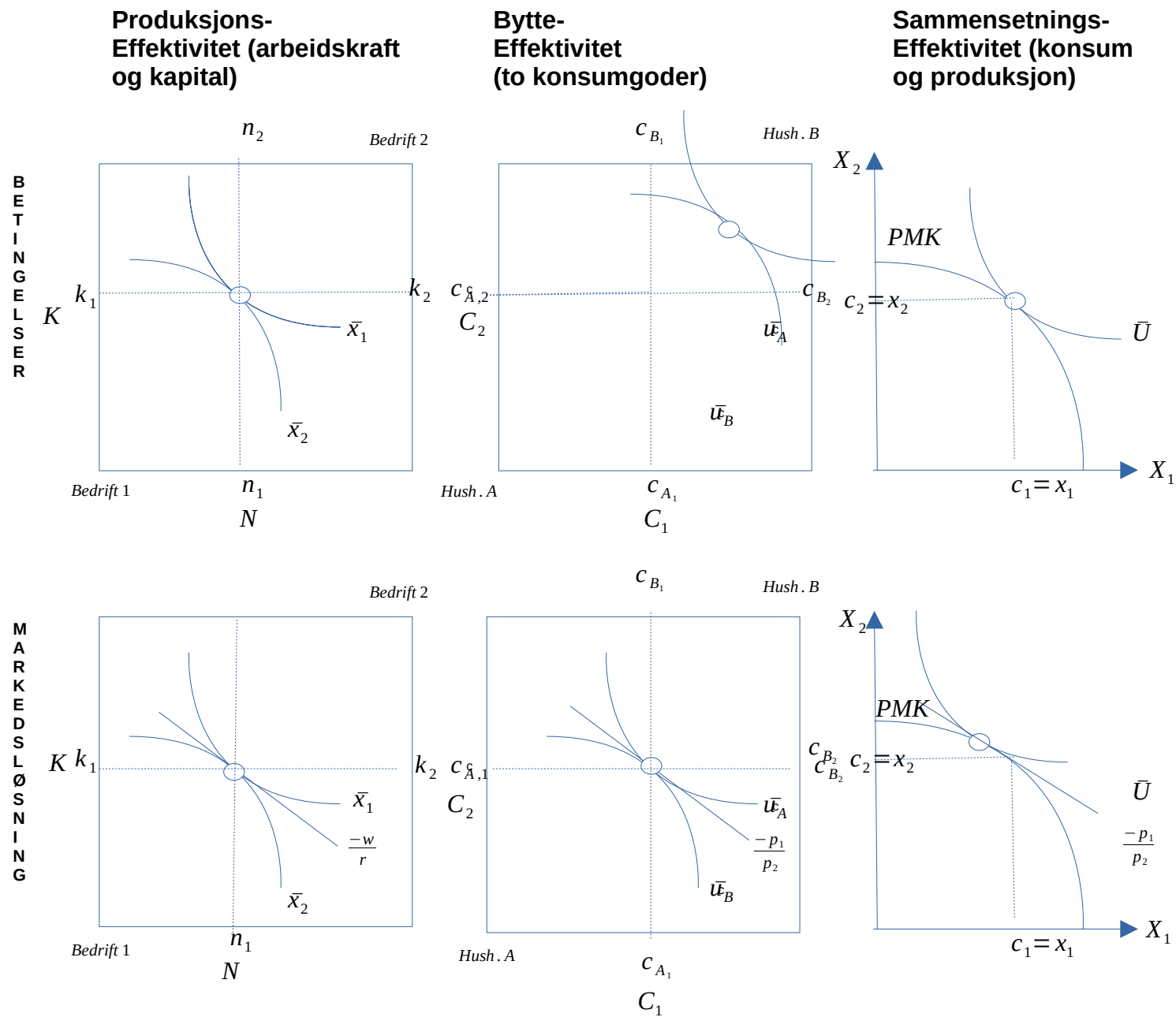


## For periode 2





Effektivitet og velferd



**MARKEDSLØSNING**

**Bedrift 1**

A graph showing the market equilibrium of two firms, Bedrift 1 and Bedrift 2. The vertical axis is labeled  $K$  and the horizontal axis is labeled  $N$ . Bedrift 1 is represented by a point  $(n_1, k_1)$  and Bedrift 2 by a point  $(n_2, k_2)$ . A ray from the origin passes through these points, indicating constant returns to scale. The ray is labeled  $\bar{x}_1$  and  $\bar{x}_2$ . The total labor supply is  $N$  and the total capital supply is  $K$ .

**Hush. A**

A graph showing the market equilibrium of two households, Hush. A and Hush. B. The vertical axis is labeled  $X_2$  and the horizontal axis is labeled  $X_1$ . Hush. A is represented by a point  $(c_{A1}, c_{A2})$  and Hush. B by a point  $(c_{B1}, c_{B2})$ . A ray from the origin passes through these points, indicating constant returns to scale. The ray is labeled  $\bar{u}_A$  and  $\bar{u}_B$ . The total labor supply is  $N$  and the total capital supply is  $K$ .

**PMK**

A graph showing the market equilibrium of the production and exchange process. The vertical axis is labeled  $X_2$  and the horizontal axis is labeled  $X_1$ . A ray from the origin passes through the point  $(c_1, c_2)$ , which is the intersection of the production ray and the exchange ray. The ray is labeled  $\bar{U}$ . The total labor supply is  $N$  and the total capital supply is  $K$ .