

## Regulation of monopoly.

- ① price regulation: govt. fix price for products of monopoly
- ② tax reforms:

lumpsome tax: fixed tax imposed on monopoly irrespective of o/p by govt.

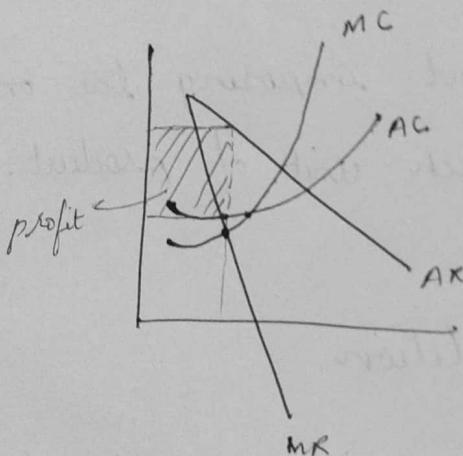
per unit tax: govt. imposing tax on each unit of product.

## Monopolistic competition

large # buyers and sellers with products varying in colour, smell, design etc..

- each firm have less market share
- Aim to max. profit in short run.
- In long run, firm aims to max. sells

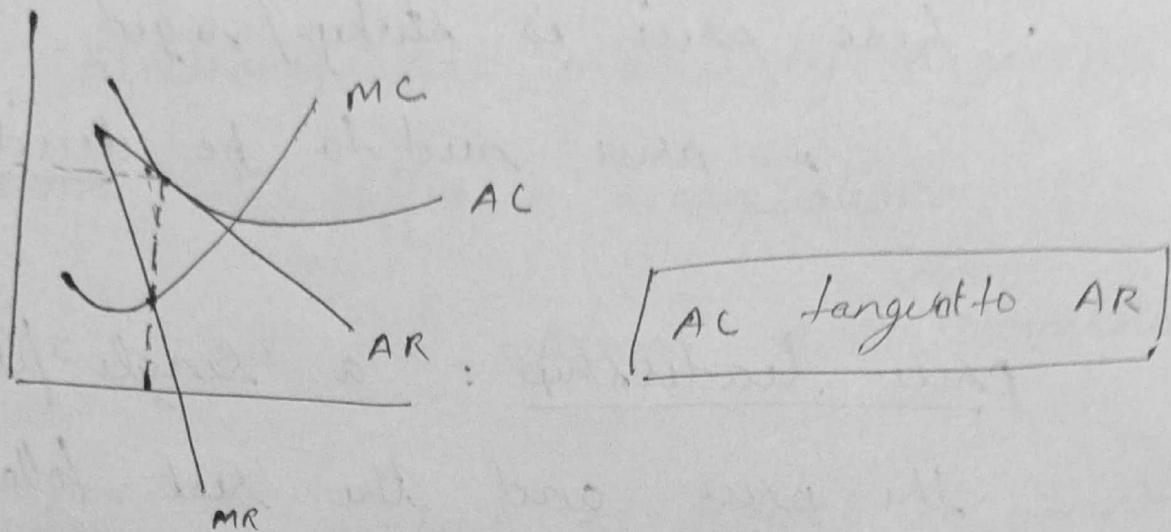
- each firm is price taker  
(less monopolistic power)
- product differentiation
- non-prui competition : additional cost  
for promotion of products
- freedom of entry & exit
- No uniformity in price among firms



for monopolistic comp.  
AR is flatter than  
that of monopoly  
(less monopoly power)

At  $\text{eqm } \text{MC} = \text{MR}$

In short run, due to super normal profit  
many firms enter into market and in  
long run, profit  $\approx 0$



## Oligopoly

→ few sellers

2 types pure oligopoly : few sellers & all have homogeneous product

differentiated oligopoly : few sellers but all produce diff products

→ action of one firm affects others.

→ eg: if a firm ↑ price, others does the same to remain in market

But when one ↑ price, other won't

follow & eventually the firm that ↑ the price

- here price is sticky/rigid
- price need to be decided collectively

price leadership: a single firm determines the price and the rest follow it.

3 types:

[ dominant price leadership: The dominant firm (more market share) determines price

low cost price leadership: The firm with lowest cost of production decides price

barometric price leadership: the firm with best knowledge about demand & supply decides price

→ There will be a group behaviour →

some decisions are made by a group of firms, & different organisation.

e.g. OPEC - oil and petroleum export cooperation

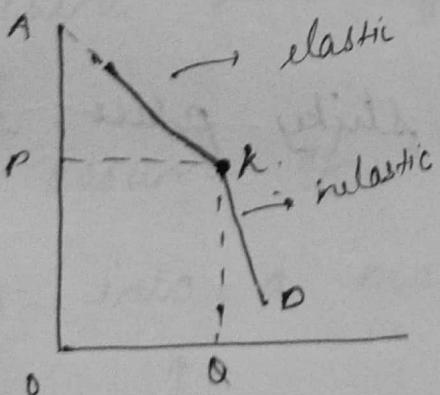
→ collusion<sup>five</sup>: implicit or explicit agreement b/w firms of an oligopoly

non-collusive oligopoly: no agreement b/w firms

E.g. in oligopoly

kinked demand-curve analysis (Panzica & Sweezy)  
(American)

→ explains price rigidity under oligopoly



kink @ K

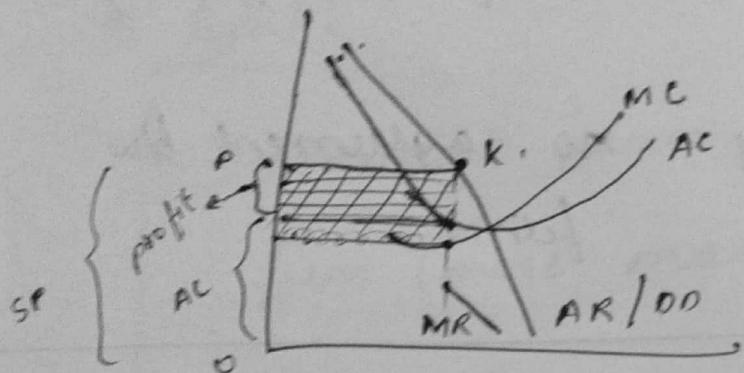
: market will always  
be in OP

① above OP

At AP, when a firm changes its price, some others won't follow so, it's dd & exit from

market.  $\therefore$  price above  $OP$  is not seen  
 $\Rightarrow$  When firm sets price ( $< OP$ )  
 to "inelastic" part, other firm also  
 follow the same.  $\therefore$  do not do that much  
 $\therefore$  inelastic  $\therefore$  no benefit for  
 firm

$\Rightarrow$  Now, Since AR is kinked, MR will be  
 discontinuous



As a result,  
 price is fixed

At eq.  $MC = MR$

$\rightarrow$  It explains price fixity based on product diff  
 of a firm in oligopoly market

$\rightarrow$  Till  $OP$ , AR will be sticky price, beyond  $OP$   
 no firm follow AR.

$\rightarrow$  The distance b/w of discontinuity large  
 will be high if there is a large cliff

b/w elastic & inelastic part

Correct model of Oligopoly (1838 - Augustin Cournot)

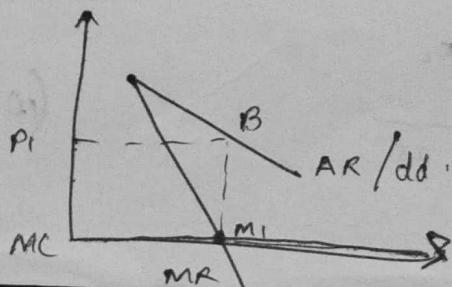
→ Model of duopoly

### Assumption

- ① Only 2 sellers.
- ② homogeneous products
- ③ cost of production = 0 (assume they produce mineral water)
- ④ Each firm take its o/p independently  
i.e., no collusion
- ⑤ A firm think that rival will continue their present level of o/p

### Stage-I

Now, assume of a situation when a firm enters into a market as a monopoly.



here cost  $\approx 0$

$\therefore MC = 0$

max. profit @  $MC = MR$

assumption

$MC = 0$

max. profit @  $MC = MR$

When  $MR = 0$ ,  $ed = 1$   $\phi / Q.D = \frac{\text{total dd}}{2}$

$MR > 0$ ,  $ed > 1$

$MR < 0$ ,  $ed < 1$

$\therefore$  at  $M_r$ ,  $dd = \text{half of total}$

assume total demand of a product  
 $= 100$

$\therefore$  At  $M_r$ ,  $dd = 50$ .

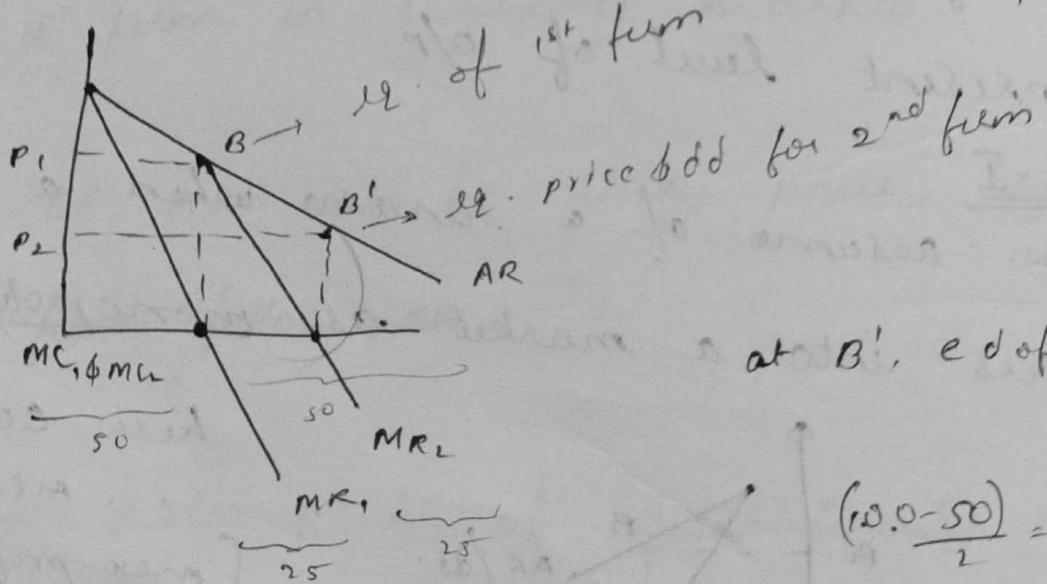
### Stage-II

here we have super normal profit.

Now a new firm enters into market.

They assume that continues to make 50.

$\therefore$  they try to contribute to the rest  
 i.e. 50 (existing demand) at their own  
 point.



at  $B'$ ,  $ed$  of 2<sup>nd</sup> firm  
 $= 1$

$$\frac{(100 - 50)}{2} = 25$$

Strategy	A	B	unproductive
L <sub>1</sub>	Half of 100 = 50	assume A produce so ∴ Half of (100-50) = 25	25
L <sub>2</sub>	assume B produce at dd 25 ∴ A produce $\frac{1}{2}(100-25)$ at eq. = 37.5	assumes A produce at 37.5 ∴ B produce $\frac{1}{2}$ existing dd = $\frac{1}{2}(100-37.5)$ = 31.25	30.25
L <sub>3</sub>	$\frac{1}{2}(100-37.5)$ = 31.25	$\frac{1}{2}(100-31.25)$ = 34.375	33.0625

Now as this goes on A & B produce  
 $\frac{1}{3}$  of total dd each & rest  $\frac{1}{3}$  will be  
 unproductive. This stage is called

constant lgm

## Module - 3

# Macroeconomics

great dep  
(1930)

Flish

- study economy as a whole
  - (price level, total output, & employment)

- ① Father of modern economics

= John Maynard Keynes

April 1 → marks  
for year (1936)

- General theory of employment, interest & money

### Distinguish b/w micro & macro economics

- area of study
  - micro - individual units
  - macro - aggregate

- type of partial eqm.
  - micro - partial eqm  
max utility by consumer
  - macro - general eqm  
eqm of economy

? Utility: satisfaction of a consumer in his total sale

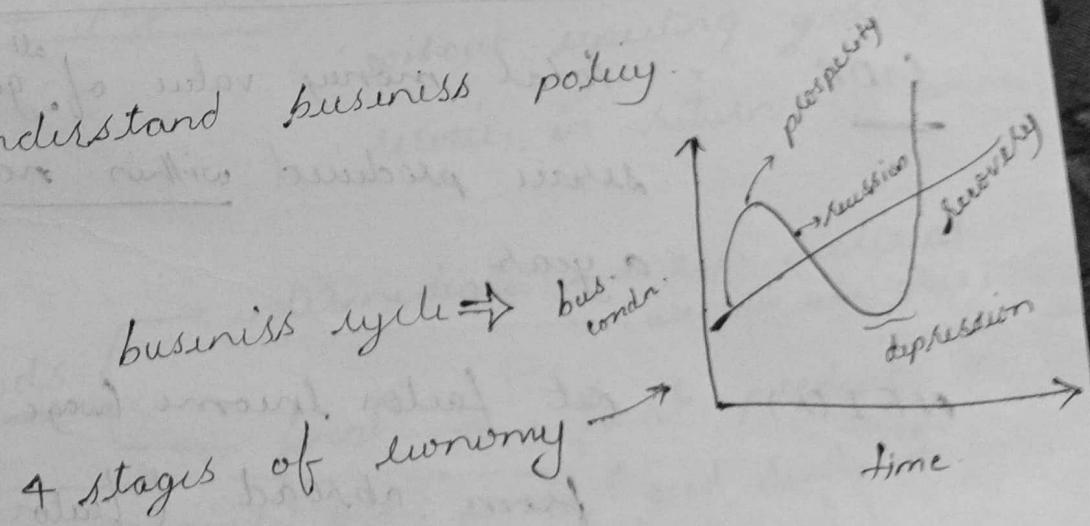
- ~~ceteris paribus~~ assumption that while considering relation b/w 2 factors, others remains constant

- ~~ceteris paribus~~
  - micro - f such assumption
  - macro - no such assumption

→ view      [ micro - worms view  
                  macro - worlds view ]

### importance:

- helps to understand economy's functioning
- understand general price level
- helps to formulate economic policies
  - e.g.: tax policy, monetary policy
- policies taken by govt to control price instability - fiscal policy
- policies taken by monetary authority (RBI) to control price - monetary policy
- understand business policy



→ Understand national income i.e., total money value a nation produce in a year within its

① money variable — value of variable (nominal variable) measured at current price

② real variable — value measured in terms of base year price

variable	M.V.	R.V.
wage	w	W/P
y	y	Y/P
interest	I	I/P
cons.	c	C/P

money variable  
base year price  
(2011-12 in India)

GDP = total money value of <sup>all final</sup> goods & services produced within nation in a year

NFI(A) = net factor income (wage, price of rent etc.) from abroad (factor income received - factor income paid)

$$GDP + NFIA = \underline{\text{GNP}} \quad (\text{gross national product})$$

national income  $\underline{\underline{\text{NNP}}}$

$$\Rightarrow \boxed{GDP - \underbrace{\text{depreciation}}_{\substack{\text{loss due to} \\ \text{wear & tear}}} = \underline{\underline{\text{NDP}}} \quad (\text{net dom. prod})}$$

$$\Rightarrow \boxed{GNP - \underbrace{\text{depreciation}}_{\text{depreciation}} = \underline{\underline{\text{NNP}}} \quad (\text{net nat. prod})}$$

$$\Rightarrow \frac{\text{per-capita income}}{\text{shows dev. of nation}} = \frac{\text{national income}}{\text{population}}$$

① economy  $\begin{cases} \text{open} \rightarrow \text{trade relation b/w nation economy} \\ \text{closed} \rightarrow \text{no trade relation b/w economy.} \end{cases}$   
 (totally Autarchy)  $\begin{cases} \text{no import & export} \\ \text{no movement of factors of production} \end{cases}$

② transfer factor payment - expenditure of govt without expecting goods & services in return (e.g.: pension)

③ goods  $\begin{cases} \text{intermediate} \rightarrow \text{raw material used for other goods} \\ \text{final} \rightarrow \text{final product} \end{cases}$

[depreciation: fixed capital losses some value due to wear & tear]  $\quad (\text{good ready for final use})$

→ Actual GNP - actual value of GNP  
→ potential GNP - max income that a country can produce in an year

→ GNP gap - Actual - pot. GNP

→ Personal income - Income earned by a household from all sources

disposable income - Income that can be disposed by a nation

Personal income -  
direct tax

(indirect tax - sales tax, service tax.)

→ tax given to goods & services

National income (NI) calculation

① income tax method

NI = total income divided among diff factors of production

$$\therefore NI = R + W + I + P$$

rent + wage + int + profit

② Expenditure method : - NI through the expenditure of a nation

$$NI = \text{Total Income} + \text{total expenditure}$$

consumption expenditure +

Investment exp. +  
(spending money for future for gains)  
govt exp. +

$$\frac{\text{export} - \text{import}}{\text{net export}}$$

③ Value added method : NI = Total income generated in diff sectors of economy.

$$NI = Y_{\text{prim}} + Y_{2^{\circ} \text{ sec}} + Y_{3^{\circ} \text{ sec}}$$

→ Also called product method.

⇒ NI does not have :

→ rent of self occupied house

- sale & purchase of 2<sup>nd</sup> hand prod
- service of housewives
- value of intermediate good
- self consumption of a producer
- income from smuggling, hawala (illegal mom)
- lottery prize, prize money (windfall gain)
- transfer payment

### Circular flow of income

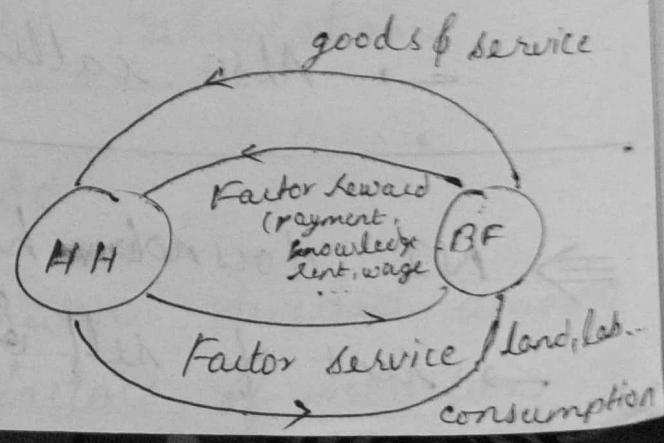
- continuous process of production

→ shows relation b/w sectors

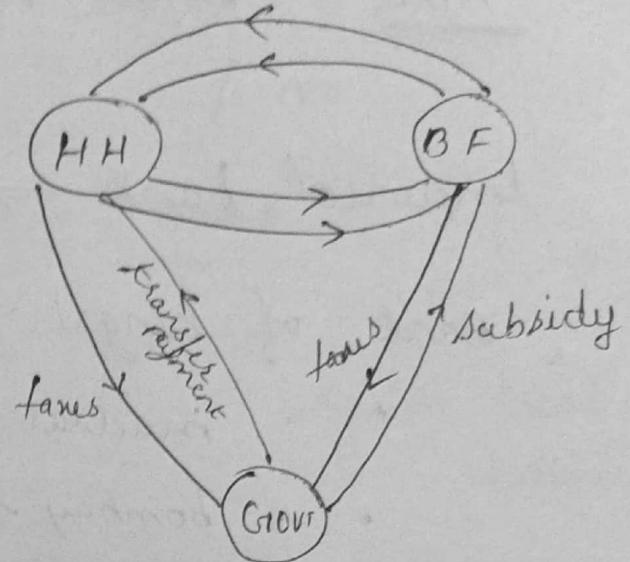
major sectors in economy:

- households (HH)
- firms (BF)
- govt (G)
- external sectors (ES)

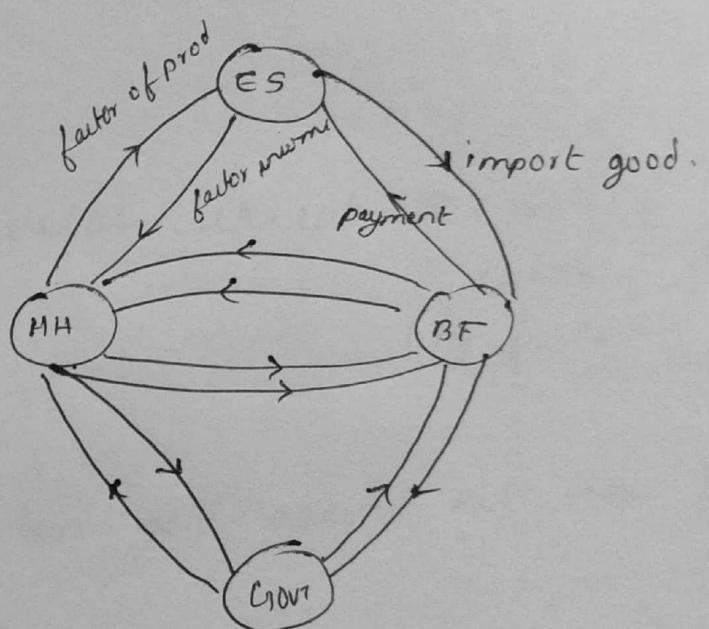
### 2 sector model



3 sector model



4 sector model



RBI (Since 1935 - April 1<sup>st</sup>)  
Kolkata

Imperial bank → SB 1 ← RBI

Bank of Bengal.

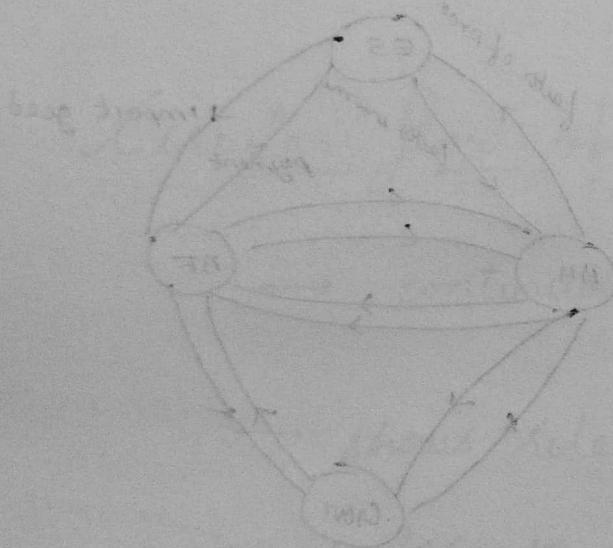
" " Madras

" " bombay

imperial govt bank

banker to govt &  
other banks

where not metally



Nationalisation : Govt taking a private firm

RBI nationalised in 1949

Privatization : private firm taking Govt institution

RBI - governor : Sankti Kant Das

It controls:

- monopoly on note issue except ₹1 notes & coins
- money supply. (by finance ministry)

Issue. Maintain gold against note issue

Depts { banking dept.

- Currency principle - central bank must preserve 100% gold against note issue  
→ in India
- Banking principle - reserves system  
reserve ₹200 more worth as gold

## Function of RBI

- As banker → banker to central & state  
→ custodian of money  
→ makes payment through SBI  
→ make arrangement for foreign currency  
→ manage public debt  
(debt of govt)  
external source - nations, world bank  
→ grants given to state

- As Advisor : → advises to state govt on international finance  
→ advises about 5-year plan (planning committee  
(no planning commission  
= neeti Ayog))  
1<sup>st</sup> - agri & water exige  
2<sup>nd</sup> - heavy industry  
(iron, cement)  
2012-17 - last plan

— now power is given to  
state govt.  
nathi ayog.

Financial agent — Agent of IMF &  
world bank  
→ lender of last resort

① CRR — cash reserve ratio :

every scheduled bank (bank under RBI)  
should maintain a part of cash reserve  
with RBI

② SLR — statutory liquidity ratio : should  
keep a portion of <sup>cash</sup> debit with them.  
The ratio is called as above.

→ Banker's bank

\* Controller of credit : controls money  
supply

(can't ↑ money supply as it cause inflation)

commercial banks are advancing loan &  
accepting deposits.

deposits - liability (need to give bank)  
loan - asset

⇒ every bank gives 90% of deposits as loan. As loan ↑, money supply ↑ inflation occurs.

To avoid this RBI make monetary policy

① Bank rate policy : can ask scheduled banks to ↑ interest (loans ↓, deposits ↑, money supply↓)

② open market policy : sales & purchase of govt. security through commercial bank.

During inflation, govt sells security to public & receive money with them

③ CRR & SLR - ask bank ↑ ↑ CRR & SLR causing loan capacity of bank to ↓

Budget : annual statement made of  
expected income & expenditure of  
govt

Balanced budget : expected income = expenditure

surplus " : income > expenditure

deficit " : income < expenditure

⇒ how govt can control money supply

fiscal policies :- Tax rate ↑, to ↓  
money supply

- public expenditure  
during inflation, govt

& public expenditure by  
presenting surplus

budget

- public debt : during  
inflation, govt won't  
take loan but give  
loan to other nation  
to ↑ money supply