

Regulation of monopoly.

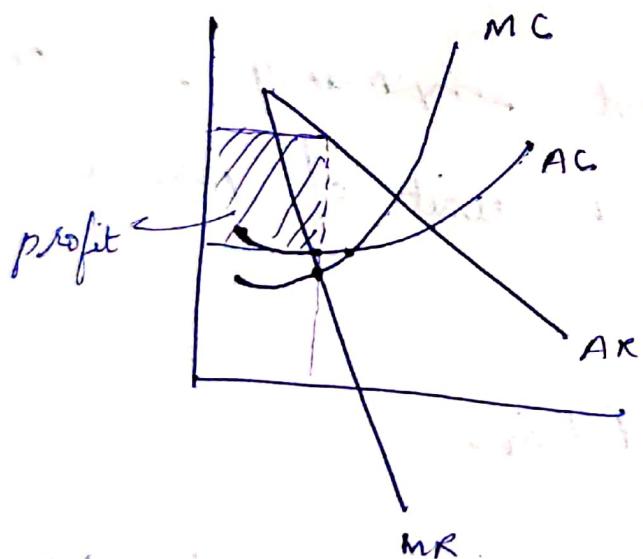
- ① price regulation: govt. fix price for products of monopoly
- ② tax reforms:
 - lumpsome tax: fixed tax imposed on monopoly irrespective of o/p by govt.
 - per unit tax: govt. imposing tax on each unit of product.

Monopolistic competition

large # buyers and sellers with product 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

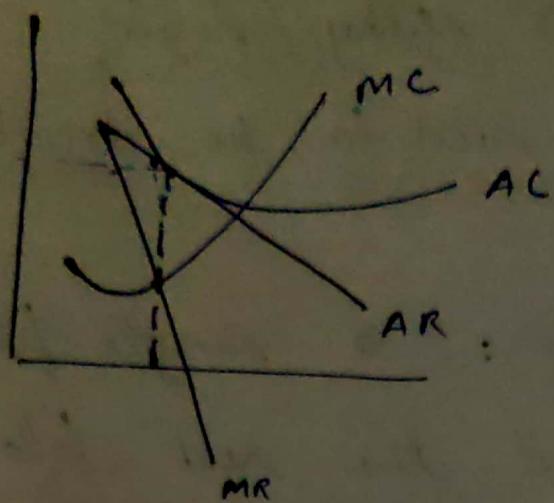
- each firm is price taker
(less monopolistic power)
- product differentiation
- non-price competition : additional cost for promotion of products
- freedom of entry & exit
- No uniformity in price among firms



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

At eqm, $MC = MR$

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



[AC Tangent to AR]

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 →

semi divisions are made by a group of firms, 2 different organisation.

e.g. OPEC - oil and petroleum export cooperation

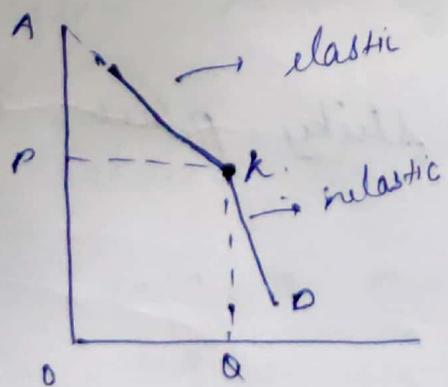
→ collusion: implicit or explicit agreement b/w firms of an oligopoly

non-collusive oligopoly: no agreement b/w firms

E.g. in oligopoly

kinked demand-curve analysis (Paul M Sweezy)
(American)

→ explains price rigidity under oligopoly



kink @ K

i.e. market will always
be in OP

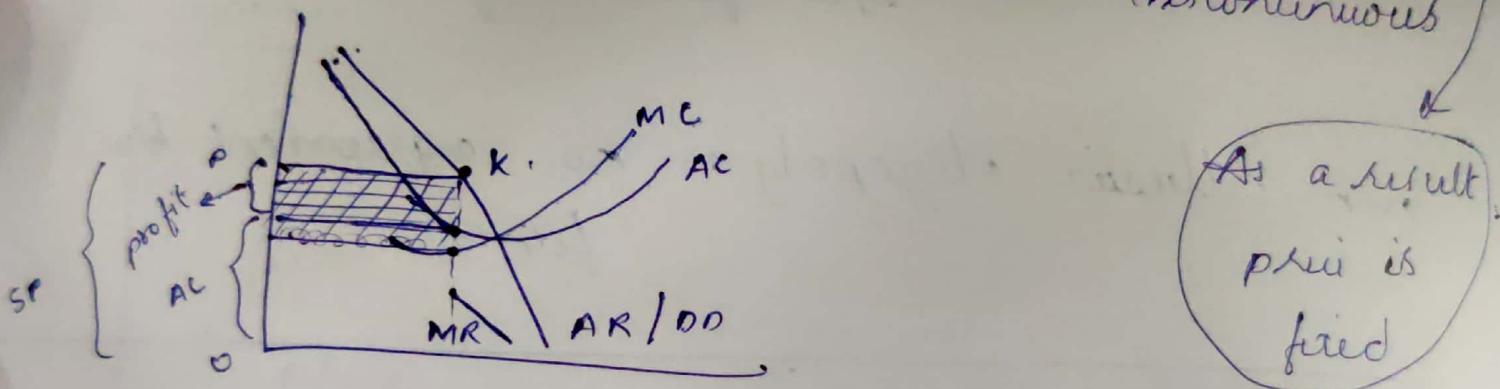
↑ above OP

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

market. \therefore price above OP is not seen

\Rightarrow When firm \downarrow price ($< OP$)
In "inelastic" part, other firm also
 \therefore follow the same. \therefore dd. do not \downarrow that much
 \therefore inelastic \therefore no benefit for
firm

\Rightarrow Now, firm AR is kinked, MR will be
discontinuous



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 range
will be high if there is a large diff

b/w elastic & inelastic part

Concave model of Oligopoly (1838 - Augustin Cournot)

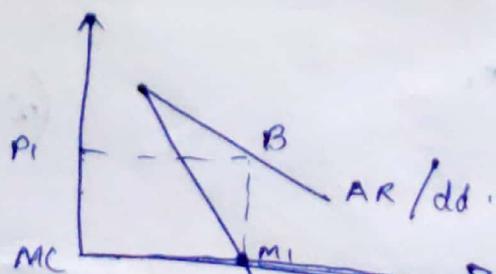
→ Model of duopoly

Assumption

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

Stage-I

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



here cost = 0
 $\therefore MC = 0$
(max. profit @ $MC = MR$)

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

$MR > 0$, $ed > 1$

$MR < 0$, $ed < 1$

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

assume total demand of a product
 $= 100$

\therefore At M_r , $dd = 50$.

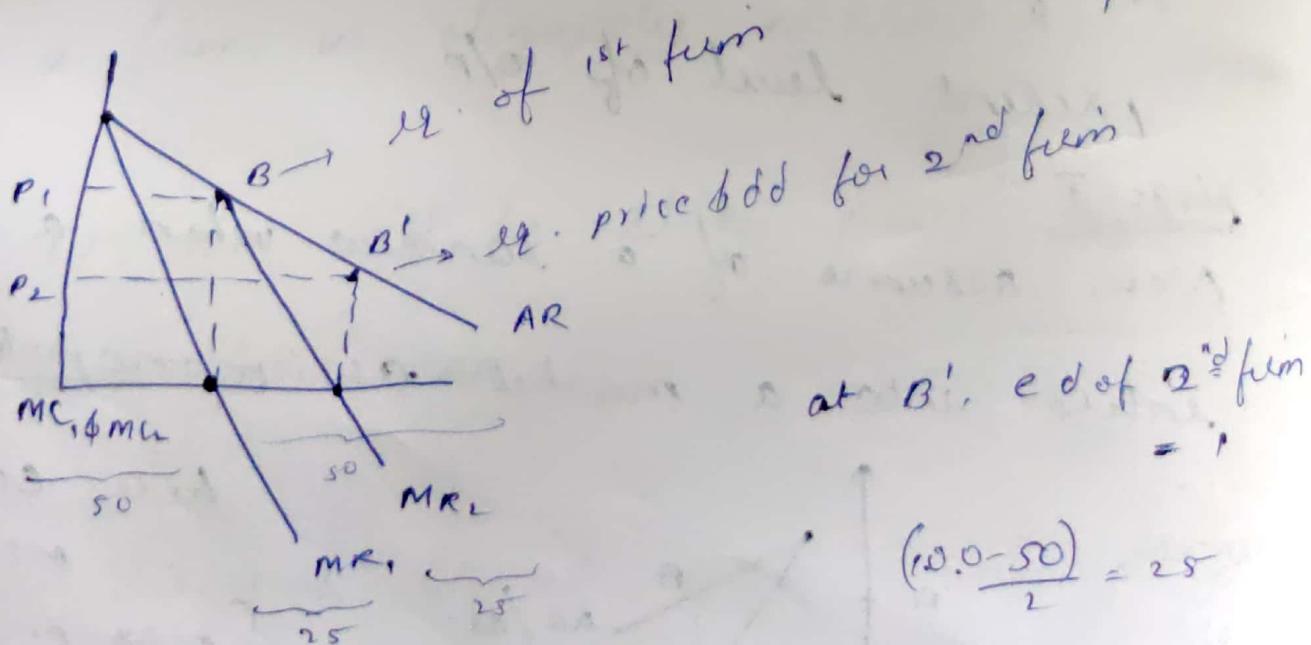
Stage-II

here we have super normal profit.

Now a new firm enters into market

They assume 1st firm continues to make 50

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



at B' , ed of 2nd firm
 $= 1$

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

strategy	A	B	unproductive
L ₁	half of 100 = 50	assumes A produce so \therefore half of (100-50) = 25	25
L ₂	assumes B produce at dd 25 \therefore A produce $\frac{1}{2}(100-25)$ dd - eq. = 37.5	assumes A produce at 37.5 \therefore B produce $\frac{1}{2}$ existing dd = $\frac{1}{2}(100-37.5)$ = 31.25	30.25
L ₃	$\frac{1}{2}(100-31.25)$ = 33.875	$\frac{1}{2}(100-33.875)$ = 33.0625	33.0625

continue till all
firm achieve some
optimal level

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 earn

Module - 3

Macroeconomics

great dep
(1930)

- first used by Ragnar Frisch
- study economy as a whole (price level, total GDP, & employment)

○ Father of modern economics

= John Maynard Keynes

→ General theory of employment, interest & money (1936)

Distinguish b/w micro & macro economics

→ area of study

- micro - individual units
- macro - aggregate

→ type of partial eqm

- micro - partial eqm
measurability by units
- macro - general eqm
eqm of economy

? Utility: satisfaction of a consumer in his total sale

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

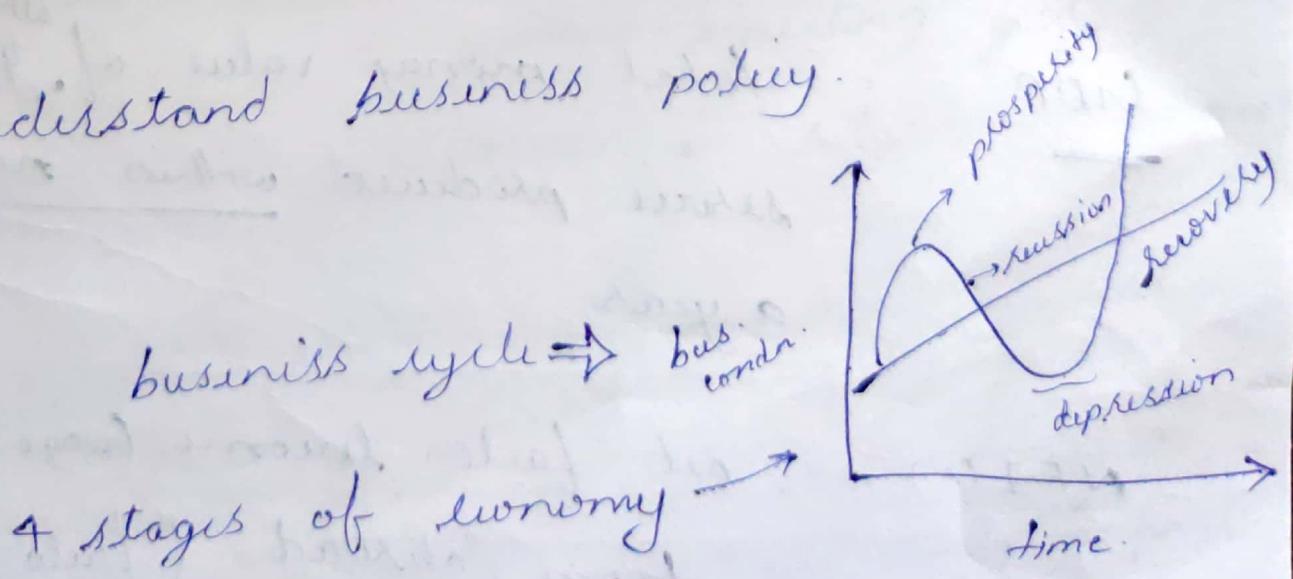
→ ~~ceteris~~ ceteris paribus

- micro - 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 it

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

② real variable — value measured

e.g:

variable	M.V.	R.V.
wage	w	w/p
y	y	y/p
interest	i	i/p
cons.	c	c/p

in terms of base year price

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

GDP = total money value of ^{all final} goods & services produced within nation in a year

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

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

national income \equiv

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

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

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

① economy open \rightarrow trade relation b/w national economy
 closed \rightarrow no trade relation b/w economy.
 (stateless)
 Autarchy
 (no import & export &
 no movement of factors of production)

② transfer factor payment - expenditure of govt
 without receiving goods &
 service in return (e.g. pension)

③ goods intermediate \rightarrow raw material
 (used for other goods)
 final \rightarrow final product
 (good ready for final use)

depreciation: fixed capital losses some value due to wear & tear

- ⇒ Actual GNP - actual value of GNP
- ⇒ potential GNP - max income that a country can produce in a year
- ⇒ GNP gap - Actual - pot. GNP
- ⇒ Personal income - income earned by a household from all source
- per. disposable income - income that can be disposed by a person
- Personal income -
direct tax
tax based on income
(indirect tax - sales tax, service tax.)
→ tax given to goods & services

National Income (NI) calculation

① income stat. method

NI = total income divided among diff factors of production

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

rent + wage + int + profit

④ Expenditure method: - NI through the expenditure of a nation

; Total Income = total expenditure;

NI = consumption expenditure +

investment exp. +
(spending money for future for gains)

govt exp. +

export - import
net export

⑤ Value added method : NI = Total income generated in diff sectors of economy.

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

→ Also called product method.

⇒ NI does not have :

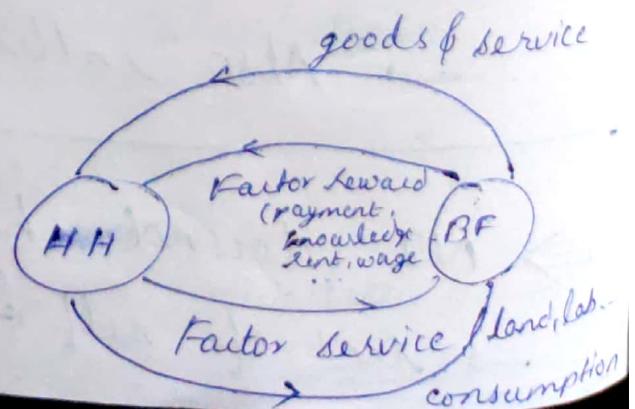
→ rent of self occupied house

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

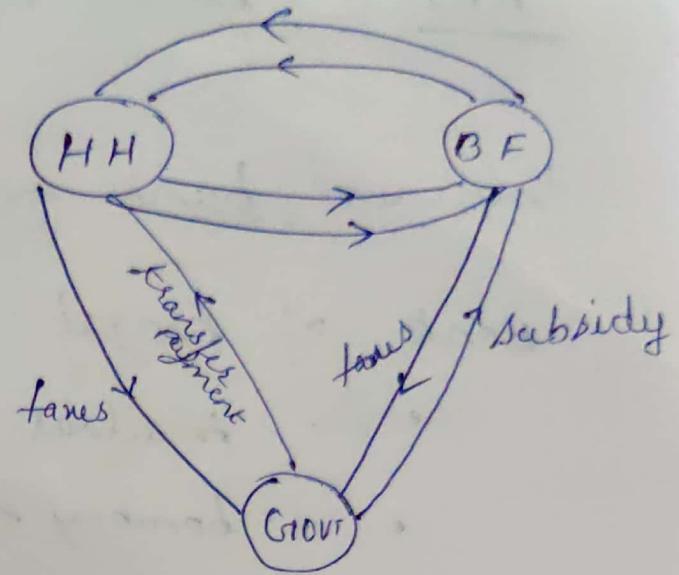
Circular flow of income

- continuous process of production
 - shows relation b/w sectors
- major sectors in economy:
- households (HH)
 - firms (BF)
 - govt (G)
 - external sector (ES)

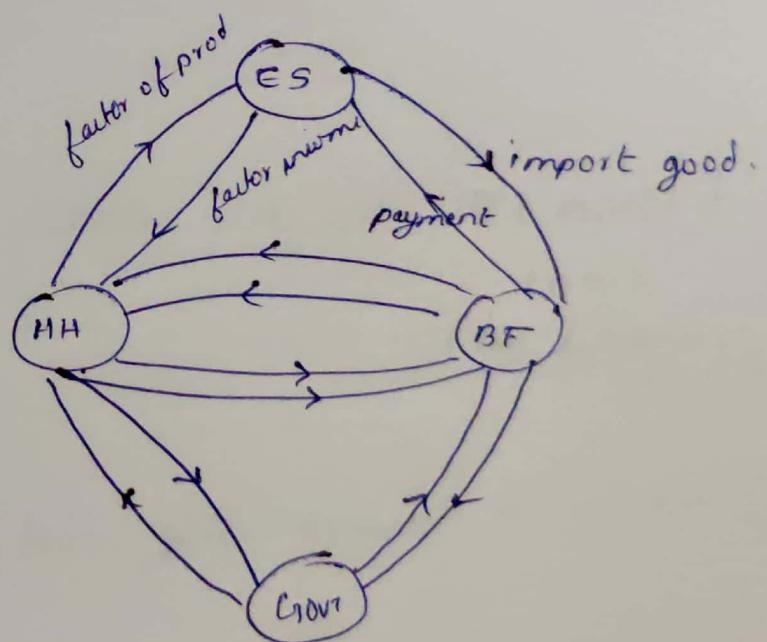
2 sector model



3 sector model



4 sector model



RBI (since 1935 - April 1st)
Kolkata

Imperial bank \Rightarrow SBI \times RBI

Bank of Bengal.

" madras

" bombay

imperial govt bank

banker to govt &
other banks
mainly

Nationalisation : Govt taking a private firm

RBI nationalised in 1949

Privatization : private firm taking Govt institution

RBI - governor : Sanki Kant Das.

It controls:

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

Depts []
Issue. (maintain gold against note issue)
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 dept
 ↳ (debt of govt)
 ↳ external source - nations, world bank
→ grants loan to state

As Advisor : → advises to state govt on international finance

→ advises about 5-year plan (planning committee
(no planning commission
= neethi Ayog)

1st - agri & water irrigatio

2nd - heavy industry
(iron, cement)

2012-17 - last plan

- now power is given to
state govt.
neethi 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 ^{cash} 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

Money market : short term financial instruments
maturity < 1 yr

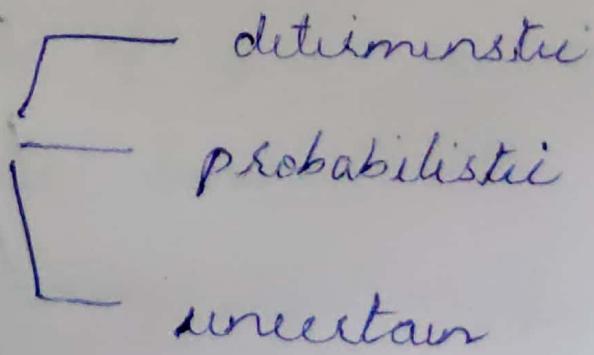
Capital market : long term financial instruments
maturity period $> 1 \text{ yr}$

Initial investment : money invested at the start of production

Game theory.

Mathematical model made for decision making for oligopolistic market

3 situations



- Von-newman & Morgenstern "theory of games and economies" "behaviour" in 1944