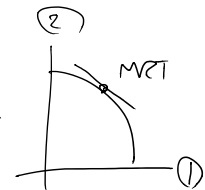


WEEK 4 (09.02.16)

° LAST WEEK, WE STUDIED THE FIRST THEOREM OF FUNDAMENTAL WELFARE ECONOMICS (FTFWE): COMPETITIVE MARKET LEADS TO A PARETO EFFICIENT OUTCOME. THE CONDITIONS WE DERIVED AND TRIED TO UNDERSTAND ITS INTUITION ARE...

$$\begin{aligned} \text{MRS}_{12}^A &= \text{MRS}_{12}^B & \text{--- (1)} \\ \text{MRTS}_{LK}^1 &= \text{MRTS}_{LK}^2 & \text{--- (2)} \\ \text{MRS}_{12}^A &= \text{MRS}_{12}^B = \text{MRT} & \text{--- (3)} \end{aligned}$$



PARETO
EFFICIENCY
CONDITIONS

$$\begin{aligned} &= \frac{P_1}{P_2} & &= \frac{P_1}{P_2} & &= \frac{MC_1}{MC_2} \end{aligned}$$

$$\left. \begin{aligned} P_1 &= MC_1 \\ P_2 &= MC_2 \end{aligned} \right\}$$

WHEN
FISH MARKET
&
COCONUT MARKET ARE COMPETITIVE!



IT WILL DELIVER
A NICE RESULT



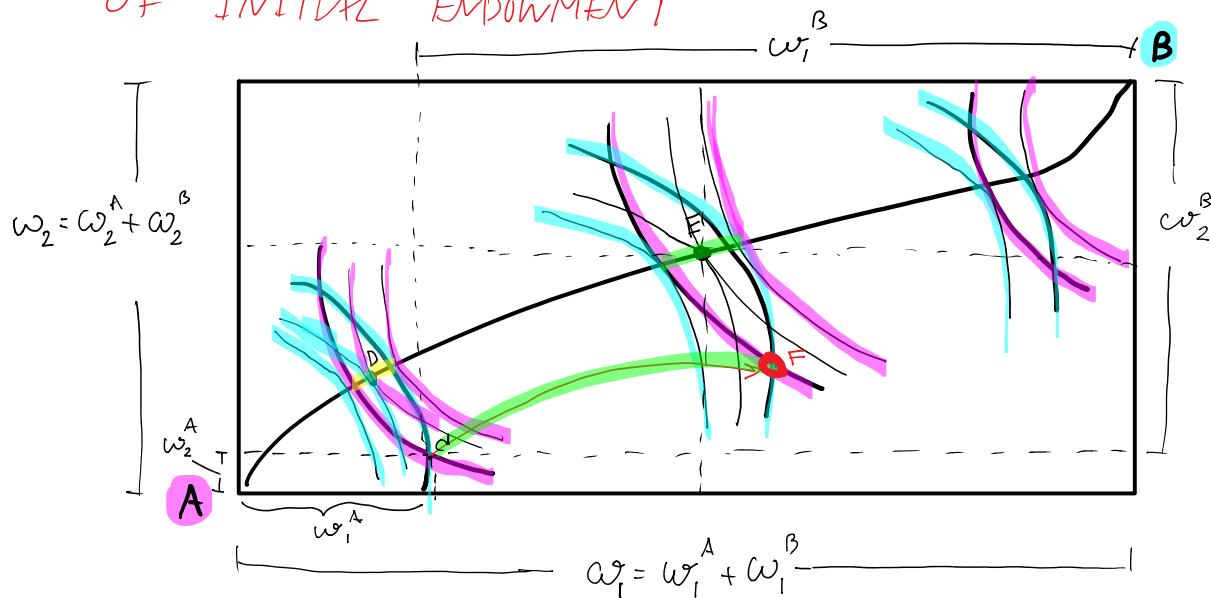
HOWEVER, EFFICIENCY IS NOT THE ONLY ONE CONCERN IN ECONOMIC SCIENCE. ECONOMISTS ALSO CARE ABOUT

EQUITY (OR FAIRMESS) → DISTRIBUTION OF THE PIE.

THIS LEADS TO THE SECOND THEOREM OF FUNDAMENTAL WELFARE ECONOMICS (STFWIE)... LET'S SEE:

2ND THEOREM SAID " ANY PARETO EFFICIENT ALLOCATION CAN BE ACHIEVED WHEN WE MAKE A SUITABLE REARRANGEMENT OF INITIAL ENDOWMENT " ° ° °

OF INITIAL ENDOWMENT



- ① IF WE START AT ALLOCATION C', WE WILL END UP WITH ANY ALLOCATION ON THE CORE. SUPPOSE, WE END UP AT POINT D. → PARETO OPTIMAL ALLOCATION? → YES!
- IS IT FAIR? → MAY BE NOT. (WHY?)
A/C' U^B IS A LOT GREATER THAN U^A !

IF WE WANT TO ATTAIN E IN WHICH A POLICY MAKER VIEWS AS "MORE-EQUAL-UTILITY" ALLOCATION, THEN WHAT HE CAN DO IS "REARRANGE" THE INITIAL ENDOWMENT FROM C TO F AND LET A AND B TRADE FREELY. E CAN BE OBTAINED.

THE REARRANGEMENT FROM C' TO F CAN BE DONE BY TAXES AND TRANSFERS/SUBSIDIES.

2ND THEOREM GIVES AN IMPORTANT ROLE OF GOVERNMENT INTERVENTION.

NOW, WE DEPART FROM "MARKET EFFICIENCY" TO
"MARKET INEFFICIENCY" (MARKET FAILURE)

- MONOPOLY POWER
- EXTERNALITY
- PROVISION OF PUBLIC GOODS
- ASYMMETRIC INFORMATION

PUBLIC GOODS

READ: ROSEN, CH. 4

PUBLIC GOODS ARE GOODS W/ 2 IMPORTANT CHARACTERISTICS:

① NONRIVALNESS IN CONSUMPTION: FOR A GIVEN QUANTITY OF THE GOOD, IF MR. A IS CURRENTLY CONSUMING IT AND MR. B COMES TO CONSUME THE GOOD, UTILITY OF MR. A DOES NOT AFFECTED BY THE ARRIVAL OF MR. B.

EX: TV SIGNAL TRANSMISSION HAS THIS PROPERTY

② NONEXCLUDABILITY: ONCE THE GOOD IS PRODUCED AND PROVIDED, ONE CANNOT PREVENT THE OTHER TO ENJOY THE BENEFIT OF THE GOOD. (OR THE EXCLUSION IS VERY VERY COSTLY TO DO)

EX: NATIONAL DEFENSE } HAVE THIS PROPERTY
DAM
NATIONAL MUSEUM

LUMPIN PARK **EXCLUDABLE**

	YES	NO
YES	PURE PRIVATE GOOD WE HAVE A CLEAR ABILITY TO EXCLUDE AND RIVALRY FOR BENEFITS	CONGESTIBLE PUBLIC GOODS EX: FISHES IN NORTH SEA, COMMON RESOURCES
NO	• EXPRESS WAY DURING NON-RUSH HOURS • CABLE TV PRICE-EXCLUDABLE	PURE PUBLIC GOOD EX: NATIONAL DEFENSE

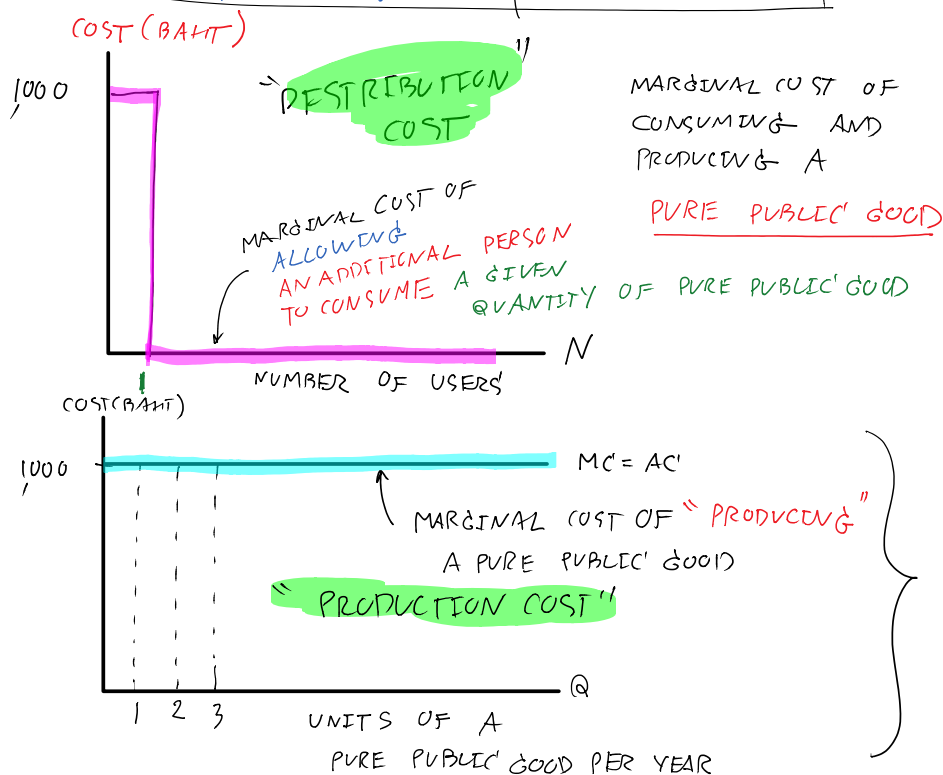
RIVAL

NO DIVIDING NON-RIVAL GOODS

- CABLE TV

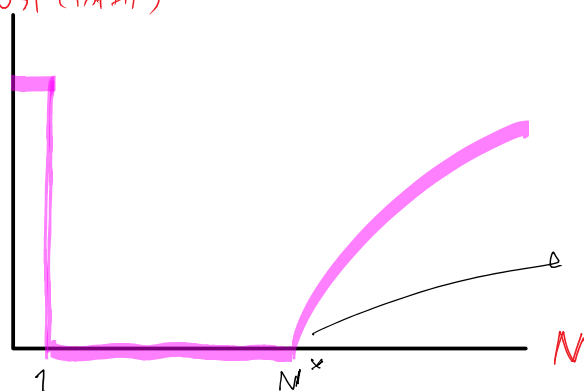
PRICE-EXCLUDABLE
PUBLIC GOODS

EX: NATIONAL DEFENSE



⇒ ONCE THE GIVEN QUANTITY OF A PURE PUBLIC GOOD IS MADE AVAILABLE, MC OF "ALLOWING" AN ADDITIONAL USER TO CONSUME THE GOOD = 0

HOW ABOUT "COSTESTIBUE PUBLIC' GOODS"?



BEYOND N^* , MC' OF ALLOWING MORE USERS TO CONSUME THE GIVEN AMOUNT OF THE GOOD STARTS TO RISE!

SOME REMARKS' ABOUT PUBLIC' GOODS'

- ① EVEN THOUGH EVERYONE CONSUME THE SAME AMOUNT OF PUBLIC GOOD, BUT IT IS NOT NECESSARY THAT EVERYONE WILL "VALUE" IT EQUALLY.
- ② CLASSIFICATION AS A PUBLIC GOOD IS NOT AN ABSOLUTE, IT DEPENDS ON
 - MARKET CONDITIONS

EX

— STATE OF TECHNOLOGY

LIGHTHOUSE



(G/F) THE INTRODUCTION
OF JAMMING DEVICE
"PURE PUBLIC GOOD"

(A/F)

IMPURE PUBLIC GOOD
AS PROPERTY OF
NONEXCLUDABILITY
IS DESTROYED.

EX

VIBHAVADI RANG SIT ROAD

AT 2 AM

DURING RUSH HOURS

- NON-EXCLUDABLE
- NON-RIVAL IN CONSUMPTION

- NON-EXCLUDABLE BUT RIVAL!

(3) SOMETHING & THAT ARE NOT CONVENTIONALLY THOUGH
AS COMMODITIES HAVE PUBLIC GOOD CHARACTERISTICS.

EX:

HONESTY, JUSTICE, FAIRMESS,
SCIENTIFIC DISCOVERY.

(4) • THE TITLE "PUBLIC" GOODS DO NOT NECESSARY MEAN
THAT THEY HAVE TO BE PRODUCED BY "PUBLIC" SECTORS
EX: CHUWIT PARK, FLYOVER BRIDGE → PRIVATELY PRODUCED PUBLIC GOODS

• THE TITLE "PRIVATE" GOODS DO NOT NECESSARY MEAN
THAT THEY HAVE TO BE PRODUCED BY "PRIVATE" SECTORS

EX: SKY TRAIN, PUBLIC HOSPITALS PUBLICLY PRODUCED PRIVATE
PUBLIC UNIVERSITIES GOODS
PUBLIC SCHOOLS
GOVERNMENT BONDS