

MARKET FAILURE

- MARKETS FAIL FOR SEVERAL REASONS
 - **EXTERNALITIES**
 - PUBLIC GOODS
 - OPEN-ACCESS COMMON PROPERTY
 - HIDDEN INFORMATION

EXTERNALITIES

- AN EXTERNALITY OCCURS WHEN A PERSON'S WELL-BEING OR A FIRM'S PRODUCTION CAPABILITY IS AFFECTED BY THE ACTIONS OF OTHER CONSUMERS AND FIRMS RATHER THAN INDIRECTLY THROUGH CHANGES IN PRICES
- POLLUTION IS AN EXTERNALITY
 - WHEN A FIRM WHOSE PRODUCTION PROCESS GENERATES FUMES (DUMAN) THAT HARM ITS NEIGHBORS IS CREATING AN EXTERNALITY FOR WHICH THERE IS NO MARKET
 - IN CONTRAST, THE FIRM IS NOT CREATING AN EXTERNALITY WHEN IT HARMS A RIVAL BY SELLING EXTRA OUTPUT THAT LOWERS THE MARKET PRICE
 - WHEN A PERSON OR FIRM DOES NOT BEAR ALL THE COSTS OR RECEIVE ALL THE BENEFITS FOR HIS/HER OR ITS ACTIONS
- EXTERNALITIES CAN EITHER HELP OR HARM OTHERS
 - POSITIVE AND NEGATIVE EXTERNALITIES

EXTERNALITIES

- AN EXTERNALITY ARISES WHEN THE MARKET PRICE OR COST OF PRODUCTION EXCLUDES ITS SOCIAL IMPACT, COST, OR BENEFIT
- MARKETS FAIL B/C THE MARKET IS INCOMPLETE → IT'S MISSING
 - NO EXCHANGE INSTITUTION EXISTS IN WHICH PEOPLE PAY OTHERS FOR EXTRA BENEFITS OR RECEIVE COMPENSATION FOR EXTRA COSTS.
 - DRIVING YOUR CAR
 - BUILDING A HOUSE IN AN OPEN SPACE

THE INEFFICIENCY OF COMPETITION WITH EXTERNALITIES

- TO ILLUSTRATE WHY EXTERNALITIES LEAD TO NONOPTIMAL PRODUCTION, LET'S EXAMINE A COMPETITIVE MARKET
 - PAPER MILLS PRODUCE PAPER & BY-PRODUCTS (E.G., AIR AND WATER POLLUTION)
 - GUNK – HARMS PEOPLE WHO LIVE NEARBY
 - EACH TON OF PAPER INCREASES THE AMOUNT OF GUNK BY ONE UNIT
 - ONLY WAY TO DECREASE THE VOLUME OF GUNK IS TO REDUCE THE AMOUNT OF PAPER MANUFACTURED
 - NO LESS-POLLUTION TECHNOLOGIES ARE AVAILABLE
 - NO POSSIBLE TO RELOCATE THE PLANTS TO PLACES WHERE THE GUNK WOULD NOT BOTHER ANYONE

THE INEFFICIENCY OF COMPETITION WITH EXTERNALITIES

- PAPER FIRMS DO NOT HAVE TO PAY FOR THE HARM FROM THE POLLUTION THEY CAUSE
 - PRIVATE COSTS = THE COST OF PRODUCTION ONLY, NOT INCLUDING EXTERNALITIES
 - DIRECT COSTS OF LABOR, ENERGY, AND WOOD PULP
 - BUT NOT THE COSTS COMING FROM THE GUNK
 - THE TRUE SOCIAL COST IS
 - THE PRIVATE COSTS + THE COST OF THE HARMS FROM EXTERNALITIES

SUPPLY AND DEMAND ANALYSIS

EXTERNALITIES

- OTHER EXTERNALITIES
 - TOXIC WASTES THAT LEACH INTO DRINKING WATER
 - URBAN AIR POLLUTION DUE TO TRANSPORTATION, CURTAILING THE ACTIVITIES OF YOUNG CHILDREN
- THESE ARE **DIRECT** EXTERNALITIES
- WE SHOULD ALSO CONSIDER **INDIRECT** EXTERNALITIES
 - ECOSYSTEM EXTERNALITIES
 - AN ACTION CAN WORK ITS WAY THROUGH THE ECOSYSTEM, POPPING UP ELSEWHERE
 - KILLING PREDATORS TO PROTECT CHILDREN AND DOMESTIC ANIMALS...
 - LARGE RODENT INFESTATIONS AFFECTING CROPS AND SANITY
 - DDT DOES NOT KILL BIRDS BUT...
 - THINGS THE SHELL OF THEIR EGGS