

LECTURE 29

COMMERCIAL FIRM AN INTERMEDIARY

The business firm is an intermediary, because it gathers resources to produce a product or service that can be sold at a price suitable for recovering the overall cost of the process.

This is like a Darwinian society, in which success means survival, and failure means elimination.

THROUGHPUT: THERMODYNAMICS AND ECONOMY

The throughput model describes the economy within ~~an~~ an ecological and physical context consistent with the first and second law of thermodynamics.

In simple terms, production is seen as creation of material goods, which are then used up to produce services to the ~~external~~ consumers.

This transformation process leads to high-

entropy residuals. In this sense, a casual interpretation of economics sometimes is referred to as the study of the process of continuously burying ourselves in our own garbage!

EXHAUSTIBLE RESOURCES:

The economy's engine of adaptation to growth with exhaustible resources is through substitution and technological change; for example, the electric car which is a substitute for the internal combustion engine.

POLICY: CONSERVING ENERGY AND ENVIRONMENT

The goal of energy policy is to begin a process that effectively values the environment and energy needs of future generations.

SUPPLEMENTARY CHARGES: The use of supplement ary charges in policy is an instrument of public involvement in market place for the purpose of conserving natural-environment resources.

Naturally, environmentalists regard such charges as an important concept in the policy toolkit.

ENERGY AND POLLUTION CHARGES: Here the regulating authority determines a charge in the form of a tax for each unit of energy used or pollution emitted.

For example, a carbon tax can be viewed as either a carbon emissions tax or a fossil fuel tax.

MARKETABLE PERMITS: The regulating authority auctions a quantity of permits that represents allowable energy use or emissions.

In a general sense, a tax on energy throughput can help correct the shortightedness of markets with respect to future energy resource needs.

Raising current prices of these resources would lead to decrease in the quantities demanded and greater availability of exhaustible resources in the future.

On the demand side, the price of every good and service will be affected in proportion to the energy used in its production and distribution.

Substitutes then become in effect for such high-priced energy, such as sweaters, insulation, insulated glass, higher-efficiency furnaces and automotive engines, lower thermostat settings, car pooling, bicycles, and public transportation.

SUMMARY: In short, pollution and energy taxes achieve three important social purposes:

- Like ordinary taxes, they fund the public sector
- They improve the efficiency of the economy - in efforts to control pollution and reduce throughput of ~~excess~~ energy and material.
- They help to conserve exhaustible resources enabling a ^{smoother} ~~smooth~~ transition from present to future energy technologies