

Donatella Porrini
dporrini@liuc.it

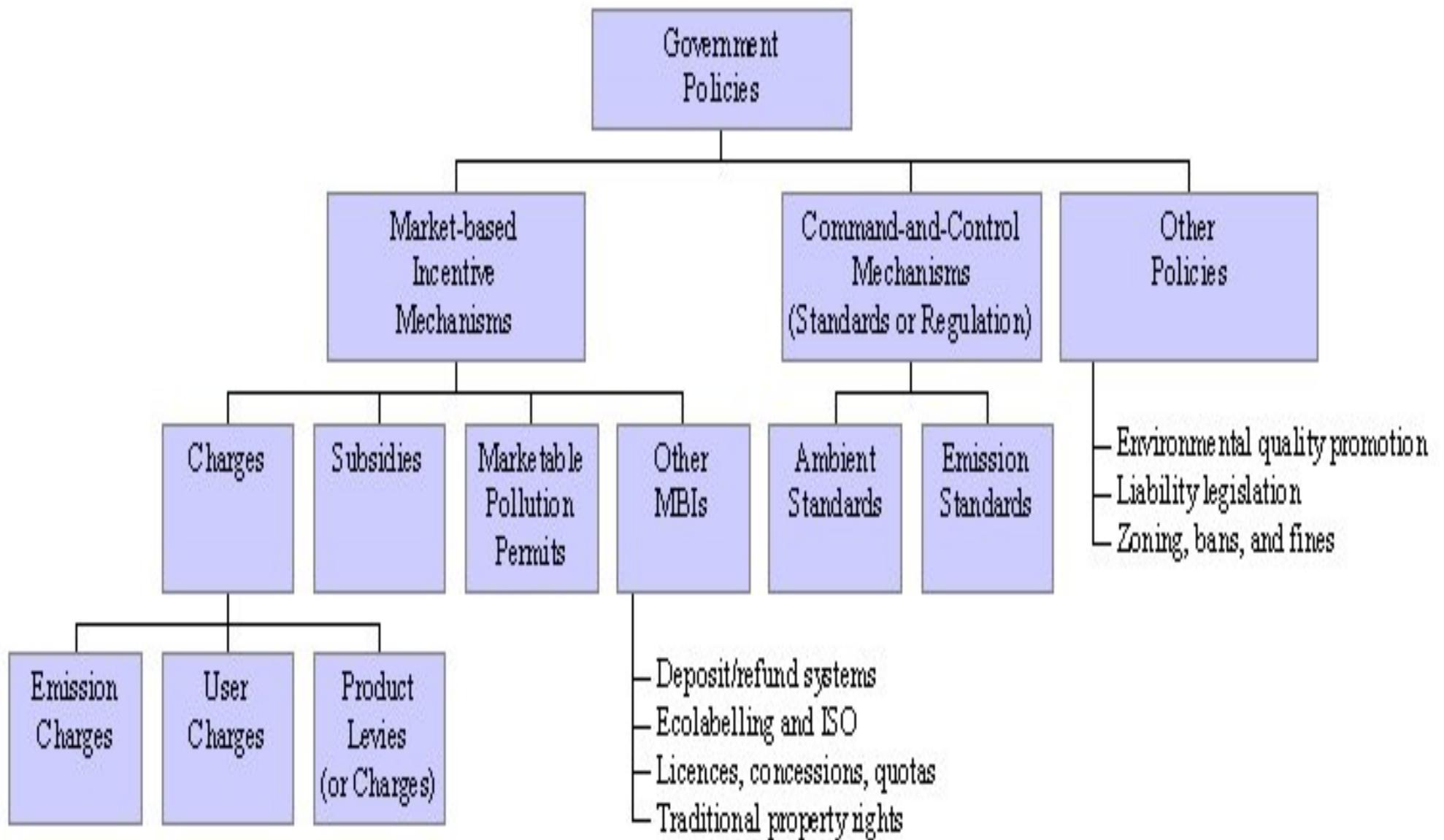
THE COMPARISON BETWEEN DIFFERENT ENVIRONMENTAL POLICIES

20 and 21 February, 2019
LIUC COURSE:
CORPORATE CITIZENSHIP FOR GLOBAL FIRM

THE ECONOMIC APPROACH

- ◆ Public intervention is justified on the base of market failures because of two reasons:
 - 1) the environment appears as a “public good” that may not be appropriated and has no market price;
 - 2) the damage to the environment is a case of “externality”: it is fully or partly a social cost that is not going to be internalized by the parties causing it.

DIFFERENT ENVIRONMENTAL POLICY INSTRUMENTS



COMPARISON BETWEEN "PUBLIC-ORIENTED" AND "MARKET ORIENTED" INSTRUMENTS:

- ◆ The first kind of instruments are characterized by a public agency with a public definition of conduct rules and a public enforcement system;
- ◆ The second are based on market mechanism stimulating indirectly the conduct of the firm and characterized by a private administration and a private enforcement system.

First instruments: **COMMAND-and-CONTROL (CAC)**

Public-oriented instruments, which require the use of a particular technology or the observation of a performance standards, prescribing the maximum amount of pollution that a source can emit.

- ◆ With perfect information, the centralized agency can systematically assess environmental risks in an optimal way.

COMMAND-AND-CONTROL POLICIES

- ◆ Command-and-control (CAC) policies are the most common system of regulation applied in the environmental policies in both the advanced and developing countries.
- ◆ As the name implies, the CAC approach consists of a 'command', which sets a standard, based on the maximum level of permissible pollution, and a 'control', which monitors and enforces the standard.
- ◆ In the US experience, the EPA provides a clear example of regulation by an independent environmental authority.

DIFFERENT COMMAND-AND-CONTROL POLICIES

In general, there are two types of standards:

1 Ambient standards set the minimum desired level of air or water quality, or the maximum level of a pollutant, that must be maintained.

2. On the other hand, an emissions standard specifies the maximum level of permitted emissions, that can be on two types:

2.1 Performance-based standards are the most common type. They stipulate emissions limits that each firm is allowed.

2.2 Technology-based standards not only specify emissions limits, but also the "best" technology that must be used

ADVANTAGES

- ◆ The advantage of centralised agencies is to assure high level of research in terms of measurement of costs and benefits of the different technical preventive instruments.
- ◆ Well-defined standards generate the correct incentive for the firm to act with caution and make the best production and prevention decisions

DISADVANTAGES

- ◆ The disadvantage of centralised agencies is to not be able to immediately follow the technological changes of the different industrial sectors.
- ◆ A big centralised agency can easily be subject to the political influence and to the lobbies pressure (capture)
- ◆ Firms have no incentives to reduce pollution beyond the standard.
- ◆ Penalties for violating standards tend to be too low and enforcement tends to be weak.

Second instruments: MARKET-BASED (MBI or EI - Economic Incentives)

Market-based instruments as regulatory devices that shape behavior through price signals rather than explicit instructions.

- ◆ With a perfect implementation the improvement to environmental quality is obtained at the lowest possible cost.

ONE TYPE OF MBIs: ENVIRONMENTAL TAXES

- ◆ A tax (or charge) is a fee that is imposed on a pollutant in proportion to the amount of the pollutant released into the environment.
- ◆ We have different types of taxes.
- ◆ Similarly to the tax instrument we have subsidies

DIFFERENT TYPES OF TAXES

Taxes may be classified in the following categories:

1. Emission (or effluent) charges is based on the actual amount of the pollutant discharged.
2. Product charges or levies is a mark-up on the price of a pollution-generating product that is based on the amount responsible for pollution.
3. User charges is a fee levied on the user of an environmental resource based on the costs of treating emissions (or effluents) that affect the resource.

ADVANTAGES OF TAXES

- ◆ Taxes give consumers and firms an economic incentive to reduce pollution.
- ◆ Unlike standards, which are applied uniformly to all polluters, charges enable firms to adopt a cost-effective solution to pollution abatement.
- ◆ Compared to standards, there is a stronger incentive for firms to adopt new technology in order to lower the charges they have to pay.

DISADVANTAGES OF TAXES

- ◆ An 'optimum' tax is often difficult to set for certain non-market environmental commodities.
- ◆ Firms could pass on a portion of the tax or charge to consumers in the form of higher product prices.
- ◆ Costs of monitoring the compliance may be high if charges are based on the emission.

SUBSIDIES

- ◆ A subsidy is a payment or tax concession that assists firms to reduce pollution. In that sense a subsidy is the opposite of taxes.
- ◆ The subsidy could be offered in proportion to the per unit reduction in pollution, or it could be offered for the purchase of pollution abatement equipment or technology.

COMPARISON OF TAXES AND SUBSIDIES

- ◆ In theory, both taxes and subsidies should result in the same optimum level of environmental quality. However, there could be the following differences:
- ◆ Where there is unrestricted entry into the industry, subsidies could attract more firms and therefore aggregate pollution could increase in the long-run
- ◆ Subsidising polluters may be seen as socially unjust because some may see this as taking income away from the society

CHOOSING BETWEEN DIFFERENT ENVIRONMENTAL POLICY INSTRUMENTS

REFERENCES:

<http://siteresources.worldbank.org/INTRANETENVIRONMENT/Resources/GuidanceNoteonMarketBasedInstruments.pdf>