TRANSPORT AND REGULATORY POLICY

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DEFINITION OF REGULATION

A regulation consists of rules administered by a government agency to influence economic activity by determining prices, product standards and types, and the conditions under which new firms may in enter industry.

Before getting into regulation per se, there is need to look at the traditional model of infrastructure provision and the evolution of regulation.

- The Traditional Model of Infrastructure provision has been of two types

1. The STATE run monopolies – European Model
2. PRIVATE run monopolies – US Model

In the first model, the state was itself a regulator and in the second the state set up a regulatory framework.

A BASIC ISSUE

WHY REGULATION AT ALL ?

MORE BASIC

Why government intervention at all?

- NATURAL MONOPOLY ARGUMENT
  - UNIT PRODUCTION COSTS FALLING
  - AS A RESULT – COSTS OF ONE PLAYER MUCH LOWER
- EXTERNALITIES ARGUMENT
- DEVELOPMENT ARGUMENT

How Has the Traditional Model Worked?

- IMPLICATIONS OVER A PERIOD OF TIME

(i) HIGH COSTS OF REGULATION IN THE US.

(ii) HIGH COSTS OF GOVT. PROVISION IN EUROPE AND OTHER COUNTRIES.

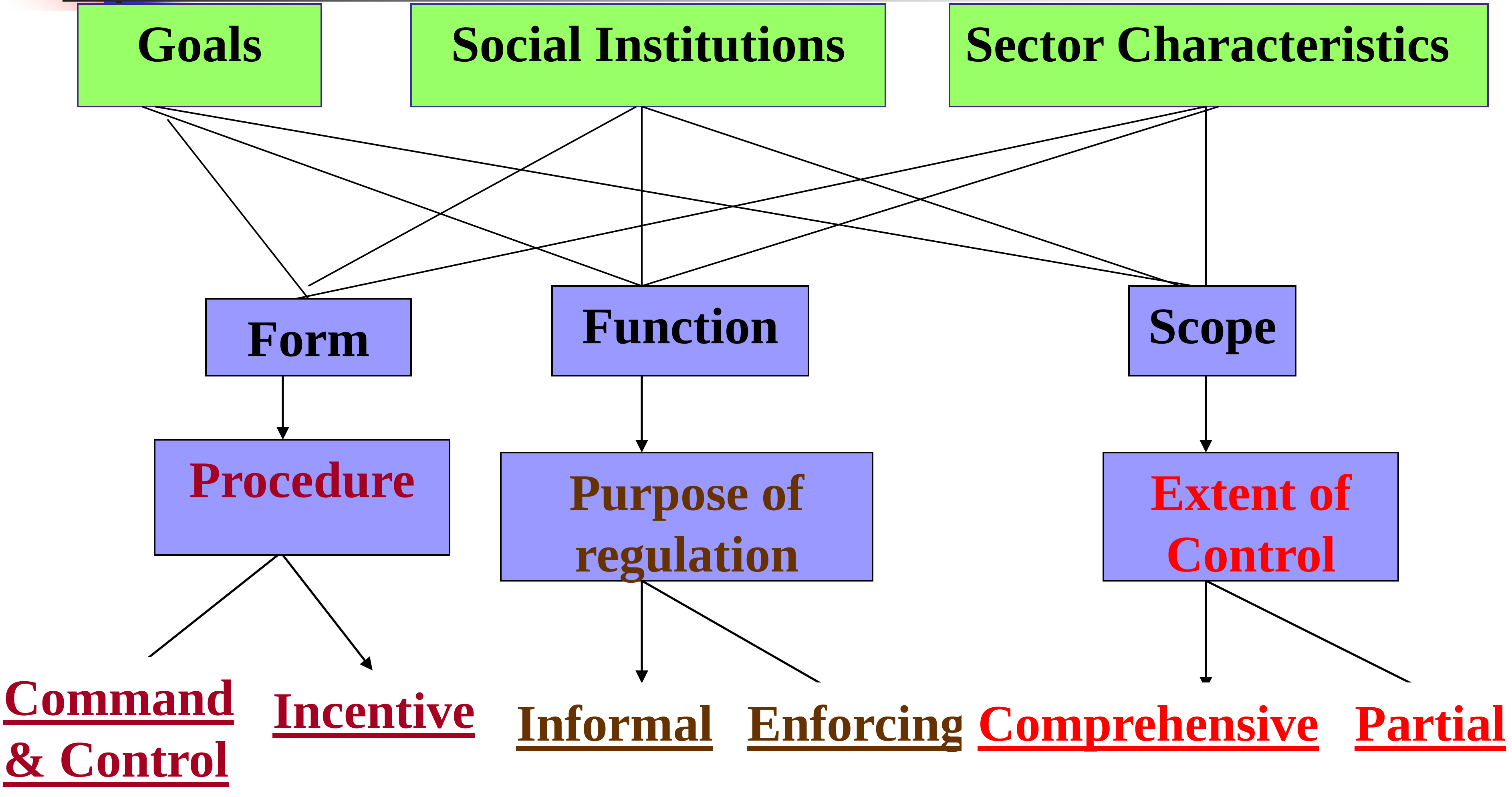
Move towards Deregulation and Privatisation

- CALL FOR DEREGULATION
  - BASED ON THE THEORY OF CONTESTABLE MARKETS
- CALL FOR PRIVATISATION
  - BASED ON THE PRINCIPAL- AGENT THEORETICAL FRAMEWORK.

BUT ONE LESSON LEARNT

AUTONOMOUS AND INDEPENDENT REGULATORY AUTHORITY REQUIRED.

Elements of Regulatory Framework



The form of regulation

Procedures to design and enforce regulatory rules, the nature of these rules and the position of decision making authority in the regulatory arena.

Functions

Refers to its basic purpose-to ensure safety, to secure production at minimum cost, to provide information to consumers.

Scope

Extent of regulatory oversight and control – imposing strict rules on activities or merely suggest guideline.

Two practical rules that regulators use

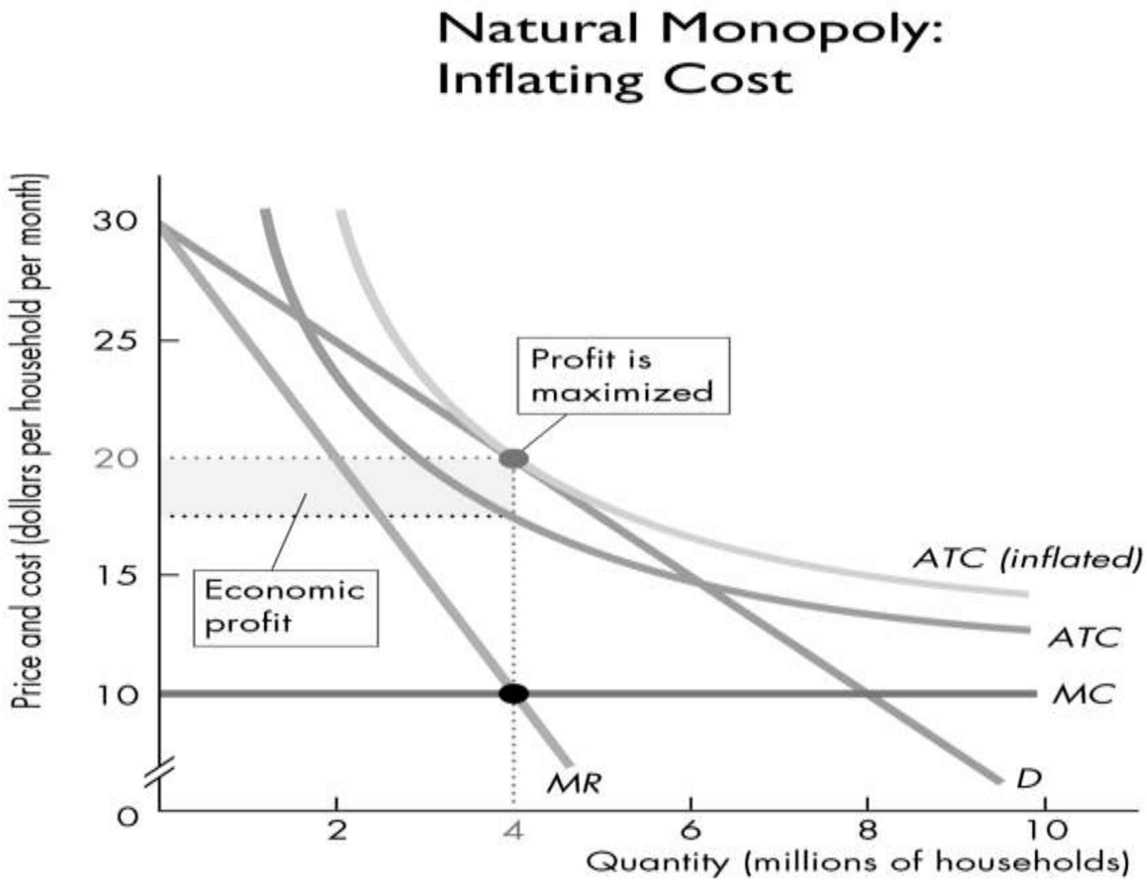
a) rate of return regulation

b) price cap regulation.

- Under **rate of return regulation,** a regulated firm must justify its price by showing that the price enables it to earn a specified target percent rate of return on its capital.
- a) The target rate of return is set at that of a competitive market and with accurate cost observation is this type of regulation is equivalent to average cost pricing.

  b) Managers have an incentive to use more capital than the efficient quantity so that total returns increase. They also have an incentive to inflate depreciation charges and other costs and deflate reported profits.

c) *Figure* shows the maximum economic profit that a firm can earn when its managers inflate capital costs under rate of return regulation.

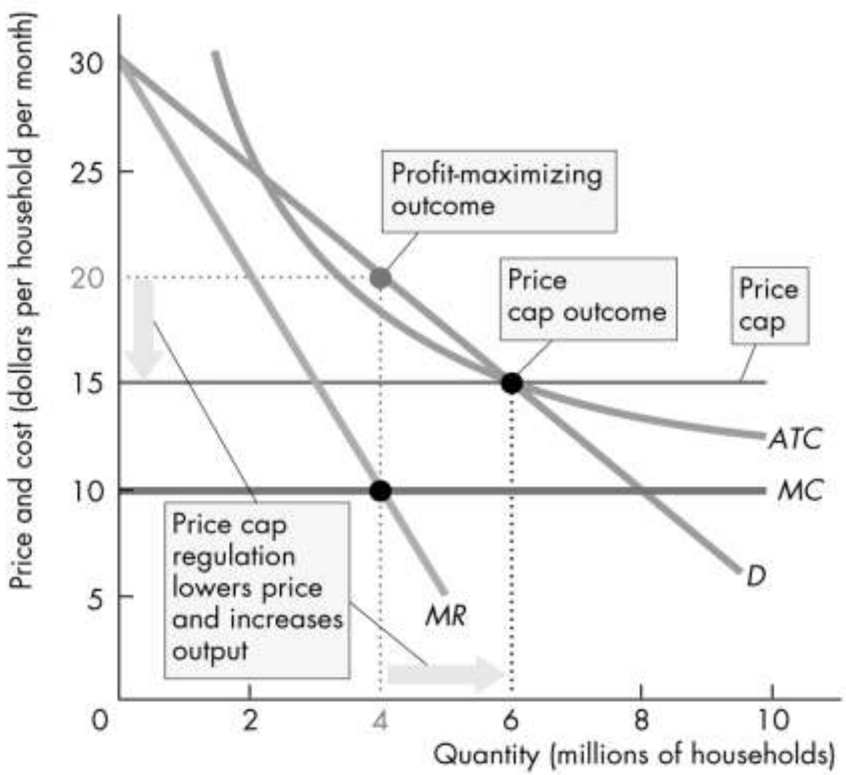


A **price-cap regulation** is a price ceiling-a rule that specifies the highest price the firm is permitted to set.

a) Price cap regulation gives managers an incentive to minimize cost because there is no limit on the rate of return they are permitted to earn.

b) shows the effects of price cap regulation. Price equals the cap price and output is the quantity demanded at the price cap. The firm earns normal profit. (This outcome contrasts with that in a competitive market. In monopoly, the profit-maximizing quantity is less than the efficient quantity and the price cap provides an incentive to increase output to avoid economic loss.)

Price Cap Regulation of Natural Monopoly



Public Interest or Capture in Natural Monopoly Regulation?

1. Whether the public interest theory or the capture theory best describes how most natural monopoly markets are regulated is unclear.

a) A test to determine whether the regulated firm has "captured" the regulator and influenced regulation to favor the firm is to compare the rates of return to capital for regulated industries against that of the rest of the economy.

b) Higher rates of return are evidence in support of capture theory of regulation.

2. *Table* shows the rates of return for regulated monopolies in the electricity, gas and railroad industries and compares these rates to the average rate of return for the overall economy. While there has been some variation over time, there is no overall trend to show a difference in rates of return exist between regulated and unregulated industries.

Rates of Return in Regulated Monopolies

	Years	
Industry	**1962–69**	**1970–77**
Electricity	3.2	6.1
Gas	3.3	8.2
Railroad	5.1	7.2
Average of above	3.9	7.2
Economy average	6.6	5.1

Source: Paul W. MacAvoy, *The Regulated Industries and the Economy* (New York: W.W. Norton, 1979), pp. 49–60.

- Another test is to study changes in the levels of producer and consumer surplus following deregulation.
- a) *Table* shows the gains (losses) in producer and consumer surplus when the railroad, telecommunications and cable TV industries were deregulated.

Gains from Deregulating Natural Monopolies

Industry	Consumer surplus	Producer surplus	Total surplus
	(billions of 1990 dollars)		
Railroads	8.5	3.2	11.7
Telecommunications	1.2	0.0	1.2
Cable television	0.8	0.0	0.8
Total	10.5	3.2	13.7

Source: Clifford Winston, "Economic Deregulation: Days of Reckoning for Microeconomists," *Journal of Economic Literature*, Vol. 31, September 1993, pp. 1263–1289, and the author s calculations.

These results show that railroad regulation hurt both producers and consumers, and that regulation in the other two industries mainly hurt the consumer.

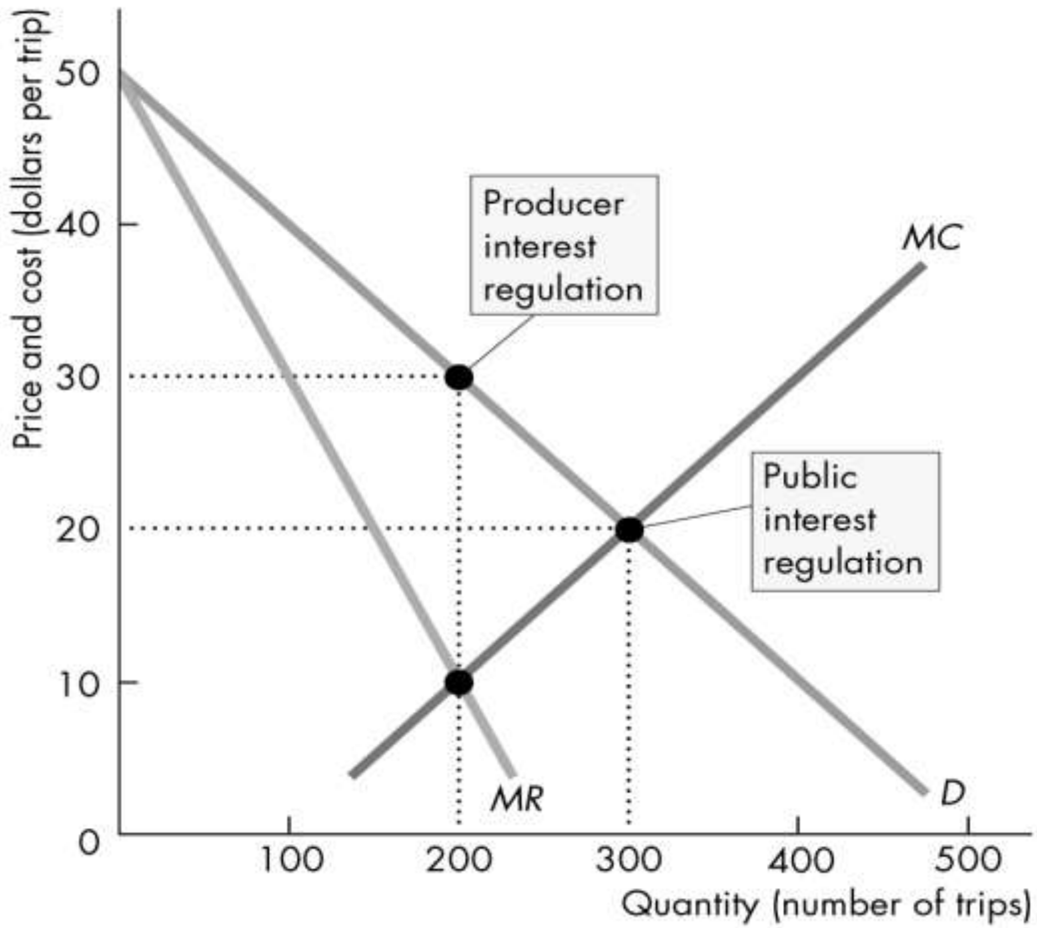
Cartel Regulation

1. A *cartel* is a collusive agreement among a number of firms that is designed to restrict output and achieve a higher profit for cartel members.

2. Cartels are illegal in the United States and in most other countries.

- 3. A cartel that acts like a monopoly earns maximum economic profit, but there is a strong incentive for each member of a cartel to cheat on the cartel arrangement

Collusive Oligopoly



a) If the regulation is in the public interest, price and quantity will equal their competitive levels and the outcome will be efficient.

b) If the cartel captures the regulator, it uses regulation to prevent cheating and price and output equal their monopoly levels and the outcome is inefficient.

. **Public Interest or Capture in Cartel Regulation?**

1. *Table* shows the rates of return on investment for the airlines and trucking industry as compared to the economy as a whole.

Rates of Return in Regulated Oligopolies

Industry	Years 1962–69	1970–77
Airlines	12.8	3.0
Trucking	13.6	8.1
Economy average	6.6	5.1

Source: Paul W. MacAvoy, *The Regulated Industries and the Economy* (New York: W.W. Norton, 1978), pp. 49–60.

a) The returns after deregulation of these industries decreased considerably and returned to the economy average.

b) This evidence supports the capture theory of regulation.

2. *Table* shows the change in consumer and producer surplus after the airlines and trucking industries were deregulated.

Gains from Deregulating Oligopolies

Industry	Consumer surplus	Producer surplus	Total surplus
	(billions of 1990 dollars)		
Airlines	11.8	4.9	16.7
Trucking	15.4	–4.8	10.6
Total	27.2	0.1	27.3

Source: Clifford Winston, "Economic Deregulation: Days of Reckoning for Microeconomists," *Journal of Economic Literature*, Vol. 31, September 1993, pp. 1263–1289, and the author s calculations.

a) While consumer surplus increased in both the trucking and airlines industries, producer surplus decreased in the trucking industry.

b) This evidence supports the capture theory of regulation.

THANK YOU !