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Industrial policy

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Economics

Economics is the study of the **economic system**, namely:

- **Actors** (enterprises, consumers, banks, public administrations, …) who carry out production activities and give rise to economic-financial exchanges (=> interdependencies due to the division of labor)
- **The allocation of resources** (e.g. labour and capital) between alternative uses

From this point of view, **economics** seeks the "best" way of organizing the **economic system**: different ways of organizing the economic system (e.g., **market economy, command economy, mixed economy**) can give rise to different results in terms, for example, of: what to produce, efficiency in the allocation of resources; distribution of production and accumulation of wealth over time.

Positive vs. Normative

Positive (descriptive) analysis: it is aimed at describing the economic system and its results. It is the 'lens' through which the world is represented, highlighting the founding elements, the theoretical concepts and their connections, which explain and interpret the present and determine the future.

Normative analysis (prescriptive): it is aimed at prescribing how reality **should be** and the conduct to be adopted in view of this objective (=> **value judgments**). It studies therefore the interventions of governments (local, national and supranational) on the economic system, that is, the **economic policy**.

L'economista Federico Caffè (Pescara, 6 gennaio 1914 – Roma, 15 aprile 1987)

Federico Caffè (1978), economic policy is "… the discipline that seeks rules of conduct tending to influence economic phenomena in order to orient them in a desired direction".

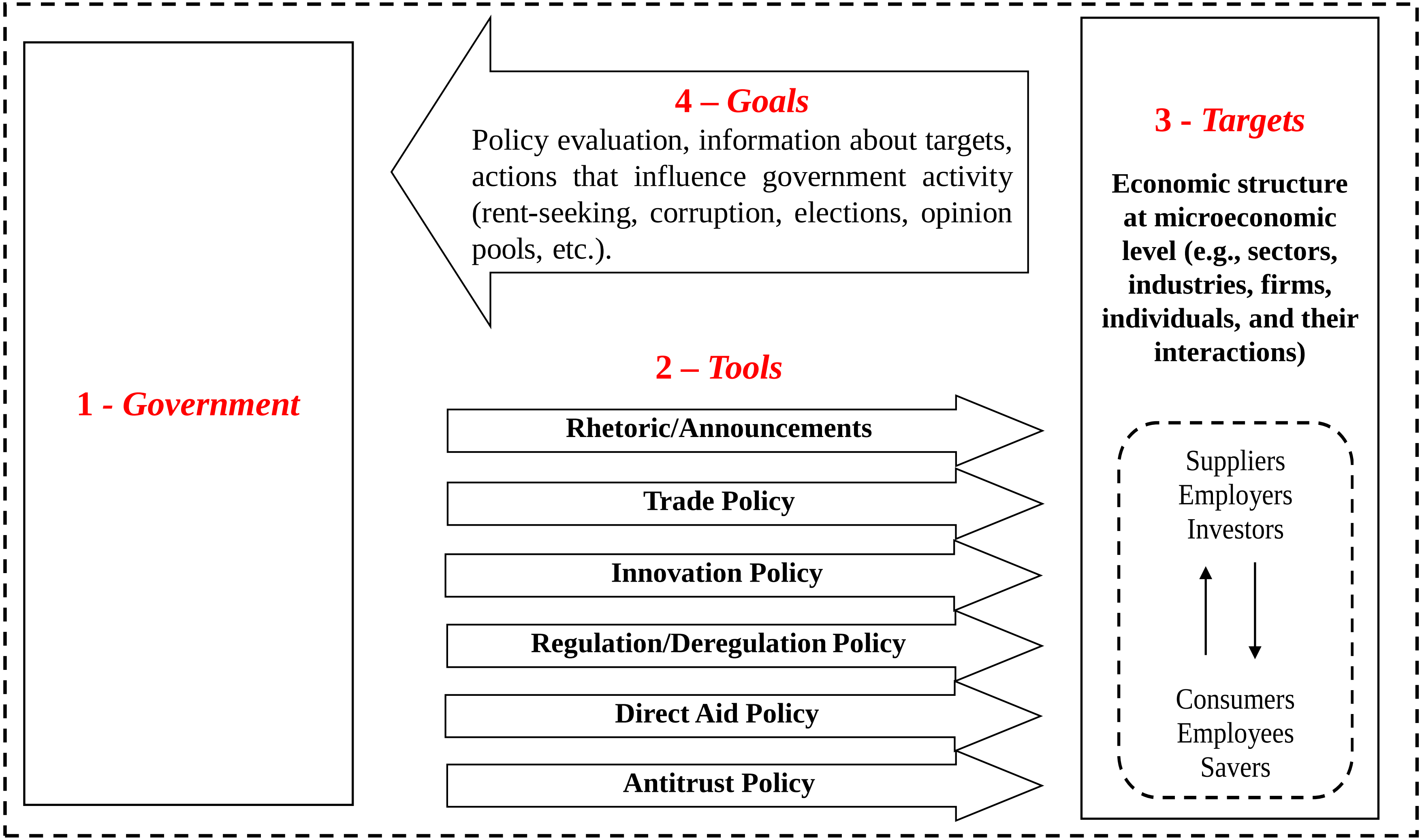
Industrial Policy

Within economics, the area of interest of industrial policy falls on:

- **Normative** => government intervention, economic **policy**
- **Microeconomic** => aimed at targeting a particular **industry** (deemed to be of national or local interest) and the behavior of individual economic agents (e.g. businesses and consumers) operating within it.

INDUSTRIAL POLICY is intuitively the study of government interventions on industry, concerning actions aiming to modify the *economic structure* (e.g., sectors, industries, firms, individuals, and their interactions), and its performance.

Industrial Policy's dimensions



Industrial policy … a controversial issue!

'Any random collection of six economists is sure to produce at least a dozen different opinions on the subject, not least because many economists have trouble in reconciling their gut reaction that industrial policy should not exist with the obvious fact that it does' (Gerosky, 1989, p.20)

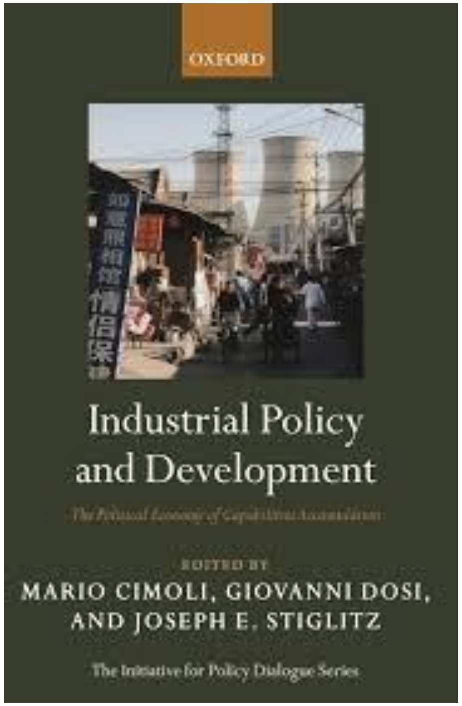
There is no accepted definition of industrial policy!

IP's definitional issues concerns:

- grade of selectiveness (vertical *vs.* horizontal policies)
- targets (manufacturing industries *vs.* all economic sectors)
- goals (economic growth *vs.* wide-ranging objectives)
- tools (direct subsidies and incentives *vs.* inclusion of other tools such as trade policy, science and technology policies, educational policy, public procurement, etc.)

Definitions of Industrial Policy

Narrow notions of industrial policy focus on *manufacturing* industries as targets of *vertical* policies, with particular regard to *economic growth* goals.



A broad notion

Industrial policy comprises policies affecting "infant industry" support of various kinds, but also trade policies, science and technology policies, public procurement, policies affecting foreign direct investments, intellectual property rights, and the allocation of financial resources. Industrial policies, in this broad sense, come together with processes of "institutional engineering" shaping the very nature of the economic actors, the market mechanisms and rules under which they operate, and the boundaries between what is governed by market transactions, and what is not.

[Cimoli et al., 2009, pp. 1–2]

Reasons for I.P. intervention

- **Market** (the "invisible hand") can produce **efficient** and **socially desirable results** ... remember how perfectly competitive markets (under specific conditions) produce efficient resource allocation:
  - competitive pressure pushes companies to reduce waste and improve production, only companies with the **most efficient production processes** survive (P = minimum AC)
  - the **individual freedom** of consumers to choose which goods to buy defines **what to produce** and in what quantities
  - the result is **allocative efficiency**
- **BUT** in some circumstances the market can also produce **inefficient** (e.g. monopoly) or **socially unfair results** (e.g. those unable to compete are marginalized)
- De facto, in reality, many governments intervene to **change the market allocation of resources** in an attempt to **correct inefficiencies** or **mitigate inequalities** (e.g., they invest public resources in R&D to make their economic systems competitive, make education compulsory, offer re-employment programs for the unemployed or protection and assistance for the elderly and the weak, redistribute wealth, ...)
- The result is a **"mixed" economic system**: the allocation of economic resources is decided in part by **individual actions of businesses and consumers** in the markets and in part on the basis of **political "agreements"**, to promote, through the public budget, goods and services deemed strategic or desirable for the community as a whole, or greater efficiency.

Reasons for I.P. intervention

The debate is old and rich ... but at least two different perspectives may justify in some circumstances industrial policy:

1) Correcting "market failures" (=> search for resource allocation that reflects the result of properly functioning markets and related individual choices)

Do markets always operate **efficiently**?

No, in certain circumstances market mechanism fails and in these cases the government is called to correct market failures (relevant cases: public goods, externalities, non-competitive markets, information asymmetries)

2) Goals that go "beyond market efficiency" (=> allocation of resources defined according to processes not inspired by the market efficiency and based on collective choices)

Is market efficiency always able to lead the economic and social system towards **optimal and desirable conditions**?

No, the government in some cases is called to intervene regardless of market efficiency

1 - Correcting "market failures"

Circumstances in which markets are unable to lead the system towards an **efficient allocation of resources**.

In these cases, the literature on market failures has addressed the debate on the possible corrections that industrial policy intervention can offer.

At least these issues deserve to be addressed:

A. **non-competitive markets**

B. **externalities**

C. **public goods**

D. **information**

A. Non-competitive markets

Some industrial sectors may depart considerably from the "ideal" case of a perfectly competitive market (oligopolistic and monopolistic markets) and may require public intervention to prevent or mitigate the negative effects of the **lack of competition** and **high market concentration**. Two main reasons can be traced back to why markets move away from perfect competition.

1) Natural reasons (*natural monopoly*): the structural conditions of the market - given the technology and the level of demand (**economies of scale**) – entails that efficiency is guaranteed if a **single producer** satisfies all the demand.

However, the monopolist - even if natural - will offer a **smaller quantity of goods** at a **higher price**, thus causing a loss of welfare for the community.

Possible solutions: public production, concession / regulation, increasing *contestability* of market

2) Strategic reasons: strategic attempts by firms in a market to modify the existing competitive structure (**monopolization attempts**, **abuse of dominant position**, **barriers to entry**, **collusion and cartels**).

Possible solutions: antitrust (USA), competition policy (EU).

A. Competition policy (Antitrust)

Antitrust policies (or **competition policies**) aim to prevent or mitigate the negative effects of the lack of competition (eg higher market prices). They promote competition, control and possibly sanction **abuses of dominant position** and market power in the name of **efficiency** and in the **interest of consumers**. The logic is to promote competition as an objective to be protected in the name of the **public interest**.

THREE MAIN AREAS OF THE INTERVENTION:

(1) Abuse of market power by a dominant firm (incumbent) against rival competitors already present on the market and / or potential entrants and final consumers.

(2) Mergers and acquisitions, concentrations aimed at establishing dominant positions and possible abuses (although they may find strategic justifications related to the efficiency of the production organization and competitiveness)

(3) Practices restrictive of competition, through agreements and coordination practices through which two or more companies reach or consolidate dominant positions and possible abuses (e.g., predatory pricing, vertical restraints, ...).

A. Competition policy (Antitrust)

However, **high market concentration does not always have negative effects** and must be countered. Antitrust authorities assess on a case-by-case basis whether the high market concentration is detrimental to the public interest.

Consider:

The contestability of market: it is the regulatory force of **potential competition**, when entry and exit in a market do not involve costs. Any extra profit attracts other companies and is progressively canceled.

National champions: competition between nations is understood as a fight between champions who interpret the national interest. The high concentration on the national market is functional to competitiveness on international markets.

Are all sectors the same? Infrastructure, raw materials, inputs, water, police, media, etc. => sectors that tend to **natural monopolies** operate efficiently in the presence of high concentration (e.g., Railways).

B. Externalities

The activity of an actor generates **spillovers** that unintentionally have an effect (positive or negative) on the activity of other individuals. Normally positive externalities are not remunerated and similarly it is difficult to pay a cost for the production of negative externalities.

The market fails and does not guarantee efficient outcomes. Indeed, it is probable that there will be an **overproduction of goods with negative externalities** and an **underproduction of goods with positive externalities**.

E.g.: pollution

Possible solutions: The public entity offers goods that have positive externalities at subsidized prices; supports (with subsidies, tax relief) those who generate positive externalities; discourages those who produce negative externalities; protects the rights of those who generate positive externalities.

CASES OF INTEREST for industrial policy: Innovation policy; Regulatory policies (eg environmental reasons); Local development policies (Marshallian industrial atmosphere).

C. Public goods

Goods characterized by:

non-rivalry in consumption (the consumption of A of a good X does not prevent B from consuming the same good X): the enjoyment of the benefits deriving from the consumption of the good by an additional individual does not involve additional costs.

non-excludability: it is not technically or economically possible to exclude those who do not pay for the use of the public good.

For example: port lighthouse.

Since the good is available without paying, there is no incentive for individuals to declare how much they would be willing to pay for it. This situation favors the emergence of free-riders and will lead to a situation where markets will NOT offer **the optimal** and **socially desirable** level of **public goods**.

Possible solutions: the public entity can intervene by offering the optimal amount of public goods (by taxing individuals).

CASES OF INTEREST for industrial policy: Failure of the knowledge market: non-rivalry in consumption (reproduction costs tend to be zero) and non-excludability (non-complete appropriability of the benefits by the person who produces it). Research, innovation, technical and scientific progress are therefore often promoted through public research, patents, subsidies, tax relief.

D. Information

INCOMPLETE INFORMATION and UNCERTAINTY

Issues that can lead to undesirable outcomes. EXAMPLES:

(1) asymmetries between producers;

(2) asymmetries between producers and consumers;

(3) evaluations of the alternative investment entrepreneur;

(4) information asymmetries in the credit market.

Possible industrial policy solutions: the public entity can intervene by offering the optimal amount of information

CASES OF INTEREST for industrial policy: Failure of the credit market; investment failures; adverse selection of the "best" products.

Policy implications for: research, innovation, investments (risky, strategic or basic); networks; information for consumers ...

IN SHORT, in the MARKET FAILURES approach

THE GOVERNMENT

CAN INTERVENE ONLY IF THE MARKET FAILS

2 - Goals that go "beyond market efficiency"

Looking at historical practices, industrialized countries developed mainly thanks to government intervention. In reality governments intervene well beyond market failures: **infant industries promotion, promotion of "national champions" by encouraging mergers and acquisitions, public procurements, bailouts, policies for science and technology, protectionism, …**

"3 Rules of Development:

1) All countries develop and sustain high per capita incomes through industrialisation

2) Most infant industries develop through protection

3) Anyone who says otherwise is lying"

[Nicolas Kaldor, 1967]

2 - Goals that go "beyond market efficiency"

Is market efficiency always able to lead the economic and social system towards optimal and desirable conditions?

Example 1: when national firms are unable to survive to competition – probably because they are unable to produce at the highest level of efficiency – society suffers unemployment, marginalization, social conflicts, and other undesirable outcomes.

=> Many governments intervene in market dynamics to mitigate inequalities and disparities created by the capitalist economic system and avoid social turmoil.

Example 2: The cigarette market is basically able to work efficiently: price defines the right level of demand and supply.

=> Yet, many government around the world intervene by increasing cigarettes price and by promoting massive campaigns to discourage cigarette consumption in the name of *social value* related to health.

De facto governments intervene even when markets are working efficiently

2 - Goals that go "beyond market efficiency"

The government, if necessary, can intervene **independently of market failures** (even at the cost of market efficiency). From this point of view, **the desirable social result** does not necessarily correspond to the sum of the individual interests expressed in the market.

These interventions deal with policies aimed at influencing and guiding the process of ***structural change*** of the national or local economy (i.e., of changing the qualitative and quantitative characteristics of the sectors and other components of the economic system)

=> this latter perspective leads the government to define sectoral priorities and to **protect and promote key industries**

At least the following are the issues to be addressed:

A. **promotion of "strategic" objectives**
B. **"paternalistic" approach**
C. **promotion of a particular model of "development"**

A. Promotion of "strategic" objectives

The government defines **strategic objectives** of national / regional / local interest: employment, growth, competitiveness of the industrial system, …

Main features:

=> **Dynamic perspective**: government has a **long-run vision** on the evolution of industrial system, the industrial structure the government wants to build (e.g., Chinese five-years plans)

"What we need is not a three-month plan, or even a three-year plan; we need a long-term American strategy, based on steady, persistent effort, to reverse the forces that have conspired against the middle class for decades. That has to be our project." (Obama B., 2013)

=> **Selective/vertical approach:** particular **strategic industries**, firms, regions, etc. are targeted and selected by the government as "winners" (i.e., to be promoted in national industrial system)

A. Strategic objectives: the relevance of the MANUFACTURING sectors

The ability of manufacturing of creating higher income compare to agriculture is base on:

⇒ higher labour productivity

⇒ higher economies of scale

⇒ more rapid technological change and innovation

⇒ higher upstream and downstream linkages

B. "Paternalistic" approach

The government acts "**as a father**" and can intervene:

(1) In the production of "**merit goods**" and "**demerit goods**": those goods that society, distinct from the preferences of individual consumers, wishes to encourage or limit.

Ex: education, culture, internet, alcohol, cigarettes, ...

(2) In those cases in which society **does not deem market transactions acceptable**: it is decided to remove such activities from the market domain and conduct or regulate them directly.

Ex: police, blood or organ donation, ...

C. Promotion of a particular model of "development"

Industrial policy as a tool for promoting a particular **model of DEVELOPMENT** of a nation, a region, ... extensive literature on the concept of development (see in particular the contributions of **Amartya Sen**)

"Paternalistic" approach => "top-down": development goals are defined by a political elite

Promotion of "development" => "bottom-up": development objectives are defined by the **capabilities** (freedom of choice) **of civil society**, the individual as a "center of action", which actively participates in social and political processes and economic => promoting development means favoring the **expansion of individual capabilities**, which define with bottom-up processes the model of society in which one wishes to live (**key industries**: education, culture, internet, etc.).

Two main features of this approach:

(1) Development is NOT the **final state of a process** to which all societies naturally tend, but it depends on how each community, with its own capabilities, defines the model of society in which it wishes to live => development is a **normative concept** that must be discussed on the basis of **value judgments**

(2) "**Development**" and not merely "growth". **Beyond GDP growth**, development is a **multidimensional concept** that looks at multiple aspects of people's lives (eg Human Development Index) and is focused on how they really live (**people-centered**), not on what they have.

"Beyond market efficiency": reasons for promoting strategic industries

- Ability to produce **high income** or to compete in international markets: ***Latent comparative advantage*** => promotion of existing sectors (Lin, 2010, 2012)
- Ability to activate a process of **overall growth of the economy:** ***Upstream and downstream linkages*** => development of the industrial structure as a whole (Hirschman, 1958)
- Ability to **protect employment:** ***Too big to fail*** => social and economic cost of structural change.
- Ability to promote **"meta-economic" goals**: promoting ***merit goods*** **(**education, health, environment, …) and discouraging ***demerit goods*** (alcohol, cigarettes, …), ***capabilities-expansion*** perspectives, …
- **Other?**

Pros and Cons of industrial policy vs. "free markets"

Pros

- Development of a national productive system able to create employment and development
- Reduction of competitive pressure for firms
- More secure standard of life (no contraction of wages and worker rights under competition)

Cons

- Restricting imports (higher prices, lower quality): less choice
- Systemic protectionism
- Lack of incentives to improve efficiency

Real world problems (e.g. unemployment, low income, pollution, …) require a virtuous compromise between promotion and protection of national/local economic structure *vs.* market efficiency and competition

<u>IN SHORT in the APPROACH "beyond market efficiency"</u>

THE GOVERNMENT CAN INTERVENE EVEN IF THE MARKET DOES NOT FAIL

… many rationales for intervention, many interests at stake!
The political economy perspective

Identification of strategic industries is essentially a **political problem**: it depends on the needs that a particular society has to address in a particular historical context

- "**Political economy**" (as different approach compared to mainstream **neoclassical Economics**) studies the **historical interaction** between **economic and political process**, challenging with a “real-world” perspective the neoclassical economics.
- Political economy attempts to explain how conflicts, power balances and processes of securing political order affect economic structure and its development; but also how technological change and economic development affect social conditions, political processes at the local, national, and global levels.

Government failures

From a political economy perspective, understanding the development of an organization entails a historical investigation of who the relevant actors of the system are, their opportunities and objectives, how they **interact and prevail** over others, and the **institutions** that they support to coordinate resource allocation towards **structural change** (=> relevance of **historical case studies**)

=> this involves agreements or conflicts of power within the company that could generate political decisions that reflect partial interests and not the general interest of the community

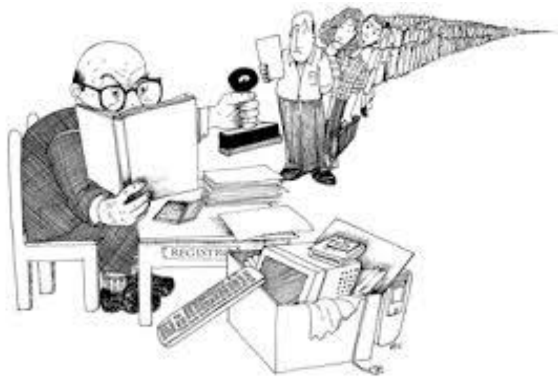
=> **government failures**, that is, a failure in promoting the *general* interest of a society

Government failures

Regardless the goals … the government can produce a result even worse than the expected benefits

1) Failure in policy goals definition:

- Pressure groups/lobbies (with different "voice" and ability to organize themselves)
- Self-seeking bureaucrats and politicians that can be budget maximizers, oriented to short-term goals (opinion polls that guide political consensus), corrupted, ...



2) Rent seekers: society spends resources for getting a rent, not for profit-seeking activities (e.g. innovation).

3) Cost of information: government obtains and processes the information with costs that overcome the benefits.

IN SHORT, CRITICISM OF THE INTERVENTION:

INDEPENDENTLY OF THE REASONS FOR THE INTERVENTION (market failures, strategic objectives, etc.)

THE GOVERNMENT MAY NOT INTERVENE AS THE COSTS OF THE INTERVENTION MAY BE GREATER THAN THE BENEFITS OF THE INTERVENTION

Is it possible to mitigate government failures?

Transparency and Participation: using information technologies for improving participation and monitoring policies

Good Public Management: investing to improve public management, efficiency and effectiveness of PA (training, management control, ...)

Good Policy Evaluation: using techniques for measuring performance and impact of policies.

TO RECAP

Market

The free functioning of the market can produce an efficient and socially desirable outcome.

Market Failures approach

the market can sometimes fail (externalities, public goods, …) and in these cases the government can intervene to correct this failure.

Beyond market efficiency

regardless of the market's ability to guarantee an efficient outcome, governments can still intervene in some circumstances (strategic objectives, development, …).

Government failures

However, the government, regardless of the reasons that motivate its intervention, when it intervenes it can fail (information, rent-seeking, ...) and this failure can make preferable to accept non-intervention.

Look for possible remedies for government failures

If the market failure is correctable, the government failures are correctable too (remedies, evaluation…).