

Some key economic concepts

Some fundamentals of welfare economics

- Welfare economics has been dealing with the issue of resource allocation for a long time (end of 19th century).
- It is critical to understand the foundations of welfare economics in order to situate current debates in a coherent manner.
- Important to be acquainted these notions and concepts of welfare economics, (a) in order to understand the “way of thinking” and (b) because all these concepts pervade all economic tools currently used in policy-making

**Pareto and
Kaldor-Hicks
criteria:**
How do
economists
judge
interventions?

- The notion of “**status quo**”: the present equilibrium
- Pareto efficient = “*if at least one person is made better off and nobody is made worse off*”.
- An intervention therefore not efficient if someone made worse off.
- Under this criteria, **most interventions would be considered inefficient/ineffective:** second-best solutions?
- Kaldor/Hicks: If the benefits of the “winners” outweigh the losses of the “losers” and there can be potential compensation, then an intervention can be considered as a societal improvement. **However, often the case that no actual compensation provided!**

The notion of opportunity cost

Usually people think of costs and benefits of an activity as straightforward to understand. However, there are some critical subtleties.

Usual Definition: *“The cost of an alternative that must be forgone in order to pursue a certain action. Put another way, the benefits you could have received by taking an alternative action.”*

People think of this everyday! Examples

The objective: Establishing whether scarce resources are used in the most efficient manner i.e. for private or public decisions.

Example of application

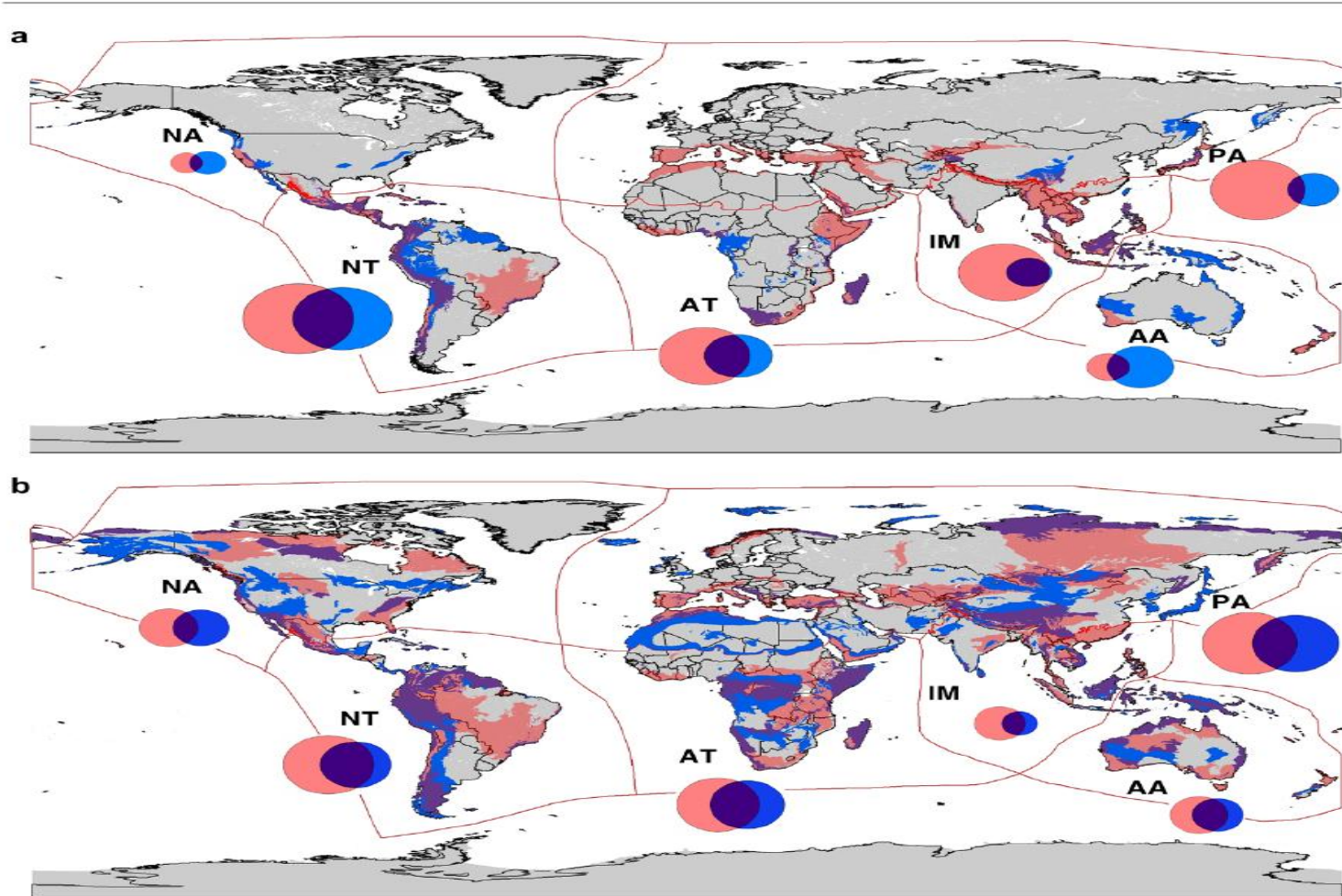
How it applies to environmental policies or project:

At a project level:

- The opportunity cost of time (e.g. community-based decisions)
- Foregone income as a consequence of environmental protection
- Arbitrage: MPA or fishing quotas?

At a policy level:

- Opportunity costs of protected area networks
- Determining Cost Effective protection spots?



The notion of transaction cost

Definitions:

“The cost associated with exchange of goods or services and incurred in overcoming market imperfections. Transaction costs cover a wide range: communication charges, legal fees, informational cost, etc.”

“In economics and related disciplines, a transaction cost is a cost incurred in making an economic exchange.[...] Transaction costs consist of costs incurred in searching for the best supplier/partner/customer, the cost of establishing a supposedly "tamper-proof" contract, and the costs of monitoring and enforcing the implementation of the contract.”

“

The notion of externalities

Definitions:

“An externality is an effect of an action by one party on others who did not have a choice and whose interests were not taken into account.”

“A consequence of an economic activity that is experienced by unrelated third parties. An externality can be either positive or negative.”

We should add: “...a consequence of an economic activity that is experienced by unrelated third parties who did not consent for the transaction or activity to take place.”

While “mainstream” economists think “externalities” as an *exception*, they are, in fact, a “*rule*” in the socio-economic world. Externalities drive **market failures, defined as situations where the market fails to reflect impacts of transactions on welfare.**

The economy

HBOS
Jan 2008 - Oct 2008
Share price (£)



RBS
Jan 2008 - Oct 2008
Share price (£)



SOURCE: Bloomberg

The environment



People



Examples of application



Positive externalities

- Investment in education can present positive returns both to the individuals directly benefiting from education and to society as a whole (i.e. people not benefiting directly from higher education).
- Fishing activities can indirectly support local communities' jobs and socio-economic livelihoods.

Negative externalities

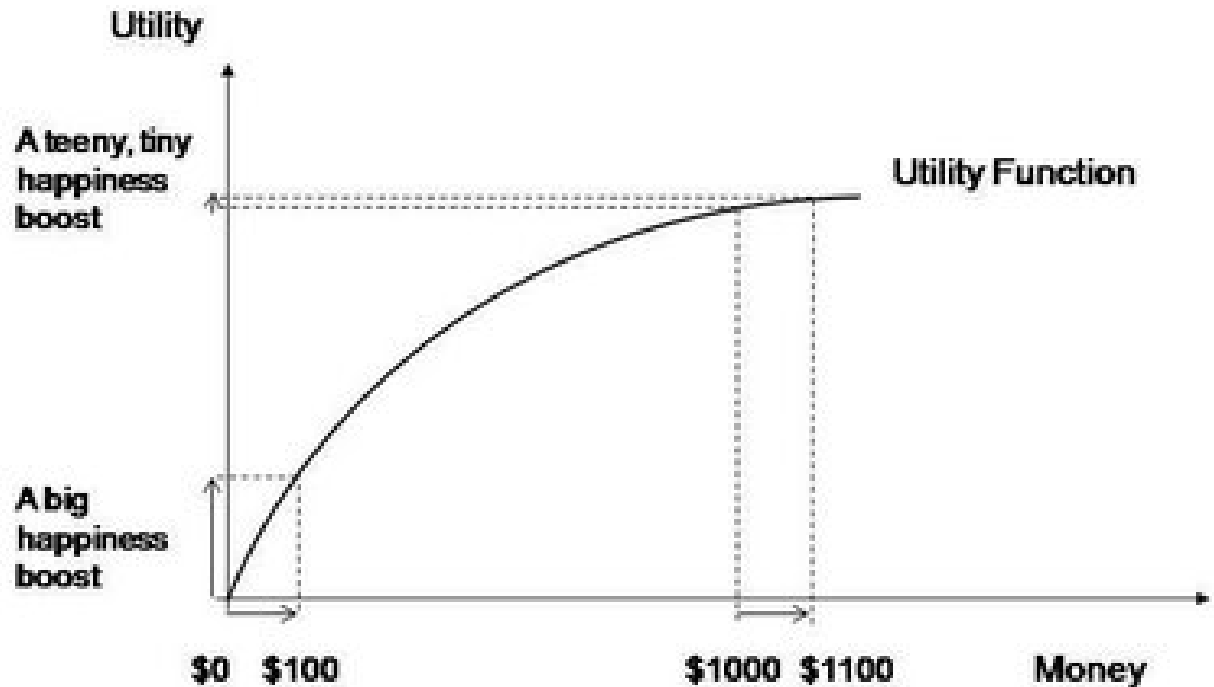
- Adverse impacts of rural development programmes on nearby ecosystems and water resources
- Impacts of destructive fishing on local tourism via degradation of marine ecosystems

Exercise:

Think of the externalities of an intervention (in pairs for 10 minutes, feedback to group).

Economists and intra- generational equity

By and large, economists do recognize the impacts of equity on broader welfare



In practice, however, this is rarely considered in economic analyses of projects or policies!

Economists and inter- generational equity:

Discounting and time preferences

- Economists are interested in the Present Value of things, i.e. the value of future costs and benefits expressed in “current” money
- Discounting can be simply defined as the opposite of compounding (interest rates).
- It is the rate at which we **reduce** future benefits and costs to express them in Present Value
- Economic theory broadly assumes that individuals have a preference for the present.
- Future income less valuable than present.
- Why does this matter for welfare economics?
- Can this individual/private (observed) behaviour can be transposed to society (public) as a whole...and if yes, under which conditions?

Example of application

Assume a hypothetical reef conservation programme, aiming to preserve and restore key ecosystem functions, including fisheries, over a time span of 10 years.

This programme presents a direct upfront investment, including relocation of some fishermen into other activities (e.g. setting micro-businesses) and ongoing (management) costs.

The programme also presents ecosystem benefits, notably in terms of replenished fish stocks, which increase as the project starts to have effects on the quality of the reef's ecology.

Policy-makers want to know whether the costs of conservation outweigh the benefits.

MSEProject Workshop, December 2013

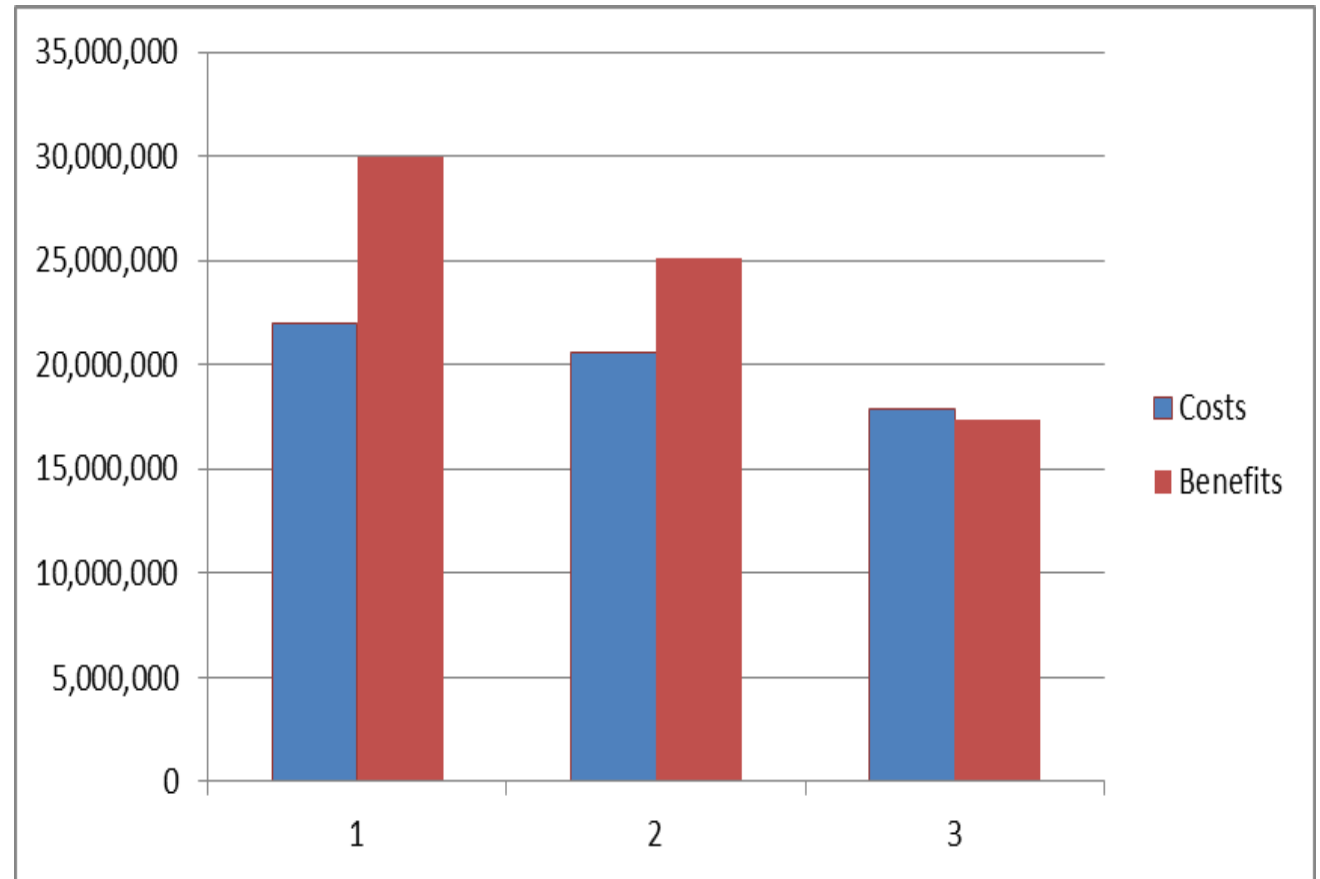
| Years | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | TOTAL |
|-------------------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| Costs | 10,000,000 | 8,000,000 | 500,000 | 500,000 | 500,000 | 500,000 | 500,000 | 500,000 | 500,000 | 500,000 | 22,000,000 |
| Benefits | 1,500,000 | 2,000,000 | 2,500,000 | 3,000,000 | 3,500,000 | 3,500,000 | 3,500,000 | 3,500,000 | 3,500,000 | 3,500,000 | 30,000,000 |
| PV Costs (3%) | 9,708,738 | 7,540,767 | 457,571 | 444,244 | 431,304 | 418,742 | 406,546 | 394,705 | 383,208 | 372,047 | 20,557,872 |
| PV Benefits (3%) | 1,456,311 | 1,885,192 | 2,287,854 | 2,665,461 | 3,019,131 | 2,931,195 | 2,845,820 | 2,762,932 | 2,682,459 | 2,604,329 | 25,140,683 |
| PV Costs (10%) | 9,090,909 | 6,611,570 | 375,657 | 341,507 | 310,461 | 282,237 | 256,579 | 233,254 | 212,049 | 192,772 | 17,906,994 |
| PV Benefits (10%) | 1,363,636 | 1,652,893 | 1,878,287 | 2,049,040 | 2,173,225 | 1,975,659 | 1,796,053 | 1,632,776 | 1,484,342 | 1,349,402 | 17,355,312 |

Discount rate
can critically
determine
policy
decisions

1 = 0% dr

2 = 3% dr

3 = 10% dr



What you should “take home” with you

1. The higher the discount rate, the lower the rationale for undertaking interventions having a long-term horizon
2. High discount rates tend to favour immediate returns vs. long-term returns
3. Always interrogate discount rates...
4. ...because although they are often set by a country (and you don't have a choice), there is no “right” discount rate.
5. The choice of discount rate can be critical for results

In short **ALWAYS REMEMBER THAT THIS IS NOT A TECHNICAL QUESTION BUT A PHILOSOPHICAL AND ETHICAL ONE!**
