

Thinking Like An Economist

Economic Methodology

WHAT IS ECONOMICS

Mainstream economics assumes that markets generate well-being and decisions are based on rationality, acting in self-interest., which is wrong, because neoclassical ideals does not always reflect human being thoughts. The *economic way of thinking* is **analytical** and **objective** ad use the *scientific method*.

ECONOMICS AS A SCIENCE

Science is a **process**; it is related to the discovery and creation of new knowledge and understanding but also relies on existing knowledge and understanding.

The knowledge and understanding associated with the process are constantly evolving as new discoveries help improve knowledge and understanding of the world.

Economics is referred to as a "*social science*" because it deals with human beings as individuals and in groups. The *process of knowledge* creation and development in social sciences can take on different nuances compared to the natural sciences, but there are processes and methods which are common to both.

MODELS

In economics, during processes *models* are used to **simplify** reality in order help people to understand.

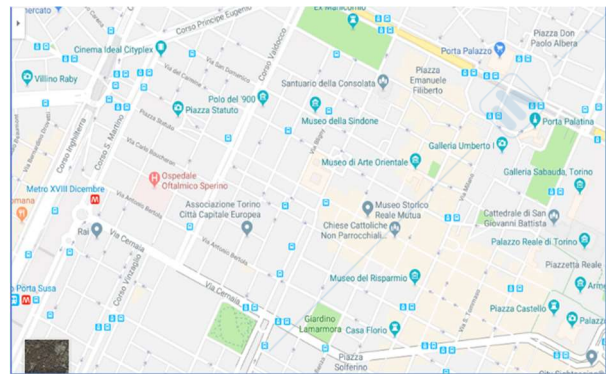
A model is a **representation of reality** which facilitates understanding of how something works.

Models can be used as a means of helping understand the real world and for making informed decisions and judgements.

Models are often represented by *diagrams* or *equations* which omits many details, underlying the most important data and they are based on **assumptions**.

Economic models have two **principal uses**:

- for **predicting** or forecasting what might happen in the future as a consequence of a decision or policy.
- to **simulate** an event and provide a comparison with what would have happened if the decision, policy or change had not happened → the *counterfactual*.



MODELS: ENDOGENOUS AND EXOGENOUS VARIABLES

Models are characterised by *variables*; these variables are determined by the model, and some are generated within the model.

For example, take the market model where the **quantity demanded** (Q) is dependent on the **price** (P), in which Q is said to be the **dependent variable**:

- **endogenous variable** → the value is determined **within** the model which is represented by quantity.
- **exogenous variable** → the value is determined **outside** the model, which is represented by price, because it affects the model but is not affected by it.

MODELS: CAUSE AND EFFECT

Understanding the difference between endogenous and exogenous variables is important because it helps us to separate out *cause and effect*, which is a problem that economists always face.

Separating out cause and effect can be informed by statistical tests but is also subject to interpretation.

It is not always easy to establish cause and effect, particularly when controlled experiments are not possible.

TYPES OF REASONING

During processes there is also the **distinction** between *inductive reasoning* and *deductive reasoning*, that are two different processes by which scientists can formulate, test, and refine theories.

Inductive reasoning refers to the *process of observation* from which one can form patterns which provides evidence for a **hypothesis** which may lead to a theory:

- **inductive reasoning** refers to the process of observation from which one can form patterns which provides evidence for a hypothesis which may lead to a *theory*.
- **deductive reasoning** begins with a theory from which a *hypothesis* is drawn. The hypothesis is then subject to observation and either confirmation or rejection.

Important is the circular process of formulation, testing and refinement of theories, no uncritical acceptance of the results of research.

EXPERIMENTS IN ECONOMICS

Economics is a science based on **human behaviour** and **empirical analysis** can happen through the collection and analysis of natural data that exists such as wages, prices, stock prices.

Laboratory type experiments in economics are where data can be collected via **observations** on individual or group behaviour.

The data can be analysed in relation to a research question and conclusions drawn, which help develop new understanding or refine and improve existing understanding.

The conclusions drawn from such experiments may be generalizable, so the findings of the experiment can be extended outside the "laboratory" to **explain behaviour** or **economic phenomena** and provide the basis for prediction.

Another type of experiment is the *natural experiment* in which the study of phenomena is determined by **natural conditions** which are not in the control of the experimenter.

Natural experiments can be exploited when some change occurs which allows observation to be carried out on the effects of this change in one population, and comparisons made with another population that is not affected.

THEORIES

The **scientific method** involves devising *theories*, collecting and analysing the data in order to verify or refute theories, which are *predictive*.

Scientists use theories to **explain** or **predict** phenomenon and events.

The theory of indifference curves and **budget lines** can be used to explain consumer behaviour.

FALSIFIABILITY

Economics claims to be a science, but it does not follow **scientific principles**.

During processes it happens to refuse the first theories and substitute them with new ones, according to new observations, so it is possible to find *falsifiability* in the scientific approach, which refers to the possibility of a theory being **rejected** as a result of new observations or new data that refine the process.

Theory organises knowledge and helps to **predict behaviour** in new situations, by suggesting which data are worth collecting and how analyse new ones.

On the converse, data collection and analysis often reveal *empirical regularities* that are not explained by existing theories.

The alternation of theory and empirical work and their reciprocal refinement are the **functioning mechanism** of each scientific discipline.

THE ROLE OF ASSUMPTIONS

Scientists should understand which **assumptions** the most *helpful* ones are to make, because sometimes it is useful to simplify the real world to understand processes.

Economists often use assumptions that appear somewhat unrealistic but will have **small effects** on the actual outcome of the answer.

Assumptions must be **tested** to see the extent to which they are *accurate* and *reasonable*.

The Economist as Policy Advisor

POSITIVE VERSUS NORMATIVE ANALYSIS

Often economists are asked to explain the *causes of economic events* and recommend policies to improve economic outcomes.

The economist might use *scientific method* to offer an explanation, but the second involves a *value judgement*. This highlights the distinction between what is termed *positive* and *normative* economics.

Positive statements have the property that the claims in them can be tested and confirmed, refuted or shown to not be provable either way, but they *do not have to be true*.

Normative statements have the property that they include opinion and make a claim about *how the world ought to be*.

Why Economists Disagree

ECONOMICS DISAGREEMENTS

Economists may disagree about the *validity* of alternative positive theories about *how the world works*.

Economists may have *different values* and, therefore, *different normative views* about what policy should try to accomplish.

DECISION-MAKING IN ECONOMICS

It could be said that economics is the *science of decision-making*.

The way that economists go about making or recommending decisions involves, first, *identifying the problem* or issue, as greenhouse gas emissions are a contributory factor in climate change.

The next stage is to *look at the costs and benefits* involved in the decision.

These costs and benefits are not just the private costs and benefits to individuals, firms and organizations; they will also include the costs and benefits to *third parties* who are *not* directly *involved* in the actual decision.

The private costs will be those borne by the businesses that will have to implement measures to adhere to the limits placed upon them.

The social costs might include the *impact on local people* of the construction of wind farms or new nuclear power stations.

Decision-making in economics can be made more informed by assessing the costs and benefits of a decision and attempting to *quantify* the costs and benefits to provide the basis for an *informed decision*.