Theories and Theoretical Frameworks

Adapted for Economics from material created by the A!Ole project

A"
Aalto-yliopisto
Kauppakorkeakoulu

Katri Kauppi & Miri Stryjan

Updated in August 2022

Theory is…..

A theory is a system of concepts (variables) that are related to each other by propositions, within some boundary conditions that sets the limitations and assumptions in applying it (e.g., context, space, time)

A theory can help organize and communicate thoughts by:

- Providing explanation for why something may occur
- Explain patterns in individuals' behavior
- Explain causal relationships: why does A lead to B?

Theory is developed in order to explain AND predict complex events, objects or phenomena

Theory in Economics

When we talk about "theory" in Economics, we usually refer to models expressed through a set of mathematical expressions.

- A theoretical model typically fomalizes:
  - Decision makers
  - Possible actions available to them (e.g. consumption choice, investment level, pricing, etc.). These choice variables are the *endogenous variables* of the model.
  - Objectives of the decision makers (e.g. maximize utility, maximize profits)
  - Description of the environment and how exogenous and endogenous variables relate to each other
  - Solution concept (in case of one decision maker: optimal solution; in case of many decision makers: equilibrium)

- A model typically belongs to one of the following categories:
  - One decision maker -> optimization problem (e.g. monopoly firm choosing optimal pricing structure)
  - N strategic decision makers -> game (e.g. oligopolistic firms choosing their prices/quantities in a market)
  - Multiple decision makers taking prices as given -> competitive equilibrium models (e.g. large number of firms competing in a market)

Theoretical or "Conceptual" framework in a thesis

In an empirical thesis or a literature review, a theoretical framework (sometimes also called "conceptual framework") can:

- Help structure the research problem
- Provide concepts to examine the problem
- In addition to just providing a predicted direction of the relationship studied, a theoretical framework usually highlights plausible *mechanisms* i.e. explanations to *why* certain agents behave in a certain way.

There is no such thing as the one and only theory or framework!

- The choice of framework should be a reasoned choice

If you write your thesis in Economics, the main guiding theory/theoretical framework should be based on theories from the field of Economics.

- Having a theory that "guides" your work is a good way to make sure you connect your thesis to Economics.

Summarizing theoretical papers

Students often struggle with how to summarize theoretical papers. Here are a few rules of thumb:

Explain/introduce to the readers:

- the model's environment,

- the parameters of the model and what each of them means

- The players/agents of the model

- The main / key assumptions made in the model.

When you are comparing a few different models, explain how they differ from each other and under what assumptions each of them hold.

If you will use the model as a background for your empirical review or analysis, it is also useful to clearly state <u>the predictions</u> of the model, that you can then refer back to in your empirical section.

You do <u>not</u> need to list and discuss all steps of the model if it has several steps, at least some can be summarized in words. Often, explaining the rationale of the model in words is preferrable to copying many equation from the paper.

See more in the thesis writing guide, section 4 under "Literature review".

Is the paper theoretical or empirical?

Even in an theoretical paper, data can sometimes be included in order to test the model with data.

Whether or not the paper is empirical or theoretical can often be understood from the abstract and the first paragraphs of the introduction, which should convey the main contribution of the paper.

It can also be understood from the relative focus of the different sections of the paper. How many sections focus on the model, relative to the data and data analysis?