

What is economics?

At its core, economics is the study of the allocation of scarce resources. Scarce resources can be money (in whatever form it takes), raw materials, labor, time, etc. In this course, the market system will be the primary allocation method we will use for analysis. The market system uses prices to allocate goods, with prices serving as an important signal to both producers and consumers.

Of course, there are many other methods of allocating resources. Parking spaces in public lots are allocated on a first-come, first-serve basis. Grades are allocated based on merit. Lottery and raffle winners are chosen by random draw (provided they have entered the draw). We can, and some have, model these allocation mechanisms, and it will be important to understand when these systems are being used so as to not confuse the outcome of these systems with the market system.¹

Links about economics in general

American Economic Association – [What is Economics?](#)

Economics Online UK – [What is Economics?](#)

Economic modelling

There are a few main models in economics -- supply and demand, individual consumer choice, and profit-maximization by firms -- that we will discuss and use throughout the course. Models are abstractions from reality. A model ship has many of the characteristics of an actual ship, but it is not an actual ship. There are many different reasons that can be so -- it could be a much smaller size (think ship in a bottle), perhaps it is not made of the same material, etc. However, we use the model as a representation of the ship to get a better understanding of some aspect of the ship. In the same way, we use economic models to get a better understanding of behavior of individuals, firms, and markets in the economy, though we are certainly not capturing every aspect of the economic situation with these models. But the goal is to create some benchmark models to use for analysis, and then determine whether or not they apply to a particular situation, and, if they do not apply, how to modify them to capture the questions we are asking.

While it is not always the case, one goal for researchers should be to have a model (be it a formal model or a hypothesized relationship between variables), test the model, analyze the results, and then revisit the model to see if the model's predictions are valid. This process is not novel to economics -- it is just the scientific method. Note that one person does not necessarily have to do every step. As a researcher, you might develop the model, test it, analyze the results, and then revise the model as needed. Or you may just develop the model for someone else to test. Or you may just test a model developed by someone else.² There are many paths to conducting research, and while it is important to find your specialty, it is also important to find research partners who have complementary but perhaps different strengths. In

¹ More recently, COVID-19 vaccines in the U.S. were allocated using a modified version (by restricting eligibility) of first-come, first-serve. You can see some comments I made to the Charlotte Observer about why the supply and demand model really was not applicable [here](#).

² If you are a fan of the television show The Big Bang Theory, you will know that Sheldon is a theoretical physicist and Leonard is an experimental physicist. They have different skill sets and, at times, work together on research projects due to the complementary nature of their skills.

order to find those research partners, one should at least be conversant in their methods, even if one is not an expert.

Links about economic modelling in general

Hal Varian – [What Use Is Economic Theory?](#)

IMF – [What Are Economic Models?](#)

Peter Turchin on Dani Rodrik – [What Economics Models Really Say?](#)

Links about specific types of modelling

Brookings - [artificial intelligence models](#)

Phil Haile – [structural vs. reduced form](#)

Bank of England – [agent based models](#)

Links about economic modelling in other academic disciplines

[Economic models in Sociology](#)

[Economic models in Criminal Justice](#)

[Economic models in Political Science](#)

[Economic models in Geography](#)

[Economic models in Public Health](#)

There are certainly many more articles -- these are just some that I found related to different policy disciplines.

Economics and policy

Economists have an important role in developing policy. In the U.S., the Council of Economic Advisers advises the President on economic matters and the Federal Reserve operates as the central bank of the U.S. These organizations play an important role in determining domestic and international economic policy. Other countries have similar organizations charged with maintaining economic stability. In addition, there are numerous independent think tanks and policy institutes focused on specific issues. While we tend not to think of corporations as "policy creators," there are economists who work at Google (okay, Alphabet -- no one calls it that), Amazon, Facebook, Apple, etc. who make decisions that are likely going to influence policy through the way that they provide goods and services; if not directly, then indirectly through responses to their decisions.

While there are many academic and non-academic journals dedicated to economics and economic policy, the [Journal of Economic Perspectives](#) typically provides overview articles of current important economic topics written by leading scholars in the area. In the three volumes published so far in 2021, symposia have covered COVID-19, Washington consensus, the European Union, preventive medicine, statistical significance, the minimum wage, polarization in (judicial) courts, and higher education.

Individual articles have focused on taxation, economic growth, corruption, LGBTQ economics, and the benefits and costs of research teams in economics.

Links about economics and policy

Gary Becker – [on discrimination](#)

CDC – [public health economics](#)

Hirschman, Berman, Socio-Economic Review (2014) – [Do Economists Make Policies?](#)

Criticisms

No discussion is complete without recognizing criticisms of the field. Perhaps the main criticism is that some models fail to make accurate predictions, which is of course an important criticism. Many of these claims tend to be focused on macroeconomic models and forecasting the overall health of the economy (is the economy going to expand or contract). That is a very difficult question to answer because "the economy" is very complex and made up of many different markets. The criticism of microeconomic models tends to be focused on assuming individuals exhibit rational behavior. Part of that criticism comes from a misunderstanding of the definition of "rational" in economics, while part of it comes from the assumption that individuals know their precise preferences, down to whether they will spend \$2.12 on an item but not \$2.13. Another criticism is that economists assume individuals will exhibit selfish behavior, which I will argue (when we discuss maximizing utility) is a misinterpretation of what economists mean when they assume that individuals maximize their own utility (which certainly can be selfish, but does not have to be).

Links to criticisms

The Guardian - [It's time to junk the flawed economic models that make the world a dangerous place](#)

Harvard Business Review – [The End of Rational Economics](#)

The Appalachian – [Why Economists Are Always Wrong](#)

Letinin and Kuorikoski, Philosophy of Science (2007) – [Why Do Economists Shun Simulation?](#)