

The art of building economic models



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When you build a model, how do you know which details to include and which to leave out? There is no simple answer to this question. The right amount of detail depends on your purpose in building the model in the first place. There is, however, one guiding principle: This means that a model should contain only the necessary details. To understand this a little better, think about a map. A map is a model—it represents a part of the earth's surface. But it leaves out many details of the real world. First, maps are two-dimensional, so they leave out the third dimension—height—of the real world.

Second, maps always ignore small details, such as trees and houses and potholes. Third, a map is much smaller than the area it represents. But when you buy a map, how much detail do you want it to have? Let's say you are in Boston, and you need a map (your purpose) to find the best way to drive from Logan Airport to the downtown convention center. In this case, you would want a very detailed city map, with every street, park, and plaza in Boston clearly illustrated and labeled. A highway map, which ignores these details, wouldn't do at all.

But now suppose your purpose is different: to select the best driving route from Boston to Cincinnati. Now you want a highway map. A map that shows every street between Boston and Cincinnati would have too much detail. All of that extraneous information would only obscure what you really need to see. Although economic models are more abstract than road maps, the same principle applies in building them: The level of detail that would be just right for one purpose will usually be too much or too little for another.

When you feel yourself objecting to a model in this text because something has been left out, keep in mind the purpose for which the model is built. In introductory economics, the purpose is entirely educational. The models are designed to help you understand some simple, but powerful, principles about how the economy operates. Keeping the models simple makes it easier to see these principles at work and remember them later. Of course, economic models have other purposes besides education.

They can help businesses make decisions about pricing and production, help households decide how and where to invest their savings, and help governments and international agencies formulate policies. Models built for these purposes will be much more detailed than the ones in this text, and you will learn about them if you take more advanced courses in economics. But even complex models are built around a very simple framework—the same framework you will be learning here.