

ECONOMIC MODELS AND MATHS (ЕКОНОМІЧНІ МОДЕЛІ ТА МАТЕМАТИКА)

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Економічна модель є спрощеною версією реальності, яка дозволяє спостерігати, розуміти і робити прогнози щодо економічної поведінки.

Economists use models as the primary tool for explaining or making predictions about economic issues and problems. For example, an economist might try to explain what caused the Great Recession in 2008, or she might try to predict how a personal income tax cut would affect automobile purchases.

Economic models can be represented using words or using mathematics. All of the important concepts in this course can be explained without math. That said, math is a tool that can be used to explore economic concepts in very helpful ways. You know the saying «A picture is worth a thousand words?» The same applies to graphs: they're a very effective means of conveying information visually – without a thousand words. In addition to being a «picture», a graph is also a math-based model.

The use of algebra is a specific way that economics express and explore economic models. Where graphs require you to «eyeball» a model, algebra can give you more precise answers to questions. For example, if a business puts their product on sale for 10% off the regular price, how much more will consumers buy? Similarly, using the algebraic formula for a line allows economists to find precise points on a graphs that help in interpreting how much of a good should be sold, or at what price.

Why would an economist use math when there are other ways of representing models, such as with text or narrative? Why would you use your fist to bang a nail, if you had a hammer? Math has certain advantages over text. It disciplines our thinking by making us specify exactly what we mean. You can get away with fuzzy thinking and vague approximations in your own mind, but not when you're reducing a model to algebraic equations. At the same time, math has certain disadvantages. Mathematical models lack the nuances that can be found in narrative models. The point is that math is one tool, but it's not the only tool or even always the best tool economists can use to work with economic models.