

The Model

The model and the data are the starting points of an econometric project. The first step in formulating a model is to select a topic of interest and to consider the model's scope and purpose. In particular thought should be given to the objectives of the study, what boundaries to place on the topic, what hypotheses might be tested, what variables might be predicted, and what policies might be evaluated. Close attention must be paid, however, to the availability of adequate data. In particular the model must involve causal relations among measurable variables.

The topic selected can be economic or noneconomic. It could be a particular market (the market for Whitman graduates, the market for economists, the market for ice cream, the markets for private education), a process (economic development, inflation, unemployment), demographic phenomena (birth rates, death rates), environmental phenomena (water quality, air quality), political phenomena (elections, voting behavior of legislatures), some combination of these, or some other topic.

You are free to choose the topic of your choice. Students have written papers on a wide variety of subjects. Some paper titles are presented below:

“Alcohol and Academics”

"Air pollution and Population"

“Baseball Salaries and Player Performance”

"Birth Rates, Death Rates, and Economic Growth in Developing Economies"

"Demand for and Supply of Higher Education"

"Differential Growth in U.S. Cities"

"Discrimination in the Retail Food Markets"

"Divorce Rates, Birth Rates, and Female Participation in the Labor Force"

"Economic and Social Determinants of Infant Mortality in the United States"

“Football Wins and Team Characteristics”

“Golf Tournaments and Player Impact”

"The Effect of Unemployment on Crime"

"Elections and Money"

“GPA of Greek and Independent Students”

"Medical School Applications"

"Police Expenditures and the Deterrence of Crime"

"Police vs Abortion and the Impact on Crime Reduction"

"The Relationship between Exports and Growth in Less Developed Countries"

"Unionization and Strike Activities"

These papers are generally interested in the impact of some independent variable X on a dependent variable Y. But since there are many variables X that have influence on the variable Y, it is important to include all those variables on the right hand side of the equation.

To ensure that the model is both interesting and manageable, it should contain at least three to four independent variables on the right hand side. The model should be formulated as an algebraic, linear, stochastic equation along with a corresponding verbal statement of the meaning of the equation. The expected signs of all the coefficients should be considered. All relevant multipliers, short-run and long-run, should be identified and considered.

Remember that these ideas above are merely examples of reasonable topics. You should be original and follow your own interests. Perhaps the best choice of a topic is one in which you have prior experience or knowledge. Did you take a course on economic crime and punishment, economics development, monetary theory, or do you like to watch sports? You will have a head start in these areas because you are already familiar with the basic issues. In any case, you will have to identify and study the previous literature on the subject. Good sources are professors, EconLit, and Penrose Library. The relevant literature should indicate, or at least suggest, a model and also hypotheses to be tested, variables to be forecast, and/or policies to be evaluated. It can also be a useful guide to the relevant data.

("The Model" courtesy of economist Linus Yamane)