

Economists

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Significant Points

- Quantitative skills are important in all economics specialties.
- Employment of economists is expected to grow about as fast as the average; most new jobs will arise in private industry, including economic research and consulting firms.
- Candidates who hold a master's or Ph.D. degree in economics will have the best employment prospects and advancement opportunities.

Nature of the Work

Economists study how society distributes scarce resources such as land, labor, raw materials, and machinery to produce goods and services. They conduct research, collect and analyze data, monitor economic trends, and develop forecasts. They research issues such as energy costs, inflation, interest rates, exchange rates, business cycles, taxes, or employment levels.

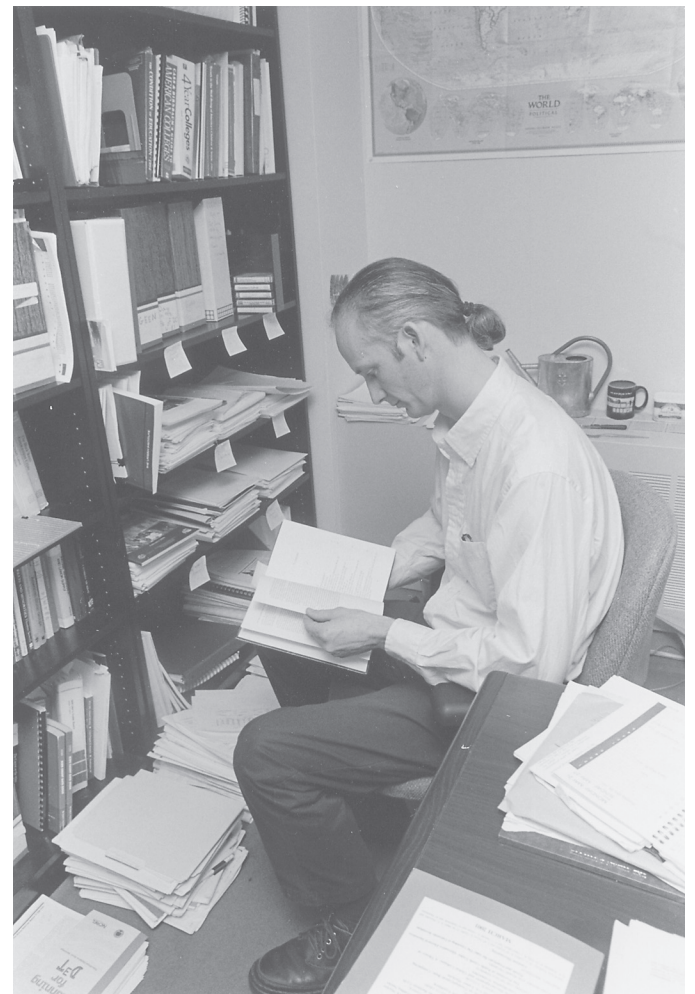
Economists devise methods and procedures for obtaining the data they need. For example, sampling techniques may be used to conduct a survey, and various mathematical modeling techniques may be used to develop forecasts. Preparing reports, including tables and charts, on research results is an important part of an economist's job. Presenting economic and statistical concepts in a clear and meaningful way is particularly important for economists whose research is directed toward making policies for an organization. Some economists might also provide economic analysis to the media.

Many economists specialize in a particular area of economics, although general knowledge of basic economic principles is useful in each area. *Microeconomists* study the supply and demand decisions of individuals and firms, such as how profits can be maximized and how much of a good or service consumers will demand at a certain price. *Industrial/organizational economists* study the market structure of particular industries in terms of the number of competitors, and the market decisions of competitive firms and monopolies. These economists may also be concerned with antitrust policy and its impact on market structure. *Macroeconomists* study historical trends in the whole economy and forecast future trends in areas such as unemployment, inflation, economic growth, productivity, and investment. Closely related to macroeconomists are *monetary or financial economists*, who study the money and banking system and the effects of rising interest rates. *International economists* study international financial markets, exchange rates, and the effects of various trade policies such as tariffs. *Labor or demographic economists* study the supply and demand for labor and the determination of wages. These economists also try to explain the reasons for unemployment, and the effects on labor markets of changing demographic trends such as an aging population and increasing immigration. *Public finance* economists primarily are involved in studying the role of the government in the economy and the effects of tax cuts, budget deficits, and welfare policies. *Econometricians* are involved in all areas of economics and use mathematical techniques such as calculus, game theory, and regression analysis to formulate economic models. These models help to explain economic relationships and are

used to develop forecasts related to the nature and length of business cycles, the effects of a specific rate of inflation on the economy, the effects of tax legislation on unemployment levels, and other economic phenomena. Many economists have applied these fundamental areas of economics to more narrow areas with specific applications such as health, education, agriculture, urban and regional economics, law, history, energy, and the environment.

Most economists are concerned with practical applications of economic policy, and work for a variety of organizations. Economists working for corporations are involved primarily in microeconomic issues, such as forecasting consumer demand and sales of the firm's products. Economists working for corporations might also analyze their competitors' growth and market share and advise their company on how to handle the competition. Other economists working for corporations monitor legislation passed by Congress, such as environmental and worker safety regulations, and assess its impact on their business. Corporations with many international branches or subsidiaries might employ economists to monitor the economic situations in countries where they do business, or to provide a risk assessment of a country into which the company might expand.

Corporations that are too small or that do not have sufficient funding might hire economists working in economic consulting or research firms to perform the same tasks as staff economists. Economists in consulting firms also perform much of the



Economists frequently conduct research, write reports and articles, and present findings to clients and colleagues.

macroeconomic analysis and forecasting that is completed in the United States. These economists collect data on various indicators, maintain databases, analyze historical trends, and develop models to forecast growth, inflation, unemployment, or interest rates. These analyses and forecasts are frequently published in newspapers and journal articles.

Another large employer of economists is government. Economists in the Federal Government administer most of the surveys and collect most of the economic data in the United States. For example, economists in the U.S. Department of Commerce collect and analyze data on the production, distribution, and consumption of commodities produced in the United States and overseas, while economists employed by the U.S. Department of Labor collect and analyze data on the domestic economy, including those having to do with prices, wages, employment, productivity, and safety and health. Economists who work for government agencies also assess economic conditions in the United States or abroad in order to estimate the economic effects of specific changes in legislation or public policy. Government economists advise policy makers in areas such as telecommunications deregulation, Social Security revamping, the effects of tax cuts on the budget deficit, and the effectiveness of imposing tariffs on imported steel. An economist working in State or local government might analyze data on the growth of school-age or prison populations, and on employment and unemployment rates, in order to project future spending needs.

Working Conditions

Economists have structured work schedules. They often work alone, writing reports, preparing statistical charts, and using computers, but they also may be an integral part of a research team. Most work under pressure of deadlines and tight schedules, which may require overtime. Their routine may be interrupted by special requests for data, and by the need to attend meetings or conferences. Frequent travel may be necessary.

Employment

Economists held about 16,000 jobs in 2002. Private industry employed 53 percent of salaried economists, particularly in scientific research and development firms; management, scientific, and technical consulting firms; banks and securities firms, and business, professional, labor, and political organizations. A wide range of government agencies provided the remaining jobs. The U.S. Departments of Labor, Agriculture, and State are the largest Federal employers of economists. A number of economists combine a full-time job in government, academia, or business with part-time or consulting work in another setting. A little over 11 percent of economists are self-employed.

Employment of economists is concentrated in large cities. Some work abroad for companies with major international operations, for U.S. Government agencies, and for international organizations, such as the World Bank, International Monetary fund, and United Nations.

Besides the jobs described above, many economists hold faculty positions in colleges and universities. Economics faculties have flexible work schedules, and may divide their time among teaching, research, consulting, and administration. (See the statement on teachers—postsecondary elsewhere in the *Handbook*.)

Training, Other Qualifications, and Advancement

A master's or Ph.D. degree in economics is required for many private sector economist jobs, and for advancement to more

responsible positions. Economics includes many specialties at the graduate level, such as advanced economic theory, econometrics, international economics, and labor economics. Students should select graduate schools strong in specialties in which they are interested. Undergraduate economics majors can choose from a variety of courses, ranging from microeconomics, macroeconomics, and econometrics, to more philosophical courses, such as the history of economic thought. Because of the importance of quantitative skills to economists, courses in mathematics, statistics, econometrics, sampling theory and survey design, and computer science are extremely helpful. Some schools help graduate students find internships or part-time employment in government agencies, economic consulting or research firms, or financial institutions prior to graduation.

In the Federal Government, candidates for entry-level economist positions must have a bachelor's degree with a minimum of 21 semester hours of economics and 3 hours of statistics, accounting, or calculus.

Whether working in government, industry, research organizations, or consulting firms, economists with a bachelor's degree usually qualify for most entry-level positions as a research assistant, for administrative or management trainee positions, or for various sales jobs. A master's degree usually is required to qualify for more responsible research and administrative positions. Many businesses, research and consulting firms, and government agencies seek individuals who have strong computer and quantitative skills and can perform complex research. A Ph.D. is necessary for top economist positions in many organizations. Many corporation and government executives have a strong background in economics.

A master's degree is usually the minimum requirement for a job as an instructor in junior and community colleges. In most colleges and universities, however, a Ph.D. is necessary for appointment as an instructor. A Ph.D. and extensive publications in academic journals are required for a professorship, tenure, and promotion.

Aspiring economists should gain experience gathering and analyzing data, conducting interviews or surveys, and writing reports on their findings while in college. This experience can prove invaluable later in obtaining a full-time position in the field, because much of the economist's work, especially in the beginning, may center on these duties. With experience, economists eventually are assigned their own research projects. Related job experience, such as work as a stock or bond trader, might be advantageous.

Those considering careers as economists should be able to pay attention to details because much time is spent on precise data analysis. Patience and persistence are necessary qualities because economists must spend long hours on independent study and problem solving. Economists must be able to present their findings, both orally and in writing, in a clear, concise manner.

Job Outlook

Employment of economists is expected to grow about as fast as the average for all occupations through 2012. Many job openings are likely to result from the need to replace experienced workers who transfer to other occupations or who retire or leave the labor force for other reasons.

Opportunities for economists should be best in private industry, especially in scientific research and development, and consulting firms, as more companies contract out for economic research services. Rising demand for economists should stem

from the growing complexity of the global economy, competition, and increased reliance on quantitative methods for analyzing and forecasting business, sales, and other economic trends. A greater need for economic analyses in virtually every industry could result in additional jobs for economists, although some corporations are eliminating some or all of their economist positions in favor of hiring economic consultants. Employment of economists in the Federal Government should decline, but not by as much as other occupations in the Federal workforce. Average employment growth is expected among economists in State and local government.

A master's or Ph.D. degree, coupled with a strong background in economic theory, mathematics, statistics, and econometrics, provides the basis for acquiring any specialty within the economics field. Those skilled in quantitative techniques and their application to economic modeling and forecasting, and who have good communications skills, should have the best job opportunities. Like those in many other disciplines, however, Ph.D. holders are likely to face keen competition for tenured teaching positions in colleges and universities.

Bachelor's degree holders may face competition for the limited number of economist positions for which they qualify. They will qualify for a number of other positions, however, in which they can take advantage of their economic knowledge by conducting research, developing surveys, or analyzing data. Many graduates with bachelor's degrees will find jobs in industry and business as management or sales trainees, or as administrative assistants. Bachelor's degree holders with good quantitative skills and a strong background in mathematics, statistics, survey design, and computer science also may be hired by private firms as researchers. Some will find jobs in government.

Candidates who meet State certification requirements may become high school economics teachers. The demand for secondary school economics teachers is expected to grow, as economics becomes an increasingly important and popular course. (See the statement on teachers—preschool, kindergarten, elementary, middle, and secondary elsewhere in the *Handbook*.)

Earnings

Median annual wage and salary earnings of economists were \$68,550 in 2002. The middle 50 percent earned between \$50,560 and \$90,710. The lowest 10 percent earned less than \$38,690, and the highest 10 percent earned more than \$120,440.

The Federal Government recognizes education and experience in certifying applicants for entry-level positions. The entrance salary for economists having a bachelor's degree was about \$23,442 a year in 2003; however, those with superior academic records could begin at \$29,037. Those having a master's degree could qualify for positions at an annual salary of \$35,519. Those with a Ph.D. could begin at \$42,976, while some individuals with experience and an advanced degree could start at \$51,508. Starting salaries were slightly higher in selected areas where the prevailing local pay was higher. The average annual salary for economists employed by the Federal Government was \$81,852 a year in 2003.

Related Occupations

Economists are concerned with understanding and interpreting financial matters, among other subjects. Other jobs in this area include accountants and auditors; actuaries; budget analysts; financial analysts and personal financial advisors; financial managers; insurance underwriters; loan counselors and

officers; and purchasing managers, buyers, and purchasing agents. Other occupations involved in market research and data collection are management analysts, as well as market and survey researchers.

Sources of Additional Information

For information on careers in business economics, contact:

► National Association for Business Economics, 1233 20th St. NW., Suite 505, Washington, DC 20036.

Information on obtaining a position as an economist with the Federal Government is available from the U.S. Office of Personnel Management (OPM) through a telephone-based system. Consult your telephone directory under U.S. Government for a local number or call (703) 724-1850; Federal Relay Service: (800) 877-8339. The first number is not tollfree, and charges may result. Information also is available from the OPM Internet site: <http://www.usajobs.opm.gov>.