Should You Take More Economic Courses?

Now that you have learned about supply and demand, utility and profit maximization, employment and unemployment, and good old Igor (at least in the Study Guide you learned about Igor!), it is time to look to the future.

- Should studying economics be part of your future?
- Should you take more classes or maybe even major in economics?
- What about graduate school in economics?

Economists generally assume that people make rational choices to maximize their own well-being. There is no reason to drop this assumption now. The purpose of this chapter is help you make that rational maximizing choice by providing low-cost information. Let us assess the benefits and see whether they outweigh the costs of studying economics.

Benefits from Studying Economics

Knowledge, Enlightenment, and Liberation

As John Maynard Keynes, a famous British economist, said, “The ideas of economists ... both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed the world is ruled by little else. Practical men, who believe themselves to be quite exempt from any intellectual influences, are usually the slaves of some defunct economist.” Studying economics is a liberating and enlightening experience. You don’t want to be the slave of a defunct economist, do you? Liberate yourself. It’s better to bring your ideas out in the open, to confront and understand them, rather than to leave them buried.

Knowledge, Understanding, and Satisfaction

Many of the most important problems in the world are economic. Studying economics gives you a practical set of tools to understand and solve them. Every day, on television and in the newspapers, we hear and read about big issues such as economic growth, inflation, unemployment, international trade relations, the latest moves by the Fed, the most recent tax or spending bill, the environment, and the future of Social Security. Your introduction to economics shows that learning economics will let you watch the news or pick up a newspaper and better understand these issues. As an added bonus, economics helps you understand smaller, more immediate concerns, such as: How much Spam should I buy? Is skipping class today a good idea? Should I put my retirement funds in government bonds or in the stock market? After all, as the famous author George Bernard Shaw put it, “Economy is the art of making the most of life.” Mick Jagger, the lead singer of the “Rolling Stones” and who dropped out of the London School of Economics, complains that he “can’t get no satisfaction.” Maybe he should have studied more economics? The economic way of thinking will help you maximize your satisfaction.

Career Opportunities

All careers are not equal. While the wages in many occupations have not risen much lately, the wages of “symbolic analysts” who “solve, identify, and broker problems by manipulating symbols” are soaring. These people “simplify reality into abstract images that can be rearranged, juggled, experimented with, communicated to other specialists, and then, eventually, transformed back into reality.” Their wages have been rising as the
globalization of the economy increases the demand for their insights and as technological developments (especially computers) have enhanced their productivity. Economists are the quintessential symbolic analysts as we manipulate ideas about abstractions such as supply and demand, cost and benefits, and equilibrium.

You can think of your training in economics as an exercise regimen, a workout for your brain. You will use many of the concepts you will learn in introductory economics during your career, but it is the practice in abstract thinking that will really pay off.

In fact, most economics majors do not go on to become economists. They enter fields that use their analytical abilities, including business, management, insurance, finance, real estate, marketing, law, education, policy analysis, consulting, government, planning, and even medicine, journalism, and the arts. A recent survey of 100 former economics majors at my university included all of these careers. If you want to verify that economics majors graduate to successful and rewarding careers, just ask your professors or watch what happens to economics majors from your school as they graduate.

Census statistics show that across the nation, economics majors earn more than most other majors. Table 1, from a 1998 study by the U.S. Bureau of Labor Statistics, shows that in 1993 (the most recent data available) middle-aged men with bachelor’s degrees in economics earned more than those with all but a handful of other undergraduate degrees. Among women, economics was the highest earning major. (see Table 1)

That’s the long-run picture. The short-run view looks much the same. In 2001 the average annual starting salary of economics and finance majors was $40,577. While this is lower than the salaries for those with degrees in computer science, engineering, and some other sciences, it is a couple of thousand dollars higher than salaries for those with degrees in business administration. Moreover, the entry-level salary of economics majors beats the entry-level salary of social science and humanities majors by a wide margin, as Table 2 shows. These numbers are updated annually, so feel free to look up the latest statistics. (In addition, the employment rate of economics majors is higher than that of many other majors, such as those in the humanities and other social sciences.)

The widening earnings gap between economics and similar majors helps explain why enrollments in economics are climbing. Since 1996 the number of

<table>
<thead>
<tr>
<th>TABLE 1</th>
<th>Median Earnings by College Major</th>
<th>Women</th>
<th>Men</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women</td>
<td>Women</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounting</td>
<td>$39,843</td>
<td>$49,502</td>
<td></td>
</tr>
<tr>
<td>Agriculture</td>
<td>28,752</td>
<td>36,758</td>
<td></td>
</tr>
<tr>
<td>Biological/Life Sciences</td>
<td>34,245</td>
<td>41,179</td>
<td></td>
</tr>
<tr>
<td>Business (except accounting)</td>
<td>34,638</td>
<td>44,867</td>
<td></td>
</tr>
<tr>
<td>Chemistry</td>
<td>37,501</td>
<td>44,994</td>
<td></td>
</tr>
<tr>
<td>Computer and information services</td>
<td>43,757</td>
<td>50,510</td>
<td></td>
</tr>
<tr>
<td>Economics</td>
<td>49,175</td>
<td>49,378</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>27,988</td>
<td>34,470</td>
<td></td>
</tr>
<tr>
<td>Engineering</td>
<td>49,072</td>
<td>53,287</td>
<td></td>
</tr>
<tr>
<td>English language and literature</td>
<td>30,296</td>
<td>38,297</td>
<td></td>
</tr>
<tr>
<td>Health/medical technologies</td>
<td>35,526</td>
<td>36,269</td>
<td></td>
</tr>
<tr>
<td>History</td>
<td>30,553</td>
<td>38,095</td>
<td></td>
</tr>
<tr>
<td>Liberal arts/general studies</td>
<td>32,073</td>
<td>39,625</td>
<td></td>
</tr>
<tr>
<td>Pharmacy</td>
<td>48,428</td>
<td>50,480</td>
<td></td>
</tr>
<tr>
<td>Psychology</td>
<td>32,301</td>
<td>40,718</td>
<td></td>
</tr>
<tr>
<td>Sociology</td>
<td>29,532</td>
<td>37,250</td>
<td></td>
</tr>
</tbody>
</table>


Note: Figures are for those with a bachelor’s degree.

<table>
<thead>
<tr>
<th>TABLE 2</th>
<th>Average Annual Starting Salary Offers by College Major, 2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Science</td>
<td>$52,723</td>
</tr>
<tr>
<td>Engineering</td>
<td>51,910</td>
</tr>
<tr>
<td>Economics/Finance</td>
<td>40,577</td>
</tr>
<tr>
<td>Business</td>
<td>38,449</td>
</tr>
<tr>
<td>Political Science</td>
<td>32,774</td>
</tr>
<tr>
<td>English</td>
<td>31,501</td>
</tr>
<tr>
<td>History</td>
<td>30,375</td>
</tr>
<tr>
<td>Psychology</td>
<td>30,338</td>
</tr>
<tr>
<td>Sociology</td>
<td>28,812</td>
</tr>
</tbody>
</table>

economics degrees awarded in the United States has jumped about 14 percent, with similar trends in Canada and Australia.

Even if you aren’t planning on getting a job right out of college, economics can be a valuable major. Economics degrees are looked upon very favorably by MBA programs and law schools. Over one-third of economics graduates enter professional programs within two years of their undergraduate degree, divided equally between business and law. In fact, an analysis of Law School Admission Test (LSAT) scores from the 1990s showed that among the fourteen college majors with more than 2,000 students taking the exam, economics majors did the best. The average score of 155.3 topped second-place history (154.0), as well as English (153.7), Psychology (151.9), Political Science (151.6), Communications (150.7), Sociology (149.3), and Business Administration (148.6).

A *Wall Street Journal* article announced that “Economics, Once a Perplexing Subject, Is Enjoying a Bull Run at Universities.” Economics is not a vocational training program, preparing you for a single line of work. Instead, the career benefits of an economics major are so great because economics teaches you to think and thinking is what’s ultimately rewarded in our dynamic economy.

### The Costs of Studying Economics

Because the “direct” costs of studying economics (tuition, books, supplies) aren’t generally any higher or lower than the direct costs of other courses, indirect costs will be the most important of the costs to studying economics.

#### Forgone Knowledge

If you study economics, you can’t study something else. This forgone knowledge could be very valuable.

#### Disutility

If you dislike studying economics because you find it boring, tedious, or unenlightening in comparison to other subjects, then the opportunity cost is even higher because your overall level of satisfaction falls. (I know that this is rare, but it does occasionally happen).

#### Time and Energy

Economics is a fairly demanding major. Although economics courses do not generally take as much time as courses in English and history (in which you have to read a lot of long books) or anatomy and physiology (in which you have to spend hours in the lab and hours memorizing things), they do take a decent amount of time. In addition, some people find the material “tougher” than most subjects because memorizing is not the key. In economics (like physics), analyzing and solving are the keys. The rigor of the major is an obstacle for many.

#### Grades

As Table 3 shows, grades in introductory economics courses are usually a notch lower than grades in some other majors, including other social sciences and the humanities. On the other hand, grades in economics are generally higher than grades in the sciences and math. Grades in introductory economics courses are generally a hair lower than grades in introductory courses to other majors, including other social sciences and the humanities.

<table>
<thead>
<tr>
<th>Department</th>
<th>Mean Grade</th>
<th>% Above B+</th>
<th>% Below B–</th>
</tr>
</thead>
<tbody>
<tr>
<td>Music</td>
<td>3.16</td>
<td>44</td>
<td>21</td>
</tr>
<tr>
<td>English</td>
<td>3.12</td>
<td>27</td>
<td>12</td>
</tr>
<tr>
<td>Psychology</td>
<td>3.02</td>
<td>28</td>
<td>23</td>
</tr>
<tr>
<td>Philosophy</td>
<td>2.99</td>
<td>29</td>
<td>21</td>
</tr>
<tr>
<td>Art</td>
<td>2.95</td>
<td>29</td>
<td>24</td>
</tr>
<tr>
<td>Political science</td>
<td>2.95</td>
<td>24</td>
<td>23</td>
</tr>
<tr>
<td>Economics</td>
<td>2.81</td>
<td>20</td>
<td>31</td>
</tr>
<tr>
<td>Chemistry</td>
<td>2.66</td>
<td>17</td>
<td>44</td>
</tr>
<tr>
<td>Math</td>
<td>2.53</td>
<td>22</td>
<td>46</td>
</tr>
</tbody>
</table>

#### Caveat Emptor (Buyer Beware): Interpreting Your Grades Is Not Straight Forward

High grades provide direct satisfaction to most students, but they also act as a signal about the student’s ability to learn the subject material. Unfortunately, because the grade distribution is not uniform across departments, you might be confused and misled by
your grades. You might think that you are exceptionally good at a subject because of a high grade, when in fact nearly everyone gets a high grade in that subject. The important point here is that you should be informed about your own school’s grade distribution. Just because you got a B in economics and an A in history does not necessarily mean that your comparative advantage is in learning history rather than economics. Everyone — or virtually everyone — might receive an A in history. Earning a B or a C in economics could mean that it is the best major for you because high grades are much harder to earn in economics. It is fun to have a high GPA in college, but maximizing GPA should not be your goal. Maximizing your overall well-being is probably your goal, and this might be obtained by trading off a tenth or so of your GPA for a more rewarding major — perhaps economics.

In assessing the tradeoffs, you’ll notice that mean departmental grades are higher where average earnings are lower. Employers know which departments grade harder. A recent article on grade patterns concluded that “those students who attend college primarily as a route to a better paying job should understand that ‘easy’ courses may be no bargain in the long run.”

### Potential Side Effects from Studying Economics

Studying economics has some potential side effects. I’m not sure whether they are costs or benefits and will let you decide.

#### Changing Ideas about What Is Fair

A recently completed study compared students at the beginning and end of the semester in an introductory economics course. It found that by the end of the semester, significantly more of the students thought that the functioning of the market is “fair.” This was especially true for female students. The results were consistent across a range of professors who fell across the ideological spectrum.

For example, the proportion of students who regarded it as unfair to increase the price of flowers on a holiday fell almost in half. The proportion that favored government control over flower prices, rather than market determination, fell by over 60 percent. The study argues that these responses do not reflect changes in deep values, but instead represent the discovery of previous inconsistencies and their modification in the light of new information learned during the semester.

#### Changing Behavior

Many people believe that the study of economics changes students’ values and behavior. Some observers think that it changes them for the worse. Others disagree. In particular, it is argued that economics students become more self-interested and less likely to cooperate, perhaps because they spend so much time studying economic models, which often assume that people are self-interested. For example, one study reports experimental evidence that economics students are more likely than nonmajors to behave self-interestedly in prisoners’ dilemma games and ultimatum bargaining games.

This need not mean that studying economics will change you, however. Another study compares beginning freshmen and senior economics students and concludes that economics students “are already different when they begin their study of economics.” In other words, students signing up for economics courses are already different; studying economics doesn’t change them. However, there are reasons to question both of these conclusions, because it is not clear whether these laboratory experiments using economic games reflect reality. One experiment asked students whether they would return money that had been lost. It found that economics students were more likely than others to say that they would keep the cash.

However, what people say and what they do are sometimes at odds. In a follow-up experiment, this theory was tested by dropping stamped, addressed envelopes containing $10 in cash in different campus classrooms. To return the cash, the students had only to seal the envelopes and mail them. The results were that 56 percent of the envelopes dropped in economics classes were returned, while only 31 percent of the envelopes dropped in history, psychology and business classes were sent in. Perhaps economics students are less selfish than others!

Obviously, no firm conclusions have been reached about whether or how studying economics changes students’ behavior.
Costs versus Benefits

Suppose that you’ve weighed the costs and benefits of studying economics and you’ve decided that the benefits are greater than or equal to the costs. Obviously, then, you should continue to take economics courses. If you can’t decide whether the benefits outweigh the costs, then you should probably collect more information — especially if it is good but inexpensive. In either case, read the rest of this section.

The Economics Major

The study of economics is like a tree. The introductory microeconomics and macroeconomics courses you begin with are the tree’s roots. Most colleges and universities require that you master this material before you go on to any other courses. The way of thinking, the language, and the tools that you acquire in the introductory course are usually reinforced in intermediate microeconomics and macroeconomics courses before they are applied in more specialized courses that you take. The intermediate courses are the tree’s trunk. Among the specialized courses that make up the branches of economics are econometrics (statistical economics), financial economics, labor economics, resource economics, international trade, industrial organization, public finance, public choice, economic history, the history of economic thought, mathematical economics, current economic issues, and urban economics. The branches of the tree vary from department to department, but these are common. It will pay to check your college bulletin and discuss these courses with professors and other students.

Graduate School in Economics

Preparing for Graduate School in Economics

You can prepare for graduate school in economics by taking several math classes. This would probably include at least two years of calculus plus a couple of courses in probability and statistics and linear/matrix algebra. Ask your advisor about the particular courses to take at your college. In addition, the mathematical economics and econometrics courses in the economics department are essential. (Helpful hint: Even if you aren’t going to graduate school, these mathematical courses can be valuable to you, just as more economics courses can be valuable for nonmajors.) If your school offers graduate level economics courses, you might want to sit in on a few to get accustomed to the flavor of graduate school.

Most graduate programs require strong grades in economics, a good score on the Graduate Record Examination (GRE), and solid letters of recommendation. It is a good idea to get to know a few professors very well and to go above and beyond what is expected so that they can write glowing letters about you.

Financing Graduate School

Unlike some other graduate and professional degree programs, you probably won’t need to pile up a massive amount of debt while pursuing a Ph.D. in economics. Most Ph.D. programs hire their economics graduate students as teaching or research assistants. Teaching assistants begin by grading papers and running review sessions and can advance to teaching classes on their own. Research assistants generally do data collection, statistical work, and library research for professors and often jointly write papers with them. Most assistantships will pay for tuition and provide you with enough money to live on.

Where Should You Apply?

The best graduate school for you depends on a lot of things, especially your ability level, geographical location, areas of research interests, and, of course, financing. You should talk with your professors about ability level and areas of research. In addition, there are informative articles that give overall departmental rankings and rankings by subfield. See especially Richard Dusansky and Clayton J. Vernon, “Rankings of U.S. Economics Departments,” Journal of Economic Perspectives, Vol. 12, no. 1, Winter 1998, pp. 157-170, Jerry G. Thursby, “What Do We Say about Ourselves and What Does It Mean? Yet Another Look at Economics Department Research,” Journal of Economic Literature, Vol. 38, no. 2, June 2000, pp. 383-404, and John Tschirhart, “Ranking Economics Departments in Areas
CONCLUSION

be more up-to-date rankings by the time you apply.
Ask a professor or reference librarian to help you track
them down. For smaller specialties (e.g., economic
history, urban economics) it is especially important to
get up-to-date information on any particular program.

■ What You Will Do in Graduate School
Most graduate programs in economics begin with a
year of theory courses in macroeconomics and micro-
economics. After a year you will probably take a series
of tests to show that you have mastered this core theory.
If you pass these tests, in the second and third year of
courses you will take more specialized subjects and per-
haps take lengthy examinations in a couple of subfields.
After this you will be required to write a dissertation —
original research that will contribute new knowledge to
one of the fields of economics. These stages are inter-
twined with work as a teaching and/or research assist-
ant, and the dissertation stage can be quite drawn out.
In the social sciences the median time that it takes for a
student to complete the Ph.D. degree is about 7.5
years.10 Be aware that a high percentage (roughly 50
percent) of students do not complete their doctoral
degree.

■ What Is Graduate School Like?
Graduate school in economics comes as a surprise to
many students. The material and approach are dis-
distinctly different from what you will learn as an under-
graduate. The textbooks and journal articles you will
read in graduate school are often very theoretical and
abstract. A good source of information is sitting in on
courses or reading the reflections of recent students. See
especially The Making of an Economist by Arjo Klamer
and David Colander (Boulder, Colo.: Westview Press,
1990).
The Committee on Graduate Education in Economics
(COGEE) undertook an important review of graduate
education in economics and reported its findings in the
September 1991 issue of the Journal of Economic Lit-
erature. COGEE asked faculty members, graduate stu-
dents, and recent Ph.D.s to rank the most important
skills needed to be successful in the study of graduate
economics. At the top of the list were analytical skills
and mathematics, followed by critical judgment, the
ability to apply theory, and computational skills. At the
bottom of the list were creativity and the ability to
communicate. If you are interested in economic issues
but do not have the characteristics required by graduate
economics departments, consider other economics-
related fields, such as graduate school in public policy.
Many economics majors go to business schools to ob-
tain an MBA and are often better prepared than stu-
dents who have undergraduate degrees in business.

Economics Reading

If decide to make studying economics part of your fu-
ture, or if you’re hungry for more economics, you
should immediately begin reading the economic news
and books by economists. Life is short. Why waste it
watching TV?
The easiest way to get your daily recommended dose of
economics is to keep up with current economic events.
Here are a few sources to pick up at the newsstand,
bookstore, or library over your summer or winter break.

■ The Wall Street Journal
Many undergraduates subscribe to the Wall Street Jour-
nal (WSJ) at low student rates. Join them! Your profes-
sor will probably have student subscription forms. Not
only is the WSJ a well-written business newspaper, but
it also has articles on domestic and international news,
politics, the arts, travel, and sports, as well as a lively
editorial page. Reading the WSJ is one of the best ways
to tie the economics you are studying to the real world
and to prepare for your career.

■ Magazines and Journals
The Economist, a weekly magazine published in Eng-
land, is available at a student discount rate. Pick up a
copy at your school library and you will be hooked by
its informative, sharp writing. Business Week is also well
worth the read.
Also recommended are The American Enterprise, The
Cato Journal, Challenge, and The Public Interest, four
quarterlies that discuss economic policy. Finally, there
is the Journal of Economics Perspectives, which is pub-
lished by the American Economic Association and
written to be accessible to undergraduate economics
students.
Books by Economists
I recently asked a group of economics professors from across the country (members of the Teach-Econ computer discussion list) the following question: “A bright, enthusiastic student who has just completed introductory economics comes up to you, the professor, and asks you to recommend an economics book for reading over the summer. What do you suggest?”
Here is what they suggested that you, the bright, enthusiastic student, should read:

Top Choices
Milton Friedman, *Capitalism and Freedom*.

Other Good Choices
David Friedman, *Hidden Order: The Economics of Everyday Life*.
Paul Krugman, *The Accidental Theorist and Other Dispatches from the Dismal Science*.
Susan Lee, *Hands Off: Why the Government Is a Menace to Economic Health*.

In addition, Adam Smith’s *The Wealth of Nations* is a must read for every student of economics. Written in 1776, it is the most influential work of economics ever. Its insights are still valuable today.

Economic Fiction
For those with a taste for fiction, choices include:

Endnotes
1. This term is used by Robert Reich in *The Work of Nations*. The quote is from p. 178.
10. See Ronald Ehrenberg, “The Flow of New Doctorates,” *Journal of Economic Literature*, Vol. 30, June 1992, pp. 830–875. If breaks in school attendance are included, this climbs to 10.5 years. Of course, some students attend only part time, and most have some kind of employment while completing their degrees.