

Foundations of Economic Analysis & Explanation

Lecture 1: The Nature and Scope of Economics

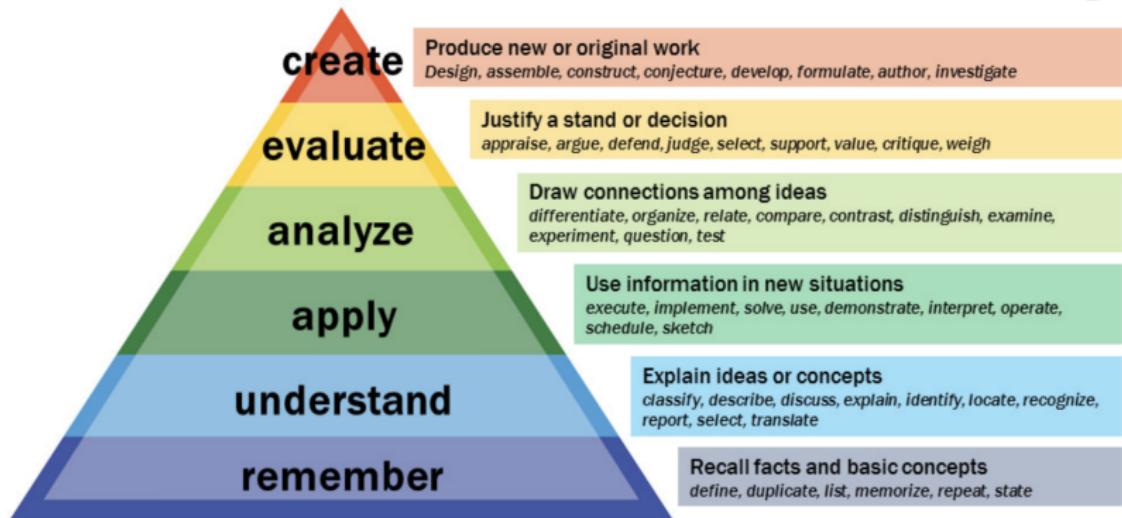
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Learning Goals: Cognitive Skills

Bloom's Taxonomy



<http://diversifyingecon.org/index.php/Bloom>

Students often mistakenly believe that learning is equivalent to memorizing. In contrast, college courses in economics expect students to progress to application and analysis.

OVERVIEW



<https://www.aeaweb.org/resources/students>

Lecture 1 presents a comprehensive overview of Economics: its origin and historical development, central topics and themes, nature and classification, analytical frameworks and statements, careers and benefits for studying Economics. Resources for pedagogy, diversity and inclusion in the field of Economics are also provided in appendices.

OUTLINES

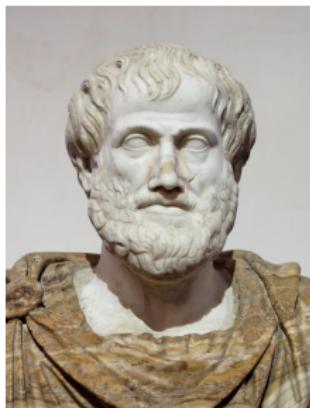
- 1** Origin and Evolution
- 2** Definition and Nature
- 3** Classification and Fields
- 4** Analytical Frameworks
- 5** Appendix

The Origin of "Economics"

- Economic writings date from earlier Mesopotamian, Greek, Roman, Indian subcontinent, Chinese, Persian, and Arab civilizations. Economic precepts occur throughout the writings of the Boeotian poet Hesiod and several economic historians have described Hesiod himself as the "first economist."
- The word "economics" is from the Greek "oikos," "family, household, estate," and "nomos," "custom, law, or order" and hence means "**household management**" or "**management of state.**"
- **In medieval and Greek thought, economic life was a branch of ethics.**
- From the 16th to 18th century, the rise of economic nationalism and modern capitalism in Europe gave birth to two schools of economic thought, the "**mercantilists**" and the "**physiocrats**," more directly influenced the subsequent development of the subject.
- The publication of **Adam Smith's The Wealth of Nations in 1776** is considered to be the first formalization of economic thought.

<https://en.wikipedia.org/wiki/Economics>

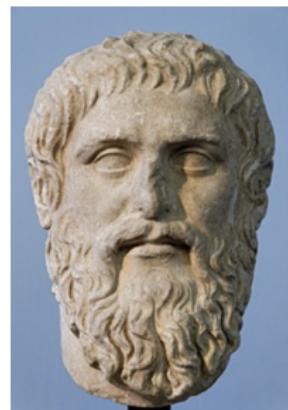
Ancient Greece Economic Thought



Plato (428/427 or 424/423
- 348/347 BC)



The School of Athens (1509)



Aristotle (384-322 BC)

Raphael's 1509 fresco-The School of Athens: Plato (left) and Aristotle (right). Aristotle holds his Nicomachean Ethics and gestures to the earth, representing his view in immanent realism, whilst Plato gestures to the heavens, indicating his Theory of Forms, and holds his Timaeus.

Ancient China Economic Thought



Prime Minister Guan
(720-645 BC, Qi)



Confucius (551-479 BC)
Spring-Autumn period



Chancellor Anshi Wang
(1021-1086) Song Dynasty

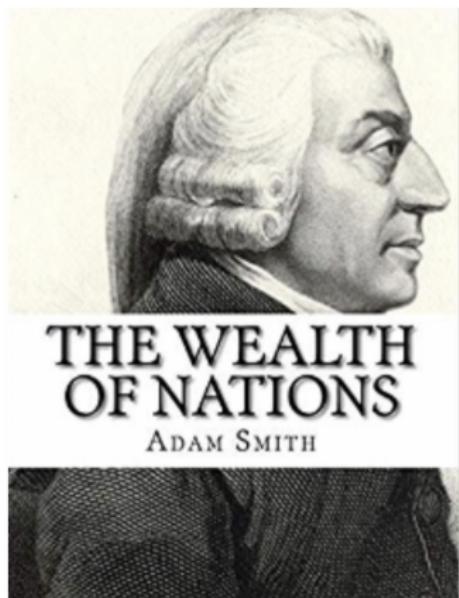
In ancient China, Chinese scholar-officials would often debate about the role government should have in the economy. Confucian factions tended to oppose extensive government controls, while "Reform" or legalist factions favored intervention. The Confucians' rationale was that the government should not "compete for profit with the people" as it would tend to exploit the population whenever it was involved in mercantile activity. Although Confucian laissez faire was largely dominant throughout China's history, legalist policies often gained prominence in times of war or with the patronage of rulers.

https://en.wikipedia.org/wiki/Ancient_economic_thought#Ancient_China

Classical Political Economy

- From Adam Smith's *Wealth of Nations* in 1776 (or perhaps the Physiocrats even earlier) until at least John Stuart Mill's *Principles of Political Economy* in 1848, "economics" was in fact generally referred to as "political economy."
- This terminology in large part reflected the belief that economics was not really separable from politics. This was more than an administrative classification of disciplines; it arose from the widespread view that political factors are crucial in determining economic outcomes. Hence, as a discipline economics historically viewed political forces not only as influencing economic outcomes, but often as a determining influence.
- Merriam-Webster: it is the study of the role of public policy in influencing the economic and social welfare of a political unit.
- Wikipedia: Political Economy is the study of production and trade and their relations with law, custom and government; and with the distribution of national income and wealth.

The Father of Classical Economics



Adam Smith

(16 June 1723 – 17 July 1790)
Scottish social philosopher and
a pioneer of political
economics.

<https://www.iep.utm.edu/smith/>

Economics as a discipline
emerged from the study of
moral philosophy. Smith was
first a moral philosopher.

<https://www.adamsmith.org/adam-smith-quotes/>

The Wealth of Nations: Themes

Book I: Of the Causes of Improvement in the productive Powers of Labor

Book II: Of the Nature, Accumulation, and Employment of Stock

Book III: Of the different Progress of Opulence in different Nations.

Book IV: Of Systems of Political Economy

Book V: Of the Revenue of the Sovereign or Commonwealth

The nation's productive capacity rests on the division of labour and the accumulation of capital that it makes possible. A country's future income depends upon this capital accumulation. This system is automatic only when there is free trade and competition. Regulations on commerce are ill-founded and counter-productive. Competition and free exchange are under threat from the monopolies, tax preferences, controls, and other privileges that producers extract from the government authorities. Thus, government itself must be limited.

<https://www.adamsmith.org/the-wealth-of-nations>

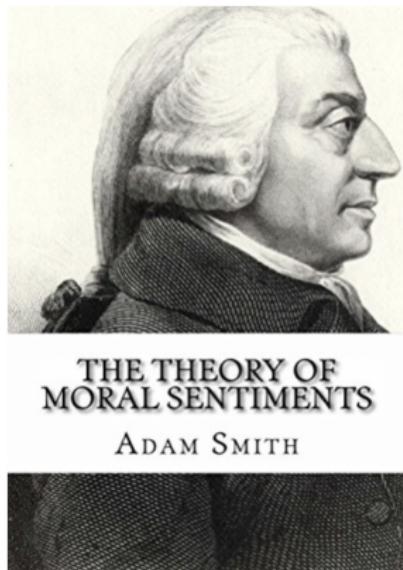
The Wealth of Nations for Today

An Inquiry into the Nature and Causes of the Wealth of Nations, 1776, usually abbreviated as The Wealth of Nations, is considered Smith's magnum opus and the first modern work of economics. Smith is widely cited as the father of modern economics and capitalism and is still among the most influential thinkers in the field of economics today.

Smith's world was very different to ours, of course, before the Industrial Revolution changed everything. At yet, by showing how the freedom and security to work, trade, save and invest promotes our prosperity, without the need for a directing authority, The Wealth Of Nations still leaves us with a powerful set of solutions to the worst economic problems that the world can throw at us. The free economy is an adaptable and flexible system, which can withstand the shock of the new, and cope with whatever the future brings.

<https://www.adamsmith.org/the-wealth-of-nations>

The Theory of Moral Sentiments



The Theory of Moral Sentiments (1759) provided the ethical, philosophical, psychological, and methodological underpinnings to Smith's later works, including The Wealth of Nations (1776), Essays on Philosophical Subjects (1795), and Lectures on Justice, Police, Revenue, and Arms (1763) (first published in 1896). Broadly speaking, Smith followed the views of his mentor, Francis Hutcheson of the University of Glasgow, who divided moral philosophy into four parts: Ethics and Virtue; Private rights and Natural liberty; Familial rights (called Economics); and State and Individual rights (called Politics).

<https://www.amazon.com/Theory-Moral-Sentiments-Adam-Smith-ebook/dp/B00PM02M32>

Theory of Moral Sentiments: Themes

The Theory Of Moral Sentiments (1759) was a real scientific breakthrough. It shows that our moral ideas and actions are a product of our very nature as social creatures. It argues that this social psychology is a better guide to moral action than is reason. It identifies the basic rules of prudence and justice that are needed for society to survive, and explains the additional, beneficent, actions that enable it to flourish.

- Self-interest. Prudence moderates the individual's excesses and as such is important for society. It is respectable, if not endearing.
- Sympathy (empathy) and morality stems from our social nature.
- Justice limits the harm we do to others. It is essential for the continuation of social life.
- Beneficence improves social life by prompting us to promote the happiness of others. It cannot be demanded from anyone, but it is always appreciated.
- Self-command moderates our passions and reins in our destructive actions.
- Virtue. A truly virtuous person would embody the qualities of prudence, justice, beneficence and self-command.

<https://www.adamssmith.org/the-theory-of-moral-sentiments>

Why is Reading Smith Essential for Economists?

During the two centuries since the publication of The Wealth of Nations the main activity of economists, it seems to me, has been to fill the gaps in Adam Smith's system, to correct his errors and to make his analysis vastly more exact. A principal theme of The Wealth of Nations was that government regulation or centralised planning were not necessary to make an economic system function in an orderly way. The economy could be co-ordinated by a system of prices (the "invisible hand") and, furthermore, with beneficial results. A major task of economists since the publication of The Wealth of Nations, as Harold Demsetz has explained, has been to formalize this proposition of Adam Smith. The given factors are technology and the tastes of consumers, and individuals, who follow their own interest, are governed in their choices by a system of prices. Economists have uncovered the conditions necessary if Adam Smith's results are to be achieved and where, in the real world, such conditions do not appear to be found, they have proposed changes which are designed to bring them about. It is what one finds in the textbooks. Harold Demsetz has said rightly that what this theory analyses is a system of extreme decentralization. It has been a great intellectual achievement and it throws light on many aspects of the economic system. But it has not been by any means all gain. The concentration on the determination of prices has led to a narrowing of focus which has had as a result the neglect of other aspects of the economic system. Sometimes, indeed, it seems as though economists conceive of their subject as being concerned only with the pricing system and that anything outside this is considered as no part of their business.

Source: Ronald Coase (1991) Nobel Prize Lecture.[\[Link\]](#)

Neoclassical Economics Foundation

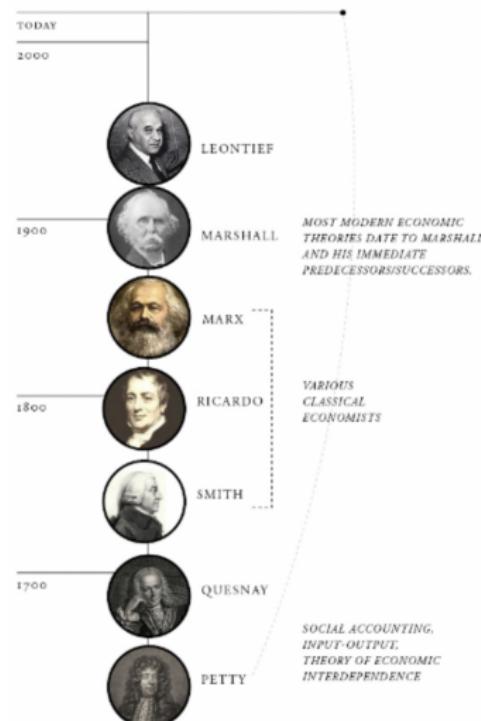
- The modern analytical framework of Economics is founded by Alfred Marshall (1842-1924) in his *Principles of Economics*, first published in 1890. The book appeared in eight editions and its main technical contribution was a masterful analysis of the issues of market equilibrium, price elasticity, consumer surplus, increasing and diminishing returns, short and long terms, and marginal utility.
- Alfred Marshall was the dominant figure in British economics (itself dominant in world economics) from about 1890 until his death in 1924. Although Marshall took economics to a more mathematically rigorous level, he did not want mathematics to overshadow economics and thus make economics irrelevant to the layman. Accordingly, Marshall tailored the text of his books to laymen and put the mathematical content in the footnotes and appendices for the professionals.

https://en.wikipedia.org/wiki/Alfred_Marshall

<https://www.econlib.org/library/Enc/bios/Marshall.html>

Timeline of Economic Thought

- 16-17th C – Mercantilism
- 18th C – Physiocrats
- 18-19th C – Classical School
- 19th C – Socialism/Marxism
- Late 19th C – Austrian School
- Early 20th C – Neoclassical
- Mid 20th C – Keynesianism
- Late 20th C – Modern Mainstream
(Monetarism, Rational Expectations,
Chicago School, New Keynesianism)

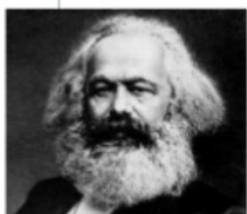
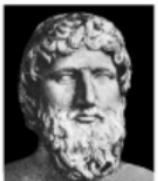


<https://www.economicmodeling.com/2011/12/14/social-accounting-and-io-theory/>

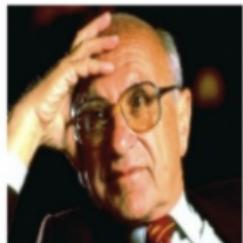
Revolutions in Economic Theory

- Classical Political Economy
 - Adam Smith (1776) *Wealth of Nations*
 - David Ricardo (1817) *Principles of Political Economy and Taxation*
 - John Stuart Mill (1848) *Principles of Political Economy*
- Neoclassical Economics
 - Alfred Marshall (1890) *Principles of Economics*
- Keynesian Macroeconomics
 - John Maynard Keynes (1936) *General Theory of Employment, Interest, and Money*
- Modern Economic Analysis
 - Paul Samuelson (1947) *Foundations of Economic Analysis*

Source: Dillard (1978).



The History of Economic Thought



<https://www.slideshare.net/BSTAI/history-of-economic-thought>

OUTLINES

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What is Economics All About?

- Popular textbooks define Economics as the study of how society manages its scarce resources, for example,
 - how households decide what to buy, how much to work, save, and spend
 - how businesses decide how much to produce, how many workers to hire
 - how society decides how to divide its resources between national defense, consumer goods, protecting the environment, and other needs
- Over time, the areas studied by economists expand significantly.



Economics is a Decision-making Science

Economists study. . .

- How people make decisions.
- How people interact with each other.
- The forces and trends that affect the economy as a whole.

Economics trains you to. . .

- Think in terms of alternatives and opportunities.
- Estimate the cost of individual and social choices.
- Examine how certain events and issues are related.
- Evaluate the effectiveness of public policies and programs

Source: Mankiw (2021).

Small Questions About Ourselves

- Shall I go to a private school or public school?
- How about dropping out of college to take a job?
- Shall I skip next class if the professor does not notice?
- Economics concerns decisions – choices among various actions.
- Every action has its pros and cons, pluses and minuses, benefits and costs.

Actions		Basket		Majors	Source	RGN	Last Price	Change	Rate	Spot	Outrights	Pairs
10) Spot	11) Forward	12) Fixing	Heat Map									
USD	EUR	JPY	GBP	CAD	AUD							
8.3962	0.8302	12.808	9.0571									
NOK	0.6242	.06404	11.623	8.2194	6.6945	6.521						
HKD	7.7527	8.7316	.06516	11.826	8.3630	6.9183	5.918					
NZD	1.3628	1.3524	.01145	2.0785	1.4700	1.0954	1.058					
AUD	1.2875	1.4572		1.9640	1.3888	1.0265						
CAD	1.2542	1.4196	.01054	1.9132	1.3529	-						
CHF	92.703	1.0493	.00779	1.4141	-	.73914	.72006					
GBP	655.65	74198	.00551	-		.52268	.50011					
JPY	118.98	134.67		181.50	128.35	94.865	92.414					
EUR	-88351	-	.00840	1.5254	.95305	.70444	.68652					
USD	-	1.1319	.00743	1.3477	-	.79787	.79732	.7767				



<https://www.aeaweb.org/resources/students/what-is-economics>

Big Questions About Our World

- What were the impacts and economic consequences of COVID-19 on the U.S. and the world? How could most countries fail?
- What are the feasible private and public solutions to the global warming and climate change? (Otherwise, it will be too late.)
- Why did U.S. government wage a "trade war" against China and other countries? Why bother Huawei and Tik Tok? Why has the U.S. been running large persistent government budget and trade deficits?
- How come the U.S. government shut down multiple times in history?
<https://www.cnn.com/specials/politics/government-shutdown-2019>
- What are the most valuable business in the world? Why do the most valuable companies (FAAMG) all belong to the high-tech sector?
- Will robots replace our jobs and cause waves of unemployment?
- Who are the winners and losers in an era of artificial intelligence?

Economics: Textbook Definition

- N. G. Mankiw (2021): Economics is the study of how society manages its scarce resources.
- Acemoglu, Laibson and List (2022): Economics is the study of how agents choose to allocate scarce resources and how those choices affect society.
- Krugman and Wells (2018): Economics is the social science that studies the production, distribution, and consumption of goods and services.
- Goolsbee, Levitt, and Syverson (2016): Microeconomics relies on theories and models to study the choices made by individuals and firms.
- Pindyck and Rubinfeld (2016): Microeconomics is the branch of economics that deals with the behavior of individual economic units—consumers, firms, workers, and investors—as well as the markets that these units comprise.
- Tucker (2019): The study of how society chooses to allocate its scarce resources to the production of goods and services to satisfy unlimited wants.
- Biwei's favorite definition: Economics is the study of choice under scarcity.
 - Lecture 3 on Scarcity and Lecture 4 on Choice.
 - All lectures teach students to make scientific decisions.

Benefits and Careers for Studying Economics

- Understand the society and the world
 - How the economy and society functions?
 - The seen, unseen, and unintended consequences
 - Evaluate public policies: cause & effect, equity & efficiency
- Make scientific decisions and impacts
 - Become intellectually and financially independent
 - Advise and help others make decisions (consultant)
 - Participate and inform public policies (economists)
- Careers in Economics (watch this AEA video!)

<https://www.aeaweb.org/resources/students/careers/video/career-in-economics>

- Career earnings for economists and economics degrees

<https://www.aeaweb.org/resources/students/careers/earnings>

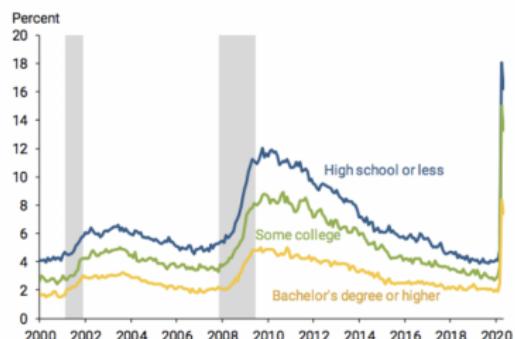
<https://www.payscale.com/college-salary-report/majors-that-pay-you-back/bachelors>

- American Economic Association job openings for economists

<https://www.aeaweb.org/joe/listings>

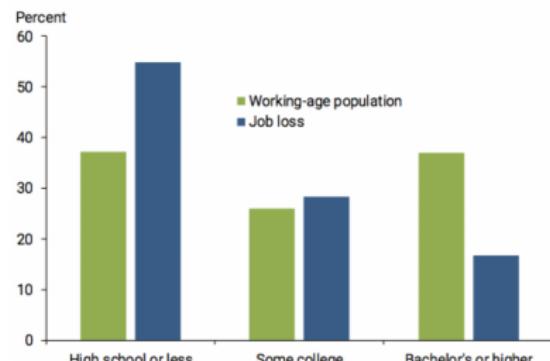
College Education: Labor Market Outcomes

Figure 1
Unemployment by education level



Source: Bureau of Labor Statistics, Current Population Survey. Gray bars indicate NBER recession dates.

Figure 2
Job loss relative to working-age population shares



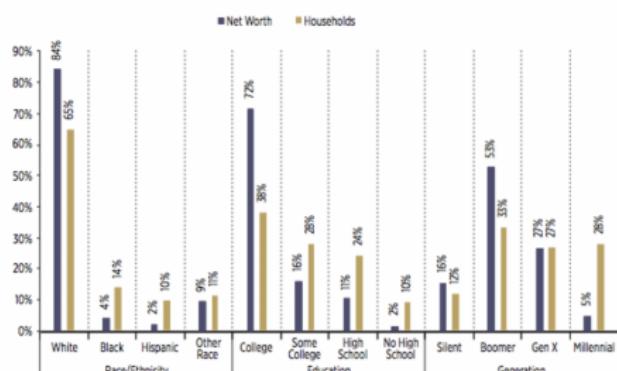
Source: Bureau of Labor Statistics, Current Population Survey; aggregate job loss between February and May 2020.

Since COVID-19 hit the United States, more than 20 million American workers have become unemployed and countless others have left the labor force altogether. While the labor market disruptions have affected workers in a wide set of industries and occupations, those without a college degree have experienced the most severe impact. Addressing gaps in educational attainment will be important to creating better economic resiliency for individuals against future shocks.

Source: Daly et al. (2020).[\[Link\]](#)

College Education: Family Wealth Outcomes

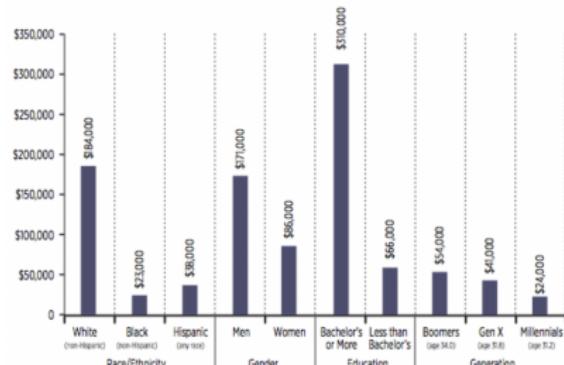
Share of Total Family Wealth and of Households by Demographic Group, Q4 2020



Sources: Federal Reserve Board's Distributional Financial Accounts and authors' calculations.

Note: The demographic characteristics for the family are taken from the family head.

Median Family Wealth in 2019



Sources: Federal Reserve Board's Survey of Consumer Finances and authors' calculations.

Notes: The demographic characteristics for the family are taken from the survey respondent. Wealth values are rounded to the nearest \$1,000. Percentages are based on unrounded numbers. Demographics considered advantaged are italicized.

Lower-wealth groups (younger, Black, Hispanic, and/or less educated families and women) tend to face contemporary barriers to wealth accumulation such as having insufficient and/or volatile income that severely limits regular saving.

Source: The Future of Building Wealth (2021), pp. 26-28
<https://futureofwealth.org/the-book/>

Will Economics Make You Rich?

Bleemer, Zachary, and Aashish Mehta. 2022. *"Will Studying Economics Make You Rich? A Regression Discontinuity Analysis of the Returns to College Major."* American Economic Journal: Applied Economics, 14 (2): 1-22.

- Publicly available statistics on career earnings show that an economics degree pays far more on the job market than degrees in other social sciences. But it's not clear that those higher salaries reveal the true returns to studying the dismal science.
<https://www.aeaweb.org/resources/students/careers/earnings>
- The authors investigate the wage return to studying economics by leveraging a policy that prevented students with low introductory grades from declaring a major. Students who barely met the grade point average threshold to major in economics earned \$22,000 (46 percent) higher annual early-career wages than they would have with their second-choice majors.
- For reference, a comparison between the national median wages of college graduates with economics degrees and those of graduates with degrees in UCSC economics students' second-choice majors suggests that majoring in economics raises the net present value of a student's college education by \$536,000, with the early-career annual wage difference widening over time.

<https://www.aeaweb.org/articles?id=10.1257/app.20200447>

The Returns to an Economics Degree

Question: Why are economics majors earning so much more in the workforce?

What we see is a big difference in the number of economics courses that these kids take. If you're allowed into the economics major, you take on the order of twelve more economics courses over your college career. Moreover, we saw a pretty substantial difference in the number of quantitative courses overall that these kids took in college. So being allowed into the economics major led these kids to take about two additional math, statistics, or other quantitative methodology courses while they were in college. These kids had different educational experiences and learned different things in college, and that's going to have different payoffs in the labor market. Also, when you look at the actual jobs that these kids have in the labor market, you see that they're much more likely to end up in relatively high-paying fields—like finance, accounting, real estate, and business consulting—as compared to the just-below-threshold students. This probably relates, at least in part, to people in those industries having a preference for economics majors as a result of the information these kids learned in their economics courses. But another thing we see is that these just-above-threshold students, who were allowed to major in economics, were much more likely to report a preference for going into these high-paying business and finance careers, even as sophomores, long before they were entering the labor market themselves, relative to the kids just below the threshold. It seems that being allowed into economics and taking a series of introductory economics courses shaped these students' preferences in a way that they ended up choosing, at least in part, the kinds of higher-wage industries that led them to themselves earn higher wages.

Source: Zachary Bleemer (2022) [Link]

Economics as a Pre-requisite

- College course requirements: general education, majors, minors
- Schools of Business/Management/Law requirements
 - Accounting/Marketing/Corporate Finance/Investments
 - Business Administration/Human Resources/Operations
 - Anti-Trust/Trade/International Tax/Property Rights Laws
- Schools of Public Policy/Education/Health/Medicine
- Professional certifications: CPA, CFA, CMA, PMP, FRM

<https://www.indeed.com/career-advice/finding-a-job/types-of-business-majors>

Remember: Economics is more than a college course; it is a lifetime skill.

Economics Rooted in Physics

- Our mother nature and human nature are not only incredibly similar but actually unified in their origin (consider the word "universe"); they are not random designs but governed by the same set of rules, laws, and principles.
- Neo-classical and modern economic analysis borrowed several pivotal concepts from Physics—with "equilibrium" being the most influential and others include friction, elasticity, momentum, oscillation, and dynamics; at a higher level, the analytical frameworks of Economics based off of Physics thereafter.
- In particular, the Laws of Thermodynamics apply to Economics and Finance, as we will briefly mention in Lecture 2 Scientific Methodology for Economics.
- As an interdisciplinary field, Econophysics applies theories and methods originally developed by physicists in order to solve problems in economics and finance, usually those including uncertainty or stochastic processes and nonlinear dynamics.
- Some of its application to the study of financial markets has also been termed statistical finance referring to its roots in statistical physics.

<https://en.wikipedia.org/wiki/Econophysics>

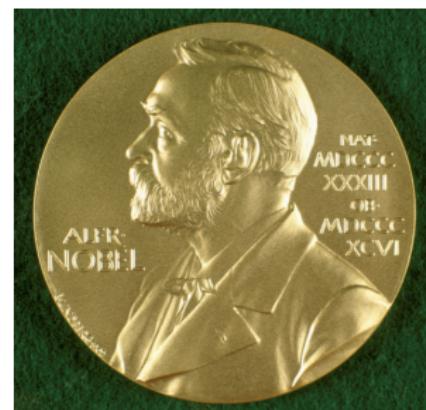
Nobel Prize in Economic Science

In 1968, Sveriges Riksbank (Sweden's central bank) established the Prize in Economic Sciences in Memory of Alfred Nobel, founder of the Nobel Prize. The Prize is based on a donation received by the Nobel Foundation in 1968 from Sveriges Riksbank on the occasion of the Bank's 300th anniversary. The first Prize in Economic Sciences was awarded to Ragnar Frisch and Jan Tinbergen in 1969. The Prize amount for 2019 is set at Swedish kronor (SEK) 9.0 million per full Prize.

Quick Facts

- Economic Sciences prizes: 52
- Economic Sciences laureates: 86
- Awarded women: 2
- Youngest laureate: 46
- Oldest laureate: 90

<https://www.nobelprize.org/prizes/economic-sciences>



<https://www.britannica.com/topic/Nobel-Prize>

Nobel Prize in Economic Sciences

- 2021 David Card, Joshua Angrist and Guido Imbens for their methodological contributions to the analysis of causal relationships
- 2020 Paul R. Milgrom and Robert B. Wilson for auction theory and format.
- 2019 Abhijit Banerjee, Esther Duflo and Michael Kremer for their experimental approach to alleviating global poverty.
- 2018 William D. Nordhaus for integrating climate change into long-run macroeconomic analysis and Paul M. Romer for integrating technological innovations into long-run macroeconomic analysis.
- 2017 Richard H. Thaler for his contributions to behavioural economics.
- 2016 Oliver Hart and Bengt Holmstrom for their contributions to contract theory.
- 2015 Angus Deaton for his analysis of consumption, poverty, and welfare.
- 2014 Jean Tirole for his analysis of market power and regulation.
- 2013 Eugene F. Fama, Lars Peter Hansen and Robert J. Shiller for their empirical analysis of asset prices.
- 2012 Alvin E. Roth and Lloyd S. Shapley for the theory of stable allocations and the practice of market design.

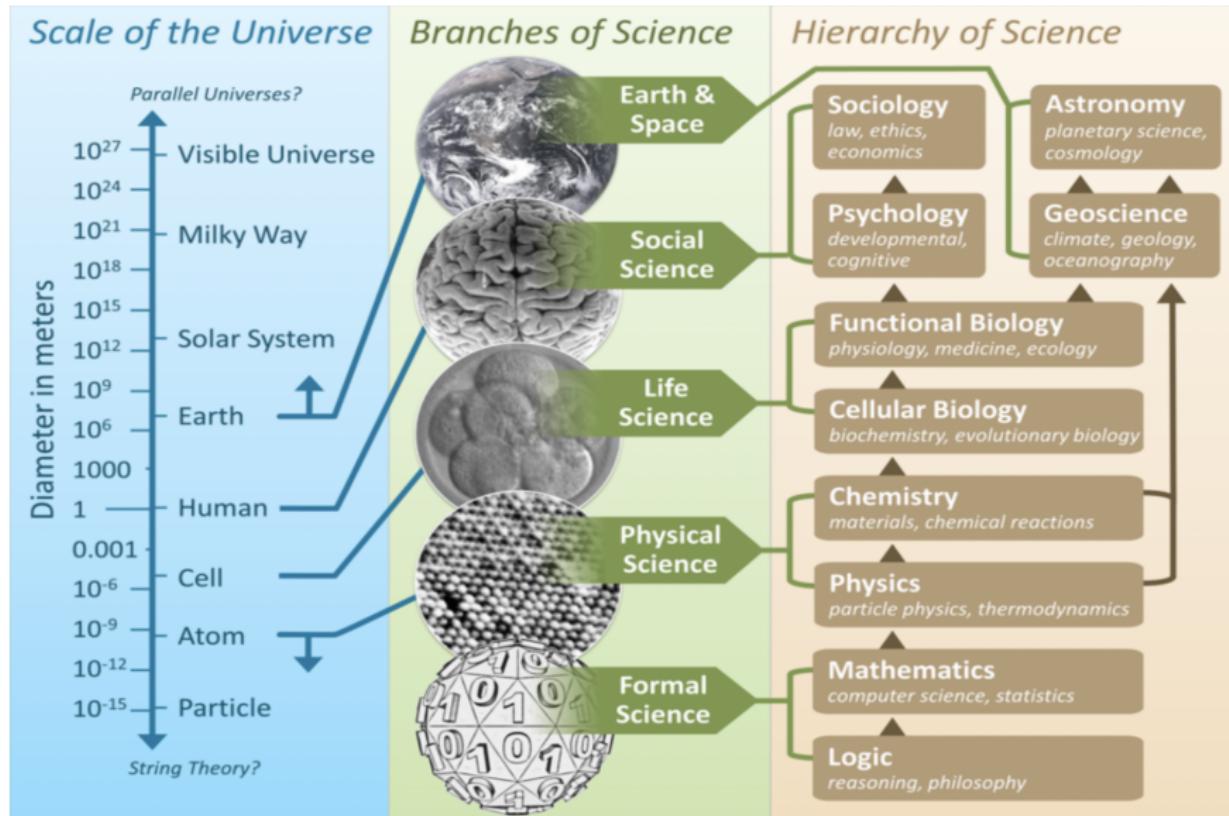
<https://www.nobelprize.org/prizes/lists/all-prizes-in-economic-sciences/>

Economics as a Social Science

- Akin to other sciences, Economics consists of explanations (theories and models) that help us understand and make valid predictions about the real world, together with the empirical evidence for and against them.
- Unlike natural science, which examines the nature, social science studies human society: e.g., How society functions and evolves? What are the differences across societies? What cause the differences?
- The scientific method requires scientists to derive abstract theory based on certain assumptions to help explain how a complex real world operates.
- More importantly, theory must be subject to empirical examinations and tests. Therefore, scientists can develop, reject, refine theories, and apply them in practice.
- Lecture 2 Scientific Methodology for Economics: More technical knowledge on this topic.

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<https://www.linguisticsociety.org/resource/science-linguistics>

Broad Classification of Economics

- Microeconomics studies and models how households, firms, and governments make decisions and how they interact in markets.
- Macroeconomics examines economy-wide phenomena, including national output, price level, unemployment, monetary and fiscal policies.
- American Economic Association
- JEL Classification Codes Guide
 - <https://www.aeaweb.org/jel/guide/jel.php>



The "JEL" classification system originated with the Journal of Economic Literature and is a standard method of classifying scholarly literature in the field of economics. It is used in many of the AEA's published research materials.

Microeconomics vs Macroeconomics

Don't be confused between **MICROECONOMICS & MACROECONOMICS**



<https://www.cheggindia.com/career-guidance/difference-between-microeconomics-and-macroeconomics/>

AEA JEL Classification

Use the guide to gain insight on how JEL Codes are used to classify articles, dissertations, books, book reviews, and working papers. You will also find it is helpful when adding classification codes to your own work.

A General Economics and Teaching

B History of Economic Thought, Methodology, and Heterodox Approaches

C Mathematical and Quantitative Methods

D Microeconomics

E Macroeconomics and Monetary Economics

F International Economics

G Financial Economics

H Public Economics

I Health, Education, and Welfare

J Labor and Demographic Economics

K Law and Economics

L Industrial Organization

M Business Administration and Business Economics; Marketing; Accounting; Personnel Economics

N Economic History

O Economic Development, Innovation, Technological Change, and Growth

P Political Economy and Comparative Economic Systems

Q Agricultural and Natural Resource Economics; Environmental and Ecological Economics

R Urban, Rural, Regional, Real Estate, and Transportation Economics

Y Miscellaneous Categories

Z Other Special Topics

The distinction between microeconomics and macroeconomics has become ambiguous. A study that may be relevant to both microeconomics and macroeconomics is classified under the appropriate categories in D and E, for example a study on the microeconomic foundations of macroeconomics.

<https://www.aeaweb.org/jel/guide/jel.php>

AEA Classification Guideline: Microeconomics

Studies about microeconomic issues in specialized fields, summarily referred to as applied microeconomics, are classified under the appropriate field categories.

- There are also many subcategories in microeconomics that are closely related to those in L (Industrial Organization). In particular, D2 categories and L2 categories, and D4 categories and L1 categories deal with the same or similar subjects.
- Studies about financial economics and business finance should be classified under the appropriate G categories.
- Studies about labor and demographic economics should be classified under the appropriate J categories.
- Micro-studies about business administration, business economics, marketing, and accounting should be classified under the appropriate M categories.
- Microeconomic studies pertaining to economic development should be cross-classified under appropriate D categories and under O12 and/or other appropriate O categories.
- Those studies pertaining to socialist and transitional economies or other economic systems should be cross-classified under appropriate categories in D and P2, P3, or P4.
- Microeconomic studies at the urban-regional level should be cross-classified under appropriate categories in D and R.

NBER Programs and Projects

PROGRAMS →

Economics of Aging
Asset Pricing
Children
Corporate Finance
Development Economics
Development of the American Economy
Economic Fluctuations and Growth
Economics of Education
Environment and Energy Economics
Health Care
Health Economics
Industrial Organization
International Finance and Macroeconomics
International Trade and Investment
Labor Studies
Law and Economics
Monetary Economics
Political Economy
Productivity, Innovation, and Entrepreneurship
Public Economics

WORKING GROUPS →

Behavioral Finance
Chinese Economy
Cohort Studies
Economics of Crime
Entrepreneurship
Household Finance
Innovation Policy
Insurance
Market Design
Organizational Economics
Personnel Economics
Race and Stratification in the Economy
Risks of Financial Institutions
Urban Economics

ALL PROJECTS & CENTERS →

Boosting Grant Applications from Faculty at MSIs
Center for Aging and Health Research
Conference on Research in Income and Wealth
Early Indicators of Later Work Levels, Disease and Death
Economics of Digitization
Gender in the Economy
Improving Health Outcomes for an Aging Population
Macroeconomics Annual
Measuring the Clinical and Economic Outcomes Associated with Delivery Systems
Oregon Health Insurance Experiment
Retirement and Disability Research Center
The Roybal Center for Behavior Change in Health
Science of Science Funding
Training Program in Aging and Health Economics
Transportation Economics in the 21st Century

<https://www.nber.org/programs-projects>

Behavioral and Experimental Economics

- Behavioral economics combines elements of economics and psychology to understand how and why people behave the way they do in the real world. It differs from neoclassical economics, which assumes that most people have well-defined preferences and make well-informed, self-interested decisions based on those preferences.
- For example, why do people often avoid or delay investing in 401ks or exercising, even if they know that doing those things would benefit them? And why do gamblers often risk more after both winning and losing, even though the odds remain the same, regardless of "streaks"?
- While economics traditionally involves the careful study of theoretical and mathematical models, experimental economists examine human behavior in the field or in a controlled laboratory setting, putting these conceptual models to the test. Experimental economists have already discovered that humans are less rational than they were previously assumed to be, and this is likely only the first of many similarly critical discoveries that this field will reveal.

<https://news.uchicago.edu/explainer/what-is-behavioral-economics>

<https://drivinginnovation.ie.edu/four-emerging-subfields-in-the-world-of-economics>

Diversity and Inclusion in Economics

- It is no secret that the economics profession suffers from a profound lack of diversity. In 2018, of the 1197 doctorates in economics awarded in the United States, less than one-third were awarded to women and only 46 to Blacks, Hispanics and Native Americans (CSMGE 2019).
- While historically there has been a focus on encouraging more women and underrepresented minorities to study economics, a growing body of convincing evidence documents the role of demand-side impediments—such as climate, hiring and promotion practices, and stereotyping—that also contribute to the lack of diversity.
- A more diverse profession would foster a more vibrant discipline. Economists with different lived experiences ask different questions and come up with different ways to answer. Addressing biases in individuals and institutions can improve both equity and efficiency.

<https://www.aeaweb.org/resources/best-practices>

Resources for Women in Economics

"Women are still a minority in the economics profession. By the mid-2000s, just under 35 percent of PhD students and 30 percent of assistant professors were female, and these numbers have remained roughly constant ever since."

- Center for Economic Policy and Research
<https://cepr.org/content/women-economics>
- Federal Reserve Bank of St. Louis—Podcast Series
<https://www.stlouisfed.org/timely-topics/women-in-economics>
- Women in Economics (offered by Marginal Revolution University MRU) highlights the groundbreaking and inspiring work of female economists—not only to recognize the important work they've done but to also share their inspirational journeys. Watch the role models for the next generation of female economists.
<https://learn.mru.org/women-economics-series/>
- AEA job markets for economists <https://www.aeaweb.org/joe/listings>
<https://www.aeaweb.org/articles?id=10.1257/jep.33.1.3>

OUTLINES

- ① Origin and Evolution
- ② Definition and Nature
- ③ Classification and Fields
- ④ Analytical Frameworks
- ⑤ Appendix

Microeconomics: Framework

The basic units in the study of Microeconomics are individual consumers and producers. Microeconomic theory models how they make consumption and production decisions, respectively. And, together, how they interact in the markets. The government also plays a vital role in everyone's social and economic life.

- Household/consumption decisions: how consumers make their demand decisions based on utility maximization subject to the law of demand and their budget constraint.
- Business/production decisions: how producers make their supply decisions based on rent maximization subject to the law of supply governing production cost.
- Market equilibrium analysis: how consumers and producers pursuing their own interest can lead to the (in)efficient functioning of markets in allocating resources and distributing income.
- Public Policies: the roles of government and how public policies affect market outcomes and social welfare.

Scientific Aspects of Economics

- Economics has both a positive and a normative aspect. From the positive or scientific point of view, economics attempts to explain what the real world is like. In its normative aspect economics studies questions of policy, for example, how large a fraction of the tax burden should be borne by the rich.
- Although scientific progress in economics tends to eliminate disagreements among economists on positive matters, when it comes to normative issues unanimity can never be expected. The reason is that economists, like other citizens, diverge in the policy goals they seek to achieve.
- In its scientific aspect economics is strictly positive. It answers questions such as "Is this theory (explanation) really true of the actual world?" But economics also has a normative aspect, dealing with questions such as "Should this policy be adopted?"
- Given an objective, economists can use their knowledge of "what is true" to analyze the problem and suggest ways of achieving "what ought to be done."

Source: Hirshleifer, Glazer & Hirshleifer (2005) Price Theory and Applications: Decisions, Markets, and Information. 7e. Cambridge University Press. p.20.

General Statements in Economics

Economics has both a positive and a normative aspect.

- Positive analysis/statements are statements that describe the world as it is. They rely on descriptive analysis and scientific explanation.
 - What? The apple price goes up.
 - Why? Apple farms cut production this year.
 - How? The decline in the supply of apple drives price up.
- Normative analysis/statements are statements about how the world should be. They resort to prescriptive analysis and morality.
 - The government should raise minimum wage year after year.
 - The government shall provide subsidies to support apple farmers next year so that consumers will benefit from lower prices and more consumption in the future.

Welfare Economics applies normative evaluation to market outcomes and government policies (equity and efficiency).

Positive Economics

Seeks to understand behavior without making judgments about outcomes



Does a currency devaluation fuel inflation?

Are oil prices contributing to a GDP slowdown?

Disposable income has declined by 15% over the past four years.

When disposable incomes fall the demand for own-label supermarket foods rises

Raising tax on beer will have a negative effect on the profits of brewers.

Higher interest rates will dampen house prices.

Normative Economics

Analyzes outcomes of economic behavior, evaluates them as good or bad, and sometimes prescribes a course of action



Higher education should be free.

Should alternative fuels be subsidized?

We must try to boost disposable income.

Basic healthcare to all citizens should be free.

Unemployment is more harmful than inflation.

The minimum wage should be raised by 20%.

Market mechanisms should be allowed to work freely in order to make sure resources are best allocated.

Alcohol consumption should be controlled by enforcing minimum prices for alcoholic beverages sold in supermarkets.

Adam Smith's Economic Analysis

- Adam Smith had in part a normative purpose in writing *The Wealth of Nations*. He opposed the then politically dominant mercantilists, favoring instead the policy he called "natural liberty"—free trade among nations, and laissez faire within.
- Economic theory and models are less concerned with normative issues (policy recommendations) than with positive matters (scientific understanding).
- Looking at the positive aspect, Smith's even more fundamental thesis was that the economy follows objectively determinable laws. In early times, some people thought the planets were pushed in their courses by angels. Newton showed how the principle of gravity explains planetary motions.
- Similarly, to explain the universe of economic behavior, Smith put forward the idea of the market system as a mechanism, driven by the self-interest of participants, yet integrated so that each is led to serve the desires of others.

Source: Hirshleifer, Glazer & Hirshleifer (2005) CH1, p.20.

Why Economists Disagree?

The distinction between positive and normative analysis sheds new light upon the question about disagreement among economists.

Proposition	Agreement among economists			
	Generally agree	Agree with provisions	Generally disagree	Index of consensus
POSITIVE ISSUES				
A minimum wage increases unemployment among young and unskilled workers.	56.5%	22.4%	20.5%	36.0
A ceiling on rents reduces the quantity and quality of housing available.	76.3%	16.6%	6.5%	69.8
The cause of the rise in gasoline prices that occurred in the wake of the Iraqi invasion of Kuwait is the monopoly power of the large oil companies.	11.4%	20.3%	67.5%	56.1
NORMATIVE ISSUES				
The distribution of income in the United States should be more equal.	48.5	24.4	26.7	21.8
Antitrust laws should be enforced vigorously to reduce monopoly power from its current level.	34.9	36.9	27.6	7.3
The level of government spending relative to GNP should be reduced.	35.6	19.03	44.6	-9.0

Note: The column labeled "Index of consensus" was constructed by comparing "Generally agree" with "Generally disagree," subtracting the smaller of these from the larger. ("Agree with provisions," the middle position, was omitted.)

Source: Adapted from Richard M. Alston, J. R. Kearl, and Michael B. Vaughan, "Is There a Consensus among Economists," *American Economic Review*, v. 82 (May 1992), pp. 204-5.

Source: Hirshleifer et al. (2005) CH1, pp.20-21.

Economists may disagree on policy issues because they seek different normative goals. One might be more concerned with social equality, another with individual freedom. Even complete scientific understanding will not resolve such philosophical conflicts. But often disagreement among economists is over means rather than goals: not over what to do, but how to do it. Scientific progress in positive economics will, over time, tend to eliminate this source of disagreement.

Attributes of Economic Analysis

To help understand what economics is, three methodological attributes should be clarified.

- ① Economic theory is "positive" or "non-normative." It gives no generally accepted criteria for determining which consequence or type of behavior or economic policy is good.
- ② Economics explains what conditions will lead to what consequences. Economics yields conditional "if-A-then-B" propositions; it does not forecast that the A will occur—although some economists (as opposed to economists) may hazard such forecasts. It says a lower price of cars will sell more cars, but it doesn't say car prices will be lowered.
- ③ Valid economic theory exists and is applicable to all economic systems and countries. There is not a special economic theory for capitalism and another for communism, although significant differences exist in the institutions and legal frameworks to which the theory is applied.

Source: Alchian & Allen (1972) University Economics. 3e. Wadsworth. pp.6-7

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Ancient Greece: Parallelism and Utopian

- The city-state of Athens is considered the birthplace of intellectual freedom and democracy – lasting legacies that helped to mold the ideas that have influenced the development of Western Civilization. In contrast, the city of Sparta, which was profoundly militarist, and in which individual freedom was practically nonexistent, due to the belief that all resources must be subordinate to the state.
- For the Greek philosophers and social thinkers, the central themes were questions of "justice," "virtue," "the good," and "the beautiful." Their discussions on economics were often few and relatively unsystematic.
- What today we call "economic" questions and problems were relegated to a narrow corner of evaluating how economic institutions and organization could be designed or modified to serve these "higher" ends or goals.

<https://www.fff.org/explore-freedom/article/economic-ideas-plato-aristotle-ancient-greeks-part-1/>

Ancient Greece: Totalitarian State

- Most eminent and distinguished Athenian thinkers (Socrates 470 BC-, Plato 428 BC and 423 BC, Aristotle 384 BC-322 BC) and philosophers invariably lambasted and undervalued the commercial order that surrounded and supported them while they took every opportunity to extol the statist totalitarianism Sparta represented.
- Socrates felt that life's ideal goal lay in the search for "virtue," understood as disdain for material wealth and profit. Socrates seized every opportunity to boast of his poverty and to idealize the supposed virtues of the totalitarian state of Sparta, which represented ideals opposed to those of Athens.
- Plato as the father of the totalitarian state and his ideal republic as the command society: All trade, commerce, and manufacturing, both within the city-state and with other city-states would be controlled and regulated by the rulers of the State. No free movement of people from city-state to city-state.

<https://mises.org/library/economic-thought-ancient-greece>

Ancient China: Guanzi

The Guanzi is an ancient Chinese political and philosophical text (over 135,000 characters, one of the longest early Chinese philosophical texts). This anonymously written foundational text covers broad subject matter, notably including price regulation of commodities via the concept of "light and heavy." It is one of the most representative text of developing concepts of political economy Warring States era.

- Several chapters of the Guanzi address what modern language would call economic and monetary issues. It is a core text on the matter of price stabilization from the ancient Chinese perspective.
- The economic policies discussed focus on insulating peasants from fluctuations in the context of then-recently developed market forces and to increase commercialization while benefitting the state.
- The "state savings" chapter has been described as the first-ever exposition of **the quantity theory of money**, and the "light and heavy" chapter as the first clear articulation of **the law of supply and demand**. *"Now, the price of grain is heavy in our state and light in the world at large. Then the other lords' goods will spontaneously leak out like water from a spring flowing downhill. Hence, if goods are heavy, they will come; if light they will go."*

[https://en.wikipedia.org/wiki/Guanzi_\(text\)](https://en.wikipedia.org/wiki/Guanzi_(text))

Ancient China: Liberty and Laissez-faire

- During the same era when classical Greek thought was being forged (from the 6th to the 4th century BC), ancient China saw the beginnings of three great currents of thought: that of the so-called "Legalists" (who supported the centralized state), that of the Confucianists (who tolerated it), and that of the Taoists, of a much more liberal bent and extremely interesting for historians of economic thought.
- In Confucius's day (6th-5th century BC), Lao Tzu concluded that government oppressed the individual and was always "more to be feared than fierce tigers." Therefore, he believed the best policy for governments was "inaction," because only then could the individual flourish and achieve happiness. Chuang Tzu (369-286 BC) adhered to the individualistic, liberal views of Lao Tzu, the father of Taoism, and took them to their most logical conclusions.
- In stark contrast with the views of the Greek philosophers and with those of the rest of western intellectuals to the present day, Chinese Taoist thought always defended individual liberty and laissez-faire while attacking the systematic and coercive use of violence typical of government.

Political Economy: Historical Development

- Political economy is a very old subject of intellectual inquiry but a relatively young academic discipline. The analysis of political economy (in terms of the nature of state and market relations), both in practical terms and as moral philosophy, has been traced to Greek philosophers such as Plato and Aristotle as well as to the Scholastics and those who propounded a philosophy based on natural law.
- A critical development in the intellectual inquiry of political economy was the prominence in the 16th to the 18th century of the mercantilist school, which called for a strong role for the state in economic regulation.
- Political economy emerged as a distinct field of study in the mid-18th century, largely as a reaction to mercantilism, when the Scottish philosophers Adam Smith (1723–90) and David Hume (1711–76) and the French economist Francois Quesnay (1694–1774) began to approach this study in systematic rather than piecemeal terms. They took a secular approach, refusing to explain the distribution of wealth and power in terms of God's will and instead appealing to political, economic, technological, natural, and social factors and the complex interactions between them.

Political Economy & Economics

- The relationship between political economy and the contemporary discipline of economics is particularly interesting, in part because both disciplines claim to be the descendants of the ideas of Smith, Ricardo, Hume, and John Stuart Mill.
- Whereas political economy, which was rooted in moral philosophy, was from the beginning very much a normative field of study, economics sought to become objective and value-free. Indeed, under the influence of Alfred Marshall (1842–1924), economists endeavored to make their discipline like the 17th-century physics of Sir Isaac Newton (1642–1727): formal, precise, and elegant and the foundation of a broader intellectual enterprise.
- With the publication in 1947 of Foundations of Economic Analysis by Paul Samuelson (1915–2009), who brought complex mathematical tools to the study of economics, the bifurcation of political economy and economics was complete. Mainstream political economy had evolved into economic science, leaving its broader concerns far behind.

<https://www.britannica.com/topic/political-economy/Historical-development>

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