

All Prizes in Economic Sciences

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel has been awarded 48 times to 78 Laureates between 1969 and 2016. Click on the links to get more information.

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2016

Oliver Hart and *Bengt Holmström*

Born: 9 October 1948, London, United Kingdom

Affiliation at the time of the award:
Harvard University, Cambridge, MA, USA

Born: 18 April 1949, Helsinki, Finland

Affiliation at the time of the award:
Massachusetts Institute of Technology (MIT),
Cambridge, MA, USA

"for their contributions to contract theory"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2015

Angus Deaton

Born: 19 October 1945, Edinburgh, United Kingdom

Affiliation at the time of the award: Princeton University, Princeton, NJ, USA

Prize motivation: "for his analysis of consumption, poverty, and welfare"

Life

Angus Deaton was born in Edinburgh, Scotland and was educated at Fettes College. He then studied at the University of Cambridge, where he received his doctorate in 1975. After serving as a professor at the University of Bristol he joined the faculty at Princeton University, New Jersey, USA, in 1983. Angus Deaton has two daughters and is married to economist Anne Case.

Work

Consumption of goods and services plays a critical role in human welfare. The understanding of these relationships is crucial for designing economic policy. Angus Deaton has examined the consumption of individuals how this relates to economic development in society at large. His research deals with how consumption depends on prices, puts consumption in relation to savings and incomes, and shows how data on consumption can be used to analyze welfare, poverty, and economic development.

"for his analysis of consumption, poverty, and welfare"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2014

Jean Tirole

Born: 9 August 1953, Troyes, France

Affiliation at the time of the award: Toulouse School of Economics (TSE), Toulouse, France

Prize motivation: "for his analysis of market power and regulation"

Field: industrial organization, microeconomics

Life

Jean Tirole was born in Troyes in France. After having studied engineering at the Ecole Polytechnique and Ecole Nationale des Ponts et Chaussées in Paris, he turned his interests to economics and mathematics. In 1981 he received his doctorate in economics from the Massachusetts Institute of Technology in Cambridge, Massachusetts in the US. He maintained his connections to MIT, in part

as a professor of economics from 1984 to 1991. Since 1992 he has worked at the School of Economics at the University of Toulouse in France.

Work

If markets dominated by a small number of companies are left unregulated, society often suffers negative consequences. Prices can become unjustifiably high and new companies can be prevented from entering the market. Since the mid-1980s, Jean Tirole has worked to develop a coherent theory, for example showing that regulation should be adapted to suit specific conditions in each industry. Based on game theory and other theories, he has also suggested a framework for designing regulations and has applied it to a number of industries, from banking to telecommunications.

"for his analysis of market power and regulation"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2013

Eugene F. Fama, Lars Peter Hansen and Robert J. Shiller

Eugene F. Fama

Born: 14 February 1939, Boston, MA, USA

Affiliation at the time of the award: University of Chicago, Chicago, IL, USA

Prize motivation: "for their empirical analysis of asset prices"

Field: financial economics

Life

Eugene Fama was born in Boston, Massachusetts and studied at Tufts University in Medford/Somerville, outside Boston. He later studied at the University of Chicago, where he received his Ph.D. in 1964. He has continued working there for his entire career. Eugene Fama is married with four children.

Work

For many of us, the rise and fall of stock prices symbolizes economic development. In the 1960s, Eugene Fama demonstrated that stock price movements are impossible to predict in the short-term and that new information affects prices almost immediately, which means that the market is efficient. The impact of Eugene Fama's results has extended beyond the field of research. For example, his results influenced the development of index funds.

Lars Peter Hansen

Born: 26 October 1952, Urbana, IL, USA

Affiliation at the time of the award: University of Chicago, Chicago, IL, USA

Prize motivation: "for their empirical analysis of asset prices"

Field: econometrics, financial economics

Life

Lars Peter Hansen was born in Champaign, Illinois in the United States and studied at Utah State University in Logan, where his father was a professor of biochemistry. He received his Ph.D. from the University of Minnesota in Minneapolis and St Paul in 1981. He then moved to the University of Chicago, where he has worked ever since. Lars Peter Hansen is married with one son.

Work

For many of us, the rise and fall of stock prices symbolizes economic development. Eugene Fama demonstrated that stock price movements are impossible to predict in the short-term, while Robert Shiller discovered that stock prices can be predicted over a longer period. In 1982, Lars Peter Hansen developed a statistical method for testing this type of theory. He demonstrated that Robert Shiller's results could not be fully explained within the then-current models and Lars Peter Hansen's method is now used within all economics research.

Robert J. Shiller

Born: 29 March 1946, Detroit, MI, USA

Affiliation at the time of the award: Yale University, New Haven, CT, USA

Prize motivation: "for their empirical analysis of asset prices"

Field: financial economics

Life

Robert Shiller was born in Detroit, Michigan in the United States. His father was an engineer. After studying at Kalamazoo College in Michigan and the University of Michigan in Ann Arbor, he moved to the Massachusetts Institute of Technology in Cambridge, where he received his Ph.D. in 1972. Robert Shiller has worked at the University of Pennsylvania, the University of Minnesota, London School of Economics, and the US National Bureau of Economic Research. He has also been associated with Yale University in New Haven, Connecticut, since 1982. Robert Shiller is married with two children.

Work

For many of us, the rise and fall of stock prices symbolizes economic development. In the 1960s, Eugene Fama demonstrated that stock price movements are impossible to predict in the short-term. In the early 1980s, however, Robert Shiller discovered that stock prices can be predicted over a longer period, such as over the course of several years. In contrast to the dominant perception, stock prices fluctuated much more than corporate dividends. Robert Shiller's conclusion was therefore that the market is inefficient.

"for their empirical analysis of asset prices"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2012

Alvin E. Roth and *Lloyd S. Shapley*

Alvin E. Roth

Born: 18 December 1951, New York, NY, USA

Affiliation at the time of the award: Harvard University, Cambridge, MA, USA, Harvard Business School, Boston, MA, USA

Prize motivation: "for the theory of stable allocations and the practice of market design"

Field: applied game theory

Life

Alvin Roth was born in New York, where he also studied at Columbia University. He later continued his education, earning his PhD from Stanford University in Palo Alto, California, in 1974. Alvin Roth then began work at the University of Illinois and the University of Pittsburgh before moving to Harvard University in Cambridge, Massachusetts, in 1998. He returned to Stanford University in 2012. Alvin Roth is married with two children.

Work

How to bring different players together in the best possible way is a key economic problem. Lloyd Shapley studied different matching methods theoretically and, beginning in the 1980s, Alvin Roth used Lloyd Shapley's theoretical results to explain how markets function in practice. Through empirical studies and lab experiments, Alvin Roth demonstrated that stability was critical to successful matching methods. Roth has also developed systems for matching doctors with hospitals, school children with schools, and organ donors with patients.

Lloyd S. Shapley

Born: 2 June 1923, Cambridge, MA, USA

Died: 12 March 2016, Tucson, AZ, USA

Affiliation at the time of the award: University of California, Los Angeles, CA, USA

Prize motivation: "for the theory of stable allocations and the practice of market design"

Field: game theory

Life

Lloyd Shapley was born and raised in Cambridge, Massachusetts, where his father worked as an astronomer. Shapley studied mathematics at Harvard University, although his education was interrupted for a time while he served in the army during World War II. After spending one year working for the RAND Corporation research organization in Santa Monica, California, he earned his PhD from Princeton University in New Jersey. He returned to the RAND Corporation in 1954 and remained there until 1981, when he was appointed a professor at the University of California, Los Angeles. Lloyd Shapley was married with two children.

Work

How to bring different players together in the best possible way is a key economic problem. From the 1960s onward, Lloyd Shapley used what is known as Cooperative Game Theory to study different matching methods. Within the framework of this theory, it is especially important that a stable match is found. A stable match entails that there are no two agents who would prefer one another over their current counterparts. In collaboration with other researchers, Lloyd Shapley has succeeded in identifying methods that achieve this stability.

"for the theory of stable allocations and the practice of market design"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2011

Thomas J. Sargent and *Christopher A. Sims*

Thomas J. Sargent

Born: 19 July 1943, Pasadena, CA, USA

Affiliation at the time of the award: New York University, New York, NY, USA

Prize motivation: "for their empirical research on cause and effect in the macroeconomy"

Field: macroeconometrics

Life

Thomas J. Sargent was born in Pasadena, California in the United States. After studying at the University of California, Berkeley, he was awarded a doctoral degree from Harvard University in 1968. Thomas J. Sargent has held positions at the University of Minnesota, the University of Chicago, and Stanford University. He has held a professorship at New York University since 2002.

Work

How is the economy affected by unexpected events and changes in economic policy? What effects do interest rate hikes and tax reductions have on the production of good and services, unemployment, inflation and investment? Thomas Sargent has developed methods for examining the relationship between policy and economics. For example, he has shown how the effects of the permanent restructuring of economic policy can be analysed and how households and businesses have adjusted their expectations to match economic development.

Christopher A. Sims

Born: 21 October 1942, Washington, DC, USA

Affiliation at the time of the award: Princeton University, Princeton, NJ, USA

Prize motivation: "for their empirical research on cause and effect in the macroeconomy"

Field: macroeconometrics

Life

Christopher A. Sims was born in Washington, DC in the United States. After studying at Harvard University, he received his PhD there in 1968. He has also worked at the University of Minnesota and Yale University. He has held a professorship at Princeton University since 1999.

Work

How is the economy affected by unexpected events and changes in economic policy? What effects do interest rate hikes and tax reductions have on the production of good and services, unemployment, inflation and investment? Christopher Sims has developed methods for examining the relationship between policy and economics. For example, he has developed a method for analysing how the economy is affected by increases in the price of oil and how the key interest rates of central banks affect inflation and economic growth.

"for their empirical research on cause and effect in the macroeconomy"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2010

Peter A. Diamond, Dale T. Mortensen and Christopher A. Pissarides

Peter A. Diamond

Born: 29 April 1940, New York, NY, USA

Affiliation at the time of the award: Massachusetts Institute of Technology (MIT), Cambridge, MA, USA

Prize motivation: "for their analysis of markets with search frictions"

Field: labor economics

Dale T. Mortensen

Born: 2 February 1939, Enterprise, OR, USA

Died: 9 January 2014, Wilmette, IL, USA

Affiliation at the time of the award: Northwestern University, Evanston, IL, USA, Aarhus University, Aarhus, Denmark

Prize motivation: "for their analysis of markets with search frictions"

Field: labor economics

Life

Dale Mortensen was born in Enterprise, Oregon to a family with Scandinavian heritage. His father was a forest ranger. Dale Mortensen first studied at Willamette University in Salem, Oregon, before completing his PhD at Carnegie Mellon University in Pittsburgh, Pennsylvania, in 1967. He has worked at Northwestern University in Evanston, Illinois, since 1965. He is also a visiting professor at Aarhus University, Denmark. Dale Mortensen is married to musician, composer, and PhD in Religious Studies, Beverly Mortensen. They have three children.

Work

When employers look for workers and job seekers look for work, they do not immediately find each other. The search process requires time and resources, and friction in the market result in less efficient outcomes. Dale Mortensen and Christopher Pissarides have developed theories for these types of markets and have applied them to the labor market. Their models help us understand how regulation and economic policies affect unemployment, job vacancies, and wages. These theories have also been applied in other areas, such as housing markets.

Christopher A. Pissarides

Born: 20 February 1948, Nicosia, Cyprus

Affiliation at the time of the award: London School of Economics and Political Science, London, United Kingdom

Prize motivation: "for their analysis of markets with search frictions"

Field: labor economics

Work

When employers look for workers and job seekers look for work, they do not immediately find each other. The search process requires time and resources, and friction in the market result in less efficient outcomes. Christopher Pissarides and Dale Mortensen have developed theories for these types of markets and have applied them to the labor market. Their models help us understand how regulation

and economic policies affect unemployment, job vacancies, and wages. These theories have also been applied in other areas, such as housing markets.

"for their analysis of markets with search frictions"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2009

Elinor Ostrom

Elinor Ostrom

Born: 7 August 1933, Los Angeles, CA, USA

Died: 12 June 2012, Bloomington, IN, USA

Affiliation at the time of the award: Indiana University, Bloomington, IN, USA, Arizona State University, Tempe, AZ, USA

Prize motivation: "for her analysis of economic governance, especially the commons"

Field: economic governance

Contribution: Challenged the conventional wisdom by demonstrating how local property can be successfully managed by local commons without any regulation by central authorities or privatization.

Life

Elinor Clair Awan was born in Los Angeles, California in the United States, and grew up in a family of simple means. She studied political science at the University of California Los Angeles, where she also received her PhD in 1965. She later went on to work at Indiana University in Bloomington. Elinor Ostrom has also been affiliated with Arizona State University in Tempe and Virginia Tech. She married fellow political scientist Vincent Ostrom in 1963.

Work

It was long unanimously held among economists that natural resources that were collectively used by their users would be over-exploited and destroyed in the long-term. Elinor Ostrom disproved this idea by conducting field studies on how people in small, local communities manage shared natural resources, such as pastures, fishing waters, and forests. She showed that when natural resources are jointly used by their users, in time, rules are established for how these are to be cared for and used in a way that is both economically and ecologically sustainable.

"for her analysis of economic governance, especially the commons"

Oliver E. Williamson

Oliver E. Williamson

Born: 27 September 1932, Superior, WI, USA

Affiliation at the time of the award: University of California, Berkeley, CA, USA

Prize motivation: "for his analysis of economic governance, especially the boundaries of the firm"

Field: economic governance

Contribution: Provided a theory of why some economic transactions take place within firms and other similar transactions take place between firms, that is, in the marketplace. The theory informs us about how to handle one of the most basic choices in human organization. When should decision power be controlled inside an organization, and when should decisions be left to the market.

Life

Oliver Williamson was born in Superior, Wisconsin, in the United States. Although his parents were originally teachers, his father later started his own real estate company. After first studying at MIT and Stanford University, he earned his PhD from Carnegie Mellon University in Pittsburgh. He has held professorships at the University of Pennsylvania in Philadelphia, at Yale University, and at the University of California, Berkeley, among others. Oliver Williamson is married with five children.

Work

Financial transactions do not only occur on financial markets, but also within organizations - companies, associations, households, and public authorities. Financial analysis has most often focused on markets, whereas Oliver Williamson's research concentrates more on organizations. According to Oliver Williamson, markets and companies used different conflict resolution methods. In the early 1970s, he proposed the theory that organizations are sometimes more efficient than markets because their conflicts are simple and cheaper to solve.

"for his analysis of economic governance, especially the boundaries of the firm"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2008

Paul Krugman

Born: 28 February 1953, New York, NY, USA

Affiliation at the time of the award: Princeton University, Princeton, NJ, USA

Prize motivation: "for his analysis of trade patterns and location of economic activity"

Field: international and regional economics

Contribution: Integrated the previously disparate research fields into a new, international trade and economic geography.

"for his analysis of trade patterns and location of economic activity"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2007

Leonid Hurwicz, Eric S. Maskin and Roger B. Myerson

Leonid Hurwicz

Born: 21 August 1917, Moscow, Russia

Died: 24 June 2008, Minneapolis, MN, USA

Affiliation at the time of the award: University of Minnesota, Minneapolis, MN, USA

Prize motivation: "for having laid the foundations of mechanism design theory"

Field: microeconomics

Contribution: The pioneer in the field of mechanism design. Formulated a general mathematical framework for analyzing institutions implementing collective decision making.

Eric S. Maskin

Born: 12 December 1950, New York, NY, USA

Affiliation at the time of the award: Institute for Advanced Study, Princeton, NJ, USA

Prize motivation: "for having laid the foundations of mechanism design theory"

Field: microeconomics

Contribution: Developed implementation theory, a theory for achieving particular social or economic goals. An important problem is that a mechanism typically admits multiple equilibria. Even if the best outcome is possible to achieve other inferior solutions may exist. Maskin was first to develop conditions under which all equilibria are optimal.

Roger B. Myerson

Born: 29 March 1951, Boston, MA, USA

Affiliation at the time of the award: University of Chicago, Chicago, IL, USA

Prize motivation: "for having laid the foundations of mechanism design theory"

Field: microeconomics

Contribution: In the 1970s, the formulation of the "revelation principle" (a way of simplifying the search for a feasible mechanism) and implementation theory led to great advances of mechanism design. He developed this principle to perfection and pioneered its application to economic problems such as auctions and regulations.

"for having laid the foundations of mechanism design theory"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2006

Edmund S. Phelps

Born: 26 July 1933, Evanston, IL, USA

Affiliation at the time of the award: Columbia University, New York, NY, USA

Prize motivation: "for his analysis of intertemporal tradeoffs in macroeconomic policy"

Field: macroeconomics

Contribution: Deepened our understanding of the relation between short-run and long-run effects of macroeconomic policy.

"for his analysis of intertemporal tradeoffs in macroeconomic policy"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2005

Robert J. Aumann and *Thomas C. Schelling*

Robert J. Aumann

Born: 8 June 1930, Frankfurt-on-the-Main, Germany

Affiliation at the time of the award: University of Jerusalem, Center for Rationality Hebrew, Jerusalem, Israel

Prize motivation: "for having enhanced our understanding of conflict and cooperation through game-theory analysis"

Field: game theory

Contribution: The first to conduct a full-fledged formal analysis of so-called infinitely repeated games. His research identified exactly what outcomes can be upheld over time in long-run relations (the Folk Theorem).

Thomas C. Schelling

Born: 14 April 1921, Oakland, CA, USA

Died: 13 December 2016, Bethesda, MD, USA

Affiliation at the time of the award: University of Maryland, Department of Economics and School of Public Policy, College Park, MD, USA

Prize motivation: "for having enhanced our understanding of conflict and cooperation through game-theory analysis"

Field: game theory

Contribution: A creative application of game theory to important social, political and economic problems. Showed that a party can strengthen its position by overtly worsening its own options, that the capability to retaliate can be more useful than the ability to resist an attack, and that uncertain retaliation is more credible and more efficient than certain retaliation. These insights have proven to be of great relevance for conflict resolution and efforts to avoid war.

"for having enhanced our understanding of conflict and cooperation through game-theory analysis"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2004

Finn E. Kydland and *Edward C. Prescott*

Finn E. Kydland

Born: 1 December 1943, Gjesdal, Norway

Affiliation at the time of the award: Carnegie Mellon University, Pittsburgh, PA, USA, University of California, Santa Barbara, CA, USA

Prize motivation: "for their contributions to dynamic macroeconomics: the time

consistency of economic policy and the driving forces behind business cycles"

Field: macroeconomics

Contribution: Showed that economic policies are often plagued by problems of time inconsistency. Demonstrated that society could gain from prior commitment to economic policy. Introduced new ideas about

economic policy design and the driving forces behind business cycles.

Edward C. Prescott

Born: 26 December 1940, Glens Falls, NY, USA

Affiliation at the time of the award: Arizona State University, Tempe, AZ, USA, Federal Reserve Bank of Minneapolis, Minneapolis, MN, USA

Prize motivation: "for their contributions to dynamic macroeconomics: the time

"for their contributions to dynamic macroeconomics: the time consistency of economic policy and the driving forces behind business cycles"

consistency of economic policy and the driving forces behind business cycles"

Field: macroeconomics

Contribution: Showed that economic policies are often plagued by problems of time inconsistency. Demonstrated that society could gain from prior commitment to economic policy. Introduced new ideas about economic policy design and the driving forces behind business cycles.

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2003

Robert F. Engle III

Born: 10 November 1942, Syracuse, NY, USA

Affiliation at the time of the award: New York University, New York, NY, USA

Prize motivation: "for methods of analyzing economic time series with time-varying volatility (ARCH)"

Field: econometrics

Contribution: Developed methods to study the volatility properties of time series in economics, particular in financial markets. His method (ARCH) could, in particular, clarify market developments where turbulent periods, with large fluctuations, are followed by calmer periods, with modest fluctuations.

"for methods of analyzing economic time series with time-varying volatility (ARCH)"

Clive W.J. Granger

Born: 4 September 1934, Swansea, United Kingdom

Died: 27 May 2009, San Diego, CA, USA

Affiliation at the time of the award: University of California, San Diego, CA, USA

Prize motivation: "for methods of analyzing economic time series with common trends (cointegration)"

Field: econometrics

Contribution: Developed and applied new statistical methods, based on so-called "cointegration", to differentiate between, and combine the analysis of, short-term fluctuations and long-term trends.

"for methods of analyzing economic time series with common trends (cointegration)"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2002

Daniel Kahneman

Born: 5 March 1934, Tel Aviv, British Mandate of Palestine (now Israel)

Affiliation at the time of the award: Princeton University, Princeton, NJ, USA

Prize motivation: "for having integrated insights from psychological research into economic science, especially concerning human judgment and decision-making under uncertainty"

Field: economic psychology, experimental economics

Contribution: Integrated economic analysis with fundamental insights from cognitive psychology, in particular regarding behavior under uncertainty, thereby laying the foundation for a new field of research.

"for having integrated insights from psychological research into economic science, especially concerning human judgment and decision-making under uncertainty"

Vernon L. Smith

Born: 1 January 1927, Wichita, KS, USA

Affiliation at the time of the award: George Mason University, Fairfax, VA, USA

Prize motivation: "for having established laboratory experiments as a tool in empirical economic analysis, especially in the study of alternative market mechanisms"

Field: economic psychology, experimental economics

Contribution: Developed methods for laboratory experiments in economics, which has helped our understanding of economic behavior.

"for having established laboratory experiments as a tool in empirical economic analysis, especially in the study of alternative market mechanisms"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2001

George A. Akerlof, A. Michael Spence and Joseph E. Stiglitz

George A. Akerlof

Born: 17 June 1940, New Haven, CT, USA

Affiliation at the time of the award: University of California, Berkeley, CA, USA

Prize motivation: "for their analyses of markets with asymmetric information"

Field: economics of information

Contribution: Studied markets where sellers of products have more information than buyers about product quality. He showed that low-quality products may squeeze out high-quality products in such markets, and that prices of high-quality products may suffer as a result.

A. Michael Spence

Born: 0 1943, Montclair, NJ, USA

Affiliation at the time of the award: Stanford University, Stanford, CA, USA

Prize motivation: "for their analyses of markets with asymmetric information"

Field: economics of information

Contribution: Showed how the able agents may improve the market outcome by taking costly action to signal information to poorly informed recipients. An important example is education as a signal of high individual productivity in the labor market. It is not necessary for education to have intrinsic value. Costly

investment in education as such signals high ability.

Joseph E. Stiglitz

Born: 9 February 1943, Gary, IN, USA

Affiliation at the time of the award: Columbia University, New York, NY, USA

Prize motivation: "for their analyses of markets with asymmetric information"

Field: economics of information

Contribution: Showed that asymmetric information can provide the key to understanding many observed market phenomena, including unemployment and credit rationing.

"for their analyses of markets with asymmetric information"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2000

James J. Heckman

Born: 19 April 1944, Chicago, IL, USA

Affiliation at the time of the award: University of Chicago, Chicago, IL, USA

Prize motivation: "for his development of theory and methods for analyzing selective samples"

Field: econometrics

Contribution: Developed methods for handling selective samples in a statistically satisfactory way. He also showed how similar methods can be used to evaluate the effect of public labor market programs and educational programs, and to estimate the effect of length of unemployment on the probability of getting a job.

"for his development of theory and methods for analyzing selective samples"

Daniel L. McFadden

Born: 29 July 1937, Raleigh, NC, USA

Affiliation at the time of the award: University of California, Berkeley, CA, USA

Prize motivation: "for his development of theory and methods for analyzing discrete choice"

Field: econometrics

Contribution: Showed how to statistically handle fundamental aspects of microdata, namely data on the most important decisions we make in life: the choice of education, occupation, place of residence, marital status, number of children, so called discrete choices.

"for his development of theory and methods for analyzing discrete choice"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1999

Robert A. Mundell

Born: 24 October 1932, Kingston, ON, Canada

Affiliation at the time of the award: Columbia University, New York, NY, USA

Prize motivation: "for his analysis of monetary and fiscal policy under different exchange rate regimes and his analysis of optimum currency areas"

Field: international macroeconomics

Contribution: Analysed international macroeconomic policy and demonstrated the importance of the exchange rate regime, and how barriers to migration and capital movements stimulate commodity trade.

Work

Exchange rates among different currencies are an important factor in business and the economy. In the beginning of the 1960s, Robert Mundell analyzed the effects of political actions on this area, including the consequences if exchange rates remain fixed or are allowed to be governed by the market. He maintained that it could be advantageous for several countries to introduce a common currency, provided that the labor force has a great deal of mobility. Robert Mundell's theories had relevance for the introduction of the euro as the European Union's currency.

"for his analysis of monetary and fiscal policy under different exchange rate regimes and his analysis of optimum currency areas"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1998

Amartya Sen

Born: 3 November 1933, Santiniketan, India

Affiliation at the time of the award: Trinity College, Cambridge, United Kingdom

Prize motivation: "for his contributions to welfare economics"

Field: welfare economics

Contribution: Research on fundamental problems in welfare economics. Studies of social choice, welfare measurement, and poverty.

Life

Amartya Sen was born into a Brahman family in Santiniketan, Bengal, in India. His father was a professor of chemistry in Dhaka (now part of Bangladesh), where Amartya also received his first education. After university studies in Kolkata, India and at Cambridge, UK, where he received his PhD in 1959, he has held professorships in India and at Oxford and Cambridge universities, as well as in the US, including at Harvard University. Amartya Sen is married to Emma Rothschild and has four children from two previous marriages.

Work

Which are the most important and fundamental resources in a community and how should we divide them? One focus of Amartya Sen's research is how individuals' values can be considered in collective decision-making and how welfare and poverty can be measured. His efforts stem from his interest in questions of distribution and, in particular, the lot of society's poorest members. Amartya Sen's studies have included famines, to create a deeper understanding of the economic reasons behind famine and poverty.

"for his contributions to welfare economics"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1997

Robert C. Merton and *Myron S. Scholes*

Robert C. Merton

Born: 31 July 1944, New York, NY, USA

Affiliation at the time of the award: Harvard University, Cambridge, MA, USA

Prize motivation: "for a new method to determine the value of derivatives"

Field: financial economics

Contribution: Had a direct influence on the development of the Black-Scholes formula and generalized it in important ways. By devising another way of deriving the formula, he applied it to other financial instruments, such as mortgages and student loans. The work generated new financial instruments and has facilitated more effective risk management in society.

Myron S. Scholes

Born: 1 July 1941, Timmins, ON, Canada

Affiliation at the time of the award: Long Term Capital Management, Greenwich, CT, USA

Prize motivation: "for a new method to determine the value of derivatives"

Field: financial economics

Contribution: Developed a method of determining the value of derivatives, the Black-Scholes formula (together with Fischer Black, who died two years before the Prize award). This methodology paved the way for economic valuations in many areas. It also generated new financial instruments and facilitated more effective risk management in society. The work generated new financial instruments and has facilitated more effective risk management in society.

Work

Myron Scholes was born in Ontario, Canada. His family's business background strongly influenced his interest in economics. As a teenager he lost his mother to cancer, and he had eye problems himself. It was hard for him to read. Instead he had to teach himself to think abstractly and be a good listener. He studied economics at the University of Chicago, where he received his doctorate. After a period at MIT, he returned to Chicago, and in 1981 he moved to Stanford. He has two daughters, Anne and Sara, and is married to Jan Scholes.

"for a new method to determine the value of derivatives"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1996

James A. Mirrlees and *William Vickrey*

James A. Mirrlees

Born: 5 July 1936, Minnigaff, Scotland

Affiliation at the time of the award:
University of Cambridge, Cambridge, United Kingdom

Prize motivation: "for their fundamental contributions to the economic theory of incentives under asymmetric information"

Field: economics of information

Contribution: Pioneering work on economic incentives in situations involving incomplete, or asymmetrical, information. Specialized in auction theory.

William Vickrey

Born: 21 June 1914, Victoria, BC, Canada

Died: 11 October 1996, Harrison, NY, USA

Affiliation at the time of the award:
Columbia University, New York, NY, USA

Prize motivation: "for their fundamental contributions to the economic theory of incentives under asymmetric information"

Field: economics of information

Contribution: Developed methods of analyzing the problems of incomplete, or asymmetrical, information. Specialized in work in optimal taxation.

"for their fundamental contributions to the economic theory of incentives under asymmetric information"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1995

Robert E. Lucas Jr.

Born: 15 September 1937, Yakima, WA, USA

Affiliation at the time of the award: University of Chicago, Chicago, IL, USA

Prize motivation: "for having developed and applied the hypothesis of rational expectations, and thereby having transformed macroeconomic analysis and deepened our understanding of economic policy"

Field: macroeconomics

Contribution: Development and application of the theory of rational expectations in macroeconomic analysis.

"for having developed and applied the hypothesis of rational expectations, and thereby having transformed macroeconomic analysis and deepened our understanding of economic policy"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1994

John C. Harsanyi, John F. Nash Jr. and *Reinhard Selten*

John C. Harsanyi

Born: 29 May 1920,
Budapest, Hungary

Died: 9 August 2000,
Berkeley, CA, USA

Affiliation at the time of the award: University of

California, Berkeley, CA, USA

Prize motivation: "for their pioneering analysis of equilibria in the theory of non-cooperative games"

Field: game theory

Contribution: Showed how games of incomplete information can be analyzed, thereby providing a theoretical foundation for a lively field of research - the economics of information - which focuses on strategic

situations where different agents do not know each others' objectives.

John F. Nash Jr.

Born: 13 June 1928, Bluefield, WV, USA

Died: 23 May 2015, New Jersey, NJ, USA

Affiliation at the time of the award: Princeton University, Princeton, NJ, USA

Prize motivation: "for their pioneering analysis of equilibria in the theory of non-cooperative games"

Field: game theory

Contribution: Introduced the distinction between cooperative games, in which binding agreements can be made, and non-cooperative games, where binding agreements are not feasible. Developed an equilibrium concept for non-cooperative games that now is called Nash equilibrium.

Reinhard Selten

Born: 5 October 1930, Breslau (now Wrocław), Germany (now Poland)

Died: 23 August 2016, Poznań, Poland

Affiliation at the time of the award: Rheinische Friedrich-Wilhelms-Universität, Bonn, Federal Republic of Germany

Prize motivation: "for their pioneering analysis of equilibria in the theory of non-cooperative games"

Field: game theory

Contribution: Refined the Nash equilibrium concept for analyzing dynamic strategic interaction by getting rid of unlikely equilibria. He also applied the refined concept to analyses of oligopolistic competition.

"for their pioneering analysis of equilibria in the theory of non-cooperative games"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1993

Robert W. Fogel and Douglass C. North

Robert W. Fogel

Born: 1 July 1927, New York, NY, USA

Died: 11 June 2013, Oak Lawn, IL, USA

Affiliation at the time of the award: University of Chicago, Chicago, IL, USA

Prize motivation: "for having renewed research in economic history by applying economic theory and quantitative methods in order to explain economic and institutional change"

Field: economic history

Contribution: Clarified the role of the railways for the development of the economy in the United States, and the economic role of slavery.

Douglass C. North

Born: 5 November 1920, Cambridge, MA, USA

Died: 23 November 2015, Benzonia, MI, USA

Affiliation at the time of the award: Washington University, St. Louis, MO, USA

Prize motivation: "for having renewed research in economic history by applying economic theory and quantitative methods in order to explain economic and institutional change"

Field: economic history

Contribution: Shed new light on the economic development in Europe and the United States before and in connection with the industrial revolution. He emphasized the role of property rights and institutions.

"for having renewed research in economic history by applying economic theory and quantitative methods in order to explain economic and institutional change"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1992

Gary S. Becker

Born: 2 December 1930, Pottsville, PA, USA

Died: 3 May 2014, Chicago, IL, USA

Affiliation at the time of the award: University of Chicago, Chicago, IL, USA

Prize motivation: "for having extended the domain of microeconomic analysis to a wide range of human behaviour and interaction, including nonmarket behaviour"

Field: economic sociology, microeconomics

Contribution: Extended the domain of economic theory to aspects of human behavior which had previously been dealt with by other social science disciplines such as sociology, demography and criminology.

Work

Gary Becker applied economic theories and approaches to areas that had previously only been addressed in sociology, demography, and criminology. His starting point was that actors act rationally to maximize specific goals, like advantage or wealth. In the 1950s and 1960s he applied his models in several areas: investments in people's competence (or human capital), behavior in households and families, crime and punishment, and discrimination in labor and other markets.

"for having extended the domain of microeconomic analysis to a wide range of human behaviour and interaction, including nonmarket behaviour"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1991

Ronald H. Coase

Born: 29 December 1910, Willesden, United Kingdom

Died: 2 September 2013, Chicago, IL, USA

Affiliation at the time of the award: University of Chicago, Chicago, IL, USA

Prize motivation: "for his discovery and clarification of the significance of transaction costs and property rights for the institutional structure and functioning of the economy"

Field: theory of market institutions

Contribution: Important contributions on the borderline between economics, law and organization.

"for his discovery and clarification of the significance of transaction costs and property rights for the institutional structure and functioning of the economy"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1990

Harry M. Markowitz, Merton H. Miller and William F. Sharpe

Harry M. Markowitz

Born: 24 August 1927, Chicago, IL, USA

Affiliation at the time of the award: City University of New York, New York, NY, USA

Prize motivation: "for their pioneering work in the theory of financial economics"

Field: financial economics

Contribution: Constructed a micro theory of portfolio management for individual wealth holders.

Merton H. Miller

Born: 16 May 1923, Boston, MA, USA

Died: 3 June 2000, Chicago, IL, USA

Affiliation at the time of the award: University of Chicago, Chicago, IL, USA

Prize motivation: "for their pioneering work in the theory of financial economics"

Field: financial economics

Contribution: Important contributions in the field of corporate finance.

William F. Sharpe

Born: 16 June 1934, Boston, MA, USA

Affiliation at the time of the award: Stanford University, Stanford, CA, USA

Prize motivation: "for their pioneering work in the theory of financial economics"

Field: financial economics

Contribution: Developed a general theory for the pricing of financial assets.

"for their pioneering work in the theory of financial economics"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1989

Trygve Haavelmo

Trygve Haavelmo

Born: 13 December 1911, Skedsmo, Norway

Died: 26 July 1999, Oslo, Norway

Affiliation at the time of the award: University of Oslo, Oslo, Norway

Prize motivation: "for his clarification of the probability theory foundations of econometrics and his analyses of simultaneous economic structures"

Field: econometrics

Contribution: Pioneering contributions to the foundation of econometrics, i.e., methods used to estimate and test quantitative economic relations.

"for his clarification of the probability theory foundations of econometrics
and his analyses of simultaneous economic structures"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1988

Maurice Allais

Born: 31 May 1911, Paris, France

Died: 9 October 2010, Paris, France

Affiliation at the time of the award: École Nationale Supérieure des Mines de Paris, Paris, France

Prize motivation: "for his pioneering contributions to the theory of markets and efficient utilization of resources"

Field: partial and general equilibrium theory

Contribution: Provided increasingly rigorous mathematical formulations of market equilibrium and the efficiency properties of markets.

"for his pioneering contributions to the theory of markets and efficient
utilization of resources"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1987

Robert M. Solow

Born: 23 August 1924, Brooklyn, NY, USA

Affiliation at the time of the award: Massachusetts Institute of Technology (MIT), Cambridge, MA, USA

Prize motivation: "for his contributions to the theory of economic growth"

Field: economic growth theory

Contribution: Contributions to the theory of long-term macroeconomic growth.

"for his contributions to the theory of economic growth"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1986

James M. Buchanan Jr.

James M. Buchanan Jr.

Born: 3 October 1919, Murfreesboro, TN, USA

Died: 9 January 2013, Blacksburg, VA, USA

Affiliation at the time of the award: Center for Study of Public Choice, Fairfax, VA, USA

Prize motivation: "for his development of the contractual and constitutional bases for the theory of economic and political decision-making"

Field: public finance

Contribution: Contributions to the theory of political decision-making and public economics.

"for his development of the contractual and constitutional bases for the theory of economic and political decision-making"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1985

Franco Modigliani

Born: 18 June 1918, Rome, Italy

Died: 25 September 2003, Cambridge, MA, USA

Affiliation at the time of the award: Massachusetts Institute of Technology (MIT), Cambridge, MA, USA

Prize motivation: "for his pioneering analyses of saving and of financial markets"

Field: macroeconomics

Contribution: Developed sub models of private consumption and the financial sector, studied the consequences for household saving of changes in demography and economic growth, and laid the foundation for the field "corporate finance".

"for his pioneering analyses of saving and of financial markets"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1984

Richard Stone

Born: 30 August 1913, London, United Kingdom

Died: 6 December 1991, Cambridge, United Kingdom

Affiliation at the time of the award: University of Cambridge, Cambridge, United Kingdom

Prize motivation: "for having made fundamental contributions to the development of systems of national accounts and hence greatly improved the basis for empirical economic analysis"

Field: national income accounting

Contribution: Pioneering research around national accounting systems.

"for having made fundamental contributions to the development of systems of national accounts and hence greatly improved the basis for empirical economic analysis"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1983

Gerard Debreu

Born: 4 July 1921, Calais, France

Died: 31 December 2004, Paris, France

Affiliation at the time of the award: University of California, Berkeley, CA, USA

Prize motivation: "for having incorporated new analytical methods into economic theory and for his rigorous reformulation of the theory of general equilibrium"

Field: general equilibrium theory

Contribution: Basic research work in the theory of general equilibrium.

"for having incorporated new analytical methods into economic theory
and for his rigorous reformulation of the theory of general equilibrium"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1982

George J. Stigler

Born: 17 January 1911, Renton, WA, USA

Died: 1 December 1991, Chicago, IL, USA

Affiliation at the time of the award: University of Chicago, Chicago, IL, USA

Prize motivation: "for his seminal studies of industrial structures, functioning of markets and causes and effects of public regulation"

Field: industrial organization

Contribution: Fundamental contributions to the study of market processes and the analysis of the structure of industries.

"for his seminal studies of industrial structures, functioning of markets and
causes and effects of public regulation"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1981

James Tobin

Born: 5 March 1918, Champaign, IL, USA

Died: 11 March 2002, New Haven, CT, USA

Affiliation at the time of the award: Yale University, New Haven, CT, USA

Prize motivation: "for his analysis of financial markets and their relations to expenditure decisions, employment, production and prices"

Field: macroeconomics

Contribution: The theory of financial markets and their relation to consumption and investment decisions, production, employment and prices.

"for his analysis of financial markets and their relations to expenditure
decisions, employment, production and prices"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1980

Lawrence R. Klein

Born: 14 September 1920, Omaha, NE, USA

Died: 20 October 2013, Gladwyne, PA, USA

Affiliation at the time of the award: University of Pennsylvania, Philadelphia, PA, USA

Prize motivation: "for the creation of econometric models and the application to the analysis of economic fluctuations and economic policies"

Field: macroeconometrics

Contribution: Analysis of the effects of macroeconomic policy by econometric model building. He also made important contributions in developing fore-casting techniques.

"for the creation of econometric models and the application to the
analysis of economic fluctuations and economic policies"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1979

Theodore W. Schultz and *Sir Arthur Lewis*

Theodore W. Schultz

Born: 30 April 1902, Arlington, SD, USA

Died: 26 February 1998, Evanston, IL, USA

Affiliation at the time of the award:
University of Chicago, Chicago, IL, USA

Prize motivation: "for their pioneering research into economic development research with particular consideration of the problems of developing countries"

Field: development economics

Contribution: Analysis of the role of investment in human capital for economic development, particularly in agriculture.

Sir Arthur Lewis

Born: 23 January 1915, Castries, British West Indies (now Saint Lucia)

Died: 15 June 1991, Bridgetown, Barbados

Affiliation at the time of the award:
Princeton University, Princeton, NJ, USA

Prize motivation: "for their pioneering research into economic development research with particular consideration of the problems of developing countries"

Field: development economics

Contribution: Developed two economic models which mark out the causes of poverty among the population of the developing countries, as well as the factors determining the unsatisfactory pace of development.

"for their pioneering research into economic development research with particular consideration of the problems of developing countries"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1978

Herbert A. Simon

Born: 15 June 1916, Milwaukee, WI, USA

Died: 9 February 2001, Pittsburgh, PA, USA

Affiliation at the time of the award: Carnegie Mellon University, Pittsburgh, PA, USA

Prize motivation: "for his pioneering research into the decision-making process within economic organizations"

Field: management science

Contribution: Work in a number of fields, including the methodology of science, applied mathematical statistics, operations analysis, economics, and business administration His work is synthesized in a new theory of organizational decision-making.

Life

Herbert Simon was born in Milwaukee, Wisconsin in the United States. His mother was a pianist and his father an electrical engineer who had migrated from Germany. His maternal uncle, an economist, sparked his interest in the social sciences. He first studied at the University of Chicago and was awarded a PhD in political science in 1943. After working at the University of California, Berkeley, and then at Illinois Institute of Technology in Chicago, he moved to Carnegie Mellon University in 1949. Herbert Simon was married with three children.

Work

Herbert Simon combined different scientific disciplines and considered new factors in economic theories. Established economic theories held that enterprises and entrepreneurs all acted in completely rational ways, with the maximization of their own profit as their only goal. In contrast, Simon held

that when making choices all people deviate from the strictly rational, and described companies as adaptable systems, with physical, personal, and social components. Through these perspectives, he was able to write about decision-making processes in modern society in an entirely new way.

"for his pioneering research into the decision-making process within economic organizations"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1977

Bertil Ohlin and *James E. Meade*

Bertil Ohlin

Born: 23 April 1899, Klippan, Sweden

Died: 3 August 1979, Vålådalen, Sweden

Affiliation at the time of the award: Stockholm School of Economics, Stockholm, Sweden

Prize motivation: "for their pathbreaking contribution to the theory of international trade and international capital movements"

Field: international economics

Contribution: Founder of the modern theory of international trade.

James E. Meade

Born: 23 June 1907, Swanage, United Kingdom

Died: 22 December 1995, Cambridge, United Kingdom

Affiliation at the time of the award: University of Cambridge, Cambridge, United Kingdom

Prize motivation: "for their pathbreaking contribution to the theory of international trade and international capital movements"

Field: international economics

Contribution: Demonstrated the effects of economic policy on foreign trade theory.

"for their pathbreaking contribution to the theory of international trade and international capital movements"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1976

Milton Friedman

Born: 31 July 1912, Brooklyn, NY, USA

Died: 16 November 2006, San Francisco, CA, USA

Affiliation at the time of the award: University of Chicago, Chicago, IL, USA

Prize motivation: "for his achievements in the fields of consumption analysis, monetary history and theory and for his demonstration of the complexity of stabilization policy"

Field: macroeconomics

Contribution: Contributions to consumption analysis and to monetary history and theory, including observations of the complexity of stabilization policy.

"for his achievements in the fields of consumption analysis, monetary history and theory and for his demonstration of the complexity of stabilization policy"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1975

Leonid Vitaliyevich Kantorovich and *Tjalling C. Koopmans*

Leonid Vitaliyevich Kantorovich

Born: 19 January 1912, St. Petersburg, Russian Empire (now Russia)

Died: 7 April 1986, Moscow, USSR (now Russia)

Affiliation at the time of the award: Academy of Sciences, Moscow, USSR

Prize motivation: "for their contributions to the theory of optimum allocation of resources"

Field: theory of optimal allocation of resources

Contribution: Contributions to consumption analysis and to monetary history and theory, including observations of the complexity of stabilization policy.

Born: 28 August 1910, 's Graveland, the Netherlands

Died: 26 February 1985, New Haven, CT, USA

Affiliation at the time of the award: Yale University, New Haven, CT, USA

Prize motivation: "for their contributions to the theory of optimum allocation of resources"

Field: theory of optimal allocation of resources

Contribution: Renewed, generalized, and developed methods for analysis of the classical problem of economics as regards the optimum allocation of scarce resources.

Tjalling C. Koopmans

"for their contributions to the theory of optimum allocation of resources"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1974

Gunnar Myrdal and *Friedrich August von Hayek*

Gunnar Myrdal

Born: 6 December 1898, Skattungbyn, Sweden

Died: 17 May 1987, Stockholm, Sweden

Prize motivation: "for their pioneering work in the theory of money and economic fluctuations and for their penetrating analysis of the interdependence of economic, social and institutional phenomena"

Field: institutional economics, macroeconomics

Contribution: Research on the interrelations between economic, social and political processes.

Work

Economic issues affect almost every area of society and economic science also interplays with other social sciences. Gunnar Myrdal conducted his first works within economic theory, but later developed broader social analyses. In *An American Dilemma* (1944), he analyzed the African American population's situation in the US by examining political, institutional, demographic, and education and health factors. Gunnar Myrdal's research has been important in understanding developing countries.

Friedrich August von Hayek

Born: 8 May 1899, Vienna, Austria

Died: 23 March 1992, Freiburg, Germany

Prize motivation: "for their pioneering work in the theory of money and economic fluctuations and for their penetrating analysis of the interdependence of economic, social and institutional phenomena"

Field: institutional economics, macroeconomics

Contribution: Research on the interrelations between economic, social and political processes.

Work

Economic issues affect almost every area of society and economic science also interplays with other social sciences. In the 1920s, Friedrich von Hayek conducted important work on business cycles, but later developed broader social analyses. From the 1930s, he highlighted the problems of central economic planning. His conclusion was that knowledge and information held by various actors can only be utilized fully in a decentralized market system with free competition and pricing.

"for their pioneering work in the theory of money and economic fluctuations and for their penetrating analysis of the interdependence of economic, social and institutional phenomena"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1973

Wassily Leontief

Born: 5 August 1906, St. Petersburg, Russia

Died: 5 February 1999, New York, NY, USA

Affiliation at the time of the award: Harvard University, Cambridge, MA, USA

Prize motivation: "for the development of the input-output method and for its application to important economic problems"

Field: input-output analysis

Contribution: Creator of the input-output technique, a method that provides tools for a systematic analysis of the complicated inter-industry transactions in an economy.

"for the development of the input-output method and for its application to important economic problems"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1972

John R. Hicks and Kenneth J. Arrow

John R. Hicks

Born: 8 April 1904, Warwick, United Kingdom

Died: 20 May 1989, Blockley, United Kingdom

Affiliation at the time of the award: All Souls College, Oxford, United Kingdom

Prize motivation: "for their pioneering contributions to general economic equilibrium theory and welfare theory"

Field: general equilibrium theory, welfare theory

Contribution: Made fundamental contributions to the renewal of the general equilibrium theory. Work with welfare theory.

Introduced new welfare concepts in microeconomics.

Kenneth J. Arrow

Born: 23 August 1921, New York, NY, USA

Affiliation at the time of the award: Harvard University, Cambridge, MA, USA

Prize motivation: "for their pioneering contributions to general economic equilibrium theory and welfare theory"

Field: general equilibrium theory, welfare theory

Contribution: Made fundamental contributions to the renewal of the general equilibrium theory. Work with welfare theory. Work in the theory of social choice.

"for their pioneering contributions to general economic equilibrium theory and welfare theory"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1971

Simon Kuznets

Born: 30 April 1901, Pinsk, Russian Empire (now Belarus)

Died: 8 July 1985, Cambridge, MA, USA

Affiliation at the time of the award: Harvard University, Cambridge, MA, USA

Prize motivation: "for his empirically founded interpretation of economic growth which has led to new and deepened insight into the economic and social structure and process of development"

Field: economic growth, economic history

Contribution: Extensive research on the economic growth of nations, developed methods for calculating the size of, and changes in, national income.

Life

Simon Kuznets was born in Pinsk in what is now Belarus, but he received his basic education in Kharkov in present-day Ukraine. In 1922 the family emigrated to the U.S. Four years later he had

earned bachelor's, master's and doctor's degrees at Columbia University. His instructor at Columbia, Wesley Mitchell, founded the National Bureau of Economic Research, with which Kuznets was affiliated for more than 30 years, beginning in 1927. This was also where he met his future wife, Edith; they married in 1927 and had two children.

Work

Simon Kuznets is best known to the public for the Kuznets curve, which describes the relationship between economic growth and inequality. However, these theories are of a later date. His prize was awarded for his earlier work with growth and the economy's size. He developed methods for calculating the size of a nation's income and changes in it and standardized the concept of gross national product (GNP). Simon Kuznets also analyzed swings in the economy's growth rate over long periods and how these were connected with population growth.

"for his empirically founded interpretation of economic growth which has led to new and deepened insight into the economic and social structure and process of development"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1970

Paul A. Samuelson

Born: 15 May 1915, Gary, IN, USA

Died: 13 December 2009, Belmont, MA, USA

Affiliation at the time of the award: Massachusetts Institute of Technology (MIT), Cambridge, MA, USA

Prize motivation: "for the scientific work through which he has developed static and dynamic economic theory and actively contributed to raising the level of analysis in economic science"

Field: partial and general equilibrium theory

Contribution: Contributed to raising the general analytical and methodological level in economic science.

Life

Paul Samuelson was born in Indiana into a Jewish family that had emigrated from Poland. In 1923 he moved to Chicago, where he began studying economics at the university at age 16. His talent was soon recognized, and he presented his doctor's thesis at Harvard in 1941. Growing up during the Depression influenced his economic and political views. He served as an advisor to both John F. Kennedy and Lyndon B. Johnson. His 1948 work, *Economics*, written to help provide for his six children, has become the world's best-selling economic textbook.

Work

Where Ragnar Frisch and Jan Tinbergen had earlier focused on statistics and empirical data, Paul Samuelson devoted his time to theoretical methods and analysis of economics. He formalized economics research using mathematics and his work influences practically all branches of modern economics. He saw himself as the last generalist among increasingly specialized economists and was one of the foremost innovators in the New Keynesian school, which incorporated John Maynard Keynes' ideas with market theories.

"for the scientific work through which he has developed static and dynamic economic theory and actively contributed to raising the level of analysis in economic science"

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1969

Ragnar Frisch and *Jan Tinbergen*

Ragnar Frisch

Born: 3 March 1895, Oslo, Norway

Died: 31 January 1973, Oslo, Norway

Affiliation at the time of the award: University of Oslo, Oslo, Norway

Prize motivation: "for having developed and applied dynamic models for the analysis of economic processes"

Field: econometrics

Contribution: Pioneering work on econometric model building. Constructed theories for stabilization policy and long-term economic planning.

Life

Ragnar Frisch was born in Oslo, the son of a goldsmith, and he trained as a smith apprentice. His mother thought he should attend the university, and they chose economics as a subject because it seemed the shortest and easiest. After graduating in 1919, he studied economics and mathematics abroad for several years. He received his doctor's degree in mathematical statistics in Oslo in 1926 and later became a professor. He married twice and had one daughter. Ragnar Frisch's hobby was beekeeping, something he described as an obsession.

Work

Ragnar Frisch, along with Jan Tinbergen, pioneered development of mathematical formulations of economics. He coined the term econometrics for studies in which he used statistical methods to describe economic systems. He is best known for his contributions to dynamic economic modeling, and in 1933 he presented the first mathematical economic model that could describe fluctuations in the business cycle. His later work concerned models for economic planning.

Jan Tinbergen

Born: 12 April 1903, the Hague, the Netherlands

Died: 9 June 1994, the Hague, the Netherlands

Affiliation at the time of the award: The Netherlands School of Economics, Rotterdam, the Netherlands

Prize motivation: "for having developed and applied dynamic models for the analysis of economic processes"

Field: econometrics

Contribution: Pioneering work on econometric model building. Constructed theories for stabilization policy and long-term economic planning.

Prize share: 1/2

Life

Jan Tinbergen was born in The Hague and became interested in mathematics and natural science at an early age. He began studying physics in Leiden and took part in discussions with his professors, including Albert Einstein. His interests shifted to economics, which he thought would allow him to contribute more to society. Despite attempts to dissuade him, economics became his focus. He spent most of his career as a professor in the Netherlands. Jan Tinbergen's younger brother Nikolaas shared the 1973 Nobel Prize in Physiology or Medicine.

Work

Like Ragnar Frisch before him, Jan Tinbergen was a pioneer in changing economics from a science formulated in words to one based on mathematics. During the 1930s he developed the first macroeconomic model that described in detail variables from the entire economy and placed them in a mathematical relationship with one another. Previously this could only be done in general terms, but now it could be done with concrete numbers. Jan Tinbergen used his knowledge of statistics to test models in order to choose those that were most suitable.

"for having developed and applied dynamic models for the analysis of economic processes"

Prepared by NITH KOSAL

Sunday, January 22, 2017

Source: <https://www.nobelprize.org>