

In the Economics, Finance and Management category

Mas-Colell and Sonnenschein win the BBVA Foundation Frontiers of Knowledge Award in Economics, Finance and Management for helping to “interpret consumer behavior”

- Andreu Mas-Colell, professor at Pompeu Fabra University and Secretary General of the European Research Council, and Hugo Sonnenschein, Emeritus President and professor at the University of Chicago, have engaged in joint and collaborative working over the space of decades.
- The Frontiers of Knowledge Awards were established in 2008 to address the great global challenges of the 21st century.
- The breadth of disciplines addressed and their monetary amount - a total of 3.2 million euros - place them among the world’s foremost award schemes. Each category carries a cash prize of 400,000 euros.

February 25, 2010.- The BBVA Foundation Frontiers of Knowledge Award in the Economics, Finance and Management category goes in this second edition to Andreu Mas-Colell, of Pompeu Fabra University, and Hugo Sonnenschein, of the University of Chicago (United States), for “extending the reach and applicability of general equilibrium analysis and for establishing the modern theory of aggregate demand”, in the words of the jury’s citation. Their work has helped achieve better models for the overall behavior of the economy, and particularly to interpret and “empirically measure consumer behavior”.

The close collaboration between Sonnenschein and Mas-Colell has enabled economists to “address a much wider range of practical problems”, and has also “changed the way in which economics is taught all over the world”, remarks the jury in its conclusions. Both Sonnenschein and Mas-Colell have been referents for generations of economists trained in the last few decades of the 20th century.

The contributions singled out by the award jury, the perfecting of general equilibrium theory and authorship of the modern theory of aggregate demand, explain economic

phenomena that are counter intuitive, like the fact that a fall in prices does not always trigger an increase in demand.

General equilibrium theory provides a frame for analyzing how changes in one part of the economy, for instance tax increases, sudden commodity price fluctuations or new environmental regulations, are transmitted through the system triggering a chain of readjustments.

Aggregate demand theory has helped explain why restrictions deriving from classical consumer theory on individual demand are not inherited at the aggregate level.

Mas-Colell and Sonnenschein, two microeconomic theorists, have modeled and elucidated fundamental aspects of economic behavior. Their work has given empirical economists a better understanding of the data they work with, providing them with new insights on empirical relations and cause-effect with important implications for economic policy.

Their work, in the jury's view, is an excellent example of how science progresses thanks to people engaged with similar problems sharing their ideas in a spirit of active collaboration.

The two men's joint candidacy was presented by Professor Jordi Galí of the Centre de Recerca en Economia Internacional (CREI).

TWO CONVERGING PATHS

"For me, this prize is worth even more because I can share it with Hugo Sonnenschein", remarked Andreu Mas-Colell on being informed of the award. "Our age difference is small now, but he was one of my first influences. An economist of great analytical subtlety and extreme elegance in his insights, perceptions and deductive work". Sonnenschein returned the compliment: "I cannot say how honored I feel to be sharing this award with Andreu Mas-Colell, whom I worked with in Minnesota four decades ago and who remains a close and valued colleague. I see this prize above all as recognition for our theoretical contributions in the field of economic models".

Among the results of Sonnenschein and Mas-Colell's work is a pricing model based on the general equilibrium theory in wide use by today's economists.

This theory starts from the idea that "for individuals, the value of a good is determined by consumer preferences, technology and the distribution of wealth", Sonnenschein explains. All these elements interact in the same way water finds the same level in two interconnected recipients. "The players involved generate a system of great mathematical complexity, and Andreu Mas-Colell and I have worked together to determine the exact nature of this complexity".

Mas-Colell takes up the story. "It was Hugo who first posed the problem. Then others like me added our own contributions. These developments have shown the robustness of the theory that runs from Adam Smith down through generations of economists regarding the properties of what we call economic welfare. But they also reveal a series of shortcomings in its predictive or dynamic properties. Put another way, the line of work that Hugo began, and to which I have contributed, says that to make sturdy predictions about price

structures and the dynamics of an economy, you need to start from a very precise knowledge of economic data”.

The aggregate demand theory is tied in closely with this last concept. “Much of economics until Paul Samuelson assumed that understanding the behaviour of an individual would be enough to explain the behaviour of the whole economy. But this happened to be untrue in the strongest sense. For instance, it might be assumed that when the price of a particular commodity falls consumers are going to buy more of it. But it may be that if prices are falling, wealth is falling too, which means demand will fall as well. This is obviously a simplification since, in fact, a vast number of similar variables are in play at the same time”, explained Sonnenschein.

In his view, the recent crisis and the current situation “are an opportunity - though certainly not a happy one - to examine what has happened and how we can avoid it happening again. I feel a great concern for the difficulties so many people are facing. What is happening is very real and economists must learn from this painful lesson”

Mas-Colell describes the sway exerted by academic economics in these times of crisis: “At a macroeconomic level, economic policy has been heavily influenced by academic analyses of the experience of the great depression of the 1930s and the string of economic recessions that occurred thereafter. I hope History’s judgment is that we learned from that experience and have managed to avoid plunging over the brink. This will end up being a severe recession, but nothing worse”. “As to Spain, I think the economy has an underlying strength that will carry us safely through the crisis”, he concludes.

INTERNATIONAL JURY

The jury deciding the Frontiers Award in the Economics, Finance and Management category was chaired by **Peyton Young**, James Meade Professor of Economics at the University of Oxford (United Kingdom), with the secretary’s role taken by **Manuel Arellano**, Professor of Econometrics in the Center for Monetary and Financial Studies (CEMFI) of Banco de España. Remaining members were **José Manuel González-Páramo**, member of the Executive Board of the European Central Bank (ECB); **Hervé Moulin**, George A. Peterkin Professor of Microeconomic Theory at Rice University (United States), and **Guido Tabellini**, Rector of Bocconi University (Italy).

The award in the inaugural edition went to French economist Jean Tirole for his path breaking work in the application of game theory and information theory in economics.

The Frontiers of Knowledge Awards honor world-class research and artistic creation. The breadth of disciplines addressed and their monetary amount, an annual 3.2 million euros, place them among the foremost international award families. However their uniqueness lies in their close alignment with the scientific, technological, social and economic challenges of the present century. In this respect, they are the first to reserve dedicated categories for Climate Change; Development Cooperation; Information and Communication Technologies, and Ecology and Conservation Biology, alongside the awards going to outstanding contributions in Economics, Finance and Management; Basic Sciences; Biomedicine, and Contemporary Music.

The BBVA Foundation supports knowledge generation, scientific research and the promotion of culture, relaying the results of its work to society at large. This effort

materializes in research projects; human capital investment; and specialization courses, grants and awards. Among the BBVA Foundation's preferred areas of activity are basic sciences, biomedicine, ecology and conservation biology, the social sciences and literary and musical creation.

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