Market Design and Computerized Marketplaces

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ABSTRACT

Markets and marketplaces are ancient human artifacts, but in recent years they have become ever more important. In part this is because marketplaces are becoming computerized. Together with the introduction of smart phones, this also makes them ubiquitous. We can order car rides to the airport, plane rides to London, and hotel rooms for when we arrive, all on our smartphones. And as we do so we leave a data trail that is easily combined with other streams of data. This is changing not only how we interact with markets, but also how we manage and regard privacy. I'll discuss some recent developments in computerized markets and speculate about some still to come.

Keywords

Marketplaces; market design; computerized marketplaces; economics.

Bio

Al Roth is the Craig and Susan McCaw Professor of Economics at Stanford University and the George Gund Professor Emeritus of Economics and Business Administration at Harvard.

Al shared the 2012 Nobel memorial prize in Economics, '*for the theory of stable allocations and the practice of market design.*' His work is in game theory, experimental economics, and market design.

He directed the redesign of the National Resident Matching Program, through which most American doctors find their first employment as residents at American hospitals. He has also helped in the reorganisation of the market for more senior physicians, as they pursue sub-specialty training and in other labour markets. He helped design elements of the market for new Ph.D. economists.

Al helped design the high school matching systems used in New York City, and the school choice systems for public and charter schools in other large American cities. He has helped in the design and implementation of kidney exchange, which allows incompatible patient-donor pairs to find compatible kidneys for transplantation.

He is a Fellow of the American Academy of Arts and Sciences, and a member of the National Academy of Sciences.

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