

BOOK REVIEW-2

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Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2020: Improvements to Auction Theory and Inventions of New Auction Formats

Paul R. MILGROM and Robert B. WILSON

The act of selling the goods to the highest bidder and buying services or goods from the lowest bidder has existed since the very beginning of human history. There are auction minutes even in the historian Herodotus's writings that qualify as documents. Coming to today, the concept of auction is more important for individuals, companies, and governments than in the past. For the sale of precious jewelry, antiques, government bonds, products such as oil and minerals, and even for the sale of advertisements of search engines, auctions are used.

Observations show that there is a two-way positive effect between the increase in auction use and the increase in the field of auction theory. The theory deals with how the auction parties move in the auction market

and explores the characteristics of this market. Auction theory first found its place in the economic literature with the studies of economist William Vickrey in 1961, using Game Theory. The two prominent names in recent years are Paul R. Milgrom and Robert B. Wilson, who were awarded the 2020 Nobel Prize in Economics for their contribution to this field.

The most striking contribution of Paul R. Milgrom and Robert B. Wilson, as well as many of their contributions to the field of auction theory, have been their inventing many new auction formats by identifying and analyzing multiple related objects and their salient common problems. The best known is "Simultaneous Multiple Round Auction". They designed this method in 1994 for the radio spectrum auction of the US Federal

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Communications Commission. This format is the most efficient method of selling spectrum even today. The SMRA format allows bidders to bid on any number of objects in multiple rounds, meaning that different objects related to each other are negotiated at the same time. This versatile feature reduces the winner's curse.

Other formats designed by Milgrom and Wilson include Stock Auctions (Wilson, 1979), Combinatorial Clock Auctions (Ausubel et al., 2006), and Incentive Auctions (Milgrom et al., 2012). For nearly half a century, Milgrom and Wilson have carried out deepening research into how auction markets work, enabling trained analysts to design new auctions, and the choice of many industries thanks to the variety and functionality of the auction formats they create. They brought theory and practice together by overcoming the problem of producing practical solutions that most economists lacked. These two valuable scientists, who contributed significantly to the real sector by carrying out studies that combine auction practices with theories, were deemed worthy of sharing the Nobel Prize in Economics in 2020.

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