Auction: An Introduction

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Auction

• Augere (a Latin word) = To increase. The past participle of augere is auctus. And from auctus, we get auction.

• Long history of auction: Auction for right to marry in ancient Babylon, Tax collection rights and Slave Auctions in ancient Greece and Rome.

• In present world: 3G Spectrum Auction, Sotheby’s, Christie's, Baazee.Com, EBay and also in many Hollywood and Bollywood movies.

• Why Auction?: The seller/s doesn’t know potential buyers’ true

Typical Setting: A seller and many potential buyers (This is not always the case)

• The seller doesn’t know potential buyers’ valuation, otherwise a “Bargaining” happened between the seller and the potential buyer with the highest valuation.

• Auction: Basically, A price discovery mechanism. Much more wider than the typical uses.
Different Auction Types.

Based on Bidding Process
• Open vs. sealed-bid
• One-sided vs. two-sided
• Determination ofWinner/s
• Number of bids allowed

Based on Bidders’ way of Valuation
• Based on the Aim of the Auction
Sealed Bid Auctions

• One seller and many potential buyers.
• Typically One Sided: Only buyers bid.
• Single round of simultaneous bids
• The buyer who submits the highest bid wins
• Example: Common in Procurement, commodities, and construction

• Two Variants:
  • First Price: The winner pays the amount equal to his bid.
  • Second Price: The winner pays the amount equal to the highest among remaining bids. It is known as Vickrey Auction.

• Why would the seller ever use the Second Price Sealed Bid Auction?
Open Bid Auctions

• One seller and many potential buyers
• Typically one sided: Only buyers bid.
• Multiple rounds of open bids.

• Two variants
  • Ascending Price: Bids must be increasing and the auction closes when only one bidder is left. It is typically observed in English Auctions.
  • Descending Price: Bids must be decreasing and the auction closes as soon as one bids. It is called Dutch Auction

• Examples: Ebay auction, Google Ad-sell, Auctions by English Auction Houses.
Valuation

Private Value

Common Value

Correlated value