**Analysis of the interfering factors about auction games**

**Abstract.** This essay simply explores the complex world of auctions and how they basically work. Start with a brief summary of auction’s history, from the Babylonian era to the present, the essay shows how auctions have evolved over the history. Then, four typical auctions are introduced by listing their rules and how they are played. Most importantly, at the main body, the essay revealed various factors that have impact on how an auction is played, such as sunk cost fallacy, information dynamics, auction rules, and the existence of bidders with distinct motivations. In addition, Candle and dollar auctions are used to show the impact of information and rules on an auction respectively. In the end, the essay argues that auctions are complicated rather than just contests for riches and emphasizes the significance of comprehending these factors. The essay aims to inform people to make wise decisions in both auctions and everyday life.

1. **Sunk cost fallacy**

The propensity for people to persist in a project or course of action when giving it up would be preferable is known as the "sunk cost fallacy."

Example: one dollar auction, watch a bad movie, line up to buy something for a long time…

1. **Information**

Maskin and Riley’s work proved showed that sealed biddings tends to favor weaker bidders.

In the open auction, player who has the highest wins. However, in sealed bid auction, bidders are more incentive to shade their bids below their true valuations because they want to optimize their payoffs by lower their chance of winning.

1. **The rule of the auction**

First price sealed-bid auction’s winner should pay the amount that person paid, while in Second price sealed-bid auction, the winner only need to pay the amount called by the second high bidder.

In First price sealed-bid auction, the amount that bidders prefer to bid is lower than their valuation because bidders want to get a profit.

Bidder of the second price sealed-bid auction should bid at least the value of the item to ensure his possibilities to win.

1. **Bidders who have special purposes**

There’s such kind of participants in auctions. They increase the bid intentionally because they only aimed to make troubles to other bidders instead of creating their own premium. Waniek found that these players will be stimulated by both the loss of their own interests and the desire to harm their opponents. In this case, the balance point of the auction is determined by these players.

Another kind of player will call a high bid at the beginning of the auction to show their determination for this auction. They aim to cause others’ hesitation because others may think that their initial high bid means they have great amount of finance can be used in bidding. Wall had concluded this kind of behaviour as “people show up at an auction to see and be seen







