Auction hosts: are they really super partes ?

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Auction hosts: are they really *super partes* ?

Abstract:

This study provides the first examination of the impacts *i)* of marketing strategies implemented by auction houses and *ii)* of auctioneers' way of conducting auctions, on auction sale outcomes: the probability of sale, the final purchase price and the final price in percentage of the presale mean estimated price. Using video recordings of art auction sales and a hand-collected database of 1101 auctioned artworks, we find firstly that the organisational and promotional work carried out by auction houses has an impact on different sale outcomes and secondly that the auctioneers' behaviour seems to be decisive, especially the usage of humour. This research brings a more comprehensive understanding of bidders' behavior, the tactics through which auction houses and auctioneers affect outcomes, and the functioning of real-world auction markets. Moreover, the findings of this study yield useful managerial insights for marketers.

Keywords: Auctioneer, Strategy, Pricing.

Track: Marketing Strategy and Theory.

1. Introduction

An auction is a common market mechanism used in a context of uncertainty for allocating a resource, determining prices and maximising social welfare. A wide and increasing range of markets are concerned, the most renowned being spectrum license, flowers in Holland, art and antiques, and Internet consumer auctions such as eBay. A large body of academic research has mostly discuss auctions formats and revenues, sellers' and bidders' behaviour at auction, depending on the auction's rules. Less have been done on the auction sale intermediary, i.e. the auction host, and especially few in marketing. It appears regularly in real auctions but also in the relevant literature that the seller holds the role of the auctioning agent, hence there is no third party. When there is an auction host, it can be online auction websites or brick-and-mortar auction houses for which a human professional auctioneer conducts auction sales. This paper empirically explores the impacts of marketing strategies implemented by auction houses and human auctioneers[1] on sale rates, on prices realized at auction, but also on the difference between auction prices and presale estimated prices. Auction houses are independent businesses with their own interests that aim at maximising their profits.

In many studies, no distinction is made between the seller and the auctioning agent or this later is considered as a passive intermediary between the seller and the potential buyers. Yet, an auction host can take several actions that can have an economic impact. Previous studies have mostly focused on the rules governing auction sales that are chosen by the auction host, such as the auction format (Milgrom & Weber, 1982), the nature of bidding (He & Popkowski Leszczyc, 2013), the level of buyer's and seller's fees and commission rates (Morwitz, Greenleaf, and Johnson, 1998; Yao & Mela, 2008) and the presence of penalties or guarantees (Greenleaf, Rao, and Sinha, 1993; Greenleaf & Sinha, 1996). Once the rules of the auction sales set down by the auction host, all presale activities, i.e. the concrete and daily work of the auction houses and auctioneer, remain. Auction houses have organisational and promotional tools at their disposal prior to sale, while auctioneers can use different kind of interventions when conducting auction sale. To our best knowledge, there is no study dedicated to the study of the impact of auction houses' organisational or promotional work upon auction market outcomes, but we can find some rare variables related to these aspects disseminated and tested in a few studies, like the presence of an illustration in presale catalogues (D'Souza & Prentice, 2002)

[1] It is common to find in the literature the term "auctioneer" indistinguishable from the seller or to designate the auctioning agent (Hossain, Khalil, and Shum, 2013). In this paper, we call "auction house" a firm that auctions (at least partly) on-site, "auction platform" a firm that organises online auction sales (such as eBay) and "auctioneer" the human professional in charge of conducting oral outcry auctions.

and the length of the lot description (Cinefra, Garay, Mibelli, and Pérez, 2019). It is undeniable that these marketing efforts require time, energy and therefore increase costs for the auction house so we hypothesize that organisational features affect auction outcomes and that promotional work increase prices. In summary,

> H1: Organisational efforts have an impact on the probability of sale and final auction prices.
>
> H2: Promotional efforts increase the likelihood for an item of being sold and fetching a high price.

Moreover, human auctioneer's actions throughout on-site outcry auction sales have not been empirically studied in past research. Lacetera, Larsen, Pope, and Sydnor (2016) measure a performance variability across auctioneers that suggests that auctioneer's performance during the auction is determining. In the context of online auctions, Ducarroz (2016) shows that in-process promotions send by auctioning platform have a positive effect on final auction price, confirming that bidders' valuations are impacted by the market environment in online auctions (Chan, Kadiyali, and Park, 2007). In line with these studies, we speculate that each kind of intervention from the professional auctioneer may improve auction outcomes. Thus,

> H3: The different contributions of human auctioneer during the sale increase the propensity for the item to be sold and/or to reach a high price.

2. Data and methodology

2.1 The sample

Our dataset includes 1101 artworks auctioned between March 2017 and May 2018 by seven different auction houses. We include sold and unsold lots in order to avoid any selection bias (Alford, Gilley, Wood, and Obilo, 2017). As there are many types and styles of artworks on the global art market, acknowledged as extreme case of heterogenous goods, we reduce this variability by considering only one relatively homogeneous art submarket. Our focus is on the European comic art market, that is, our observed lots are original comics auctioned in Paris and Brussels. The comic art market is a young and expanding art market which has almost never been studied. We compile this unique dataset by collecting by hand all information about organisational and promotional presale activities by auctioning firms, auctioneer's efforts during the sale, final purchase prices, and items' characteristics to control for heterogeneity

between pieces of art. To do so, we used pre-sale catalogues published by auction houses to collect our variables about the different aspects of the organizational and promotional work of auction houses. Regarding the variables related to the auctioneer's behavior, we use video recordings of auction sales. Indeed, the auction houses we selected all allowed participating to their onsite sale by bidding online in real time. Therefore it is possible to follow auction sales through live video display and to record these videos.

2.2 The variables

Our dependent variables are threefold: the probability of sale (a dummy variable equal to 1 if the item is sold, 0 otherwise), the (log) price buyer's premium included and the hammer price to mean estimate ratio.

In order to test our research questions empirically, we constructed three groups of explanatory variables, regarding i) the sale organisation ii) the lots' presentation made in the catalogue iii) the auctioneer's behavior. We included typical variables of control related to artworks characteristics (such as artist's reputation, size, signature, medium and topic).

The organisation of an auction sale includes several aspects that constitute as many steps of decision-making by the auction house. We identify seven of them: i) the number of other similar sales 15 days before and after the sale date chosen by the auction house, ii) the sale size (number of lots), iii) the number of lots from the same artist presented in the same sale, iv) the subrank of the lot among the lots from the same artist, v) a dummy variable which equals 1 if the lots gathers multiple items, vi) a dummy variable which equals 1 if the lot includes a top-up, vii) the lot order in the auction sale.

Ahead of the auction sale, the auction house has three means at its disposal to advertise lots and inform about their attributes, which constitutes our three variables concerning the auction house promotional work. First, we measure the size of the lot illustration in percentage of the catalogue page, second we add a dummy variable for whether the presentation of the lot includes an in-depth introduction, and third we generate a dummy variable for whether the lot description contains an additional positive comment such as "beautiful/wonderful piece".

We now turn to auctioneers' tools to intervene in the ongoing sale by distinguishing four of them. First, we include a dummy variable that takes the value of 1 if he/she chooses to read the whole description of the lot which will be proposed for sale and 0 if he/she reads only its

title before bidding starts. Second, we add a dummy variable if the auctioneer proceeds to an oral correction (adding an forgotten information or correcting a mistake). Third, we include a dummy variable that equals 1 if the auctioneer says a positive remark (such as "beautiful artwork", "unmissable opportunity" or "it's worth more"). Last, to capture the humour usage effect, we add a discrete variable which equals to 1 if the auctioneer makes one or more humoristic comment(s) (and 0 otherwise).

2.3 The model

We use an hedonic price approach, which considers that price variations among heterogenous products can be explained by differences in characteristics such as, for artworks, artist-related features, artworks attributes, but also, and this is our concern, sale-related aspects. We apply a Tobit model that takes into account the probability for an item to be sold in addition to the price and the spread between the hammer price and mid-estimate. As our latent variable (the selection of the item) does not assimilate to the observed dependent variables (the price and the price-estimate ratio), we use a Type II Tobit model. Formally, our model is:

$$y_{1,i}^{*} = o_{1,i}\beta_1 + p_{1,i}\beta_1 + a_{1,i}\beta_1 + w_{1,i}\beta_1 + \varepsilon_{1,i} \quad (1)$$

$$y_{2,i}^{*} = o_{2,i}\beta_2 + p_{2,i}\beta_2 + a_{2,i}\beta_2 + w_{2,i}\beta_2 + \varepsilon_{2,i} \quad (2)$$

$$y_{1,i} = \begin{cases} 1 & si\ y_{1,i}^{*} > 0 \\ 0 & si\ y_{1,i}^{*} \leq 0 \end{cases} \quad (3)$$

$$y_{2,i} = \begin{cases} y_{2,i}^{*} & si\ y_{1,i}^{*} > 0 \\ 0 & si\ y_{1,i}^{*} \leq 0 \end{cases} \quad (4)$$

Where $i = 1, \dots, N$ denote each lot with N the sample size, $o_{j,i} = \left(o_{j,i}^{1} \ \dots \ o_{j,i}^{K_j} \right)$, $j = 1, 2$, are two vectors of observed organizational characteristics of the auctioned lot, $p_{j,i} = \left(p_{j,i}^{1} \ \dots \ p_{j,i}^{K_j} \right)$, $j = 1, 2$, are two vectors of observed promotional characteristics to which the lot is subject, $a_{j,i} = \left(a_{j,i}^{1} \ \dots \ a_{j,i}^{K_j} \right)$, $j = 1, 2$, are two vectors of observed characteristics related to the auctioneer interventions for the lot, $w_{j,i} = \left(w_{j,i}^{1} \ \dots \ w_{j,i}^{K_j} \right)$, $j = 1, 2$, are two vectors of observed works of art characteristics (control variables), $\beta_j = \left(\beta_{j,1} \ \dots \ \beta_{j,K_j} \right) \in \mathbb{R}^{K_j}$, $j = 1,2$, are two vectors of unknown coefficients. The random disturbances $\varepsilon_{j,i}$ are normally distributed

with zero mean and constant variance, σ_j^2 $(j = 1,2)$. $y_{1,i}^*$ is the latent variable which is the difference between the last bid and the seller's reserve price. If it is positive, it means that the last bid exceeds the seller's reserve price, so the lot is sold, if not the latent variable is negative and the lot remains unsold. It is not possible to observe the value of the latent variable $y_{1,i}^*$ but only $y_{1,i}$: the binary variable sold/unsold. $y_{2,i}$ is the observed dependent variable (logged auction price for model 1 and logged hammer price in percentage of average estimate in model 2), only observable if $y_{1,i}^*$ is positive, i.e. when the lot is sold. The variables $o_{j,i}$, $p_{j,i}$, $a_{j,i}$ and $w_{j,i}$ are observed for each item, no matter if it is sold or not. The parameters of the Tobit II models are estimated with the maximum likelihood method.

3. Results

The first issue of this paper is to investigate if the day-to-day work of auction houses and the auctioneer behavior predict the probability that an item will sell and prices (Model 1 in Table 1).

What the results clearly show at first glance is that some organizational, promotional and auctioneer effects play a role in explaining probability of sale and prices, which supports H1, H2 and H3, although all variables do not have a significant impact.

We first find that many organizational effects exert an influence upon the probability of sale and prices. The number of competing sales close in time to the date chosen by the auction house for its sale is negatively associated with the outcome of artwork transactions, while not being correlated with prices. Moreover, concentrating lots of the same author in the same auction sale commands a higher sale rate and higher price premiums, while the subrank among items from the same artist for sale has a negative effect upon prices. As for multiple items lots, they achieve lower prices than single item lots on average. On the contrary, lots with a top-up have a higher probability of sale vis-à-vis lots without any pop-up.

Table 2 Tobit estimations. Dependent variable: price, buyer's commission incl. (N=1100)

Variables	Equation 1 Probability of sale	Equation 2 *log* (sale price)
Organisational variables		
Other sales	-0.255 **	0.004
Sale size	0.000	0.001
Number lots author	0.262 **	0.449 ***
Subrank author	0.003	-0.353 ***
Multiple items lot	-0.129	-0.300 **
Lot top-up	0.395 **	0.110
Lot order (% of total number of lots)	-0.301 *	0.112
Presentation variables		
Illustration size	0.010	0.537 ***
In-depth introduction	0.132	1.746 ***
Positive comment	0.377 ***	0.590 ***
Auctioneer variables		
Description reading	0.320 ***	-0.145
Oral correction	0.733 *	0.169
Positive remark	0.079	-0.144
Humour	0.688 ***	0.829 ***
Control variables	Yes	Yes
Constant	-0.175	5.034 ***

***Statistically significant at 1% level, **Statistically significant at 5% level, *Statistically significant at 10% level

Table 1. Model 1: the impact of auction host on probability of sale and prices

With regard to presentation of lots by presale catalogues, it appears that all three variables affect very significantly (at the 1% level) and positively the price. We learn that the size of the illustration plays a role in determining auction prices. Next, our results show that the insertion of an additional more detailed paragraph of information produce a positive effect on artwork prices. Moreover, the presence of a written positive comment ahead of the sale seems to be decisive: it has a highly significant and positive influence upon probability of sale, prices and the surprise ratio.

Focusing upon the auctioneer effect now, one striking result is that auctioneer's touch of humor in auctions turns out to be a highly significant and important determinant of both the sale probability and the price. What is more, sale rates are significantly and positively influenced by description reading and oral corrections by auctioneer.

The second issue investigated in this study concerns the identification of mechanisms used by auction houses and auctioneers that are systematically able to influence the final realized price in percentage of the average pre-sale estimated price (Model 2 in Table 2). This ratio measures the spread between the value attributed by the expert of the auction house and the seller (when debating and fixing the estimates) and the value attributed by the bidders (the final bid results from the series of bids). When positive, this spread is a pleasant surprise for sellers whose works of art sell over the mid-estimate. Naturally, the higher this spread is, the greatest the seller's surprise and satisfaction become. Consequently, sellers become more likely to use the auction house's services again when surprised by higher prices, which in turn should result in increased sales and profits level for the auction house (Palmatier, Scheer, Evans, and Arnold, 2008).

Table 3 Tobit estimations. Dependent variable: hammer price in percentage of the average estimate (N=1100)

Variables	**Equation 1 Probability of sale**	**Equation 2 log (hammer price in % of average estimate)**
Organisational variables		
Other sales	-0.071	-0.044
Sale size	0.000	0.000 **
Number lots author	0.101	0.037
Subrank author	0.005	-0.008
Multiple items lot	-0.075	-0.015
Lot top-up	0.311 **	0.072 **
Lot order (% of total number of lots)	-0.086	-0.085 **
Presentation variables		
Illustration size	0.044	0.023
In-depth introduction	0.109	0.016
Positive comment	0.389 ***	0.136 ***
Auctioneer variables		
Description reading	0.185 *	0.089 ***
Oral correction	0.664 **	0.195 ***
Positive remark	0.223 **	0.015
Humour	0.764 ***	0.166 ***
Control variables	Yes	Yes
Constant	-0.396	0.214 ***

***Statistically significant at 1% level, **Statistically significant at 5% level, *Statistically significant at 10% level

Table 2. Model 2: the impact of auction host on price differential between pre-auction average estimated price and hammer price.

Estimations show that there are less significant organization and presentation effects on this "surprise ratio" than on prices. The most striking result of this second model is undoubtedly the clear and highly significant impact of the auctioneer behavior on this "surprise ratio". Contrary to presale information, that can be anticipated a long time ahead of sale, auctioneer's interventions occur only over the course of the auction. The auctioneer is therefore better able to handle and create surprises. The surprise appears to be higher when the auctioneer i) takes the time to read the description of the lot, ii) provide oral corrections and iii) exercises a sense of humour.

4. Conclusion and Implications

We confirm the role of auction house organizational and promotional strategies (information-based factors) and auctioneer behaviors (behavioral factors) in determining outcomes of artwork transactions, prices or price-estimate ratios for otherwise equivalent art. To be specific, our empirical findings reveal that auction house should give particular attention to the organization of the sale and the promotion of lots for sale, as many effects exert an influence upon probability of sale and prices. We show that the human auctioneer has a prominent impact on outcomes. Our results highlight first that the usage of humour by the auctioneer plays a relevant role in determining sale probability and auction prices, and second that the surprise ratio is mostly determined by the behavior of the auctioneer, whose role of salesman appears to be crucial in selling an entertaining auction.

This research brings a more comprehensive understanding of bidders' behavior, the mechanisms through which auction houses and auctioneers affect outcomes, and the functioning of real-world auction markets. Moreover, the findings of this study yield useful managerial insights for marketers. The auction houses effects detected here reveal the economic significance of auction houses strategies and provide some guidance as to the organization of auction sales and the promotion of lots, in order to maximize revenues. Our study shows the importance of the auctioneer humoristic skills in service delivery for auction houses. This observation can be used in the recruitment process of auctioneers, since having a good sense of humour increases profits for auction houses. This insight also demonstrates the usefulness of humour training programs for auctioneers. However, praising artworks during the auction does not seem to have any utility for auctioneers.

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