

# **FIRST BID EFFECT IN ONLINE AUCTIONS OF NEW AND USED MONTBLANC PENS**

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## **Abstract**

This paper is a preliminary study of the dynamics of online auctions of Montblanc pens on eBay. The author will then follow up with another paper in which a larger sample size will be used and a different statistical analysis technique will be applied (Structural Equation Modeling). The author in this research compared two sets of auctions: auctions of new pens and auctions of used pens and concluded that substantial differences seem to exist between the two sets of auctions. The author also looked at how the first online bid seems to affect the number of bidders and the number of bids in both auctions and concluded that the first bid in an auction seems to have a very strong influence on the outcome of the auction. The shorter the time between the auction start and the first bid, the higher will be the number of bidders and the number of bids in the auction. The author called this the “first bid effect”. The research also showed that this phenomenon is more evident in new pens versus used pens. These findings indicate that potential buyers feel more confident in bidding on items on which others have already placed a bid because this ensures to a certain extent that the item sold is a genuine and not a replica. This also highlights buyers’ perception that used pens are safer to bid on than new ones that nowadays are easily replicated. It is also clear from the research that the relative value of the starting bid has a much higher impact on the auctions for new pens versus auctions for used ones again clarifying that there are subtle difference in the way buyers approach these two auctions. In this research the author used the relative starting bid variable instead of the traditional starting bid variable that was used in previous research arguing that the value of the starting bid is perceived differently based on the perceived value of the item in the auction.

## **1) Introduction**

Guth, Mengel and Ockenfels<sup>9</sup> reported that “Internet transaction fraud is 12 times higher than in-store fraud.” Jin and Kato<sup>7</sup> also believed that “online fraud rate was significantly higher than the fraud rate observed in corresponding offline transactions.” This kind of fraud is especially evident in auctions of expensive collectible items like the Montblanc pen. Everyday many of these pens are auctioned on eBay and a lot of those pens are replicas that are sold as genuine pens. This is such a wide spread phenomenon that a number of guides have already been posted on eBay to help potential buyers differentiate between a fake pen and a genuine one. Because of this, the author believes that buyers would normally feel more comfortable bidding on pens that have already been bid on by other buyers because this indicates that the other bidders also believe that the item is genuine and accordingly motivates the potential bidders to participate in the auction and bid for the item.

## 2) Hypothesis

In this research the author introduces the following hypothesis:

Hypothesis 1: The shorter the time gap between the auction start and the first bid, the more the number of bidders in the auction.

Hypothesis 2: The shorter the time gap between the auction start and the first bid, the more the number of bids in the auction.

Hypothesis 3: The smaller the starting bid versus the product's value, the more the number of bidders in the auction.

Hypothesis 4: The smaller the starting bid versus the product's value, the more the number of bids in the auction.

Hypothesis 5: there will be no difference between used and new pens in terms of hypothesis 1, 2, 3, and 4.

## 3) Literature Review

Bolton et al.<sup>1</sup> investigated trust among Internet traders in computer-mediated online markets such as eBay and explained some of the challenges in establishing Trust in such markets: transactions on these platforms are characterized by asynchronous actions of anonymous traders, operating at spatially disperse locations. They then explained that in a medium of communication such as Computer-mediated communication it is more difficult to signal trustworthiness and to promote cooperation that richer communication media such as face-to-face communication<sup>3,2</sup>.

According to Bolton et al.<sup>1</sup> other challenges include the fact that is easier for a buyer or a seller to choose a trader identity other than one's true identity, as well as the fact that lasting personal relationships on Internet market platforms are infrequent. They then concluded that cyberspace makes it particularly difficult to develop social and economic bonding that supports the emergence of trust and trustworthiness in more traditional markets. Pavlou et al.<sup>8</sup> define perceived uncertainty in a buyer-seller relationship as the degree to which the outcome of a transaction can not be accurately predicted by the buyer due to seller and product related factors. They then explained that uncertainty consists of seller quality uncertainty (seller making false promises, shirking or defrauding, and hiding its true characteristics), and product quality uncertainty (product condition not being as promise, or product quality being compromised). They then identified four antecedents of perceived uncertainty in online buyer-seller relationships: perceived information asymmetry, fears of seller opportunism, information privacy concerns, and information security concerns and then proposed four uncertainty mitigating factors: trust, website informativeness, product diagnosticity, and social presence.

Highfill & O'Brien<sup>6</sup> studied Bidding and prices for online art auctions and concluded that a number of variables significantly affected the number of bids: a higher minimum bid decreased the number of bids but the effect was small; availability of the buy-it-now option decreased the number of bids; a longer auction length increased bids; increased shipping and handling fees decreased bids by adding to the overall cost of an item, however, the effect was small. They also concluded that an increase in the number of bids significantly increased the final sales price.

Song and Baker<sup>5</sup> conducted a field study to elucidate critical factors that determine sellers' net revenue in Internet auctions using two datasets of Internet auctions, one dataset for auctions of a

DVD and one for auctions of an MP3 player. They concluded that the buy-now option, number of payment options, number of pictures, and number of delivery methods were found to be significant predictors of outcome for the MP3 player auctions, but not for the DVD auctions. Conversely, auction duration and feedback ratings were found to be significant in DVD auctions but not in MP3 player auctions. They also identified the potential role of the product type in Internet auction research and concluded that “it is conceivable that consumer electronics, collectibles, and commodity-like items—to name only a few types—may have specific sets of variables that influence the final price they bring and the net revenue they are able to generate when auctioned”.

### 3.3) Data Analysis


In this preliminary research, the author collected information from sixty two completed auctions on eBay for Montblanc pens that ended between June 23<sup>rd</sup> and June 25<sup>th</sup>, 2009. The sample consisted of 39 auctions for used pens and 23 auctions for new pens. This information is readily available by clicking on the “bid history” for ended auctions on eBay (see Fig 1.). The following criteria were used to select the sample:

- 1) The reserve price (if any) was met
- 2) The auction did not end by a Buy-Now option
- 3) There was at least one bid on the item and the auction ended in a sale of the item

Fig 1. Example of bids history for a used Montblanc pen

eBay.com Item Bid History

Item number: 160342536632



**VINTAGE MONTBLANC 149 MEISTERSTUCK PIX FOUNTAIN PEN**  
 Winning bid: **US \$230.10**

Bidders: 6 Bids: 15 Time Ended: Jun-23-09 12:24:13 PDT

**This item has ended.**

Only actual bids (not automatic bids generated up to a bidder's maximum) are shown. Automatic bids may be placed days or hours before a listing ends. [Learn more about bidding.](#)

[Show automatic bids](#)

Bidder	Bid Amount	Bid Time
6***9 ( 19 ★ )	US \$230.10	Jun-23-09 09:01:34 PDT
u***d ( 6 )	US \$227.60	Jun-23-09 07:29:09 PDT
s***s ( 236 ★ )	US \$182.00	Jun-23-09 07:19:01 PDT
u***d ( 6 )	US \$155.00	Jun-22-09 12:03:44 PDT
s***s ( 236 ★ )	US \$151.00	Jun-23-09 07:18:45 PDT
e***e ( 782 ☆ )	US \$121.00	Jun-22-09 18:08:14 PDT
i***i ( 5 )	US \$115.00	Jun-20-09 11:56:48 PDT
e***e ( 782 ☆ )	US \$101.00	Jun-16-09 12:40:41 PDT
e***o ( 53 ★ )	US \$101.00	Jun-17-09 04:17:40 PDT
e***o ( 53 ★ )	US \$76.00	Jun-17-09 04:17:06 PDT

The following data was then extracted:

- 1) Starting bid
- 2) Winning bid
- 3) Number of bidders
- 4) Number of bids
- 5) Auction start date and time
- 6) First bid date and time
- 7) Auction end date and time

The author then subtracted the auction start time from the time the first bid was placed and called this variable the “First bid time”.

It is important to note that the value of the starting bid in an auction is perceived differently by the buyers according to the perceived value of the product itself. For example, a \$10 starting bid for a \$10,000 diamond ring is different from a \$10 starting bid for a \$20 shirt. Accordingly the value of the product needs to be considered when investigating the effect of the starting bid on the auction. To do this, the author will divide the starting bid by the selling price in order to create a new variable: the relative value of the starting bid.

In this preliminary research, the author used the Pearson Correlation Coefficient to measure correlation between the variables. Table 1. shows the correlation between the variables for the all the auctions of Montblanc pens.

Table 2. Correlation between variables for all the auctions

	<b>First bid time</b>		<b>Relative value of the starting bid</b>	
	Pearson Correlation Coefficient (r)	Square of Correlation (R)	Pearson Correlation Coefficient (r)	Square of Correlation (R)
<b>Number of bidders</b>	-0.58678	0.344310768	-0.454971	0.206998611
<b>Number of bids</b>	-0.52681	0.277528776	-0.398639	0.158913052

As shown in the above table, the first bid time has a high correlation with both the number of bidders and the number of bids. As expected, the relative value of the starting bid also has a relatively high correlation with both the number of bidders and the number of bids. It is worth noting though that the correlation between first bid time and the two variables is stronger than the correlation between the relative value of the start bid and the same two variables.

The author then repeated the same steps for the auctions for used Montblanc pens and the results of the correlation coefficient are shown in table 2.

Table 2. Correlation between the variables for the auctions for used Montblanc pens

	First bid time		Relative value of the starting bid	
	Pearson Correlation Coefficient (r)	Square of Correlation (R)	Pearson Correlation Coefficient (r)	Square of Correlation (R)
<b>Number of bidders</b>	-0.46409	0.215379528	-0.19669	0.038686956
<b>Number of bids</b>	-0.40903	0.167305541	-0.109072	0.011896701

It is evident from the table above that the correlations between the first bid time and the number of bidders and number of bids are still very strong while correlations between the relative value of the starting bid and the same two variables became substantially weaker.

The author again repeated the same steps for the auctions for new Montbalnc pens and the results of the correlation coefficient are shown in table 3.

Table 3. Correlation between the variables for the auctions for new Montblanc pens

	First bid time		Relative value of the starting bid	
	Pearson Correlation Coefficient (r)	Square of Correlation (R)	Pearson Correlation Coefficient (r)	Square of Correlation (R)
<b>Number of bidders</b>	-0.74161	0.549985392	0.7228881	0.522567205
<b>Number of bids</b>	-0.68902	0.47474856	0.630036	0.396945361

It is evident from the table above that the correlations between the first bid time and the number of bidders and number of bids are even stronger in the case of new pens and the same is true for the correlations between relative value of starting bid and the same two variables.

#### 4) Conclusion and Recommendations

This research aimed at validating five hypotheses but after analyzing the data it became clear that although there seems to be a significant correlation between the first bid time (the time the first bid was placed minus the auction start time) and both the number of bidders, and number of bids and again between the relative value of the starting bid and both the number of bidders and numbers of bids, the strength of those relationships seem to vary considerably based on the item sold being used or new.

It is evident that the effect of the relative value of the starting bid on both the number of bids and the number of bidders is much weaker in used pens auctions versus new pens auctions, which leads one to believe that in the case of used pens, buyers are less sensitive to the value of the starting bid as long as other bidders have already bid on the item. The same can not be said

though with regards to auctions of new pens. It seems that in the latter case, buyers are more cautious and accordingly rely more on the relative value of the start bid and again feel much more comfortable bidding when somebody else has already bid on the item.

Apart from showing the influence of the first bid on the auction outcome (first bid effect), this research also contributes to the literature in terms of clarifying the differences between auctions of used versus new items especially in the case of expensive collectible items that have traditionally been counterfeited. This research also introduces to the literature the concept of relative value of starting bid which was used in this research instead of the starting bid variable that was constantly used in previous researches.

In terms of practical implications, it seems evident that attracting the first bidder should be a major goal for sellers as well as for auction sites and so incentives for first bidders should be provided, for example providing the first bidder with a small discount on the final selling price or even providing small free gifts like a pen box, etc.

## **5) Research Limitations and Future Research**

In this research the author only used sixty two auctions which are considered a small sample size. The researcher is currently collecting more samples in order to improve the statistical significance of the finding. In this research the author also used the Pearson Correlation Coefficient to measure correlation between the independent variables and the dependent variables. In a future research, the author will use Structural Equation Modeling to discover relationships between the variables and validate the hypothesis. Structural equation modeling (SEM) is a multivariate technique that combines aspects of both multiple regression and factor analysis to estimate a series of interrelated dependence relationships in a simultaneous manner<sup>4</sup>. SEM is very flexible because it can deal with a number of regression equations simultaneously. The same variable may represent a dependant variable in one equation and an independent variable in another equation.

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