

RISK-REDUCING AND RISK-ENHANCING FACTORS IMPACTING ONLINE AUCTION OUTCOMES: EMPIRICAL EVIDENCE FROM EBAY AUCTIONS

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ABSTRACT

This research investigates eBay auction features that influence auction outcomes: likelihood of transaction or whether the item was actually sold in the auction (auction success) and value of the last bid (auction effectiveness). Specifically, we study several seller options available to the seller to increase the final price and successful end to the auction. We investigate the effectiveness of the term “New In Box” in the auction’s heading, the use of an actual or cut picture, the initial price set by the seller, use of a reserve price and acceptance of a credit card in increasing the likelihood of the auction ending successfully, and at increasing the final price. Along with other independent variables, the impact of factors dealing with the auction pictures is examined. Hundreds of auctions (423) for two financial calculators were examined in this study. Findings show that utilization of certain risk-reducing auction features positively influence outcomes of these eBay auctions. These features include level of the starting bid, mention of “New in Box,” inclusion of a real picture of the unit being sold, and the inclusion of a stock picture. In addition, findings indicate that certain risk-enhancing auction features negatively influence eBay auction outcomes. These features include the presence of a reserve price and the mention of “Wear” in the auction.

Keywords: Online purchasing, eBay, e-commerce, consumer risk, online auction

1. Introduction

This research presents the results of an empirical testing of the assumptions that peripheral cues influence purchase decisions. Consumer-to-consumer (C2C) e-commerce, on-line auctions allows the analysis of behavior. It allows testing of theory without regard to the population demographic or attitude characteristics. Our goal was to determine the variables that influence the success and affect the final price in online auctions. Unlike the collectable United States Indian Head pennies in Lucking-Rieley, Bryan, Prasad and Reeves’ [2007] data set, or the functional but expensive items like the Palm Pilots used in Standifird’s [2001] research, we used business calculators because they are inexpensive, homogeneous, functional items that consumers would use rather than collect, and would consider a relatively low risk purchase. We believe that the standardization and lack of need to inspect the calculators to evaluate the quality of their manufacture meet the qualifications of a “low-touch” product described in Levin, Levin and Heath [2003] and Levin, Levin and Weller [2005]. Regression analysis was performed on the set of completed auctions allowing us to quantify the influence of various peripheral cues.

2. Related Literature

2.1 Consumer behavior

A review of academic publications from the past fifty years would readily indicate the interest concerning consumer purchase behavior. Much of the research has involved the development of measures for ascertaining relationships among the product attributes, the consumer’s attitude and the consumer’s behavior associated with

shopping at a “brick-and-mortar” store. Marketers have readily accepted many fundamental aspects of consumer decision-making, such as the role of risk perception upon the assessment of value. This study attempts to offer a better understanding of the factors that influence a consumer’s actions in regard to assessing the value of products with methodology that does not involve a researcher’s attempt to develop attitude measures or the manipulation of environmental factors.

A common research trend for marketers has been and continues to be the consumer’s process for assessing risk and how their risk perception influences behavior. In 1983 Petty, Cacioppo and Schumann proposed that purchase behavior is impacted by the consumer’s perception of risk. An abundance of research indicates that the consumer’s perception of risk is associated with willingness to buy: *as risk increases, the willingness to purchase decreases*. Highly “risky” purchase decisions are less likely to occur due to the requirement of greater involvement by the consumer including: the use of more sources of information; evaluation of multiple criteria; and the greater likelihood of cognitive dissonance occurring. When faced with a highly “risky” decision consumers tend to seek information, and actively evaluate. Consumers are most likely to experience high risk with purchases like homes and cars because of the higher economic and social consequences.

Petty, Cacioppo and Schumann [1983] proposed that consumers faced with a low-risk purchase are more likely to use peripheral cues, the easily processed aspects of a message. Peripheral cues include source factors, message factors and context factors. It is a common strategy for marketers to use source, message and context factors to influence the consumer’s willingness to buy. For example: *It is brand x, it must be good; celebrity Y uses the product it must be good; the higher the price the better the product; and store A sells the product it must be good*.

Hence, two assumptions have been the basis for much consumer behavior research.

- The perception of risk is related to the willingness to purchase.
- Peripheral cues are used when making decisions.

This study defines willingness to purchase as the successful completion of an auction (a purchase is made) and the value is the selling price or last bid. Perception of risk is measured by the presence of peripheral cues.

Consumer-to-consumer (C2C) e-commerce, on-line auctions allows the analysis of behavior, not attitude, without researcher’s manipulation. The empirical testing of theory is performed with factually accurate information concerning actions without regard to the population demographic or attitude characteristics. Our exploratory model testing is an attempt to empirically identify factors affecting willingness to purchase in an environment without attitude measures or manipulations by the researcher.

Because of the prominence of eBay in this industry, it was selected as the organization of research interest. The auction host has achieved success and the managers at eBay actively research and implement measures to make eBay user-friendly, for both sellers and customers. Resnick and Zeckhauser [2001] report 89% of all buyer-seller pairs conducted just one transaction during a five-month data collection period. This high percent of one-time transactions is interesting for this study because of the focus upon cues, not relationships.

Additionally for this study, eBay provides sellers with several tools or options from which to choose to help make auctions as effective as possible at increasing the likelihood that a transaction will occur and maximizing the value of the last bid. Some of these tools include being able to establish the first bid, the option of reserve pricing, message, and picture options.

The products selected for the study are the Hewlett Packard (HP) 10b and Texas Instruments BAI Plus calculators. These machines are inexpensive financial calculators with an MSRP of \$29.99. They are standardized and do not require the purchaser to inspect them to evaluate their quality of construction, so we contend that they would be categorized as “low-touch” items described by Levin, Levin and Heath [2003] and Levin, Levin and Weller [2005]. Unlike the collectable United States Indian Head pennies in Lucking-Rieley, Bryan, Prasad and Reeves’ [2007] data set, or the functional but expensive items like the Palm Pilots used in Standifird’s [2001] research we chose these calculators because they are inexpensive, homogeneous, functional items that consumers would use and not consider as high-risk purchases if made at a brick-and-mortar store. Our goal was to determine the variables (cues) that influence the willingness to purchase in online auctions.

2.2. The perception of risk is directly related to the willingness to purchase.

Research has shown that Internet shoppers use caution when purchasing and paying for products purchased over the Internet. Also, the extent to which online businesses can build trust significantly influences the willingness of consumers to make online purchases [Trocchia and Janda 2000]. The findings of Grewal et al. [2003] indicated that a well-written and prominently displayed assurance of security encryption on a website increased consumer trust. George [2002] found evidence that consumer beliefs about privacy and Internet trustworthiness help determine attitudes toward the Internet. Teltzrow, Meyer and Lenz [2007] found that a consumer’s trust in an e-shop of a multi-channel retailer is positively related to the perceived privacy at the e-shop. These attitudes, in turn, affect intent to make Internet purchases. Chellappa and Pavlou [2002] found a significant relationship between the

consumer's perceived information security and trust in electronic commerce transactions. Other studies found similar relationships between perceived risk of online purchasing and the likelihood of making online purchases [e.g., Miyazaki and Fernandez 2001; Patton and Josang 2004; Udo 2001; Brown and Muchira 2004]. Mutz [2005] found the level of social trust has recently been shown to impact e-commerce participation, with higher levels of social trust actually encouraging greater participation. Mathews and Katzman [2006] related risk attitudes of both eBay sellers and buyers with the "buy it now" option offered by eBay. Pollach [2006] suggested that companies should look for more user-friendly alternatives to the narrative presentation format of privacy and security policies as a way to further build customer confidence.

2.3. Presence of photo increases the likelihood of transaction and the presence of photo increases the value of the final bid.

Sellers have these options: (1) including none, one or more pictures and (2) use of "stock" or actual photographs. Previous research has shown the use of pictures to be important to buyers when buying on eBay [Bajari and Hortacsu 2003; Bland, Black, and Lawrimore 2005; Lohse and Spiller 1998; Gilkeson and Reynolds 2003; Trocchia and Janda 2000]. Further, evidence has been presented that one method to reduce perceived risk associated with online purchasing is to provide clear and detailed pictures of the products for sale [Helander 2000; Koehn 2003; Wolfenbarger and Gilly 2001]. A stock photograph gives the buyers a general idea of the appearance of the item. Specifics such as the 'color quality' that may be very important to the collector of an Indian Head Penny studied in the Lucking-Reiley et al [2007] research may not be as important for homogeneous products. As a homogeneous product there is little additional information to be gained from using a real versus a stock picture. The information in the item description can easily be referenced to back up the information gained from the picture.

2.4. Presence of positive phrases such as "new in box" increases the likelihood of a transaction and increases the value of the final bid. The presence of negative phrases such as "wear" decreases the likelihood of a transaction and the value of the final bid.

The terms (message peripheral cues) to describe the product are provided by the seller. A term familiar with seasoned online auction customers and sellers is "new in box." This term should mean that the product is still in the box in which it came and has not been used. If a product is misrepresented by a seller on eBay, a customer can take actions that will both get them a full refund from the seller and damage the seller's reputation. Thus, savvy sellers are not likely to use the term, "new in box," unless it is the truth. Buyers can use the presence of this term as a cue for reducing risk.

The seller may describe the product using a term that indicates less-than-new condition. Therefore, a seller using a term such as "wear" in the auction should decrease both the value of the final bid and the likelihood of a transaction actually occurring.

2.5. Presence of low cost cues increases the likelihood of a transaction and increases the value of the final bid; the presence of reserve price cue decreases the likelihood of a transaction and decreases the value of the final bid.

A lower starting price should make potential consumers more willing to bid because of the perception of less financial risk. Thus, a lower starting price clearly should increase the likelihood of a transaction occurring. In economics it is said, "The lower the price, the greater the quantity demanded". In addition, a lower starting price may entice more customers to bid on the item so the value of the final bid should actually increase, despite the beginning bid.

As reported in Swinyard and Smith [2003], online consumers are sensitive to high shipping costs. Therefore, a lower shipping price associated with an eBay auction will result in both a higher value of the final bid and a higher likelihood of a transaction actually occurring.

Sellers have the option of opening an account with the eBay affiliate PayPal, thus giving buyers the option of paying by credit card. Though sellers pay a small percentage of the auction's winning bid for this service, most elect to offer this convenience to buyers. Providing the option of paying with a credit card reduces the transaction costs for both buyers and sellers as well as the time necessary to conclude a transaction. Therefore, offering the option of paying for a product with a credit card will increase both the value of the final bid and the likelihood of a transaction actually occurring.

Using a reserve price is an option for eBay sellers to safeguard them from having to sell products unless the bidding reaches a minimum predesignated price. Reserve prices make it possible for items to get bids but not actually sell in the auction. Therefore, the presence of a reserve price will likely decrease both the value of the final bid and the likelihood of a transaction actually occurring.

Based on the reasoning above, the following research model is offered. See Figure 1 for a model of these relationships.

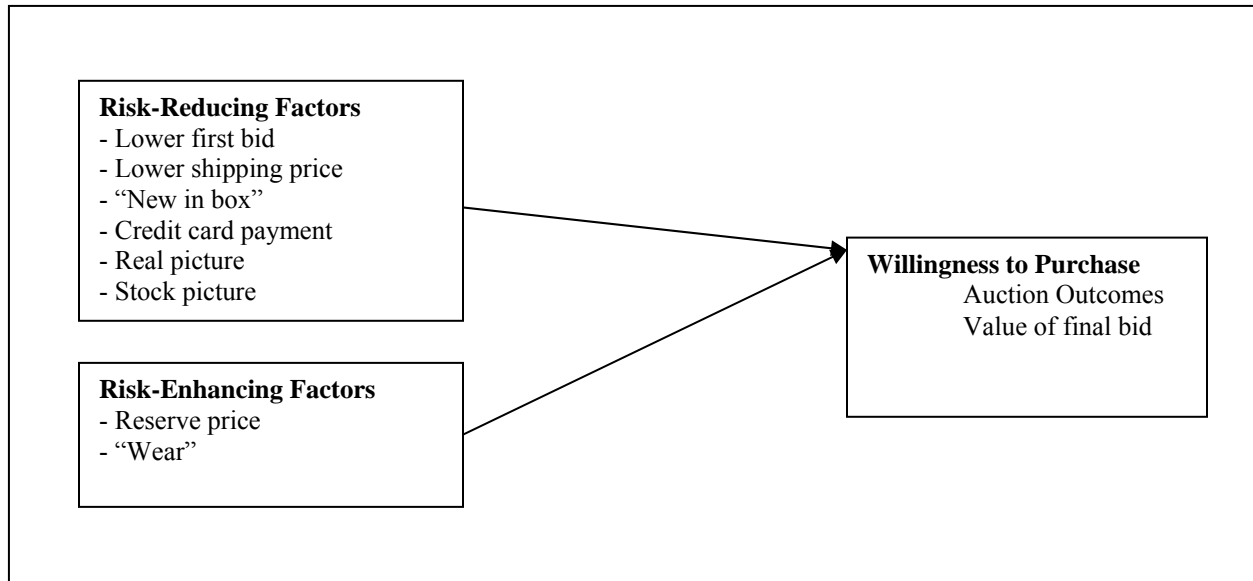


FIGURE 1: Model of Determinants of eBay Auction Success

- H₁: Likelihood of transaction (whether the item actually sold during the auction), or auction success, is
- a. increased by a lower first bid;
 - b. increased by a lower shipping price;
 - c. increased by the mention of “new in box” in the auction heading;
 - d. increased by the ability to pay with a credit card;
 - e. increased by the presence of a real picture of the product;
 - f. increased by the presence of a stock picture of the product;
 - g. decreased by the presence of a reserve price; and
 - h. decreased by the mention of “wear” in the description of the auction.
- H₂: If the item is actually sold during the eBay auction, the value of the last bid, or auction effectiveness is
- a. increased by a lower first bid;
 - b. increased by a lower shipping price;
 - c. increased by the mention of “new in box” in the auction heading;
 - d. increased by the ability to pay with a credit card;
 - e. increased by the presence of a real picture of the product;
 - f. increased by the presence of a stock picture of the product;
 - g. increased by the presence of a reserve price; and
 - h. decreased by the mention of “wear” in the description of the auction.

3. Methodology

Between September 2000 and March 2001, we searched eBay daily for new auction listings for two calculators. New listings were added to one of several “Watch Lists.” As these auctions ended, the relevant information was entered into the data set. See Table 1 for a summary and descriptive statistics of the data. While the data set is not new, we do not believe that there have been any significant changes to the eBay system that would warrant the extremely tedious and time consuming collection of another data set.

For each auction, we collected information on the following variables:

1) whether the item actually sold during the auction, 2) value of the final bid, 3) starting bid for the auction, 4) stated shipping charges for the product being sold, 5) presence of the phrase “new in box” or “NIB” in the auction’s heading, 6) possibility of paying with a credit card, 7) presence of a real picture of the actual item being sold, 8) presence of a stock picture, 9) presence of a reserve price, and 10) presence of the word “wear” in the auction description.

We excluded several auctions from our data set. When the auction included multiple items, it was eliminated. We also eliminated any “Dutch auctions.” A Dutch auction occurs when a seller lists multiple calculators for sale to multiple bidders where the selling price for all the calculators is the lowest winning bid price. Auctions that ended with the “Buy it Now” feature were eliminated since the feature was not available for the entire period of this study and these auctions did not have the full period of exposure to maximize the final bid value. The “Buy it Now” feature allows buyer to pay seller’s posted price, terminating the auction and resulting in the immediate sale of the item. Auctions hosted by the “Take-To-Auction” group were also excluded. This company provides a shell for members to use. These auctions were nearly identical and generally listed the calculators for full list price and charges roughly \$7 for shipping. Most of these auctions failed. The resulting data set included 423 completed auctions meeting our requirements.

As shown in Table 1, there were 423 auctions in the sample. Of these auctions, 19.23% failed to be consummated. These auctions failed because they did not meet the minimum reserve bid set by the seller or they failed to receive any bids at all.

TABLE 1: Descriptive Statistics

Calculator	Variable	N	Mean	Std Dev	Minimum	Maximum
HP 10b and BA II Plus	# of Bidders	423	3.2364	2.4497	0	12
	Failed	423	0.1938	0.3958	0	1
	First Bid	423	11.383	8.1698	0.01	40
	Shipping	423	4.1730	1.3078	0	11
	"New in Box"	423	0.2269	0.4194	0	1
	Credit Card	423	0.6879	0.4638	0	1
	Real Picture	423	0.3144	0.4648	0	1
	Reserve Price	423	0.0520	0.2223	0	1
	"Wear"	423	0.0355	0.1852	0	1
	Stock Picture	423	0.5343	0.4994	0	1

Nearly 23% of the auctions included some version of the phrase “New In Box” or “NIB” in the auction’s heading. At the other extreme, nearly 4 % of the calculators indicated some degree of ‘wear’, indicating that they were in less than new condition. A total of 85% of the auctions in this data set included a picture. Of these, 53% were determined to use a cut or a stock photo of the calculator, while slightly more than 31% were determined to include an actual digital picture of the calculator. Since the data was collected in late 2000 and early 2001, this required much more effort than today, since digital cameras were still rather new.

The first bid an auction received averaged \$11.38. This is the average price set by the seller as the first bid when the auction is set up. The initial price is one of the determinants of the final fee that is paid to eBay by the seller. Sellers accepted credit cards as one of the payment options 69% of the time. On average auctions attracted 3.24 distinct bidders.

Since the dependent variable for the first hypothesis is a dummy variable for whether or not a transaction actually took place, i.e. the auction transaction resulted in a sale, logistic regression analysis was used to determine which factors had significant influence on the auction’s outcome. Ordinary Least Squares (OLS) regression was used to test the second set of hypotheses that the value of the last bid was impacted by these test variables. The subset of data used to test the second hypothesis is smaller than the first data set because we removed the failed auctions. These auctions did not result in a ‘meeting of the minds’ since they had starting bids too high to attract buyers, or the final price bid by any buyer was smaller than the seller’s reserve price. Tables 2 and 3 provide the regression results for the two sets of hypotheses tests.

4. Results

The various hypotheses associated with H₁ were tested using logistic regression analysis. The dependent variable was whether the auction resulted in a successful (coded 0) or failed (coded 1). The results in Table 2 indicate that two risk-reducing factors helped to increase the likelihood of transaction for these calculators. The risk-reducing factors having a statistically significant impact on auction success included a lower first bid (H_{1a}: X² = 63.3920, p ≤ .01), and the presence of an actual picture of the calculator being sold (H_{1c}: X² = 5.9620, p ≤ .05). The results indicate that the higher the value of the first bid that the seller lists when setting up the auction, the greater is the probability that the auction will ultimately fail. The results also indicate that presence of an actual photo (rather

than no photo at all) decreases the probability of auction failure. (Results, not reported here, from the subset of auctions that included a picture – that is removing the auctions with no picture- indicate that auctions with an actual photo are statistically significantly less likely to fail than auctions with a stock picture).

TABLE 2: Results of Hypothesis Testing: Auction Success (H1)

Calculator	Hyp.	Independent Variable	Estimate	Standard Error	Chi-Square
HP 10b and BA II Plus	1a	First Bid	0.2859	0.0362	62.3920**
	1b	Shipping	0.2406	0.1590	2.2891
	1c	"New In Box"	0.5355	0.4330	1.5296
	1d	Credit Card	0.0171	0.4421	0.0015
	1e	Real Picture	-1.7175	0.7034	5.9620*
	1f	Stock Picture	-0.1405	0.575	0.0597
	1g	Reserve Price	3.2142	0.7616	17.8096**
	1h	"Wear"	0.6309	1.1952	0.2787

** $p \leq .01$; * $p \leq .05$

Risk-reducing factors having no statistically significant impact on auction success included a lower shipping cost (H_{1b}), the words "New in Box" appearing in the auction's heading (H_{1c}), the possibility of paying with a credit card (H_{1d}), and the presence of a stock picture (H_{1f}).

Table 2 also indicates support for the impact of one of the risk-enhancing factors on auction success. The presence of a reserve price has a negative impact on auction success (H_{1g} : $X^2 = 17.8096$, $p \leq .01$). However, the word "wear" appearing in the description (H_{1h}), had no impact on auction success.

If the auction was successful, a slightly different set of risk-reducing factors proved to significantly impact the value of the last bid (H_2). Table 3 presents the statistical results of the regression of the subset of 348 successful auctions. The failed auctions were removed from this subset of the data, since the ending price was not a 'market' price as the sale did not consummate. Among the statistically significant factors are the value of the first bid, with a higher first bid increasing the value of the last bid (H_{2a} : $t = 4.94$, $p \leq .01$); the words "New in Box" appearing in the auction heading increased the value of the last bid by \$1.89 (H_{2c} : $t = 2.27$, $p \leq .05$); the presence of a real picture of the actual product being sold increased the value of the last bid by \$2.37 over those auctions without a picture (H_{2e} : $t = 2.55$, $p \leq .05$); and the presence of a stock or cut picture increased the value of the final bid by \$2.51 over those auctions without a picture (H_{2f} : $t = 2.77$, $p \leq .01$). The risk-reducing factors that did not have an impact on the value of the final bid are the shipping cost (H_{2b}) and the possibility of paying for the product with a credit card (H_{2d}). Table 3 also indicates that both risk-enhancing factors had an impact of the value of the last bid. The mention of "wear" in the auction decreased the value of the last bid by \$3.40 (H_{2g} : $t = -2.20$, $p \leq .05$), finally as predicted, the presence of a reserve price increased the value of the last bid by \$3.83 (H_{2f} : $t = 2.90$, $p \leq .01$). However, this last result must be interpreted with care. Auctions with a reserve price will result in a higher price only if the auction is successful. Unsuccessful auctions do not technically have a price since no transaction occurred.

TABLE 3: Results of Hypothesis Testing: Auction Effectiveness (H2)

Calculator	Hyp.	Independent Variable	Estimate	Standard Error	t-value
HP 10b And BA II Plus	2a	First Bid	0.28546	0.05777	4.94**
	2b	Shipping	-0.27068	0.27791	-0.97
	2c	"New In Box"	1.89221	0.83384	2.27*
	2d	Credit Card	-0.23807	0.66473	-0.36
	2e	Real Picture	2.36608	0.94423	2.55*
	2f	Stock Picture	2.51408	0.90810	2.77**
	2g	Reserve Price	3.82823	1.32220	2.90**
	2h	"Wear"	-3.39757	1.54437	-2.20*

** $p \leq .01$; * $p \leq .05$

5. Discussion and Conclusion

This study shows there are several risk-reducing features that eBay sellers can easily implement to increase the chances of selling their items while maximizing the value of the final bid for these items. These features likely have this positive impact on the outcomes of eBay auctions because consumers perceive the presence of these factors to actually be reducing the many perceived risks associated with making online purchases of unseen items from sellers who they may not know.

Previous research indicates that including a picture is very important for online buyers for various reasons. This study confirmed that previous research by finding that the inclusion of either a real picture of the product actually being sold or a stock picture is a risk-reducing factor that will improve the outcomes of the auction for the seller. The inclusion of the real picture proved to be effective in increasing auction success and auction effectiveness. However, the inclusion of a stock picture was only useful in determining the value of the last bid.

This research indicated that one of the most influential risk-reducing factors was a picture of the product. An actual picture of the item being sold not only increases the probability of the auction's success, but increases the value of the final bid by an average of \$2.37. While the use of a stock or cut picture also significantly increased the final bid, the probability of auction success is not enhanced. Therefore, if the seller has the ability of take and upload an actual digital picture of the item being auctioned, they should have a higher probability of success as well as a higher final bid. Given the comparatively widespread availability of digital cameras since this data set was collected, there is very little benefit to using a stock source of photos rather than an actual photograph of the item for sale.

The first bid set by the seller is also a statistically significant factor impacting both an auctions success and its effectiveness. However, the seller must use caution when increasing or decreasing this first bid because a higher first bid decreased auction success (whether the item actually sold) but increased auction effectiveness (the value of the final bid). Auctions where sellers set lower initial bids are more likely to be successful. However, for every dollar that the seller raises the first bid, the results indicate that the final bid will increase by \$0.28. As a practical example of the tradeoff between success and effectiveness consider the calculator with the highest initial price. The starting price in this auction was set by the seller at \$40. This calculator received no bids and the auction failed. Worse, the seller still paid eBay a fee to list the calculator and that fee is a function of the starting bid.

The use of a reserve price, like the first bid, provides contradictory implications. Auctions with a reserve price are more likely to fail. However, if they are successful, they can result in a higher selling price. The use of a reserve price allows the seller to list the product for a lower initial price, but not require that they sell the product unless the reserve price is met. If the auction is completed the seller gets at least their reservation price. On the other hand, these auctions are more likely to fail. The result of a failed auction is the loss of the listing fee, the surcharge for the reserve feature, as well as the missed profit from the failed sale. As a practical matter, the seller could simply set the initial price at their reserve price. If the auction gets even one bid, the auction is a success.

An interesting implication of this research involves the use of terms that indicate that the product is of either above or below average quality. Including the words "new in box", or "NIB" in the auction heading or describing the product to indicate that it has 'wear' did statistically and economically significantly impact the product's price. The use of the term "new in box" increased the final bid by about \$1.89 while calculators described as being of below average quality sold for about \$3.40 less than the average calculator. However, the use of these descriptions did not change the likelihood of the auction's success. The price differences simply reflect the value gained or lost when compared to a typical calculator in 'average' condition. Sellers should accurately describe their product and if it has wear, they should indicate that in the item description. However, our research indicates that the word "wear" may cause more of a negative reaction than would other ways of describing a product, so sellers may be able to find other words to describe the condition of their products.

Many other factors impacting outcomes of eBay auctions exist. The possibility of further research to continue discovering and examining these factors can be useful to researchers, eBay sellers, and eBay buyers. In addition, this research examined only calculator sales. It is likely that the determinants identified in this study have a different impact, or no impact at all, on auctions for others types of products. Further research is needed to examine these determinants in relationship to the thousands of other products being sold on eBay.

REFERENCES

- Aldridge, A., "eBay is Emerging as the New Channel to Market," *Strategic Direction*, Vol. 21, No. 2:44, February, 2005.
- Anonymous, *eBay Annual Report*, 2005.
- Anonymous, "Fast Facts," *eBay PowerSeller Community Newsletter*, Vol. 1, No. 1:7, Spring, 2004.
- Anonymous, "eBay.com Basks in the Sun," *FinancialWire*, Vol. 1, November 29, 2005.

- Anonymous, *United States Census 2000*, Washington, DC: U.S. Census Bureau, 2000.
- Bajari, P. and A. Hortacsu, "The Winner's Curse, Reserve Prices, and Endogenous Entry: Empirical Insights from eBay Auctions," *The Rand Journal of Economics*, Vol. 34, No. 2:329-355, Summer, 2003.
- Bland, E.M., G.S. Black, and K. Lawrimore, "Determinants of Effectiveness and Success for eBay Auctions," *Coastal Business Journal*, Vol. 4, No. 1:5-15, March-April, 2005.
- Brown, M and R. Muchira, "Investigating the Relationship Between Internet Privacy Concerns and Online Purchase Behavior," *Journal of Electronic Commerce Research*, Vol. 5, No. 1:62-70, February, 2004.
- Chellappa, R.K. and P.A. Pavlou, "Perceived Information Security, Financial Liability and Consumer Trust in Electronic Commerce Transactions," *Logistics Information Management*, Vol.15, No. 5/6:358-368, 2002.
- George, J.F., "Influences on the Intent to Make Internet Purchases," *Internet Research*, Vol.12, No. 2:165-180, 2002.
- Gilkeson, J.H. and K. Reynolds, "Determinants of Internet Auction Success and Closing Price: An Exploratory Study," *Psychology & Marketing*, Vol. 20, No. 6:537-566, June, 2003.
- Grewal, D., J.L. Munger, G.R. Iyer, and M. Levy, "The Influence of Internet-Retailing Factors on Price Expectations," *Psychology & Marketing*, Vol. 20, No. 6:477-491, June, 2003.
- Helander, M.G., "Theories and Models of Electronic Commerce," *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* Vol. 2, No. 1:770-773, 2000.
- Koehn, D., "The Nature of and Conditions for Online Trust," *Journal of Business Ethics*, Vol. 43, No. 1/2:3-15, March, 2003.
- Levin, A.M., I.P. Levin, and C.E. Heath, "Product Category Dependent Consumer Preferences for Online and Offline Shopping Features and Their Influence on Multi-Channel Retail Alliances," *Journal of Electronic Commerce Research*, Vol. 4, No. 3:85-93, August, 2003.
- Levin, A.M., I.P. Levin, and J.A. Weller, "A Multi-Attribute Analysis of Preferences for Online and Offline Shopping: Differences Across products, Consumers, and Shopping Stages," *Journal of Electronic Commerce Research*, Vol. 6, No. 4:281-290, November, 2005.
- Lohse, Gerald L. & Spiller, Peter "Electronic Shopping: The Effect of Customer Interfaces on Traffic and Sales," *Communications of the ACM*, 41(7), 81-87, 1998.
- Lucking-Reiley, D., Bryan, D., Prasad, N., and Reeves, D., "Pennies from eBay: The Determinants of Price in Online Auctions," *Journal of Industrial Economics* forthcoming.
- Mathews, T., and B. Katzman, "The Role of Varying Risk Attitudes in an Auction with a Buyout Option," *Economic Theory*, Vol. 27, No. 3:597, April, 2006.
- Miyazaki, A. and A. Fernandez, "Consumer Perceptions of Privacy and Security Risks for Online Shopping," *The Journal of Consumer Affairs*, Vol. 35, No. 1:27-44, Summer, 2001.
- Mutz, D.C., "Social Trust and E-Commerce: Experimental Evidence for the Effects of Social Trust on Individuals' Economic Behavior," *Public Opinion Quarterly*, Vol. 69, No. 4:393-416, Fall, 2005.
- Patton, M.A. and A. Josang, "Technologies for Trust in Electronic Commerce," *Electronic Commerce Research*, Vol. 4, No. 1-2:9-21, January-April, 2004.
- Petty, R, J. Cacioppo, and D. Schumann, "Central and Peripheral Routes to Advertising Effectiveness: The Moderating Role of Involvement," *Journal of Consumer Research*, September 1983, pp. 135-146.
- Pollach, I., "Privacy Statements as a Means of Uncertainty Reduction in WWW Interactions," *Journal of Organizational and End User Computing*, Vol. 18, No. 1:23-49, January-March, 2006.
- Resnick, P. and R. Zeckhauser, "Trust Among Strangers in Internet Transactions: Empirical Analysis of eBay's Reputation System," Working Paper, University of Michigan, 2001.
- Standifird, S.S., "Reputation and E-Commerce: EBay Auctions and the Asymmetrical Impact of Positive and Negative Ratings," *Journal of Management*, Vol. 27, No. 3:279-293, 2001.
- Swinyard, W.R. and S.M. Smith, "Why People (don't) Shop Online: A Lifestyle Study of the Internet," *Psychology & Marketing*, Vol. 20, No. 7:567-576, July, 2003.
- Teltzrow, M, B. Meyer, and H.J. Lenz, "Multi-Channel Consumer Perceptions," *Journal of Electronic Commerce Research*, Vol. 8, No. 1:18-31, February, 2007.
- Trocchia, P.J. and S. Janda, "A Phenomenological Investigation of Internet Usage Among Older Individuals," *The Journal of Consumer Marketing*, Vol. 17, No. 7:605-612, 2000.
- Udo, G. J., "Privacy and Security Concerns as Major Barriers for E-Commerce: A Survey Study," *Information Management & Computer Security*, Vol. 9, No.4:165-174, 2001.
- Wolfinger, M. and M.C. Gilly, "Shopping Online for Freedom, Control, and Fun," *California Management Review*, Vol. 43, No. 2:34-55, Winter, 2001.