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Understanding the Role of Surcharge Information Transparency and Pricing Strategies in Online Auctions

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ABSTRACT
The current study offers insights into how different surcharge strategies can influence online auction success variables. We collected information of new iPod Nano auction transactions on eBay and found that auctions that did not provide clear shipping and handling (S&H) surcharge information significantly received lower final bids. This lack of transparency did not however affect the number of bids an auction received. We also found that, contrary to the traditional wisdom in the area of partitioned-pricing, online bidders can accurately adjust their bids according to the auctions’ surcharge amount. In addition, we found that the strategy of charging a higher S&H surcharge in an attempt to avoid commission fees did not help promote auction sellers’ revenue, nor the number of bids in the auctions. Practical guidelines are later offered in the study.

Keywords:
Partitioned Pricing, Shipping & Handling Surcharges, Online Auctions, E-Markets, Bidding Behaviors

INTRODUCTION
With the exorbitant growth of sales in the electronic markets, marketers and researchers have recently directed their attention to inventing several pricing strategies that help maximize gains for businesses (i.e. Burman and Biswas 2007; Lewis, Singh, and Fay 2006; Lewis 2006; Stiving and Winer 1997, etc.). One of these strategies is the use of partitioned pricing where consumers generally have to process at least two price components, including a base price and surcharges. A review of prior studies in this bailiwick revealed mixed findings in how surcharges can impact consumers’ demand, attitude toward brands, intention to purchase, and recalled total costs, etc. (i.e. Morwitz, Greenleaf, and Johnson 1998; Lee and Han 2000; Xia and Monroe 2004 ). We argue that such mixed results can be attributed to several systematic differences in how previous studies were conducted. For instance, while some studies were carried out in experimental settings (i.e. Morwitz et al. 1998; Schindler et al. 2004), others were conducted as field experiments (i.e. Hossain and Morgan 2006). We also found that both fixed-price and auction models were used almost as frequently for research in this area.

Despite such mixed findings and significant efforts from previous research, many research questions remain unanswered. For instance, no study, best known to our knowledge, has examined the role of surcharge information transparency in online auction platforms. Our study is driven by one of the most influential research in this area by Morwitz and her colleagues (Morwitz et al. 1998) and others that studied partitioned pricing in the auction environment (Clark and Ward 2008 and Hossain and Morgan 2006). The prime objectives in this study are 1) to investigate the role of surcharge information transparency on online auction success factors and 2) to investigate how S&H surcharge helps shape the online auction successes. We investigated an untapped topic of transparency in partitioned prices and revisited the relationship between S&H and auction success factors, including number of bids, final prices (final bids), total prices, and net prices.
THEORY DEVELOPMENT AND RESEARCH HYPOTHESES

Partitioned Prices and Its Transparency in Online Auction Marketplace

Research in partitioned pricing has gained popularity in the past decade. In general, partitioned pricing refers to a practice of separating the price of a product or service into multiple components (Morwitz et al. 1998). When there are two price components, the price component that directly relates to the item being sold is referred to as the base price and the other price component is referred to as the surcharge. Traditional wisdom in this area suggested that partitioned pricing helps promote higher demand from consumers. Such a notion is based on the assumption that a majority of consumers generally use their heuristics to calculate the total price or just simply ignore the surcharge information (Morwitz et al. 1998).

Previous studies further suggested that surcharge presentation and its location can be influential to consumers’ ability to correctly recall the total cost and their perception of values (Anderson and Simester 2003; Dholakia and Simonson 2005; Heath et al. 1995). In general, surcharge information is provided to consumers in a separate location from the base price. Such practice drives our study to explore the role of surcharge information transparency in the online auction environment.

Transparency of information refers to visibility of information, information flows, and the ability to observe transactions (Huisman and Koeduk 1998; Pagano and Roell 1996). It has been found to correspond positively with consumers’ overall rating of price satisfaction (Matzler et al. 2006; Matzler, Renzl, and Faullant 2007). In a series of studies, Matzler and his colleagues found that students and bank customers’ rating of price transparency help predict their overall price satisfaction rating. In the online auction environment, price transparency is critical for consumers’ bidding decision-making. Information such as beginning price, current price, final price, are generally readily available to users/bidders. Sellers in this marketplace have to make several pricing decision such as what will be their opening bids, whether or not to use a reserve price and/or a buy-it-now price. Their decisions will later be shown in the auction page layout and can impact their net sales/premium according to the auctioneer’s commission rules.

In this section, we investigate the impact of transparency on two auction success factors, the number of bids and auction final price. Auction final price is the final bid that the auction winner has placed to the auction. Later in the study, two additional auction success factors, total price (a sum of final price and S&H fee) and net price (total price less commission fees), will be included in the analysis. We argue that including four auction success factors, especially the three auction prices, is imperative. While the number of bids and final prices have repeatedly been used to measure auction success in prior research (i.e. Gilkeson and Reynolds 2003; Wilcox 2000), total price and net price have rarely been studied. Cheema (2008) investigated the impact of sellers’ reputation on auction final price and total price and encouraged future research to examine the influence of seller reputation on net price.

Our study proposes that surcharge information transparency can affect the number of bids and auction final prices. We argue that sellers who clearly indicate their surcharge information can draw more attention from bidders in online auction marketplace. In the online auction platform, it is common that buyers will find base price at a separate location from surcharges (Lee and Han 2000). Several online auctioneers such as eBay and Amazon auctions however decidedly promote surcharge information transparency by providing a template for sellers to enter their S&H information. Despite such an effort, some sellers omit surcharge information either on purpose or by accident.

The omission of surcharge information from the auction listing page can cause consumers to attach higher risk to the transaction, lower their trust in the seller (Munger and Grewal 2001), and promote information asymmetry in an auction. This information asymmetry stems from the fact that some bidders may receive S&H information through a direct contact with sellers (i.e. email) while others do not. Bidders who were not informed with S&H information assume additional risk that the shipping price, when revealed after the auction ends, will make the total price higher than they are willing to pay (Soh, Markus, and Goh 2006). Munger and Grewal (2001) stated that the clarity of price structure presented by an online merchant can promote consumer’s perceived value and trust in sellers. When experiencing higher surcharge information transparency, consumers/bidders can develop better understanding of and reasons for the surcharges, positively influencing purchase intention (Sloan 2003). With such support from previous studies, we proposed;

H1: The presence of surcharge information will increase the number of bids.
H2: The presence of surcharge information will increase auction final prices.
Sellers’ Strategies and Reputations as Covariates

Besides information transparency, previous research in the online auction domain suggested many other factors that can affect auction successes. To fully examine the role of surcharge information transparency, we argue that other factors such as sellers’ reputation and strategies should be taken into account. Among several sellers’ strategies, setting a low opening bid is one of the few avenues to attract bidders. Numerous online auction studies have found a negative relationship between an auctions’ opening bid and number of bids and bidders (i.e. Reynolds et al. 2009). Sellers who are more risk averse can however set their opening bid higher to have a certain guarantee of auction final prices (Hidvégi et al. 2002).

In addition to the opening bid strategy, there is a constellation of works in the area of how sellers’ reputation affects auction success. Several online auction marketplaces such as eBay provide their users with a feedback/reputation system that allows their members to leave feedback scores to indicate their experiences with a particular sellers and/or buyers. Resnick and Zeckhauser (2002), for instance, found that less than one percent of feedback left on eBay marketplaces is negative. The negative feedback can however be detrimental to auction success factors. Conversely, it was indicated that sellers with higher reputation (overall and positive feedback) will draw more bidders and receive higher price premium (Houser and Wodders 2006). Such sellers were reported to receive an average 7.6% price premium when compared to sellers with minimal feedbacks (Resnick, Zeckhauser, Swanson, and Lockwood 2006).

In the light of partitioned pricing studies, very few studies have investigated how seller’s strategies and reputations work in conjunction with S&H surcharge strategies. Taking the sellers’ opening bid strategies and their reputation into consideration, we further expand our first two hypotheses and propose;

H3: The presence of surcharge information will increase number of bids, regardless of the sellers’ strategies and reputations.
H4: The presence of surcharge information will increase auction final prices, regardless of the sellers’ strategies and reputations.

How Bidders/Consumers Process Surcharges Information

The above hypotheses attempted to test the impact of surcharge information transparency on online auction success factors. When auction sellers choose to provide S&H information, they have to decide how much the S&H surcharges will be. Our study also endeavored to examine the impact of S&H on the auction success factors when the surcharge information is clearly presented to bidders. Several theoretical frameworks have been proposed to study how consumers process surcharge information. One of which was the use of cost-benefit framework (Beach and Mitchell 1978; Johnson and Payne 1985; Shugan 1980) by Morwitz and her colleagues (1998). They suggested that separating surcharges from the base price would increase consumers’ demand since they are likely to underestimate their recalled total cost. It is worth noting that a majority of previous research in this area was conducted in the traditional shopping environment where consumers cannot revisit the source of base price and surcharges information (i.e. Morwitz et al. 1998; Schindler et al. 2004). Such a notion can however be challenged when partitioned-pricing strategies are implemented in an online auction context. Morwitz et al. (1998) encouraged future research to investigate actual purchases and provide subjects with economic incentives for making good decision.

Kim (2001) had a different view of how online consumers process surcharge information. He posited that consumers’ price perceptions in the Internet environment are more stimulus-driven than recalled-driven. It was further said that errors in consumers’ total price recall can be reduced when consumers engage in stimulus-driven price situation (Kim 2001). With the stimulus-driven nature of consumers’ online price perception, one can expect an insignificant relationship between surcharge amount and auction total price.

Another stream of research provides support to the argument above. It was claimed that online bidders are more calculative than normal consumers. Previous findings in the e-Commerce area suggested that online users are generally more utilitarian, price sensitive, more educated, and less risk averse, etc (Donthu and Garcia 1999; Cheema 2008). It was postulated that the majority of online consumers conduct intentional searches for product/price information when shopping online by visiting websites that help them more easily engage in comparison shopping (Shim et al. 2001). Cheema (1998) further suggested that consumers may pay more attention to S&H surcharges than traditional research has estimated. A recent study reported that 46% of the consumers interviewed blamed shipping costs as the biggest factor discouraging online purchases.
The effect of S&H surcharges was twice as strong as that of the base price in online book shopping environment (Smith and Brynjolfsson 2001).

This emerging research all points in the same direction - online buyers are more sophisticated and likely to perform a more accurate summation of base price and surcharges. Hence, we can expect that bidders will adjust their bids and participation according to the S&H surcharges and auctions with higher S&H surcharges should receive lower winning bids. We expect a negative relationship between S&H surcharge and auction final prices. Auction total prices and net prices should however remain stable, despite the S&H amount.

After reviewing different online auction success model (i.e. Gilkeson and Reynolds 2003; Ba and Pavlou 2002; Lucking-Reiley et al. 2007, etc.), we decided to adopt a regression model proposed by Lucking-Reiley and his colleagues (2007) as our base model. Their model used auction final prices as a dependent variable and employed sellers’ strategies and feedback variables, discussed in the earlier section, as independent variables. We further extended their model by including S&H surcharge as an additional independent variable and tested our model with four different auction success factors as dependent variables. Sellers’ strategies and reputation variables are used as controlled variables in our study. With the above discussion, we propose;

H5: S&H surcharges are negatively associated with number of bids.
H6: S&H surcharges are negatively associated with auction final prices.
H7: S&H surcharges do not have a significant association with auction total prices.
H8: S&H surcharges do not have a significant association with auction net prices.

RESEARCH METHOD

This study is a part of a larger project conducted at a global scope. It adopted a field study as its underlying methodology. Using 2 spider programs, we collected data of new 2GB iPod Nanos over a two-month period from 2 eBay websites (U.S. and United Kingdom), producing an initial sample size of 2,745. We chose this product mainly because of its commodity nature. Data cleaning was later undertaken. The cleaning process helped filter out 1,126 auctions, rendering an immediate sample of 1,619. The majority of the auctions that were eliminated are auctions of used iPods, iPod accessories, bundled items, and non-iPod products etc.

The 1,619 auctions were derived from two eBay websites, the U.K. eBay website (445) and the U.S. eBay website (1,174). Upon closer examination, we found that only the U.K. samples had sufficient number of auctions that did not have shipping fee information and a majority of these samples were 3-day auctions. Thus, we limited our attention to only 3-day auctions to ensure a fair comparison in our data analysis. Focusing only on 3-day auctions had two implications. First, it reduced the number of controlled variables in our base model. Second, it further reduced our sample size. Thus, the final sample includes a total of 525 auctions (201 U.K. and 324 U.S. auctions). The U.K. and U.S. auctions were offered by 63 and 172 unique sellers, respectively.

DATA ANALYSIS AND FINDINGS

The first set of hypotheses (H1 – H4) addressed the impact of information transparency on online auction success factors. The U.K. sample was used to test this group of hypotheses mainly because it had a sufficient number of auctions with no S&H information. This data set is however limited in size and too small to test H5 – H8. Only 48.75 % of the U.K. auctions listed their S&H information (103 out of 201 auctions). Conversely, a majority of the U.S. sellers (99.2%) provided S&H information. Thus, we decided to use the U.S. sample to test the second set of hypotheses (H5- H8).

An ANOVA test was performed to test H1 and H2. It is important to note that only the number of bids and auction final price were included in this analysis. Total price and net price were not included due to the lack of the S&H information in some of the auctions. The ANOVA test revealed that S&H information transparency did not affect the number of bids (p = 0.33). Auctions with S&H surcharge information had 19.29 bids on average while auctions that did not have S&H surcharge information had an average of 18.15 bids.
Another ANOVA test revealed a different story. It showed that auctions with clear S&H information had significantly higher final prices \( (p = 0.00) \). We found an average final price of £ 84.67 and £ 77.22 in the auction with and without S&H surcharge information, respectively. It is important to note that the final prices of auctions with S&H surcharge transparency were £ 7.45 (on average) higher than those without S&H surcharge information. This result confirms the important role of information transparency in the online auction environment and rendered a support to H2.

In the subsequent analysis, sellers’ strategy and reputation variables were included as covariates in an ANCOVA test. The purpose of including of sellers’ strategy and reputation variables in the analysis is to ensure the results in H1 and H2. Testing H3 revealed that the opening bid is a significant factor that shapes the number of bids an auction receives. The H4 result also confirmed that the difference found earlier in H2 stemmed from the difference in S&H information clarity. This ANCOVA test produced \( R^2 \) value of 0.46. Adding the sellers’ strategy and reputation into the analysis enlarged the gap in average auction final price between the two samples. The difference of average final price between the two groups increased from £ 7.45 to £ 10.42. We further conducted a test of homogeneity of regression and found that our data did not violate the assumption of parallelism in ANCOVA \( (p > 0.10) \). A summary hypothesis testing is provided in Table 1 (see below).

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Test</th>
<th>p-values</th>
<th>Beta of S&amp;H</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1:</td>
<td>ANOVA</td>
<td>0.33</td>
<td>n/a</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H2:</td>
<td>ANOVA</td>
<td>0.00**</td>
<td>n/a</td>
<td>Supported</td>
</tr>
<tr>
<td>H3:</td>
<td>ANCOVA</td>
<td>0.16</td>
<td>n/a</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H4:</td>
<td>ANCOVA</td>
<td>0.00**</td>
<td>n/a</td>
<td>Supported</td>
</tr>
<tr>
<td>H5:</td>
<td>Regression</td>
<td>0.00**</td>
<td>-0.02</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H6:</td>
<td>Regression</td>
<td>0.00**</td>
<td>-0.19</td>
<td>Supported</td>
</tr>
<tr>
<td>H7:</td>
<td>Regression</td>
<td>0.00**</td>
<td>-0.01</td>
<td>Supported</td>
</tr>
<tr>
<td>H8:</td>
<td>Regression</td>
<td>0.00**</td>
<td>-0.04</td>
<td>Supported</td>
</tr>
</tbody>
</table>

The above discussion showed that S&H surcharge transparency has significant impact on auction final prices but not on number of bids. The current research also strived to examine how S&H surcharges work in conjunction with other auction variables. Four regression models were developed and each was used to explain different auction success variables. The four regression models were augmented versions of the model proposed by Lucking-Reiley (2007). The summary of regression analysis is provided in Table 1 and Table 2.

The results of regression analyses unveiled interesting insight in the role of S&H surcharges. All four regression models were significant \( (p = 0.00) \) with F values ranging from 14.80 to 46.62 and \( R^2 \) values ranging from 0.16 to 0.37. We found that all the proposed variables have significant effect on the number of bids, except S&H surcharges. This result is consistent to the finding in H1. Of the three significant factors, the opening bid had the strongest coefficient (See H5 in Table 2). The opening bid however did not play a significant role in shaping the other three auction success variables (final prices, total prices, and net prices). It is interesting to observe that sellers’ reputations (positive and negative feedback scores) had significant effects on all four auction success variables.

Special attention should be given to the relationship between S&H surcharges and auction success. Our analysis indicated that S&H surcharge does not have a significant effect on the number of bids (H5). We also found that online bidders adjust their bids according S&H surcharges. S&H surcharges were reported to have a significant negative relationship with auction final prices (H6). In addition, S&H surcharges did not have a significant impact on total prices (H7) and net prices (H8). This finding provides support for the concept of the stimulus-driven nature of online consumers. Discussions of these findings are offered in the subsequent section.
Table 2: Summary of Regression Analysis

<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>F values</th>
<th>R²</th>
<th>Independent Variables</th>
<th>Beta</th>
<th>p-values</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>H5: Number of Bids</td>
<td>46.62</td>
<td>0.37</td>
<td>Ln(Opening Bids)</td>
<td>-0.50</td>
<td>0.00**</td>
<td>1.13</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ln(Feedback +1)</td>
<td>0.26</td>
<td>0.00**</td>
<td>1.49</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ln(Negative Score +1)</td>
<td>-0.10</td>
<td>0.05**</td>
<td>1.36</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Shipping</td>
<td>-0.02</td>
<td>0.61</td>
<td>1.06</td>
</tr>
<tr>
<td>H6: Final Prices</td>
<td>16.29</td>
<td>0.17</td>
<td>Ln(Opening Bids)</td>
<td>-0.01</td>
<td>0.83</td>
<td>1.13</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ln(Feedback +1)</td>
<td>0.45</td>
<td>0.00**</td>
<td>1.49</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ln(Negative Score +1)</td>
<td>-0.21</td>
<td>0.00**</td>
<td>1.36</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Shipping</td>
<td>-0.19</td>
<td>0.00**</td>
<td>1.06</td>
</tr>
<tr>
<td>H7: Total Prices</td>
<td>14.80</td>
<td>0.16</td>
<td>Ln(Opening Bids)</td>
<td>-0.01</td>
<td>0.83</td>
<td>1.13</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ln(Feedback +1)</td>
<td>0.45</td>
<td>0.00**</td>
<td>1.49</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ln(Negative Score +1)</td>
<td>-0.02</td>
<td>0.00**</td>
<td>1.36</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Shipping</td>
<td>-0.01</td>
<td>0.94</td>
<td>1.06</td>
</tr>
<tr>
<td>H8: Net Prices</td>
<td>15.98</td>
<td>0.17</td>
<td>Ln(Opening Bids)</td>
<td>-0.04</td>
<td>0.93</td>
<td>1.13</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ln(Feedback +1)</td>
<td>0.45</td>
<td>0.00**</td>
<td>1.49</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ln(Negative Score +1)</td>
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<td>0.00**</td>
<td>1.36</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Shipping</td>
<td>0.01</td>
<td>0.94</td>
<td>1.06</td>
</tr>
</tbody>
</table>

Note: All regression models were found significant at p = 0.00
** significant at p < 0.05

DISCUSSION AND IMPLICATONS

The current study demonstrated that information transparency is critical to achieving higher auction final price. The ANOVA and ANCOVA tests indicated that online auction sellers can gain a higher price premium when they clearly present their surcharge information, in spite of their reputation and their opening bid strategy. Such a difference can be derived from the fact that bidders may have perceived higher risks in the auctions that did not disclose the surcharge information and they may have been concerned that the total price may exceed what they were willing to pay.

We conducted a further examination and found that eBay gained on average of £ 0.40 more per auction when S&H surcharge information was clearly listed. Auctions with clear S&H information generated a final value fee (a type of commission fee) of approximately £ 5.49, while auctions with no S&H surcharge information produced an average final value fee of £ 5.09. An ANOVA test indicated significant difference in the final value commission fee at p = 0.00. This difference accounts for 7.28% of the loss in revenues to the auctioneer. To prevent such losses, eBay and other online auctioneers should consider making S&H surcharge required information for all auction listings.

While many researchers may direct their attention to the risk incurred by online bidders, we argue that online sellers also face certain risks when they neglect to provide S&H surcharge information. Auction winners may refuse to pay for an item when S&H surcharge information is finally disclosed in the invoice. The disagreement that may result between a seller and a buyer in this situation can lead to non-materialized auctions, wasting the seller’s and bidders’ time and financial resources.

The ANOVA and ANCOVA tests performed for H2 and H4 provide additional insight. H4 indicated a £ 10.42 difference in auction final prices between the groups of auctions with and without S&H surcharge information. Our analysis additionally indicated an average S&H fee of £ 8.15. This statistics showed that auction sellers who omitted the S&H surcharge information have to charge £ 2.27 higher for their S&H to meet the total price average. This higher S&H surcharge may however be deemed unfair in the eyes of the bidders and later generate transaction conflicts.
Our regression analysis revealed interesting findings for research in online auctions. We found that online bidders seem to be more sophisticated than what we originally thought. They lowered their bid amount in auctions with higher S&H surcharges (H6). It is also important to note that auction winners were bound to pay similar amounts regardless of the different S&H surcharges in different auctions (H7). Therefore, auction sellers did not gain a premium by charging higher S&H surcharge in an attempt to avoid final value fees (H8).

Such findings contradict traditional wisdom that argues that consumers generally underestimate transaction costs when partitioned pricing is implemented. This argument is based on the assumption that consumers are more likely to use their heuristics to calculate the total cost or simply ignore the surcharges (Morwitz et al. 1998). It is important to note that Morwitz et al.’s study was conducted in an experimental setting where consumers were not able to revisit surcharge information and therefore they were unable to devise a complex shopping comparison strategy. Online bidders are however equipped with more sophisticated tools (such as the watch-list option that most online auctions offer) that allow them to accurately calculate the total cost, which renders greater support for H6, H7, and H8.

To fully understand the relationship between S&H surcharges and auction net prices, one should pay attention to the role of the eBay commission system. The commission fee system on eBay can be considered an external variable and was not investigated in this study. The relationship between S&H surcharges and auction net prices may change if eBay modifies its commission fee rates. Thus, it is important for sellers to understand where their potential final prices stand in the auctioneer’s final value fee system. If their potential final prices are in between two ranges (http://pages.ebay.com/help/sell/fees.html), auction sellers may consider adopting a higher S&H surcharge strategy to avoid a higher commission fee. All of our observations however have their final prices falling within the same range which limits a more thorough examination of the role of this external variable.

According to the regression analysis results, one can find a consistent pattern where sellers’ feedback scores are influential in shaping all four auction success variables. These findings signified the role of a seller’s reputation and experience in the online auction marketplace. Roth and Ockenfels (2002) used overall sellers’ feedback as a surrogate measure of sellers’ experiences. Our findings indicated that experienced sellers can gain a price premium in the online auction marketplace.

In term of the explanatory power of our models, we found that our models produced $R^2$ values in an acceptable range when compared to prior research. Our models explained approximately 16% to 46% of the variances in auction success variables. Previous studies reported $R^2$ values ranging from 0.02 to 0.76 (i.e. Anderson et al. 2008; Reynolds et al. 2009; Lucking-Reiley et al. 2007), depending on different products and different sets of independent variables. Since we adopted the model proposed by Lucking-Reiley et al. (2007), it is beneficial to compare the two studies in greater detail.

In comparing the two studies, we found that the study by Lucking-Reiley et al. (2007) produced higher values of $R^2$ for auction final price, ranging from 0.49 – 0.53. We argued that this higher $R^2$ values may be attributed to their larger set of independent variables. Their models used up to 12 independent variables, while our study used only four. In addition, we argued that the difference in explanatory power stems from other heterogeneities in the data collected in the two studies. In their research, collectible coins were selected as their subjects. Such a selection allows them to include an important variable, namely “book value”, as an independent variable. Book value was found to be the most influential factor in shaping an auction’s final price, with the beta ranging from 0.77 – 0.81. It is important to note that the book values of collectible coin can serve as external price references for bidders, which cannot be easily observed in electronic products (i.e. iPods). Xia and Moore (2004) suggested that product categories can affect different levels of acceptable S&H surcharges. Further, Ockenfels and Roth (2006) observed that some product characteristics may impact a bidder’s behaviors.

**LIMITATIONS AND DIRECTION FOR FUTURE RESEARCH**

Our study faces some constraints and limitations. First, the field study methodology gave us limited control over the availability of data. For instance, we were unable to include auction duration as a covariate in H2 and H4 mainly because the majority of auctions with no S&H surcharges information were 3-day auctions. In addition, the selected product in our study had a time-sensitive nature. Thus, expanding the data collection period was not a feasible option.

The primary goals of our study were to examine the effects of S&H information transparency and to investigate how S&H surcharges influence four auction success factors. We did not attempt to propose a comprehensive auction success model. Thus, we excluded some auction variables such as variables that represent the use of buy-it-now option, reserve price option, etc. We encourage future studies to develop a more complex model, perhaps by exploring the mediating role of these variables in the relationship between surcharge information transparency and online auction successes.
Last but not least, we recommend that attention be given to how S&H surcharge information is presented. Xia and Moore (2004) studied the effect of surcharge presentation (i.e. absolute value versus percentage value) in a traditional shopping environment. They found that surcharges that are presented in a percentage were preferred by consumers in some situations. In the online auction environment, auction prices can change as more bids are placed. Using the percentage format will therefore require more processing work from the bidders and it may impact the auction success variables.

CONCLUSION

This study reveals that the omission of S&H surcharge information negatively affects auction final prices, but not number of bids an auction received. Its negative impact on auction final price in turn reduces the auctioneer’s revenue generated from the final value commission fee. Our data indicates 7.28% of the loss in the auctioneer’s revenues from the auctions that did not clearly provide S&H surcharge information. We additionally revisited the relationships between S&H surcharges and auction success factors. The results shows that contrary to previous partitioned pricing research in non-online setting, online auction bidders appear to fully process S&H amount and accurately adjust their bids. We also found that the sellers’ strategy to charge higher S&H fee with an attempt to avoid final value fees does not necessarily help generate higher revenue to the sellers. We hope that these findings will encourage researchers to further investigate the impact of different pricing strategies on different auction success factors as E-auction continues to evolve in the online marketplace.

REFERENCES

References are available upon request to the first author.