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# **WHAT MATTERS AND WHAT DOESN'T: EXAMINING THE EFFECTIVENESS OF SURCHARGE POLICIES IN C2C ONLINE AUCTIONS**

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## **ABSTRACT**

This study examines the effectiveness of two prevalingly used sets of mutually exclusive surcharge policies in C2C online auctions. The first policy is the option of using an all-inclusive pricing strategy or a partitioned pricing strategy. The second policy entails the flexibility of shipping policies based on shipping destinations (domestic shipping versus worldwide shipping). The impacts of these surcharge policies on C2C participators, including sellers, buyers, and auctioneer, were examined with data collected from eBay. We found that sellers and buyers receive and pay approximately the same auction total prices regardless of the choice of the first surcharge policy. The online auctioneer however receives approximately 3% higher commission fees when C2C sellers adopt an all-inclusive pricing policy. The results also suggest that C2C sellers that are more flexible in their shipping destinations receive almost 8% higher auction final prices than those that are not. Theoretical importance and pragmatic implications are discussed.

**Keywords:** pricing strategy, all-Inclusive pricing, partitioned pricing, shipping flexibility, online auctions

## **INTRODUCTION**

In the past few decades, information systems (IS) and business researchers have rigorously studied the change in online pricing strategies through information technology (IT) (e.g., [6][8][9][11][33][35]). Pricing is a complex task that involves decision-making at both strate-

gic and operational levels. Offering the right price to buyers not only improves revenues of a business, it also helps enhance hedonic value of a transaction [48]. An important element of pricing strategy involves decisions regarding a company's surcharge policies. Oftentimes, businesses have to decide whether to offer free-shipping to customers. In addition, they have to decide whether they will ship their products overseas or focus only on domestic buyers.

Not only can such decisions affect the bottom-line of a business but they can also help shape the identity of a business (e.g., as a low-cost leader or a differentiation leader).

Amazon.com, for example, has been adamant about its policy of free shipping, a strategy that is financially equivalent to an all-inclusive pricing strategy. Jeff Bezos, Amazon's CEO, stated that the free shipping move is a "bet," and that Amazon has "doubled down" by making the offer permanent [41]. This strategy seems to have worked to Amazon's advantage. Despite the current economic downturn, Amazon.com's recent financial report showed its revenue of \$9.91 billion in the 2nd quarter of 2011, an astonishing over 50% increase of revenue compared to the same quarter of 2010 [31].

Why does shipping policy deserve more attention from the E-commerce community? The above example demonstrated a pricing decision that is critical to a business. Lee and Joshi [24] also found that customer's perceived delivery performance is the most influential factor to customer satisfaction. As C2C E-commerce is becoming a mainstream business model in the online environment (e.g., [17][27][39]), individual sellers also need to be aware of appropriate and more profitable pricing policies. Unlike B2C sellers, C2C sellers are generally limited in resources to research for the pricing strategies that best fit their business goals. The current study therefore offers insights into the pricing strategy options and their impacts in the C2C online auction platform.

Each pricing strategy has its benefits. For example, the all-inclusive pricing strategy gives higher perceived transaction utility than the partitioned pricing strategy [20]. The all-inclusive strategy, often manifested as free shipping, has been touted as the most effective incentive for catalog purchases [12]. On the contrary, the presence of a shipping and handling (S&H) fee, a form of surcharge found in the partitioned pricing strategy, was claimed to increase the rational shopper's optimal purchase quantities per visit and the optimal elapsed time between visits [50].

Prior research regarding effectiveness of pricing strategy has generated mixed results. Morwitz et al. [32] found that partitioned pricing can promote customer demand since most buyers will underestimate total cost when partitioned pricing is used. Kim [20] however found that free shipping led to significantly higher purchase intention. Park et al. [37] argued that shipping fee triangulated with consumers' perceived risk of product to create more anxiety to consumers in their online purchase decision-making process. In addition, research has found that an S&H fee is one of the major reasons people abandon their shopping carts in the e-Commerce environment [47].

The Internet has changed the ways that companies conduct their businesses. On the one hand, it helps businesses reach their global customers without incurring substantial cost increases. On the other hand, it empowers buyers to overcome the information asymmetry (e.g., information regarding costs and profit margins of a product or service) through lower consumer search cost. Contrary to the conventional wisdom, the Internet has not created "a state of perfect competition by forcing pricing downward" [22, p. 284]. Findings of Nelson et al. [34] suggest that the price dispersion at the e-marketplace is inversely related to the price of the product and the number of sellers. While corporate businesses recognize the importance of expanding their market globally, limited research has studied financial benefits incurring to individual sellers, especially in a customer-to-customer (C2C) e-Commerce environment which can be commonly found in online auctions.

Furthermore, individual sellers – found more often in C2C online auction markets – are generally not experienced in conducting business internationally. As such, most of them typically try not to deal with international buyers and focus only on domestic buyers. Our study therefore strives to present evidence of financial benefits incurring to the sellers that are flexible in their shipping destination. This can hopefully serve as an incentive for sellers to do business with more of their globally dispersed customers. It will also provide evidence of impacts of sellers' choice of surcharge policy on two other participating members in C2C online auctions, including buyers and auctioneers. Thus, the goal of this research is twofold: (1) to revisit how all-inclusive and partitioned pricing strategies affect online auction members (bidders, sellers, and auctioneers), and (2) to examine the effectiveness of the flexible shipping policy in the online auction platforms. Later in this study, we refer to sellers, buyers, and auctioneers as those that are participating in the C2C online auction transactions and will omit the term C2C for simplicity.

## **PRICING STRATEGY AND SHIPPING DESTINATION FLEXIBILITY**

### **All-Inclusive Pricing versus Partitioned Pricing**

All-inclusive pricing and partitioned pricing strategies, when applied to shipping and handling (S&H) surcharges, are mutually exclusive options to online

sellers. The all-inclusive pricing strategy is also known as the free shipping policy. The partitioned pricing strategy, as a rival to the all-inclusive strategy, divides prices into at least two components, including a base price and surcharges. One may argue that the S&H fee is the most common form of surcharges found in the online business.

There appear to be two competing streams of research that address the effectiveness of these two pricing strategies. The results of the first stream of research suggest that using a partitioned pricing strategy not only lowers customers' recalled total costs but also increases their demand for products [32], which may help increase the sellers' revenues. The increase in customers' demand arguably stems (at least partially) from the idea that most buyers underestimate total costs when the partitioned pricing strategy is used [32]. Xia and Monroe [49] showed that "appropriate online price partitioning may enhance consumers' purchase intentions, perceived value, and price satisfaction, and reduce further information search intentions" [p. 63].

The results of the second stream of research suggest otherwise. Lewis et al. [26] suggested that "promotions such as free shipping and free shipping for orders that exceed some size threshold (are) very effective in generating additional sales" [p. 51]. Using the prospect theory, Kim [20] argued that the all-inclusive pricing strategy gives higher perceived transaction utility than the partitioned pricing strategy. He further argued that using the partitioned pricing strategy can lead consumers to feel that they have to pay twice for the same product in a single transaction. This can negatively affect buyers' intention to purchase. Others supported Kim's argument by claiming that the S&H fee is one of the biggest reasons that buyers abandon their shopping carts in the online business environment [47].

Schindler et al. [45] developed a theoretical framework for understanding consumer response to a direct marketer's pricing formats based on a shopper's perceptions of fairness. They demonstrated that when an external reference price is available, shipping-charge skeptics prefer an all-inclusive price, whereas non-skeptics prefer a partitioned price. Muthitacharoen and Perry [33] examined the effect of shipping information transparency. They observed a few auctions that adopted the all-inclusive pricing strategy and found that these auctions appear to produce much higher auction final prices. Unfortunately, they did not provide conclusive evidence regarding the effectiveness of this surcharge strategy due to their limited samples. They also found that in a real business setting such as an online auction, online bidders pay approximately the same amount of auction total price. It seems that online bidders can accurately adjust their bids

to compensate for S&H surcharges. They however did not fully examine the impact of the all-inclusive pricing policy as compared to the partitioned pricing policy.

It is worth noting that most of the studies in this area were conducted in either an experimental setting (e.g., [32][45]) or conducted as field experiments (e.g., [1][16]). We found very few studies conducted in the online-auction platform – an emerging business model that has gained much attention from online consumers. We argue that the effectiveness of these two surcharge strategies should be more thoroughly examined when being implemented in online auction marketplaces since most online auctioneers generally operate on a commission-fee-based system. As such, their revenue is mainly driven by the auction final price, not by the auction total price (i.e., auction final price plus S&H fees). In the online auction platform, it is understandable that auctioneers, sellers, and bidders may adopt different strategies to maximize their financial gains. For instance, a seller can set a very low price for his/her product but charge a very high price for S&H so that he/she can pay a lower amount of commission fees to the auctioneers for that transaction. Additionally, online bidders will adjust their bids according to the S&H surcharges. Peng and Jan [38] showed that the pricing strategies (e.g., start-bidding price, buy-it-now, and reserve price) directly influence both the probability of closing an auction and the level of price premium. Therefore, understanding the dynamics amongst online sellers and bidders will allow auctioneers to devise a more profitable commission fee policy. Thus, our first research question is: Which pricing strategy (all-inclusive vs. partitioned pricing) is more effective in promoting online auction prices?

### **Worldwide versus Domestic Shipping**

The second goal of this study is to examine the effectiveness of a seller's flexibility in terms of shipping destinations. As E-commerce is becoming a more common mode of exchange around the world (e.g., [21][36][37][46]), limited research has shed light to trading between consumers (C2C) across nations. In online auction marketplaces, sellers have their choice of focusing only on domestic buyers or expanding their customer base worldwide. According to Arant-Wells [2], eBay had more than 247 million users and almost half were located outside the United States. By adopting a worldwide shipping policy, online sellers in the United States can immediately double their customer base.

While it is rather obvious that sellers with a more flexible shipping destination policy should receive higher prices in their auctions, we believe that it is important to

provide concrete evidence of such benefits. Sellers who offer a larger variety of shipping destinations face more risks than those who focus only on domestic buyers. For example, it is more difficult and more expensive to track shipping when products are shipped overseas. In addition, online sellers who are willing to adopt a worldwide shipping policy have to understand tax and other regulations between countries. From the sellers' point of view, these added responsibilities and risks should be compensated for by higher prices in the auctions. This study therefore strives to provide such information to the online auction community so that online sellers can make a more informed decision regarding their shipping destination policy. Hence, our second research question is: Do auctions with a more flexible shipping destination policy gain higher auction prices and to what extent?

## RESEARCH HYPOTHESES

To answer the research questions above, we employed the concept of price premium to three price components found in online auctions, including auction final prices, auction total prices, and auction net prices. Price premium is generally defined as "monetary amount above average received by multiple sellers for a certain matching product" [3, pp. 247-248]. A successful online auction generally involves three parties including the online auctioneer such as eBay, the sellers, and the buyers. Each is affected by different auction prices. The auction final price is the final bid that the auction winner has placed in the auction. This final price is often used to calculate the commission fee for services provided by the online auctioneers. The auction total price is the price incurring to the auction winner, which includes the auction final price and S&H fees. The auction net price is the total revenue received by the sellers, which is the auction total price minus the commission fees. Thus, each of the three parties involved in an auction is more concerned with a particular price than the other two: the auctioneer with the auction final price, the buyer with the auction total price, and the sellers with the auction net price.

According to Morwitz et al. [32], consumers tend to follow three different approaches when processing surcharge information: (1) calculating the mathematical sum of price and surcharge, (2) using heuristics to process surcharge information, and (3) ignoring surcharge information. They further found that using heuristics and ignoring surcharges are more commonly used. As a result, most buyers underestimate the total cost which in turn promotes sales to businesses. Kim [20] disagreed and purported that partitioned prices can adversely influence buyer's attitude

toward the product while the all-inclusive pricing strategy can improve that attitude.

While previous research provided important groundwork for research in this domain, most was conducted in experimental settings. A recent study provided an alternative outlook of how online buyers process surcharge information [33]. It found that online buyers in the online auction environment can accurately adjust their bids according to surcharge amounts, resulting in similar auction total prices. They argued that bidders' ability to accurately adjust their bids is attributed to two main reasons: (1) surcharge transparency from the online auction website (most online auction websites present their surcharge information explicitly), and (2) the sophisticated nature of online buyers as opposed to those in the brick-and-mortar environment. Since we revisit this research topic using actual commercial auction data in the online auction setting, we propose:

*H1: Online auctions with an all-inclusive pricing strategy will receive higher premium of auction final prices than those with a partitioned pricing strategy.*

*H2: Online auctions with an all-inclusive pricing strategy will receive similar amount of auction total price premiums as those with a partitioned pricing strategy.*

*H3: Online auctions with an all-inclusive pricing strategy will receive similar amount of auction net price premiums as those with a partitioned pricing strategy.*

The current study additionally examines the impact of the flexible shipping destination policy in the online auction marketplace. One may expect higher final price premiums received by auctions with a more flexible shipping destination policy. The higher final price premiums can be attributed to higher buyers' perceived value of transactions and higher competition among bidders. Sellers that offer more variety of services are generally perceived to be more flexible and provide more value to their customers [4][9]. More importantly, when sellers are willing to ship their product outside their region they can enlarge their customer base and promote competition among bidders in their auctions. Due to the value-added nature of auctions that provide worldwide shipping service and increased competition, we argue that such auctions can generate higher final price premiums. Thus, we propose:

*H4: Online auctions that are more flexible in their shipping destinations will receive higher auction final price premiums than those without.*

It is important to note that the premium of auction total price and the auction net price were not included in the analysis of flexible shipping destination policy. When products are shipped overseas, the S&H fees are generally higher and vary according to shipping destinations. Thus, comparing premiums of auction total price and auction net price in such a situation will provide a bias in the results.

To provide a more comprehensive view of how surcharge strategies and shipping destination flexibility influence auction price premiums, it is imperative to bring forward other important factors that help shape auction success. Our literature review revealed that sellers' strategies (auction duration and starting bid) and their reputation are frequently included in online auction research. In particular, sellers' feedback scores (often used as a surrogate of sellers' reputation) can interplay with their surcharge strategies. There is a constellation of studies on how a seller's reputation affects auction success. For instance, sellers with higher reputations (overall and positive feedback) will draw more bidders and receive higher price premiums [14][18][44]. Such sellers were reported to receive an average 7.6% higher price premium when compared to sellers with minimal feedbacks [40]. On the other hand, sellers' negative feedback can be detrimental to their success and it was found to be a good indicator of a seller's future performance [15]. Thus, surcharge policy alone may not fully explain online auction success indicators. Luo and Chung [29] posited that firms with higher reputations or positive feedback scores are able to charge higher S&H fees. Cheema [10] also found that S&H fees affect purchases more for low-reputation sellers as compared to medium or high-reputation sellers. Jarmon [19] however suggested that good reputation is positively associated with pricing power only under a focused differentiation strategy. In addition, buyers' attitude toward buying in C2C transactions was significantly influenced by the risk of sellers [25]. To thoroughly examine the impacts of surcharge strategies on auction prices, the role of a seller's reputation should therefore be taken into account.

Other seller's factors that can be influential in determining auction prices are, for example, auction durations and auction's opening bids. It has been argued that the duration of auctions has a positive association to auction final prices since it allows more bidder participation [7][23][28]. A team of researchers found that 7-day auc-

tions generally produced 24% higher auction final prices, on average, than 1-day and 3-day auctions. They however suggested that, as the auction market becomes more mature, auction duration may not have such a large effect on auction final prices [28, p. 230]. Thus, we believe that such a variable needs to be revisited and included in the analysis of surcharge policy effectiveness.

Not only can auction sellers use different auction durations to draw bidder participation, they can also lower opening bids to attract more bidders [5][28]. This argument was tested in multiple studies and the findings were mixed [42]. We argue that while lower opening bids attract more bidders to the auctions, they project some risks of not gaining desirable prices to the sellers. Taking the above sellers factors into account, we propose four additional hypotheses as follows:

*H5: Online auctions with an all-inclusive pricing strategy will receive higher premiums of auction final prices than those with a partitioned pricing strategy, regardless of sellers' other selling strategies and reputations.*

*H6: Online auctions with an all-inclusive pricing strategy will receive similar amount of auction total price premiums as those with a partitioned pricing strategy, regardless of sellers' other selling strategies and reputations.*

*H7: Online auctions with an all-inclusive pricing strategy will receive similar auction net price premiums as those with a partitioned pricing strategy, regardless of sellers' other selling strategies and reputations.*

*H8: Online auctions that are more flexible in their shipping destinations will receive higher auction final price premiums than those without, regardless of sellers' other selling strategies and reputations.*

## METHODOLOGY

The current work adopted a field study using actual commercial auction data as its underlying methodology. Since eBay is well-known for its C2C transactions, online auction data of the new iPad from eBay were collected in summer 2010 for approximately 2 months. Two

spider programs were developed for the purpose of data collection. The first program was used to find live auction data on eBay. To search for appropriate auctions, a product keyword (iPad) was entered into the program. We chose the iPad due to its commodity characteristics. In addition, electronics is one of the most popular product categories on eBay. The program visited the eBay website daily to fetch HTML files of new auctions that fit to the provided keyword. Data such as auction start and end times, starting prices, and auction identification numbers were extracted from the HTML files. This information was later used by our other program to monitor the auctions. The program revisited eBay every 5 minutes to check whether the watched auctions were complete. If the auction was complete, more HTML files were downloaded. Additional auction information such as final prices, S&H fee, auction duration, and seller's feedback information were extracted from the HTML files to an MS SQL server database. The data were subsequently migrated to an SPSS program for analysis.

The initial sample contained 1,951 auctions of new 32GB and 64GB iPads with built-in Wi-Fi. A data cleaning process was later undertaken. Auctions that were cancelled, ended with buy-it-now prices, and bundled-itemed auctions were removed from the samples, rendering a final sample of 1,860 auctions. Of these samples, 752 were those that focused only on buyers in the United States. The remaining samples provided options to ship their items worldwide. The smaller set of samples (that of 752 auctions which include 349 with S&H fees and 403 with free shipping) was used to test the effectiveness of

all-inclusive pricing and partitioned pricing strategies. The larger sample (that of 1,860 auctions which include 752 with U.S. shipping and 1,108 with worldwide shipping) was used to test the effectiveness of the flexible shipping destination policy.

While some of the proposed variables can be directly extracted from the HTML files, others have to be transformed. Those include auction prices, sellers' feedback scores, and auctions' opening bids. To fairly compare auction prices of multiple products (iPad 32 GB and 64 GB), the price premium was calculated for each auction by using the average price of similar products. Price premium for each auction was standardized by its average price ( $\text{Price Premium} = (\text{Price} - \text{Average Price}) / \text{Average Price}$ ) to facilitate price comparison of multiple products. Seller's feedback scores and auctions' opening bids have also undergone a transformation. We used the guidelines suggested by previous studies (e.g., [3][17][28][43]) to perform log transformation on feedback scores and auction's starting prices (opening bids). Table 1 provides a summary of variables used in this study and their measurement approach.

To simplify price information, Table 2 breaks down auction price information by products and shows the price information in the form of average instead of premium.

To test hypotheses H1-H4, ANOVA tests were performed. ANCOVA tests were conducted to test hypotheses H5-H8. Below is a snapshot of the data analysis results of this study. All eight of the hypotheses were supported, as indicated in Table 3.

Table 1: Summary of Variables and Their Measurement Approach

Variables	Measurement Approach	Sources
Price Premium (PP)	$\text{PP} = (\text{Price} - \text{Average Price}) / \text{Average Price}$	Ba & Palvou [3]
Shipping & Handling Fees	Dollar amount of S&H fees directly extracted from auction pages	eBay
Seller's Positive Feedback	Log Transformation of Seller's Positive Feedback	Ba & Palvou [3]; Lucking-Reiley et al. [28]
Seller's Negative Feedback	Log Transformation of Seller's Negative Feedback	Ba & Palvou [3]; Lucking-Reiley et al. [28]
Opening Bids	Log Transformation of Opening Bid	Lucking-Reiley et al. [28]
Auction Duration	Number of days auctions was available	Bapna et al. [7]; Gilkeson & Reynolds [13]; Reynolds et al. [42]
Auction Final Prices	Winning bids (\$) directly extracted from auction pages	eBay
Auction Total Prices	Total Price = Final Price + S&H Fees	eBay
Auction Net Prices	Net Price = Total Price - Commission Fees	eBay

Table 2: Summary of Auction Prices and Commission Fees

Product	Shipping Strategy	Avg. Final Price/ Std. Dev.	Avg. Total Price/ Std. Dev.	Avg. Net Price/ Std. Dev.	Commission Fees	Commission Fee Difference
iPad 32 GB	All-Inclusive	682.96/45.36	682.96/45.36	621.49/41.28	\$61.46	\$1.55 (2.59%)
	Partitioned	665.70/43.58	683.12/42/46	623.20/38.63	\$59.91	
iPad 64 GB	All-Inclusive	802.30/55.62	802.30/55.62	730.09/50.62	\$72.21	\$2.29 (3.27%)
	Partitioned	776.89/45.92	801.70/80.66	731.78/78.39	\$69.92	
iPad 32 GB	Worldwide	724.60/45.82	n/a	n/a	\$65.21	\$4.58 (7.56%)
	Local	673.67/45.17	n/a	n/a	\$60.63	
iPad 64 GB	Worldwide	854.16/69.50	n/a	n/a	\$76.87	\$5.62 (7.88%)
	Local	791.77/53.26	n/a	n/a	\$71.26	

Table 3: Summary of Hypothesis Testing

Hypothesis	Test	p-Value	Interpretation
H1	ANOVA	0.00**	<i>Supported</i>
H2	ANOVA	0.951	<i>Supported</i>
H3	ANOVA	0.669	<i>Supported</i>
H4	ANOVA	0.00**	<i>Supported</i>
H5	ANCOVA	0.00**	<i>Supported</i>
H6	ANCOVA	0.909	<i>Supported</i>
H7	ANCOVA	0.546	<i>Supported</i>
H8	ANCOVA	0.00**	<i>Supported</i>
**Significant at $p < 0.05$			

## DISCUSSION

### Summary of Results

The purpose of this study was to examine the effectiveness of using an all-inclusive pricing strategy versus using a partitioned pricing strategy and the effectiveness of flexible shipping policy using actual commercial auction data. Specifically, we found that: (1) online auctions with an all-inclusive pricing strategy received higher premiums of auction final price than those with a partitioned pricing strategy (H1), but similar premiums of auction total price (H2) and auction net prices (H3), regardless of sellers' reputations and their other strategies (H5, H6, and H7); (2) online auctions with worldwide-shipping services received higher premiums of auction final prices than those with only domestic shipping services (H4), regardless of sellers' reputations and their other strategies (H8).

### Implications of Findings

Our findings have important implications to auctioneers, auction sellers, and auction bidders. To online auctioneers such as eBay, they should encourage auction sellers to use all-inclusive pricing strategy as well as to adopt worldwide shipping policy because our findings indicate that both will increase the auction final prices (H1, H4, H5, and H8), by as much as 3.27% with the former and by as much as 7.88% with the latter (see Table 2). The increased auction final prices will, in turn, increase the commission fees that are collected by the auctioneers because the commission fees are calculated using the auction final prices as discussed previously in this paper.

Our results are in line with those recently reported by Muthitacharoen and Perry [33] and confirmed that online bidders are more sophisticated than most have believed. Traditional wisdom in this area suggested that most consumers either underestimated or ignored sur-

charges (e.g., [32]). It is however evident in this study that online bidders can accurately adjust their bids to compensate for higher shipping surcharges, producing similar total prices for the transactions (H2 and H6). Their ability to accurately adjust bid amounts can perhaps partly be explained by the auctioneer's web design. eBay provides their users with a tool on their pages to sort total prices in different orders. Such functionality can therefore help simplify this complex decision-making and allow online bidders to compare auctions more accurately with minimal or no efforts involved.

The bidders' ability to accurately adjust their bids according to surcharge amount also reflects on the finding from H3 and H7. We found that sellers in an online auction environment cannot easily manipulate their net price by charging different surcharge amounts. H7 additionally revealed that, consistent with prior research in this area, the key ingredients for sellers to gain higher premiums in online auctions are mainly their reputation (feedback scores). As such, auction sellers who attempt to decrease their commission fees by charging higher S&H fees do not gain higher net price premiums from this strategy. Opening bids were found to have a significant effect only on auction final price premiums while we did not observe a significant effect of auction duration on any price premiums. These findings are consistent with those reported by Hou [17]. We believe that the high demand of our selected products negated its impact on price premiums.

To promote the use of an all-inclusive pricing strategy, online auctioneers can inform their customers about the added benefits from buying items with free shipping. For instance, if the item was not received or received but not as described, the buyers can request a full refund. Buyers who buy items from auctions with a partitioned pricing strategy may not be able to take this advantage since most S&H fees are not refundable. There appear to be no additional expenses incurring to the sellers and bidders from this shipping strategy, at least in the forms of auction total prices and net prices.

Although sellers cannot easily manipulate shipping surcharges to increase their auction net prices, they can improve their net prices through offering more shipping destination options to their buyers. We found that sellers who are willing to adopt a worldwide shipping policy gain significantly higher auction final prices (H4 and H8) by approximately between 7.57% - 7.87%. The current study provides evidence of the improved auction prices from using a worldwide shipping policy. It is therefore important that the sellers are aware of not only different shipping charges to other countries but also their taxes and other shipping regulations.

Although we cannot demonstrate whether such final price improvements will later help increase their net price, we want to offer our perspective on possible financial gains accruing to the sellers from adopting this surcharge strategy. Assuming that sellers do not make additional profits from charging their buyers varying shipping fees for different shipping destinations, we argue online sellers can expect as much improvement in their revenue from the worldwide shipping option as the improvement found in the auctioneer's commission (7.56% - 7.88%). In fact, some researchers argued that it is reasonable to make additional profits through S&H fees due to the labor intensive nature of this type of service [47]. Since sellers that are flexible in their shipping options are the minority in the online auction community, we believe that they can demand even higher S&H fees from their buyers. Thus, we believe that our estimate of increase in seller's revenue (net price) from adopting the worldwide shipping option is rather conservative.

While the buyers have no or minimal influence on the sellers' choices of pricing and shipping strategies, they can still benefit from our findings. Local bidders (such as the U.S. bidders) may want to avoid auctions with worldwide shipping options since these auctions generally ended with higher final prices. They however have more freedom in choosing auctions with no or some shipping fees since these auctions, after putting their sellers' reputation aside, generally incur similar total prices to the buyers.

We conducted additional analyses and found more interesting results. There are 1,171 and 562 unique sellers in our larger and smaller sample, respectively. We found that sellers that offered worldwide shipping options have significantly higher feedback scores than those that offered only local shipping options (F value = 14.993,  $p = 0.00$ ). In addition, sellers that employed an all-inclusive pricing (free-shipping) strategy have significantly higher feedback scores than those that utilized a partitioned-pricing strategy (F value = 3.880,  $p = 0.049$ ). Some prior studies used feedback scores as surrogate measures of experiences [43], which leads us to believe there is perhaps some learning involved among sellers and those with more experiences tend to favor all-inclusive pricing strategies and are more likely to be flexible in their shipping destinations.

Interestingly, we also found that selecting shipping strategy is not a simple dichotomy. Some sellers are seemingly experimenting and gaining new knowledge through using multiple shipping strategies. For instance, 24 sellers in our larger sample offered both local and worldwide shipping options across their 92 auctions. Twelve sellers in our smaller sample used both all-



inclusive and partitioned pricing strategies across their 26 auctions. Although we did not find a significant difference in the reputation and auction prices between sellers who employed single versus multiple-surcharge strategies, we believe that these sellers are those who attempt to learn more about the effectiveness of surcharge strategies and they will later be able to choose appropriate surcharge strategies for their businesses. Such findings also signify the topic of this study in online auction research.

### **Limitations and Directions for Future Research**

Like other studies, the current study faced some challenges and limitations. Firstly, we experienced some loss of data during our data collection period. Some auctions were removed prematurely either by eBay or their sellers. There were also some auctions that offered international shipping but with limited country options such as only European countries. Since they did not offer the worldwide shipping option, we did not include them in our final sample. Secondly, some sellers offered multiple shipping services with varying shipping fees such as regular shipping and expedited shipping. To calculate auction total and net prices, we adopted the lowest S&H fees they offered. In addition, although we treated each auction as a separate unit, there is a possibility that some buyers may have participated and won multiple auctions and requested their sellers to combine these units into one shipping to save some S&H fees. Thus, our calculation may be somewhat higher for these types of transactions. We however believe that these types of auctions constitute a very small proportion in our sample.

Although rarely discussed in online auction research, we want to put a spotlight on two important external factors in online auction markets, including product types and the auctioneer's commission fee schedule. The suggestions we made in the earlier sections were based on our sample which contains auctions with a rather popular product (iPad). MacInnes et al. [30] observed that some product characteristics may impact a bidder's behaviors. Future studies, if using other products (such as clothing, books, or DVDs) in these analyses, may find different results. iPads, at the time of our data collection, were mainly available in the United States. Therefore, they drew demand from customers around the world, contributing to support for our H4 and H8.

The choice of products, together with changes in auctioneer's fee schedule, may have an impact on the results of research in this bailiwick. For instance, some products may fall within one single price range of the auctioneer's commission fee schedule, while others may fall

into multiple price ranges. Since the eBay commission fee schedule is progressive in nature, sellers of products with their prices falling into multiple price ranges can perhaps increase their auction net prices through the use of a partitioned pricing strategy (with very high S&H fees) to decrease the commission fee. Thus, it is very critical to understand the interaction between product types and the auctioneers' fee schedule to choose a more effective pricing strategy.

Choosing appropriate surcharge strategies, as witnessed in our study, can be influential to the success of online auction members (auctioneers, bidders, and sellers). We believe there is much room for research in this area to grow. In our sample, we found that approximately 80% of auctions did not offer a return option. Future research may investigate how such a service intertwines with other shipping policies. More importantly, we encourage IS and business researchers to examine how different surcharge policies affect other forms of auction success such as feedback given by a buyer. For instance, one may expect to find that sellers who are more flexible in their shipping destination will receive more positive feedback from their buyers. This research will provide a new outlook of how surcharge policies play a role in sellers' long-term viability in the online auction market.

## **CONCLUSION**

The current study showed that the decision to use all-inclusive versus partitioned pricing strategies in the C2C online auction environment, often made solely by online sellers, matters more to online auctioneers than to the sellers and the buyers. Sellers' decisions to be flexible in their shipping destinations however showed a potential to improve revenues not only to online auctioneers but to themselves as well. We found that, in contrast to conventional wisdom in this research domain, online bidders did not ignore and/or underestimate their total cost of purchasing. They can accurately adjust their bid amount to compensate for higher S&H surcharges. As indicated in our data, some sellers are experimenting with these policies. We hope that our findings will expedite their learning experience and allow them to forgo such experiments and to choose a more appropriate surcharge policy that fits their business goals in this fast-growing online auction marketplace.

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