Individual Choice among Charity Auctions

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Abstract. We examine individual choice between pairs of simultaneous auctions nearly identical in all but percentage of the proceeds donated to charity. We investigate the extent to which individuals choose and switch between auctions of various donation percentages. We use a mixture model approach to allow for different types of individual preferences. We find that while most individuals do not switch between auctions, individuals classified as non-donors are more likely to engage in switching behavior and switch to lower price auctions. We find that a large segment has a positive value for charitable donations but also values price savings. A far smaller segment actively seeks higher priced auctions, thereby acting as "shillers". The results of this paper have important implications for the usage of charity auctions as part of cause-related marketing. If charities seek to broaden participation, they need to keep the small shiller segment from crowding out the charitable price sensitive segment. This can be done by ensuring that the differences between charity percentages for simultaneous auctions are not too large.

1. Introduction

The past decades has experienced a significant increase in charitable giving. In 2005, over $260 billion dollars was donated to American charitable organizations, a 6.1% increase over the previous year, of which $199 billion was donated by individuals.[1] Auctions play a respectable role in charitable contributions. In 2002, about $18 billion was collected through more than 300,000 silent and live charity auctions in the US alone (Wall Street Journal, May 8 2002). Internet charity auctions in particular are on the rise, with eBay dedicating a special section for charity auctions. Not only do these auctions play an important role for non-profit organizations, but an increasing number of firms are sponsoring these events to establish themselves as good corporate citizens. In turn, sponsorship of these social causes may improve a firm's image or profits (Lichtenstein et al. 2004; Navarro 1988; Varadarajan and Menon 1988).[2]

While charitable auctions are an important fundraising tool, little is known about their effectiveness or about the bidding behavior and the charitable intent of the participants in these auctions. Engers and McManus's (2007) compared revenue of first and second-price charity auctions with non-charity auctions. Results indicated that bidders bid more aggressively in first price charity auctions than in non-charity auctions, while second-price charity auctions obtained even higher revenue than first price charity auctions. Ettinger (2003) concluded that while charity auctions have a positive effect on revenue for second price auctions, they did not influence revenue for first-price auctions. Finally, Goeree et al. (2005) compared revenue of several different fundraising mechanisms, and concluded that all-pay auctions, where all bidders pay the amount of their bid, are superior to auctions

[1]Estimates obtained from American Association of Fundraising website at: http://www.aafrc.org/.

[2] There is a growing body of research in marketing that has concluded that linking product purchases with donations to charities has a positive impact on perceptions (e.g., Brown and Dacin, 1997) and brand choice (e.g., Lichtenstein et al., 2004; Pracejus, Olsen and Brown, 2003; Strahilevitz and Meyers, 1998;) However, these positive effects are not universal, since several researchers have shown that in certain instances it may lead to a reduction in purchase intention (Luo and Bhattacharya, 2006; Sen and Bhattacharya, 2001; Handelman and Arnold, 1999).

where only the winner pays. Carpenter, Holmes and Matthews (2008) report the results of four sealed bid charity auctions for four different preschools, comparing revenues of a first price, second price and all-pay auctions. In contrast to the theoretical work by Engers and McManus (2007), and Goeree et al. (2005), they found that first price auctions revenues were highest followed by second price and finally all-pay auctions. They concluded that low revenue for all-pay auctions is due to reduced bidder participation. Isaac and Schnier (2005) conducted nine silent charity auctions-- three natural field auctions and six laboratory experiments-- and concluded that bidders tend to jump bid due to impatience. They also found that in one of the three field experiments there was bidding above the market value in about 10% of the auctions. Finally, Ku, Malhotra and Murnighan (2005) studied competitive arousal and emotional decision-making in live and Internet biding in charity auctions. They concluded that auction outcomes were positively affected by competitive arousal and bidders tended to bid more aggressively in live auctions.

With the exception of the work by Ku et al. (2005) and Isaac and Schnier (2005) extant research has focused on identifying the optimal charity auction format. In contrast to the previous literature, we focus on individual bidding behavior in charity auctions. More specifically, we study the case where bidders are faced with a choice between identical product auctions with different percentages donated to charity – including the choice between charity and non-charity auctions. In this work, we examine individual choice between pairs of auctions over identical items with identical starting times and near-identical ending times. The two auctions in a pair differ only in the percentage of the proceeds donated to charity. We investigate two related issues.

The first issue relates to individual selfish optimization in charity auction settings. This is a basic underlying assumption in analysis of non-charity auctions and it is interesting to see whether it holds in charity auctions. It is plausible that not all individuals will behave in a manner consistent with seeking the best deal when faced with the decision to bid in a charity or non-charity auction for the

same good (Engers and McManus, 2007; Ettinger, 2003; Salmon and Isaac, 2006). In field data, where valuations cannot be observed, alternative utility specifications are typically at best very difficult to extract. In the present setting, however, we can make some inferences about individual preferences based on choices among competing auctions.

A second issue pertains to individual competitive intensity in auctions. There are two reasons individuals might engage in more competitive behavior in charity versus non-charity auctions. The first is that individuals have altruistic preferences (Leyard, 1995; Andreoni and Vesterlund, 2001), or individuals behave in a seemingly more altruistic manner when they think they are observed by others (Glazer and Konrad, 1996; Romano and Yildirim, 2001) and when they observe others behaving altruistically (Frey and Meier, 2004)[3]. Individuals may also donate as a signal of social status (Rose-Ackerman, 1996) or desire to demonstrate wealth (Glazer and Konrad, 1996). Furthermore, individuals could act as shills in an attempt to benefit the charity. That is, individuals may get positive utilities even when they lose—hence giving them an added incentive to bid. However, as individuals are united in a common cause, one might expect a lower social distance between them which would lower competition among the participants (e.g., Charness, Haruvy and Sonsino, 2007).

Our research makes several important contributions to the literature. 1. We study individual choice and switching between competitive auctions, an area of great importance, which has been largely ignored in the literature. 2. We identify different segments of bidders, based on their bidding behavior in charity and non-charity auctions. We find a charitable segment willing to pay a significant price premium for auctions involving charitable donations, as well as non-charitable segment. 3. Data are obtained from a series of controlled field-studies, with real customers making actual purchase decisions.

[3] This observation could imply predictions in either direction—depending on whether individuals are altruistic towards the charities or towards other bidders. It is reasonable to assume that when bidding in charity auctions, the bidder's altruism towards the charity dominates.

The data consists of four studies, summarized in Appendix A. The studies differed on the type and nature of the items as well as the donation percentages for the two items in a pair. Each study consists of pairs of auctions starting and ending at roughly the same time (a max of 30 seconds difference – the difference is only in the ending time). The products ranged from collectible stamps, computer products, cosmetics, electronics, gift certificates, and tools, among others. The studies had 276, 96, 124, and 176 usable individual auctions for studies 1-4 respectively. The auctions were arranged in pairs. Donation percentages were either zero, partial (positive <100%) or full (100%). Pairs either had two zero-to-partial donation auctions or one zero and one full. That is, 100% is always paired with 0%. We refer to the two sets of matches as partial condition pairs and full condition pairs. There were 162 auction pairs in the partial condition and 174 pairs in the full condition. A total of 374 bidders participated in our data set. The average number of auction pairs an individual made bids in was 5.38. More detail on the studies is provided in Appendix A.

All experiments were conducted on a local internet auction website, hosted in a major North American city. The auction website was established in September 2002 and had about 6,300 registered users as of October 2007. Proceeds of these auctions are donated to four significant Canadian charities – the United Way, the Edmonton Christmas Bureau, the Sign for Hope, and the Stollery Children's Hospital foundation. All auctions were ascending bid auctions as in eBay. The duration of each auction was about one day. Auctions were listed simultaneously and closed sequentially with 30 second intervals (pairs of identical auctions were always listed next to each other, ending 30 seconds after each other).[4]

[4] At the bottom of each auction, just above the bid box, there was a clear message indicating the percentage, if any, donated to charity (e.g. 100% of the proceeds of this auction are donated to charity). If an auction is not a charity auction, the message would read "This is not a charity auctions, no proceeds of this auction are donated to charity."

Bidding was done through proxy bidding and we look at the choice at the time the proxy was submitted. That is, bids generated by the computer agent as part of proxy process are not counted as individual choices at a given time.

2. Theory and Hypotheses

The focus in this work is on choice between charity auctions (with different percentage donated to charity) and between charity and non-charity auctions. In estimating preferences based on choice, the axiom of revealed preference is central. That axiom states that a person's choice of one alternative implies that this alternative is the most preferred. Observed choices among similar alternatives may allow for statistical estimation of the weight of various choice attributes in a person's utility function via discrete choice models, such as logit or probit. Since revealed preference is critical to the present investigation, a basic requirement is for bidders to be sensitive to incentives and to switch between auctions when incentives become more favorable in a competing auction.

One reason bidders might not be fully sensitive to price is due to charitable considerations. Individual may donate because they obtain additional utility from the charity receiving money for a good cause, also known as warm glow (Andreoni, 1989). Also, as discussed in the introduction, some individuals might behave altruistically when they think they are observed by others (Glazer and Konrad, 1996; Romano and Yildirim, 2001) and when they observe others behaving altruistically (Frey and Meier, 2004). Individuals may also donate as a signal of social status (Rose-Ackerman, 1996) or desire to demonstrate wealth (Glazer and Konrad, 1996). This leads us to conjecture that there are charitable individuals who possess more charitable motives and it is these individuals who are less likely to exhibit price sensitivity and switching behavior.

We attempt to characterize the determinants for auction choice and switching. We conjecture that the key determinants for choice and switching are price and donation percentage. It is also reasonable to allow for stickiness or state dependence (Seetharaman et al., 1999; Seetharaman, 2004) in

the choice of alternatives. This state dependence can arise from two similar but distinct behaviors. The first is switching cost (e.g., Shi and Rhee, 2006; Stango, 2002), which implies that a person has an added cost of choosing a different alternative than the one last chosen. This could be due to any number of factors, including loyalty (Wernerfelt, 1991). The second is a consideration set which may not include alternatives other than the last alternative chosen. The difference between these two explanations is subtle but essentially implies in the first the outside alternatives have a disadvantage. The second implies that they are not going to be considered at all. Stickiness can also arise from proxy bidding. Related behaviors are escalation of commitment and endowment effects (Staw, 1976; Heyman, Orhun and Ariely, 2004). We capture these various considerations with a 'state dependence' variable.

3. Results

We begin by noting that 39.2% and 57.7% of all bids were choices of the lowest price auction in the partial condition and full condition pairs, respectively. This difference is significant at the 1% significance level. Hence, in the full condition pairs where always all or nothing is donated to charity, the percentage of bidders optimizing on the price dimension is substantially higher.

A priori, one might expect to observe the opposite direction in the difference between conditions. That is, bidders might be less likely to bid for the lower priced item in the "full" condition, since the charity is more salient than in the "partial" condition. One possible reason for why bidders are more likely to bid on the low price item in the partial condition might be that the difference in price is greater for the "full" than the "partial" condition. In the "full condition" the charity auctions are on average $5.44 more expensive than the non-charity auctions. In contrast, the more charitable auctions in the "partial" condition are on average only $1.20 more expensive. So in the "partial" condition it tends to be inexpensive to trade-up to the higher donation auction.

We look at two types of analyses, with two different dependent variables. The first dependent variable is the probability of choosing the low price item. The second dependent variable is switching probability. The idea is that some bidders are reluctant to switch once they bid in one auction. Indeed, the switching percentages are 29% and 22% for partial and full pairs respectively.[5] This suggests that most people do not switch once they choose an auction which would account for much of the failure to optimize. In cases bidders switched from the charity to non-charity auction, the price premium for charity auction over the non-charity auction was $8.33. In the cases where bidders did not switch, the price premium was $5.94. Hence, the average threshold price premium that would result in a switch is likely in that range which we call the "price premium range". We next classify bidders into switchers and non-switchers according to whether they switch in more than 20% of their bids (this seems to divide the population almost equally). Non-switchers exhibited a price premium range of $8.07 - $9.28. Switchers had a price premium range of $4.36 - $4.96. Hence switchers required a lot lower incentive to jump auctions.

To examine the possibility that charitable individuals are stickier than price-oriented individuals, we classify people into donors and non-donors according to whether more than half their choices were of higher donation option. Dividing bidders into donors and non-donors is justified by findings of previous research, which has reported a substantial segment of consumers without charitable intent and another segment of consumers with intent (e.g. Ledyard, 1995). Leyard (1995) concluded that at least half of subjects acted close to self-payoff maximizing, while Andreoni and Vesterlund (2001) reported that about 44% of their subjects were completely selfish. Supphellen and Nelson (2001) concluded that 41% of respondents usually rejected requests for monetary donations to charities. Finally, Pracejus, Olsen, and Brown (2003) and Strahilevitz and Myers (1998) have reported significant charitable intent for a large proportion of participants in laboratory experiments. After the

[5] Both percentages are significantly different from 0 at the 1% level and the difference between the percentages is significant at the 1% level.

classification, bidders classified as “donors” chose charity auctions 68% of the time vs. “non-donors” 38%. Interestingly, donors were more likely to choose charitable auctions in the full condition (70%) than in the partial condition (66%), whereas non-donors were more likely to choose charitable auctions in the partial condition (40%) than in the full condition (36%). This suggests that non-donors made a trade-off by bidding in a high percentage charity auction for partial pairs (where charity auctions are cheaper) and bidding in non-charity auction (where charity auctions are more pricy) for full pairs.

Based on bidders’ final bid in each auction pair, we computed that 51% of non-donors choose the lowest price but only 38% of donors choose the lowest price auction. This is not surprising given that the higher donation options were more expensive. Non-donors switch 25% of the time. Donors switch 20% of the time. This difference is significant at the 1% significance level. Later we will see that in a multi-segment analysis over choice, the only segment that significantly values donation is also the only segment with a significant negative coefficient for state dependence.

3.1. Results of single population regressions

The explanatory variables for the regressions on switching are as follows: *Price* is the negative of the difference between the current price of the option chosen last time and the current price of the other option. Under the conjecture that people are reluctant to switch when the price is low, the sign should be negative. *Donation* is the difference between the donation percentage of the last option chosen and the donation percentage of the other option. Under the conjecture that donation percentage is desirable, the coefficient should be negative. *State dependence* depicts the difference between the number of bids a bidder placed in the last auction and the other auction. Under the conjecture that bidders who have placed more bids in auction are less likely to switch, this coefficient is expected to be negative.

The results of the switching between pairs of auctions are provided in Table 1. In this regression, the first bid of each bidder is not included (though it was used for the initialization for the

second bid) and non-switchers have been removed. The results show that the "partial" condition indicates "reverse" price sensitivity, as well as sensitivity to donation percentage, whereas for the "full" condition bidders are sensitive to price but averse to donation. Why is donation more important when the differences in percentage are relatively small? First, the price premium in a charity auction, for switching to an auction where a higher percentage is donated, is lower when the difference in donation percentages is smaller (i.e., partial condition). Secondly, the switching results may be 'biased' towards non-donors as they tend to switch more (donors are more likely to just bid in a charity auction). This will in particular be the case for the "full" condition – this may be less for the partial condition, since all are charity auctions. That may be why we do not find a negative coefficient for donation. Non-donors may be switching more (25% vs. 20%) and in particular switch away from higher prices in charity auctions (27% vs. 24% switched to lower priced auction from higher priced auction for non-donors and donors respectively). In the full condition, where one auction is non-charity, the people classified as donors are more likely to switch from non-charity to charity auctions (24% vs. 20%, for donors and non-donors, respectively) and less likely to switch from charity to non-charity (27% vs. 33% for donors and non-donors, respectively). Finally, for both conditions we find that the more bids a bidder has placed in a particular auction, the less likely she is to switch.

Table 1: Regression results of switching between simultaneous charity auctions

	Partial Condition		Full Condition	
Coefficient	Estimate	t-stat	Estimate	t-stat
Intercept	0.577	7.763	0.077	0.976
Price	0.024	3.457	-0.031	-4.411
Donation	-0.013	-4.225	0.001	2.001
State dependence	-0.500	-11.725	-0.869	-17.124
Log Likelihood	-696		-652	

We next estimate a logit model for the lowest price choice of bidders between partial and full-pairs of charity auctions (see Table 2 for results). This model considers the extent to which bidders make the optimum choice or lowest price alternative. The first bid is included in the analysis. The explanatory variables are as follows: Price indicates the price difference between the highest price alternative and the lowest price alternative. Donation indicates the difference between the percentage donated to charity in the lowest price alternative and the highest price alternative. State dependence is the difference between the numbers of bids by a given bidder so far in the lowest price alternative and the highest price alternative.

In the optimal choice regressions, both price and donation are insignificant for partial pairs. In the full condition regime, price is significant and positive, indicating that bidders are more likely to choose optimally when price differences are large. Donation is significant and negative, for the full pair regime, indicating that donation has a negative influence on optimal choice. For both regimes state dependence[6] is significant and positive, indicating that the more past bids in an auction, the more likely it is to be chosen again.

[6] Recall that the variable "state dependence" is really the difference between state dependence for the two auctions in a pair, where state dependence is the number of bids placed in an auction. Another specification for state dependence might be binary (0 or 1 for whether bids have been placed before). Alternatively, one might be

Table 2: Regression results for lowest price choice between simultaneous charity auctions

	Partial Condition		*Full Condition*	
Coefficient	Estimate	t-stat	Estimate	t-stat
Intercept	-0.430	-7.328	-0.406	-6.84
Price	-0.005	-0.856	0.037	6.78
Donation	-0.003	-1.477	-0.003	-6.19
State dependence	0.159	6.470	0.446	17.95
Log Likelihood	-1252		-1314	

The results of the two models above provide some consistent trends. However, price and donation are not consistent across the partial condition and full condition regimes. Note that donation is only significantly negative for the partial condition in the switching model but only for the full condition in the optimal choice model. To further explore this, we will next consider a model with different segments.

3.2. Multi-segment Analysis

We employ latent class segmentation (Kamakura and Russell, 1989) to control for unobserved heterogeneity. We take out non-switchers prior to estimation. This leaves us with 271 distinct bidders and 4258 bids (2628 bids in the switching regression where first bids that were not used). We estimate two, three and four segment models for both the switching regression and choice regression and use the Bayesian Information Criterion (BIC) and Akaike Information Criterion (AIC) to determine the optimal number of segments. The three segment model emerges with the best BIC and AIC in the switching regression (Table 3) and the choice regression (Table 4). In our estimation, the proportion of each

interested in looking at state dependence separately for each auction. We tested these specifications and the current one provides the best fit.

subpopulation is bounded from 0 to 1. To avoid boundary problems, we estimate an unbounded parameter lambda for each of the segments such that the proportion of segment j is $\frac{\exp(\lambda_j)}{\sum_k \exp(\lambda_k)+1}$.

The results of the switching regression indicate the are three segments, segment one (43%) that appears to be price sensitive, segment two (36%) that exhibits preferences for higher prices, and segment three (21%) that is price sensitive. Most bidders appear unwilling to pay a price premium when switching to a charity auction. This is, however, to be expected as there is no particular reason for donors to pay a premium to switch to a charity auction, when they can bid in a charity auction right from the start. When considering state dependence, all three segments exhibit a significant or marginally significant negative effect, indicating that they are less likely to switch the more bids they have placed in an auction.

In addition to switching, it is useful to look at the optimal choice as the dependent variable in a mixture model framework. This is because it is clear from our earlier analysis that donors do not tend to switch as much. Hence, the switching model, while characterizing heterogeneity in switching behavior, may not fully capture the behavior that is demonstrated by less frequent switchers.

Table 3: Regression results 3-segment switching model

Coefficient	Estimate	t-stat
Intercept1	0.866	2.849
Price1	-0.049	-2.291
Donation1	0.001	0.296
State Dep1	-2.925	-5.939
Intercept2	1.149	5.737
Price2	0.057	3.250
Donation2	-0.0004	-0.128
State Dep2	-0.408	-5.619
Intercept3	-0.504	-2.001
Price3	-0.086	-2.602
Donation3	0.001	0.669
State Dep3	-0.163	-1.700
λ_1	0.726	2.320
λ_2	0.551	1.376
Log Likelihood	-1332	
BIC	2774	

The results of the three-segment model for lower-price or optimal choice regressions are provided in Table 4. We have one large segment and two smaller segments (58%, 16% and 26% respectively). Price is significant and positive in the large segment, which represents the majority of bidders. That means that the majority of bidders consider price to be important. In the next two segments, price has a negative sign, although significant only in the third segment, implying that these segments prefer higher prices, consistent with charitable motives. Donation has a negative coefficient in all segments, implying that bidders are less likely to choose the lower priced auction when it has a lower donation, but it is significant only for the second segment.

The size of the charitable population seems comparable to the switching regression. Taken together, this suggests that these bidders select to bid in charity auctions and are less likely to switch

away, while others, the price-seekers, are more opportunistic, switching between charity and non-charity auctions.

Table 4: Regression results 3-segment lowest price choice model

Coefficient	Estimate	t-stat
Intercept1	-0.429	-5.145
Price1	0.066	4.968
Donation1	-0.002	-1.736
State Dep1	0.608	10.102
Intercept2	0.416	1.574
Price2	-0.020	-0.967
Donation2	-0.036	-2.952
State Dep2	-0.403	-2.123
Intercept3	-1.009	-4.536
Price3	-0.034	-1.936
Donation3	-0.002	-1.132
State Dep3	-0.123	-1.204
λ_1	0.796	2.745
λ_2	-0.506	-1.521
Log Likelihood	-2546	
BIC	5208	

4. Discussion

We found that individuals rarely migrate between charity auctions, even when the items are identical and the price varies greatly. There is great disparity in final prices (e.g. in the full condition bidders paid a price premium of almost 30% in charity auctions) and heterogeneity over charity preferences means that projected final prices should at the very least be increasing in current prices. As such, individual choice between auctions should depend on current price. Nevertheless, incentives may not be as strong as the relationship between current price and final price may involve some variance.

We find that individuals are sensitive to the percentage donated to charity but that they are also sensitive to prices. When the price differences between auctions of different charitable contributions are small to moderate, consumers appear charitable in that they are less likely to optimize and to migrate away from higher contribution auctions. However, in the full difference condition, where the price differences are more substantial, many consumers appear reluctant to choose the charity auction. Segmentation shows that there is at least one segment of consumers that would choose the charity auction at higher prices. It is this segment that drives prices higher in the charity auction. This effect might be partially offset by a segment of price-sensitive bidders.

4.1 Managerial Implications

There are several key managerial implications from the present research.

The first managerial implication pertains to pricing on the Internet. Despite the potential of the Internet for reducing search costs and allowing consumers better deals, research on consumer choice in Internet auctions (e.g., Spann and Tellis, 2006) has found that most consumers do not make choices consistent with getting the best deal. Spann and Tellis (2006) propose that managers can exploit this pattern by segmenting consumers according to their bidding patterns. Our analysis shows that consumers can also be segmented according to their charitable inclinations and that these inclinations are correlated with price insensitivity and reduced switching. Our results are consistent with Jap (2003, 2007) who suggests that bidders in online auctions have considerations that are not purely monetary.

The second implication pertains to auction design. As auctions gain popularity as a pricing mechanism on the Internet (Park and Bradlow, 2005; Spann and Tellis, 2006), better design of auctions is needed. The present work sheds light on migration and search behavior in auctions—particularly in showing how little there is of it and how and when it is responsive and irresponsive to price differences. Managers should be cognizant of this potential lack of migration and should seek to pursue auction features—charity marketing in particular—which reduce search and migration.

The third managerial implication pertains to charity marketing and cause related marketing. The effectiveness of cause related marketing has been fiercely debated in the literature (Sen and Bhattacharya, 2001; Varadarajan and Menon, 1988; Osterhus, 1997). The present work provides one setting where the evidence is pretty conclusive that cause related marketing makes a difference in consumer willingness to pay. While previous research has studied the influence of linking product purchases with donations (e.g. a certain percentage of sales or profits) to charities on brand choice and perceptions, we study the bundling of auctioned products with donations to charity in a dynamic pricing setting. We were thus able to determine the price premium that these consumers were willing to pay, for different percentages of proceeds donated to charity. Many auction sites have sections dedicated to charity auctions or otherwise make charity auctions prominent. Managers may be able to increase participation, increase loyalty (reduce migration) and increase prices by positioning their auctions with a charitable orientation.

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Appendix A. Summary Details on the Studies

	Duration	Number of Auctions	Donation Percentages	Avg. $ Bid Amount	Avg. number of bidders per auction
Study 1	November 3 – 5, 2004	276	0 or 100%	$13.84	3.1
Products Sold	Art, CDs, collectables stamps, computer accessories, electronics, gift certificates, handcrafts, jewelry.				
Study 2	April 21–26, 2006	96	10, 20, 30 or 40%	$18.64	3.0
Products Sold	Cosmetics, gift certificates, fitness equipment, golf equipment, household items, tools.				
Study 3	October 14 – 17, 20 – 21, 2006	124	0, 1, 25, or 50%	$9.0	2.9
Products Sold	Collectables stamps, computer accessories, electronics, games, handcrafts, tools, toys.				
Study 4	October 31 – November 2, 2006	104 72	10, 20, 30 or 40% 0 or 100%	$12.53 $23.42	2.7 3.2
Products Sold	Computer goods and electronics.				