2009

Commitment Cost and Product Valuation in Online Auctions: An Experimental Research

Ruben Mancha
University of Texas at San Antonio, ruben.mancha@utsa.edu

Follow this and additional works at: http://aisel.aisnet.org/amcis2009_dc

Recommended Citation
http://aisel.aisnet.org/amcis2009_dc/9

This material is brought to you by the Americas Conference on Information Systems (AMCIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in AMCIS 2009 Doctoral Consortium by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.
Commitment Cost and Product Valuation in Online Auctions: an Experimental Research

Ruben Mancha
University of Texas at San Antonio
ruben.mancha@utsa.edu

ABSTRACT

This research aims to explore bidder behavioral conditionings and value creation when bidding in online auctions. The cost of commitment imposed by an auction mechanism is hypothesized to impact one's willingness to pay, level of satisfaction with the transaction, and intention of using the auction mechanism in future online transactions. After reviewing auction mechanisms and behavioral economics, an experiment is proposed as the naturalistic setting of preference to study behavior in online auctions.

Keywords
Commitment Cost, Auctions, Willingness to Pay, Experiment

INTRODUCTION

Auctions are market clearing mechanisms, often used when the price of a good is unclear or unknown. They have been successfully employed in conventional markets to allocate goods as varied in nature as flowers (in the Dutch market), licenses for the electromagnetic spectrum (McAfee & McMillan, 1996; Milgrom, 2004), electricity markets (Klemplerer, 2004), and real estate. The emergence of online commerce opened the possibility of novel economic configurations for the exchange of goods. Currently, customer to customer (C2C) and business to customer (B2C) exchanges using auction mechanisms are widespread in the Internet, and B2B and G2B transactions, although less popular, are rapidly gaining momentum. Auctions have particularities that make them suit specific scenarios, such as price uncertainty, large scale transactions, sensitivity to transaction costs, and desirable price discrimination. The application of auctions to online settings offers some additional advantages, such as allowing locally and temporally distributed environments, providing access to a broader offer and categorization of the goods, limited or null allocation expenses, and greater computational capabilities allowing real-time allocation of complex bundles and the application of elaborated rules (Pinker et al., 2003).

Auctions can be classified according to different criteria, ranging from the items to be sold (single-object or multiple-objects) to the pricing mechanism (price ascending or descending). They use different rules to determine such factors as the winning bid, the selling price, the minimum price acceptable, the initial bid, the minimum bid increment, and the information shared. Standard auction types include: the ascending-bid auction (also called English auction), the descending-bid auction (also called Dutch auction), the first-price sealed bid auction, and the second-price sealed-bid auction (also called Vickrey auction). In the ascending-bid auction, bidders call or electronically submit their incremental bids. The last person to raise the price is the winning bidder. In the descending-bid auction, the auctioneer starts out with a high price and lowers it until a bidder is willing to pay the price offered. In a first-price sealed-bid auction, the bidder with the highest sealed bid wins the auction. The second-price sealed-bid auction is similar to the first-price auction, except the winner will pay the price offered by the second highest bidder. These two auction models, sometimes modified, are frequently deployed in online settings.

A review of the literature on auctions identifies some interesting problems. Although Revenue Equivalence Theorem implies that seller revenue is independent of the auction model, experimental observations demonstrate that the theorem only holds under several assumptions (e.g. McAfee & McMillan, 1987; Hossain & Morgan, 2006). Furthermore, bidder perceptions and valuation (willingness to pay) seem conditioned not only by the auction rules and environment, but also by learning, attitude toward risk, impatience, decision heuristics, and other individual behavioral conditionings. Although anomalies in online bidding have been noted, few online auction researchers have addressed the effect that individual behavioral characteristics have on the outcome (perceptual and economic) of different online auction models.

The purpose of this research is to adopt the behavioral economics perspective to enhance our understanding, beyond the assumptions of Revenue Equivalence Theorem, of the behavior of participants in online auctions. A model will be developed to determine how the auction environment and personal characteristics of the bidder impact the bidder’s willingness to pay,
user satisfaction, and intention to use the auction in the future. This model will be applied to two alternative auction types, namely the English auction and second price Vickrey auction.

The results of this study will offer valuable insight pertaining to individual differences and perceptions of commitment in the purchase of goods using online auctions. It will also provide useful information about the valuation of goods in online settings as well as offer auction mechanism design considerations and customization opportunities for auction websites.

The research proposal is organized as follows. The literature review provides a brief discussion of the Theory of Auctions, experimental auction research, and behavioral economics as they relate to this study. The research questions and hypotheses are then presented. Finally, the methods section discusses the experimental design of the proposed study.

LITERATURE REVIEW

For illustrative purposes, the realm of auction research can be conceptually divided into three major research streams: Foundational (design) auction economics, experimental auction economics, and behavioral economics.

Foundational and Experimental Auction Economics

Revenue Equivalence Theorem is central to the Theory of Auctions (Vickrey, 1961; Riley and Samuelson, 1981; Myerson 1981). It demonstrates how, when certain assumptions are met, different standard auction types (e.g. English auction, second price Vickrey auction) theoretically yield equal revenues to the seller. For two auctions to be equivalent (yield the same expected revenue to the seller), they must allocate the good(s) to the buyer(s) with the highest type, and the bidder with the lowest possible valuation should expect zero surplus. Revenue Equivalence Theorem is based on three assumptions: risk-neutrality, independent private value, and symmetric bidders. Risk-neutrality shows no preference for high-probability small utility in comparison to low-probability high utility. Independent private-value requires that each bidder independently decided on a value for the good. The symmetry assumption requires the bidders to draw their valuations (prices) from a strictly increasing continuous distribution (Vickrey, 1961; Riley and Samuelson, 1981; Myerson 1981).

Revenue Equivalence Theorem has implications in the optimal selection of an auction model. If different auction models are equivalent, they would be expected to yield equivalent revenues. However, in real world settings, different auction models may result in different outcomes (McAfee & MacMillan, 1987).

Smith (1976) and Coppinger et al. (1980) found support for the equivalence in outcomes of the ascending price (English) and the sealed-bid second price (Vickrey) auction models. However, sealed bid first-price and descending-price auction (Dutch) models did not yield equivalent revenues. Overall, the assumption of risk-neutral bidders did not hold.

Subramaniam et al. (2004) compared Yahoo! (an English auction) and eBay (a hybrid of a second price auction and an English auction) by studying 206 matched auctions, and found that the hybrid model used in eBay yields higher revenues than the traditional English auction. The availability of information and the rules (specifically the auction ending rules) have an impact on the bidders’ behavior and the revenue yielded by the auction model.

Hossain and Morgan (2004) tested Revenue Equivalence Theorem by conducting 80 auctions on eBay and manipulating the structure of the reserve price (opening bid, a secret reserve amount, and the shipping plus handling costs). They did not set a reserve amount, and varied the cost of shipping and handling and opening bid to maintain the total reserve price constant. The results revealed that, if the effective retail price is less than 30% of the retail price of the good, the seller obtains more revenue by setting lower opening bids and higher shipping and handling costs. If the effective reserve price is over 50% of the retail cost of the good, the results were consistent with the Revenue Equivalence Theorem.

Ivanova-Stenzel and Salmon (2004) identified that users prefer ascending (English) and second-price (Vickrey) auctions to first-price auctions, and that they are willing to pay a higher entry fee to participate. More recently, Ivanova-Stenzel and Salmon (2008) relate the auction model preference to having more agents choosing to participate in auctions using English and Vickery models. The difference on the number of bidders would have an effect on the revenue difference between the auction formats. They conclude that the Revenue Equivalence Theorem, when controlling for the number of participants, does explain outcomes across auction types.

Practical design considerations should also be taken into account. The auction environment may also impact auction outcomes (Klempner, 2002), by facilitating or deceiving bidding, thus affecting the outcome of the auction.
The stream of experimental auction economics focuses on the study of auction theory, paying special attention to its assumptions, and how loosening or violating them impacts its fundamental principles. In this venue, models are developed to explain deviations that make prospective models, such as affiliated signals (Milgrom & Weber, 1982), risk-averse bidders, and information asymmetries (Klemperer, 2004). Of special interest are experimental tests of Revenue Equivalence Theorem that show how auction characteristics and violation of the above-mentioned assumptions result in non-equivalent revenues for different auction designs (Hossain & Morgan, 2004; 2006; Ivanova-Stenzel & Salmon, 2008).

Experimental Evaluation of Assumptions

Researchers have focused on the study of the basic assumptions of risk-neutrality, independent private information, and symmetry, a frequently made use of experimental evaluations on their studies. Further developments have attended to emergent auction behaviors dependent on (or emergent from) the auction design, such as collusion and last-minute bidding. For example, Cox et al. (1982) found the assumption of risk-neutrality very restrictive, and constructed an equilibrium bidding model that enables bidders to have different attitudes toward risk. The presence of affiliated information, or correlations between the valuations of the bidders, has also been successfully modeled (Milgrom & Weber 1982). When there exists a common value shared by the bidders on the good being auctioned, the winner’s curse (i.e. the winner overpays for the good) is common.

Asymmetric bidders draw their valuations from different distributions. Although no general results are easily extracted due to the variety of possible asymmetries, it can be observed that it breaks the equivalence between different auction models (Klemplener, 1999).

Beyond the violation of the assumptions of the Revenue Equivalence Theorem, other empirical observations affecting auction results challenge the standard theory, e.g. last minute bids (Roth & Ockenfels, 2002), and collusive behaviors (Bajari & Hortacsu, 2004). Both are the result of behaviors not explained by economic theory (Ockenfels et al., 2006).

Coppinger et al. (1980) examined individual bidder choices in an auction experiment and remarked that, to have rational behavior as expected in standard theory, learning (or experience) must be present. In their experiment, out of six participants only one behaved according to the principle of rationality. Wilcox (2000) equally supports that experience approximates bidder behavior to the ideal theoretical model, although he states: “the proportion of experienced bidders who behave in a manner inconsistent with theory remains quite large”. The attention to the limitations of the standard theory and the search for alternative models that include behavioral aspects represents the initial switch toward the inclusion of psychological considerations in the study of auctions. Beyond explaining the auction outcomes, true psychological considerations attempt to describe the underlying reasons, the utility formation process, which leads the bidder to commit to a valuation.

Behavioral Auction Economics

Behavioral auction economics attempts to explain auctions by adopting psychological theories, frequently challenging neoclassical economic theory. This research focuses on a variety of experimental and non-experimental research methods and theories of learning and decision making, such as explaining bidders’ behavior (Bazerman, 2001; Chakravarti et al., 2002).

Initial research on experimental auctions led researchers to consider the limitations of economic theory on describing individual psychological phenomena. From a neoclassical perspective, auction participants behave in a manner that maximizes their expected utility. Behavioralists, however, focus on ecological settings, studying how bidders learn, tend to satisfy instead of maximize, have ethical considerations, apply heuristics, and have motivational drivers not considered by economic theory.

Behavioral economics attempts to understand deviations from the traditional economic model by studying human psychological processes. As characterized by Camerer and Lowenstein (2003): “[…] increasing the realism of the psychological underpinning of the economic analysis will improve the economics on its own terms – generating theoretical insights, making better predictions of filed phenomena, and suggesting better policy.”

Behavioral auction economics adapts perspectives and methods from psychology to challenge traditional assumptions of the auction model. Factors such as risk aversion (Harris & Raviv, 1981), information asymmetries and diffusion (Hinz & Spann, 2008), fairness perceptions (Min et al., 2005), and bidding behaviors (Conti & Naldi, 2008) such as last-minute bidding (Roth & Ockenfels, 2002), are taken into account to “observe the extent to which existing theory is still applicable” (Pinker et al., 2003). Missing foci in the auctions literature are the study of the individual differences leading to a specific good’s valuations, and the identification of auction design features affecting these valuations.
The streams of research on experimental auctions and the behavioral auction economics, although strongly related, differ in their underlying focus. Behavioral economics draws insights and approaches from psychology (Loewenstein, 1999), and even from neuroscience (Camerer & Loewenstein, 2003). In opposition, experimental economics is rooted in psychological experimentation and is strongly focused on research methods. Experimental economics strives for control while behavioral economics strives for external validity (Loewenstein, 1999).

*Expected Utility vs. Prospect Theory*

Neoclassical economic theory addresses humans as rational decision makers operating according to expected-utility maximization (von Neumann & Morgenstern, 1944). In opposition to this perspective, behavioral economics describes human choice attending to their intrinsic incentives and attempts to find regularities in decision-making under uncertainty. Prospect theory (Kahneman & Tversky, 1979) is presented as a more adequate descriptive model to account for choice under risk.

*Willingness to pay*

Neoclassical economic theory assumes that individuals have certain values about goods. However, researchers have demonstrated that this assumption is violated in dynamic environments where the individual’s willingness to pay (WTP) is not equal to the compensating variation (CV, the amount of compensation necessary after a change in price or other attribute to maintain the consumer’s utility constant, (Zhao & Kling, 2004)). In these cases, the divergence is explained by attending to a cost of commitment, demonstrated to have a great impact on the final valuation of the good. However, few researchers have tested the expected outcomes provided by Commitment Cost Theory (Lusk, 2003).

Several researchers have investigated the effects of irreversibility, price uncertainty, and learning effects in the investment decision (Zhao & Kling, 2004; Corrigan, Kling, & Zhao, 2008). Attending to the nature of the online environment, where equivalent vendors and large amounts of information are available, it is expected to find differences in the individual valuations of goods associated to the commitment cost perceived, as it is easy to postpone the purchase decision and collect more information on the good (Corrigan et al., 2008).

*Summary of the Literature Review*

The primary theoretical approaches discussed in the literature review are shown in Table 1. Revenue Equivalence Theorem proposes that standard auction models should result in similar outcomes, independent of the auction model. However, empirical results show violations of the basic assumptions occur frequently and impact our understanding on the outcomes of online auctions. Research on behavioral economics describes alternative perspectives to the rational view of the human, consistent with empirical research findings, and adopting perspectives from psychology. The perspective opens new possibilities of research on online auctions attending to the behavioral processes behind perceived utility and online product valuation (willingness to pay).

In the research realm of online auctions, there is no solid body of theoretical research backed in experimental data to explain how individual differences and environmental conditions dynamically interact and result in the perceived utility levels, the valuation of goods, and the resulting WTP. The general agreement is that compensating variation will be discounted by behavioral process of commitment, and result in a WTP. In the proposed study, Commitment Cost Theory is used to understand how Commitment Cost results in a WTP, a level of satisfaction with the transaction, and a willingness to use the auction mechanism in future purchases. By using two different auction mechanisms, Revenue Equivalence Theorem will be evaluated. The antecedents of Commitment Cost proposed in the literature include uncertainty about the value of the good, expected future learning on the value (Future Information Availability), perceived cost associated to reversing the transaction, freedom to choose when to make the purchase decision, and level of buyer impatience (Zhao & Kling, 2001; 2004). The general idea is that the initial uncertain value the bidder assigns to the good being auctioned will be affected by the timing of the formation of these values, the cost of committing to the purchase. Simply put, the difference between today’s WTP and compensating variation (the expected value of the good) is the Commitment Cost. Prospect Theory (Kahneman & Tversky, 1979) offers theoretical support for these considerations.
Table 1. Theoretical approaches discussed in the literature review.

<table>
<thead>
<tr>
<th>Economic Tradition</th>
<th>Theoretical Approach</th>
<th>Author(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neoclassical</td>
<td>Expected Utility Theory</td>
<td>von Neumann and Morgenstern, 1944</td>
</tr>
<tr>
<td>Experimental</td>
<td>Revenue Equivalence Theorem</td>
<td>Vickrey (1961); Riley and Samuelson (1981); Myerson (1981)</td>
</tr>
<tr>
<td>Behavioral</td>
<td>Prospect Theory</td>
<td>Kahneman &amp; Tversky (1979)</td>
</tr>
</tbody>
</table>

WTP is a behavioral concept (Zhao & Kling, 2004). Hence, different auction models may be perceived differently and result in different WTP for the same good, with the same CV, and even for the same bidder. If Commitment Cost affects product valuation differently across auction models, it would reveal inconsistencies in Revenue Equivalence Theorem. Two auction models widely used online, namely the Vickrey and English auctions, are compared in this study. The study of the antecedents of Commitment Cost is crucial in gaining an understanding of the behavioral processes of auctions.

RESEARCH QUESTIONS AND HYPOTHESES

Although auctions have been widely studied with respect to bidding mechanisms and assumptions, little research has been conducted pertaining to the behavioral and psychological aspects of the bidder. The influence of bidder behavior on individual bids and on the results of different auction models needs further investigation (Wilcox, 2000).

Three research questions are proposed: What are the antecedents of Commitment Cost? Do different online auction models, ceteris paribus, result in different levels of Commitment Cost? What is the influence of Commitment Cost on the bidders’ willingness to pay, on their satisfaction, and on their intention of future use of the auction system? These research questions lead to the following hypotheses.

**H1. English auction and Vickrey second price auction types, ceteris paribus, result in the same levels of Commitment Cost**

Revenue Equivalence Theorem states that, having met assumptions of independent private value and symmetry of the bidders, different auction models result in similar seller revenues. English and Vickrey second price auction models are considered because of their relevance in online environments (i.e. eBay uses a modified English auction, and second price auctions are used by Google and Yahoo! to sell online advertising). Attending to the presence of a Commitment Cost, the two auction models should not differ in their resulting level of Commitment Cost.

Coppinger et al. (1980) reported isomorphism between the English and the second price sealed bid auction. Ivanova-Stenzel and Salmon (2008) found no significant difference between ascending and sealed-bid auctions, claiming that the endogenous entry is a key component to consider when comparing both auction models’ revenue equivalence. The literature justifies the equivalence of auction models when the assumptions are met, and reports contradictory findings when a portion of the valuation is common to the bidders.

**H2. Value Uncertainty increases the level of Commitment Cost**

It is hypothesized that uncertainty of the value of the item being auctioned results in the bidder perceiving a higher Commitment Cost. Zhao and Kling (2001) explored the effect of Commitment Cost on the willingness to pay, and justify that experience decreases the Value Uncertainty and Commitment Cost. Kahneman et al. (1990), when testing for endowment effect (the over-valuation of owned goods), found that no Commitment Cost was present when the value of an experimental token was predetermined (by clearly giving the bidders a price).

Learning was found to have an effect on Commitment Cost (Kahneman et al., 1990). The uncertainty on the value can decrease as the result of observing the prices posted by other bidders (assuming that learning can only occur within the experiment; Zhao and Kling, 2001). The perceived validity of the source of information, not considered here, should affect the degree in which new information reduces Value Uncertainty. These findings justify the positive relation between Value Uncertainty and Commitment Cost.
Lusk (2003) reports that, in non-hypothetical experimental auctions of mugs and lottery tickets, increasing the certainty about the value of the good did not significantly increase bids. A possible explanation is that the signals on the price were not credible. An even more compelling explanation is that there was no initial uncertainty on the price of the items, hence no initial Commitment Cost exists and no change in price is expected (as found by Kahneman et al., 1990).

**H3. The Freedom to Commit decreases Commitment Cost**

Freedom to Commit implies that the bidder can freely choose when to make the purchase. Generally, the decision will be made voluntarily when the bidder has gathered enough information on the value of the item to minimize Commitment Cost (Zhao & Kling, 2001). However, there is no empirical evidence to support this hypothesis.

**H4. Future Information Availability increases Commitment Cost**

The bidder’s perception of the existence of future sources of reliable information on the product value increases the cost of committing to the purchase decision. Lusk (2003) reports that, in an experimental research, auctioned lottery tickets supported the hypotheses, but auctioned mugs did not. As discussed in hypotheses 2, Future Information Availability would reduce Commitment Cost, and increase willingness to pay, only if they expected valuable future information and they were uncertain about the initial price of the mugs. It is possible, as discussed in Lusk (2003), that the bidders were not expecting relevant future information about the value of the mugs.

**H5. The potential reversibility of the transaction decreases Commitment Cost**

Transactions identified as difficult to reverse (the item cannot be easily returned or sold in a resale market) will result in a higher Commitment Cost. Corrigan (2005) found that, when bidders perceive that delaying the transaction will be more difficult than reversal, they submit higher bids than when they believe delay will be easier. Lusk (2003) did not find support for this prediction of the theory. However, his manipulation of the construct is not clear and seems inappropriate (the instructions given to the students are not provided), and resale markets external to the experiments may have influenced the perception on the reversibility of the purchase. It should also be mentioned that Lusk (2003) does not report having performed manipulation checks.

**H6. Buyer impatience decreases Commitment Cost**

It is hypothesized that impatient bidders will be less willing to delay a purchase, decreasing the cost of committing to it. Although Zhao and Kling (2004) and Ockenfels et al. (2006) argue that sufficiently impatient bidders will not experience Commitment Cost, this has not been empirically tested.

**H7. Commitment Cost has a negative impact on willingness to pay**

It is hypothesized that the presence of a Commitment Cost, the opportunity lost for learning more about the value of the item if purchasing now, decreases the bidder’s willingness to pay for the item (Zhao & Kling, 2001; 2004; Lusk & Shogren, 2007). In an experimental auction, Corrigan (2005) demonstrated that Commitment Cost has an effect on the bidders’ willingness to pay.

**H8. Commitment Cost has a negative impact on buyer intention to use the online auction system for another purchase**

It is hypothesized that Commitment Cost will decrease the intention of the bidder to use the online auction system, as alternative systems may offer the same item without associated commitments costs, hence maximizing the value from the transaction and resulting in a more attractive offer. In a similar study, Gregg and Walczak (2008) confirmed that there is a positive relationship between an auction site’s e-image and price premium. Their definition of e-image related to data organization and quality of the auction listings.

**H9. Commitment Cost has a negative impact on buyer satisfaction**

It is hypothesized that Commitment Cost will decrease the bidder’s satisfaction with the transaction, as the overall received value is diminished. No empirical support is found in the literature.
In response to these questions, Figure 1 includes the relations hypothesized by Zhao and Kling (2004) between several behavioral constructs and Commitment Cost, and formulates them in a theoretical mode. Furthermore, the relation between the cost of commitment and Willingness to Pay is also formalized for experimental testing. Auction type, intention of future use, and satisfaction with the auction system are new links proposed.

![Figure 1. Theoretical model. Antecedents and consequences of Commitment Cost.](image)

Zhao and Kling (2001, 2004), Corrigan (2005), Corrigan et al. (2008), Lusk (2003), and Lusk and Shogren (2007) have reviewed the concepts in Commitment Cost Theory presented in Figure 1, discussing their implications from a behavioral perspective. However, empirical results supporting the validity of the links and their direction need to be theoretically tested and confirmed using solid methods and adequate validity checks.

Commitment Cost, the central construct in the model, refers to the perceived item price modification that should occur if the bidder has to precipitate the purchase and forgo to future learning opportunities (Corrigan, Kling, & Zhao, 2008). The input constructs are defined as follows:

- **Standard Auction Type** - one of the two auction mechanisms to be compared: second-price Vickrey and English auction models
- **Value Uncertainty** - the lack of knowledge that the bidder may have on the true value of an auctioned item, or on the values and prices of its substitutes (Zhao & Kling, 2001)
- **Freedom to Commit to the Purchase** - the bidders’ autonomy to delay the purchase decision and learn more about the value of the item
- **Future Information Availability** - the subjective perception of the bidder regarding the sources of information that will become available in the future
- **Transaction Reversibility** - the availability of mechanisms for returning the item
- **Impatience** - the unwillingness of the bidder to delay the purchase

The outcomes of the model include:

- **Willingness to Pay (WTP)** - the dollar amount the bidder is willing to exchange for the item
- **Intention of Future Use** - the bidder’s belief in the possibility of future use of the same online auction system
- **Satisfaction** - the overall user contentment with the online auction system.

**METHOD**

I propose a laboratory experiment to 1) test the contentions that the English ascending auction and the Vickery second-price yield equivalent revenue based on behavioral considerations and 2) show that Commitment Cost, resulting from behavioral antecedents, mediates the willingness to pay for an auctioned item. Overall, the tradition of behavioral economics is appropriate to study the behavioral antecedents of Commitment Cost and to attend to psychological processes when explaining the observed phenomena. This research explores behavioral processes, not market prices. Hence it will strive for ecological validity.
Empirical testing of the theoretical model (Figure 1) will be conducted using an auction system. Two different auction mechanisms will be implemented in the platform, namely English auction and second price Vickrey auction.

Individuals will be randomly assigned to one of the two auction models. The constructs Value Uncertainty, Future Information Availability, Freedom to Commit, and Transaction Reversibility, will be manipulated by modifying the information being displayed on the auction system. Manipulation checks will be devised for each manipulated construct. Impatience will be pre-assessed with a survey. Perceptions of buyer Commitment Cost will be measured during the experimental auction, and their WTP obtained from the individual bids in the auction. Two other outcomes, satisfaction with the purchase decision and willingness to use auctions in the future, will be obtained by surveying the participants. All the instruments will be previously validated.

Structural Equation Modeling (SEM) will be used to analyze the validity of the model. Each auction type will be validated separately. The manipulation checks will be included to assess the validity of the independent (exogenous) latent variables. Similarly, the measurement model will include the multiple items conceived for the measurement of the endogenous latent variables.

A sample size of 448 subjects (minimum) will be required for the 2x2x2x2 full factorial design. Each auction type will be randomly assigned 224 individuals of the pool of participants, and each participant will be randomly assigned to one of the 16 existent groups. Each group will have 14 subjects. After analysis of the overall fit of the model, the individual hypotheses will be evaluated, and the overall power tested.

Attending to the nature of the study, it is appropriate to use college students as subjects. As Lusk and Shrogen (2007, p.46) explain:

“Using a student sample in a laboratory auction for a study designed to test a theory or behavioral phenomenon is likely to be of little concern. The same is not necessarily true, however, for a study designed to extrapolate the value of a particular good to a population”.

CONCLUSION

This study focuses on the domain of behavioral economics to explore bidder behavior while participating in online auctions. A novel methodology for auction research is proposed, leading to a new stream of computer-supported research. Two auction mechanisms frequently used online will be compared, making it possible to explore their impact on bidder perceptions and behavior.

REFERENCES


