

Physical vs. Electronic Auction Environments: What Do Dealers Think?

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Executive Summary

Dealers can purchase vehicles in either physical or electronic auction environments, but the experience of purchasing a vehicle online differs greatly from the experience of purchasing the vehicle in the live auction lane. To what extent do dealers value the benefits of the physical auction environment, such as the ability to personally inspect vehicles, get a sense for the "buzz" of the market, and network with other dealers and consignors? Conversely, to what extent do they value the benefits of the electronic auction environment, such as greater vehicle selection and increased convenience? This report describes the results of a research study designed to shed light on such questions by surveying dealers about their preferences for physical vs. electronic auction environments.

The findings are based on survey responses received from 130 dealers. Results suggest that dealers prefer the physical auction to electronic auctions by an approximately 2:1 ratio. Several theories commonly proposed to explain dealer preferences for physical or electronic auctions are supported by the results, although many are not.

The two main reasons why dealers prefer the physical auction to electronic auctions are the ability to: a) physically inspect vehicles, and b) receive purchased vehicles quickly. The social aspects associated with interacting with other dealers and the auction staff at the physical auction are also moderately important in explaining dealer preference. However, other possible explanations for why a dealer might prefer the physical auction are not supported by the data. For example, the ability to experience the "buzz" of the market, the ability to observe who is bidding on a vehicle, and the ability to conceal a dealer's own bids are not relevant factors in explaining preference for the physical auction.

On the other side of the coin, the primary reasons why dealers prefer electronic auctions are a) the increased variety of vehicles available in electronic auctions, and b) a belief that vehicles can be represented adequately electronically. The increased convenience of electronic auctions was recognized, but it was not a factor in explaining dealer preferences, because all dealers (regardless of whether they preferred physical or electronic auctions) found electronic auctions to be convenient.

The results suggest that there are differences in preferences based on whether a dealer is a franchise dealer, an independent dealer, or a wholesaler. Franchise dealers were more likely to prefer electronic auctions compared to independent dealers and wholesalers. Franchise dealers were more appreciative of the expanded variety of vehicles available electronically and were more positive about electronic vehicle representation. Wholesalers, on the other hand, were more interested in the social and networking aspects of the physical auction. The results also revealed generational effects: younger dealers tended to be more favorable about electronic auctions compared to older dealers.

The results provide insight into the changing nature of the automotive auction industry and highlight strategic implications for auction companies regarding how to best serve their dealer customers.

Introduction

Increasingly, the wholesale automotive remarketing industry is migrating from physical to electronic forums. Although the physical automotive auction remains the primary mechanism by which used vehicles are exchanged in the wholesale market, electronic auctions are becoming more and more prominent. Several players in the market, including the major auction companies, Internet-based auction companies, and large-volume sellers, are operating electronic auctions to either complement or compete with the traditional physical automotive auction.

This gives automotive dealers a choice for how they use wholesale automotive auctions to acquire used vehicles: dealers can purchase vehicles in either physical or electronic auction environments. Of course, the experience of purchasing a vehicle online differs from the experience of purchasing the vehicle in the live auction lane, and both environments have their pros and cons. To what extent do dealers value the benefits of the physical auction environment, such as the ability to personally inspect vehicles, get a sense for the "buzz" of the market, and network with other dealers and consignors? Conversely, to what extent do they value the benefits of the electronic auction environment, such as greater vehicle selection and increased convenience?

The purpose of this research study is to shed light on these questions by surveying dealers regarding their preferences for physical vs. electronic auctions. The study is a joint effort between a research team at Emory University led by Eric Overby and the National Auto Auction Association ("NAAA.")

The research report is organized as follows.

- The first section discusses **several theories that might explain why dealers prefer physical auctions to electronic auctions**, or vice versa. Examples from non-automotive industries are used to illustrate each theory.
- The second section describes the **methodology used for the research study and the demographics of the sample**.
- The third section provides a **summary of the overall findings**.
- The fourth section offers **overall conclusions, including projections for the future and the strategic implications of the study**.
- **Detailed results of the survey** are provided in Appendix A. Results are broken out by dealers' overall preference for physical or electronic auctions, dealer type (franchise, independent, or wholesaler), and dealer age range. Scores for each individual survey statement are also provided.
- Appendices B and C contain copies of the **cover letter and survey instrument** that were mailed to each dealer.

Theories Proposed to Explain Dealer Preference for Physical or Electronic Auctions

There are multiple theories that have been proposed to explain dealer preference for physical or electronic auctions. For example, some might argue that an advantage of the physical auction is that it provides dealers with access to the actual vehicles, which can be important for diagnosing vehicle quality. Others might counter that improvements in technology and standardized condition reporting have enabled electronic auction environments to convey this type of information as effectively (or perhaps more effectively) as physical auctions.

Second, some might argue that the physical auction provides an environment in which dealers can socialize with each other, with the seller representatives, and with the auction staff, and that these encounters foster the development of beneficial relationships. Others might counter that any social benefits of the physical auction are outweighed by the ability of the electronic auction to provide dealers with access to a wider range of vehicles.

Third, some might argue that the physical auction experience allows a dealer to handle all aspects of purchasing in a single morning – from bidding to payment to unloading purchased vehicles at the dealer’s lot – whereas electronic auctions introduce delay between purchasing vehicles and receiving them. Others might counter that the ability to use electronic auctions to purchase vehicles without leaving the office more than makes up for any delay in receiving them.

This section summarizes several of these types of theories. The first sub-section presents theories that might explain preference for the physical auction. These are divided into four groups, and include:

a) **Sensory** aspects associated with auctions, including:

- the need to physically inspect vehicles.
- the need to experience the “buzz” of the market.

b) **Social / Relational** aspects associated with auctions, including:

- the need to talk to other dealers and/or the auction staff.
- the need to have a personal relationship with the seller.

c) **Synchronism** aspects associated with auctions, including:

- the need to receive purchased vehicles quickly.
- the need complete purchasing administration (e.g., financing, any arbitration, etc.) quickly.

d) **Identification and Control** aspects associated with auctions, including:

- the need to observe who else is bidding on a vehicle.
- the need for a dealer to hide that he is bidding on a vehicle.

In addition, it is possible that dealers who are **uncomfortable using computers in general** would prefer the physical auction.

The second sub-section presents theories that might explain preference for electronic auctions, including:

- The **increased variety** of vehicles available to dealers in electronic auctions.
- The **convenience** of electronic auctions.
- The capacity to **represent** vehicles electronically.
- Improved ability to **monitor and manage** bidding and purchasing activities online.

Theories Favoring the Physical Auction

The first two theories that might explain a dealer's preference for the physical auction relate to the **sensory aspects** associated with auctions.

The first theory is *the need to physically inspect vehicles*. For example, it is possible that the ability to touch a vehicle, smell a vehicle, listen to a vehicle's engine, etc. provides valuable information about the vehicle that cannot be transmitted online. This could explain a preference for the physical auction. The ability to physically inspect products has been shown to be important in other industries. For example, the need to touch and feel the products in the grocery industry, particularly produce and meat, has hindered the adoption of online grocery shopping. This is one reason why the physical environment of the grocery store has remained robust despite the potential to conduct grocery shopping online (Ramus & Nielsen, 2005).

The second theory is *the need to experience the "buzz" of the market*, which refers to the general enthusiasm (or lack thereof) of the buyers and sellers at the auction facility as well as overall noise and activity level. The "buzz" of the market may provide valuable information about market conditions, such as which vehicles and sellers are "hot" and which are not. This information may help dealers with their bidding strategies and could help explain dealer preference for the physical auction environment. The ability to experience the "buzz" of the market has been shown to be useful in non-automotive markets. For example, research has shown that the "buzz" associated with being in the pit at the Chicago Board of Trade provided traders with information about important market changes such as increased price volatility and heightened information asymmetry (Coval & Shumway, 2001). This information was not available to traders who connected to the market electronically.

Research on the wholesale flower auctions in Holland has shown similar results. In that context, wholesale flower buyers who bid on flowers via an electronic system instead of being at the physical market complained that they missed out on important market information, because they could not detect and react to the activity of other buyers on the trading floor (Kambil & van Heck, 1998).

The next two theories that might explain a dealer's preference for the physical auction relate to the **social / relational aspects** associated with auctions.

The third theory is *the need to talk to other dealers and/or the auction staff*. The physical auction experience may provide benefits not strictly related to buying and selling vehicles. For example, dealers may enjoy and benefit from interacting with other dealers and the auction staff. These interactions may help them maintain friendships, share lessons learned about running an automotive dealership, and learn about overall market trends. This may be an important reason why dealers have a preference for the physical auction. These types of social / relational benefits are a key reason why other groups continue to hold events in collocated, physical environments. For example, industry and professional conferences could easily be conducted online in which keynote speeches were simulcast over the Internet and presentations delivered via online meeting technologies. However, these events continue to be held at physical conference locations, largely because one of the main benefits of the events is the opportunity for attendees to interact with each other in a social setting.

The fourth theory is *the need for dealers to have a personal relationship with the seller*. This is related to the third theory described above, except it pertains to dealers' relationships with sellers rather than with other dealers and/or the auction staff. It is possible that dealers feel more comfortable purchasing from a seller when they can see the seller's

representative at the auction facility and interact with him face-to-face. This type of interaction may foster a relationship with the seller that is an important aspect of the vehicle purchasing process. Face-to-face interaction between buyer and seller is a key reason why sales processes in other industries continue to be conducted in physical environments (Vickery, Droge, Stank, Goldsby, & Markland, 2004), despite potential efficiency improvements associated with conducting them online.

The next two theories that might explain a dealer's preference for the physical auction relates to the **synchronism** aspects associated with auctions.

The fifth theory is *the need to receive purchased vehicles quickly*. One of the possible advantages of attendance at the physical auction is that it permits dealers to purchase vehicles and then return with them to his lot the same morning. By contrast, there is usually a delay between purchasing a vehicle via an electronic auction and receiving it. The delay between purchase and receipt of physical products that are transacted online has proven problematic in other industries. For example, one of the reasons cited for difficulties in online grocery shopping is the delay between when a customer orders groceries and when he receives them, which is of particular concern for perishable products such as meat and dairy products that require refrigeration. Although this has not been an insurmountable problem (see PeaPod's initiative to install receiving bins at customer's homes (Kamarainen & Punakivi, 2004)), it has been a barrier to online grocery shopping.

The sixth theory is *the need to complete all purchasing administration quickly*. This is related to the theory above. A dealer may favor the physical auction because it provides facilities to help him handle all aspects of a purchase transaction, including financing, transportation, and any necessary arbitration, shortly after he has purchased a vehicle in an

auction. It may be more difficult or time-consuming to handle these administrative tasks when using an electronic auction. Also, the delay between purchasing a vehicle electronically and receiving it may lead to other delays in the transaction, for example, if the vehicle has problems that require arbitration.

The next two theories that might explain a dealer's preference for the physical auction relate to the **identification and control aspects** associated with auctions.

The seventh theory is *the need to observe who else is bidding on a vehicle*. This could be an important element of the auction experience for two reasons. First, dealers may want to observe that others are bidding on a vehicle to feel comfortable that bids registered by the auctioneer are genuine. In other words, dealers may harbor suspicions that auctioneers generate phantom bids to drive the price up, and observing others placing bids may make them feel more comfortable. Second, dealers may infer information about vehicle quality based on who else is bidding on it. For example, if a dealer known to be an expert in assessing vehicles is bidding on a particular vehicle, then that may entice other dealers to bid on that vehicle as well. It is possible that dealers who are interested in observing who else is bidding on a vehicle, either to use the information as a cue regarding vehicle quality or to ensure that registered bids are valid, may prefer to use the physical auction facility. This type of behavior has been seen in non-automotive industries. For example, research on eBay has shown that bidders choosing between two similar listings tend to gravitate toward the listing with more bidding activity. This is because they use the level of bidding activity as an indication of quality (Dholakia & Soltysinski, 2001), i.e., if others want that item, then they should want it as well. Concern over phantom bids (and related “shill” bids¹) has been an

¹ “Shill” bids refer to those bids placed covertly by the seller in an attempt to drive up the price. They are similar to phantom bids, but differ in the sense that a shill bid requires that someone (referred to as the “shill”)

issue in the auctioning of products since at least the 1800's (Engelbrecht-Wiggans & Nonnenmacher, 1999). Phantom bids and/or "shilling" can be more of a concern in online auctions, as bidders cannot visually confirm that other bidders are bidding (Lucking-Reiley, 2000). This, coupled with a possible desire to use another dealer's bids as an indicator of vehicle quality may explain why dealers prefer the physical auction environment.

The eighth theory is *the need for a dealer to hide that he is bidding on a vehicle*. This is the flip side of the theory discussed above, in a sense. In this case, rather than trying to take cues from another dealer about which vehicles to bid on, the dealer is concerned that other dealers are trying to take cues from him. As a result, the dealer tries to hide the fact that he is bidding on a vehicle. A related example relates to behavior on eBay. A large percentage of eBay bids are placed in the last few seconds of each auction, a practice referred to as "sniping." One reason for this behavior is that by waiting until the last possible moment to bid, eBay bidders can help keep the price down. Another reason is that bidders want to conceal their interest in an item as long as possible, for fear that other bidders will interpret their interest in an item as a sign of its quality and/or value (Roth & Ockenfels, 2002). It may be easier to conceal interest in a vehicle when bidding on it at the physical auction (where bidding gestures can be quite subtle) than when bidding on it online (where the dealer's name is listed in the bid log.) This might explain a preference for the physical auction.

The last theory has to do with *dealer's general comfort level with computers*. Dealers who are uncomfortable using computers in general may prefer the physical auction. A lack

actually place a bid, while phantom bids do not require anyone to have placed them. Instead, phantom bids can be concocted by the auctioneer.

of computer savvy has been considered as one reason why electronic commerce has failed to gain widespread penetration into certain demographic groups.

Theories Favoring Electronic Auctions

Just as there are theories that might explain preference for the physical auction, there are also theories that might explain preference for electronic auctions.

The first theory relates to *the increased variety of vehicles available to dealers in electronic auctions*. Dealers who use electronic auctions are not limited to only those vehicles available in their local geographic areas. Instead, they can participate in sales and purchase vehicles from around the country. This may enable them to purchase a wider variety of vehicles or to locate hard-to-find units. This type of increase in product variety is a well-documented benefit of electronic commerce, as the Internet allows consumers to purchase products that would otherwise be unavailable to them.² For example, research suggests that Amazon.com has enabled a wider variety of books to be purchased than was possible via brick-and-mortar bookstores (Brynjolfsson, Hu, & Smith, 2003). This benefit may extend to automotive auctions and explain why dealers might prefer electronic auctions.

The second theory relates to *the convenience of electronic auctions*. Dealers can participate in electronic auctions and purchase vehicles without having to leave their home or office. The convenience associated with electronic auctions may explain why dealers have a preference for them. Convenience is commonly used as an explanation for the use of electronic commerce in a wide variety of other industries.

The third theory relates to *the capacity to represent vehicles electronically*. If a dealer believes that electronic auctions provide adequate information about vehicles, then he is more likely to favor electronic environments. It is even possible that electronic auctions may provide better vehicle information than the physical auction. For example, electronic

² This phenomenon has been labeled the “long tail” of electronic commerce because of the shape of the resulting distribution of product purchases (Anderson, 2006).

condition reports might draw attention to problem areas on a vehicle (e.g., scrapes, dings) that might escape a dealer's attention when personally inspecting a vehicle. There are several products for which electronic representation may provide as much or more product information as physical representation. For example, it may be possible to learn more about the quality of a book by looking at its listing on Amazon.com (which includes its sales rank, book reviews, and limited ability to search inside the book) than by inspecting a physical copy at a bookstore. Although this example may not apply directly to the automotive auction industry, it does illustrate that many aspects of product quality can be transmitted electronically, given proper design of the electronic environment.

The last theory relates to improvements in a dealer's *ability to monitor and manage his bidding and purchasing activities*. The electronic environment may make it easier for dealers to keep track of which vehicles he has already bid on, which he would like to bid on, and which he has already purchased. One of the benefits of electronic commerce, and of information technology in general, is the ability to keep records of transaction activity (Zuboff, 1988). This may explain why a dealer would prefer to use electronic auctions rather than physical auctions, where it may be more difficult to keep track of his overall bidding and purchasing activity.

Methodology Used to Conduct the Study

The purpose of the research study was to investigate which, if any, of the theories described above were important to dealers and played a role in their preferences for physical vs. electronic auctions. This section describes the methodology of the study and the characteristics of the dealers who responded to the survey.

The study was conducted in two phases. The first phase was a pilot phase in which we mailed a survey to 200 dealers. The sample was drawn randomly from a mailing list of over 10,000 U.S. automobile dealers, each of whom purchased at least one vehicle physically and one electronically in the year 2005. This helped us ensure that the dealers we surveyed had used both physical and electronic auctions and thus were qualified to comment on their strengths and weaknesses. The list was provided by a member firm of the NAAA. Each dealer received a cover letter from the NAAA requesting their participation in the project, a blank survey, and a business-reply envelope in which to return the survey. We received a total of 17 responses during the pilot phase. We analyzed the pilot responses to ensure that the respondents understood the survey appropriately. Based on the pilot, we revised several aspects of the survey.

In the second phase, we mailed the revised survey to 1,000 dealers drawn randomly from the same mailing list, not including the dealers who received surveys during the pilot phase. We received 130 responses during this phase. This report presents the results based on these 130 responses.

Each dealer was asked to indicate his level of agreement with the survey's statements on a 1-7 scale. The end points of the scale were labeled "Disagree" and "Agree." Dealers could mark 1, 2, 3, 4, 5, 6, or 7 based on their level of agreement with each statement. A

response of 1, 2, or 3 indicated disagreement (of varying strengths) with the statement, a response of 4 corresponded to being neutral or ambivalent about the statement, and a response of 5, 6, or 7 indicated agreement (of varying strengths) with the statement. Dealers could also choose “Don’t Know”, although this option was rarely used.

Copies of the NAAA cover letter and survey instrument are provided in Appendix B and C, respectively.

Sample Demographics

Each dealer was asked several demographic questions, including his dealer type (e.g., franchise, independent, or wholesaler), dealership size (e.g., small, medium, or large), and age range (e.g., <25, 25-35, 35-45, etc.) 57% half of the respondents were franchise dealers and 47% were between the ages of 45 and 55. The demographics of the sample are shown in Table 1.

Question	Results
How would you characterize your business (e.g., wholesaler, franchise dealer, independent dealer)?	<p>Franchise: 75 (58%) Wholesaler: 11 (8%) Independent: 42 (33%)</p>
How would you characterize the size of your business (e.g., small, medium, large)?	<p>Small: 58 (45%) Medium: 56 (43%) Large: 11 (8%)</p>
How would you characterize the location of your business (e.g., urban area, rural area, suburban area)?	<p>Rural: 49 (38%) Urban: 46 (36%) Suburban: 36 (28%)</p>
How long have you used auctions or similar methods to acquire vehicles (# of years)?	<p>Franchise 21 yrs. Independent 17 yrs. Wholesaler 19 yrs.</p>
What % of your time do you spend acquiring vehicles?	<p>Franchise 21% Independent 39% Wholesaler 57%</p>
Please indicate your age.	<p><35 7 (5%) 35-45 21 (16%) 45-55 61 (47%) 55-65 31 (24%) >65 4 (3%)</p>

*Table 1: Sample demographics.
(Percentages may not add to 100 due to missing data.)*

Summary of the Overall Findings

Findings By Overall Preference for Physical or Electronic Auctions

Figure 1 summarizes the results of the survey. The left-hand side of the figure lists the theories that might predict a preference for the physical auction, while the right-hand side lists the theories that might predict a preference for electronic auctions. Of the 130 dealers who responded to the survey, 87 expressed a general preference for the physical auction. The average scores for this group of dealers are indicated by the vertical green lines shown in Figure 1. The other 43 dealers expressed a general preference for electronic auctions. Their scores are indicated by the dashed red lines shown in Figure 1. The average scores for all dealers, regardless of their general preference for physical or electronic auctions, are indicated by the black arrows.

An average score greater than 4 for an item indicates that dealers generally agreed that the item was important. A score below 4 indicates that they generally disagreed that the item was important. For example, dealers who favored the physical auction tended to agree that it was important to be able to physically inspect vehicles. This is shown in Figure 1 as the vertical green line next to “Need to physically inspect vehicles.” Conversely, dealers who favored the electronic auction tended to disagree that this was important. This is shown in Figure 1 as the dashed red line next to “Need to physically inspect vehicles.” Details for each item shown in Figure 1, along with other details to support the overall findings, are provided in Appendix A.

Advantages of the Physical Auction?

Advantages of Electronic Auctions?

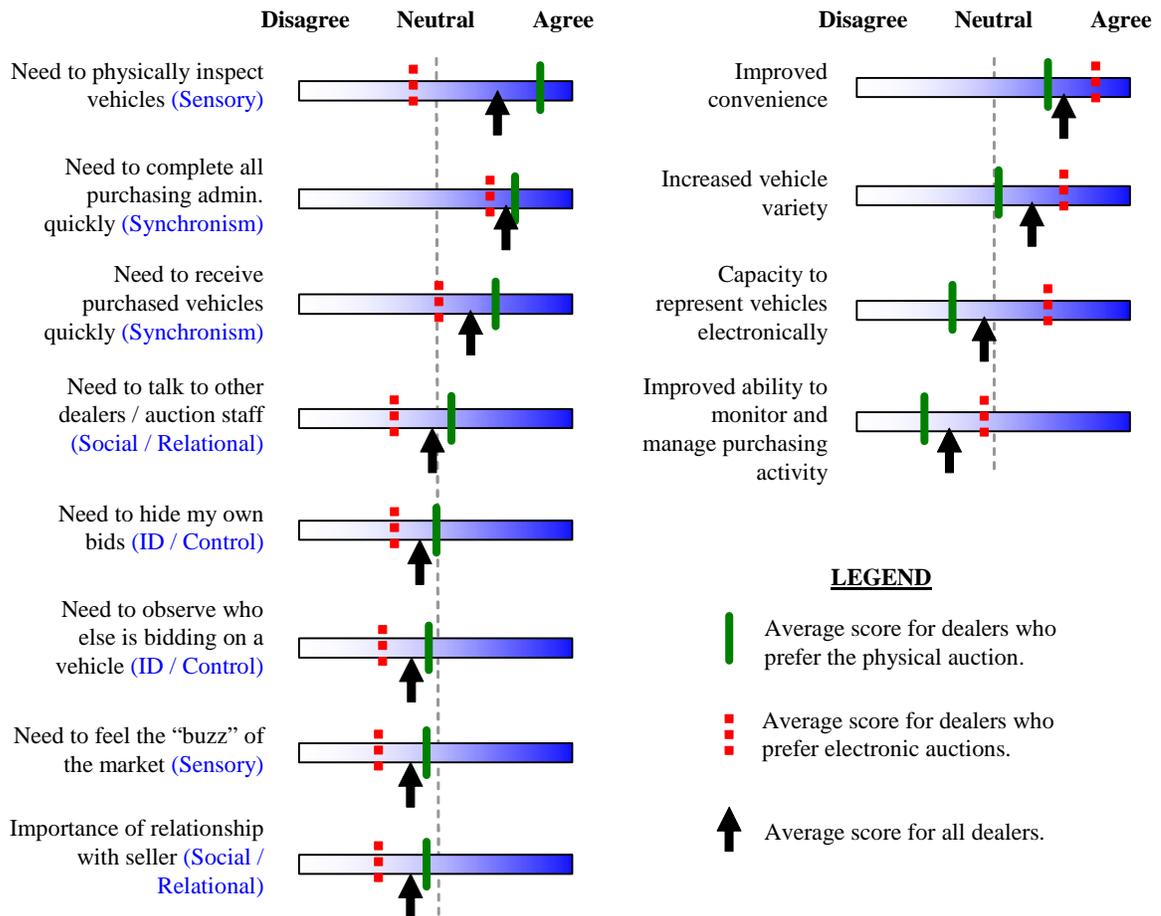


Figure 1: Summary of results

Theories Favoring the Physical Auction

The results indicate that the main factors that predict a preference for the physical auction are:

- 1) The need to physically inspect vehicles.
- 2) The need to receive purchased vehicles quickly.
- 3) The need to talk to other dealers and/or the auction staff, although this factor seems to be less powerful than the first two.

The dealers who preferred the physical auction agreed that each of these factors was important, whereas the dealers who preferred electronic auctions were neutral or disagreed. This suggests that there is a difference of opinion about whether these factors are important in the auction experience. The results suggest that dealers who believe that these factors are important prefer the physical auction. Those who do not prefer electronic auctions. Thus, these factors can be used to predict a preference for the physical auction.

One factor showed up as important to both the pro-physical and pro-electronic dealers: the need to complete all purchasing administration quickly. Because all dealers, regardless of their overall preference for physical or electronic auctions, agreed on this point, it is not useful in distinguishing which type of auction experience a dealer will prefer.

Several factors proposed as advantages of the physical auction were not deemed to be important by either the pro-physical or pro-electronic dealers. These included:

- a) Experiencing the “buzz” of the market.
- b) Observing who else is bidding on a vehicle.
- c) Hiding the fact that a dealer is bidding on a vehicle.
- d) Opportunities to develop a personal relationship with the seller.

All dealers were either neutral regarding these factors or disagreed that they were important. Thus, although these factors have been proposed as relevant to the auction experience and potentially important advantages of the physical auction, the dealers who responded to this survey did not agree.

Theories Favoring Electronic Auctions

The main factors that seem to predict a preference for electronic auctions are:

- 1) Desire for increased vehicle variety.
- 2) Belief that vehicles can be adequately represented electronically.

Dealers who preferred electronic auctions were believers in these aspects of electronic auctions, whereas dealers who preferred physical auctions were not.

All dealers agreed that electronic auctions were convenient. Because there was little disagreement about this factor, however, it is not useful for predicting dealer preference for physical or electronic auction environments. Last, neither dealer group agreed that electronic auctions enhance their ability to monitor and manage their bidding activity.

Findings By Dealer Type

One of the interesting findings of the survey was the difference in preferences between dealer types, particularly between franchise dealers and wholesalers. These two dealer types had differing opinions about several aspects of the auction experience. The opinions of independent dealers generally fell between those of franchise dealers and wholesalers.

One way to characterize the difference between franchise dealers and wholesalers is that franchise dealers appear to be more “deal-oriented”, while wholesalers appear to be more “relationship-oriented.” To explain, franchise dealers spend a much lower percentage of their time acquiring vehicles compared to wholesalers (21% to 57%), and franchise dealers are less interested in interacting with other dealers at the auction compared to wholesalers. Also, franchise dealers do not attempt to hide their bids from other dealers. This suggests that franchise dealers use auctions primarily to acquire vehicles and are relatively uninterested in some of the potential ancillary benefits. Also, they are not concerned with what other dealers think of their bidding activities. As such, they are “deal-oriented.” On the other hand, wholesalers appear to see value in using the auction experience to build relationships within the industry. They are also concerned about what others think about their bidding activities. As such, they are more “relationship-oriented.” Table 2 illustrates several differences between these two dealer types that support the deal vs. relationship orientation.

Question	Franchise Dealer Average	Wholesaler Average
What % of your time do you spend acquiring vehicles?	21%	57%

Average score for “The need to talk to other dealers and/or the auction staff” (with standard deviation.)	3.9 (1.6)	4.7 (1.8)
Average score for “The need to have a personal relationship with the seller.” (with standard deviation.)	3.3 (1.7)	4.1 (1.7)
Average score for “The need for a dealer to hide that he is bidding on a vehicle.” (with standard deviation.)	3.1 (1.7)	5.1 (1.7)

Table 2: The “deal” orientation of franchise dealers vs. the “relationship” orientation of wholesalers.

Franchise dealers are also more likely to favor electronic auctions compared to wholesalers. They purchase a greater percentage of vehicles electronically (46% compared to 29%) and are more likely to agree that electronic auctions provide benefits related to vehicle variety, convenience, and electronic representation. Table 3 illustrates the differences in opinion between franchise dealers and wholesalers regarding electronic auctions.

Question	Franchise Dealer Average	Wholesaler Average
Of all the vehicles you buy, approximately what percentage do you purchase at a physical auction facility (vs. via the Internet)?	54% (46% electronically)	71% (29% electronically)
Average score for “Convenience of electronic auctions” (with standard deviation.)	5.7 (1.7)	4.3 (2.2)
Average score for “Capacity to represent vehicles electronically” (with standard deviation.)	4.1 (1.4)	2.6 (1.3)
Average score for “Increased vehicle variety available in electronic auctions” (with standard deviation.)	4.4 (1.3)	3.7 (1.5)

Table 3: Opinions of franchise dealers vs. wholesalers regarding electronic auctions.

These differences between franchise dealers and wholesalers may reflect differences in their business models and the types of vehicles they purchase. For example, the end customers of a franchise dealer are usually retail consumers, whereas the end customers of a wholesaler are often other dealers. Thus, wholesalers are more likely than franchise dealers to view the physical auction as an opportunity to interact with potential customers. This may explain why wholesalers have a greater appreciation for the social aspects of the physical auction. Also, it is possible that franchise dealers purchase more predictable vehicles than do wholesalers or independent dealers. For example, franchise dealers may purchase predominantly program cars. It may be unnecessary to inspect these vehicles physically, because their condition is relatively predictable. On the other hand, wholesalers may purchase a wider assortment of vehicles whose conditions may vary greatly. Physical inspection of these vehicles may be required to diagnose quality. Thus, the mix of vehicles purchased by franchise dealers and wholesalers may explain the differences in their preferences.

Findings By Dealer Age

The survey revealed differences in dealer preferences based on age. In general, older dealers had a stronger preference for the physical auction than younger dealers. Older dealers also had a stronger preference for physical interaction with the vehicle. Conversely, younger dealers had greater appreciation for the enhanced vehicle variety available in electronic auctions, the convenience of electronic auctions, and the ability to represent vehicles electronically. Thus, there is evidence of generational differences in which younger dealers seem to be comfortable with and confident in electronic environments compared to older dealers.

Interestingly, younger dealers seemed to care more about the dynamics of sales events in terms of the “buzz” and who else was bidding compared to older dealers. This suggests that younger dealers are more concerned about the surrounding environment and what others think compared to older dealers. Table 4 illustrates the differences between younger (<35) and older (>65) dealers. Care should be taken in generalizing these results, as there were only 7 dealers younger than 35 and 4 dealers older than 65 in the sample. Despite the limitations in sample, the results are interesting.

Question	Younger Dealers (< 35)	Older Dealers (>65)
Average score for “Overall preference for the physical auction” (with standard deviation.)	4.4 (2.3)	5.5 (1.5)
Average score for “The need to physically inspect vehicles” (with standard deviation.)	4.8 (1.9)	5.7 (1.6)
Average score for “Increased vehicle variety available in electronic auctions” (with standard deviation.)	5.7 (0.7)	3.9 (2.0)
Average score for “Convenience of electronic auctions” (with standard deviation.)	6.1 (1.6)	5.1 (1.8)

Average score for “Capacity to represent vehicles electronically” (with standard deviation.)	4.9 (1.7)	3.8 (1.9)
Average score for “General comfort level with computers” (with standard deviation.)	6.9 (0.4)	5.5 (1.8)
Average score for “The need to experience the “buzz” of the market” (with standard deviation.)	4.1 (2.2)	2.3 (1.7)
Average score for “The need to observe who else is bidding on a vehicle” (with standard deviation.)	3.9 (1.8)	3.2 (0.7)
Average score for “The need for a dealer to hide that he is bidding on a vehicle” (with standard deviation.)	4.0 (2.4)	1.6 (1.0)

Table 4: Differences between younger and older dealers.

Conclusion

General Conclusions

The survey indicates that dealers prefer the physical auction to electronic auctions by a ratio of approximately 2:1. The main reasons for this preference appear to be, in descending order: a) the ability to physically interact with vehicles (e.g., to touch and feel them), b) the ability to receive purchased vehicles quickly without having to wait for them to be delivered from another location, and c) the ability to interact with other dealers and the auction staff on a social or professional basis. Those dealers who preferred electronic auctions did so because of: a) the increased variety of vehicles available in electronic auctions, and b) a belief that vehicles could be adequately represented electronically. Other plausible explanations for why a dealer might prefer one auction environment over the other, such as the ability to detect market “buzz” and the convenience of electronic auctions, do not appear to explain dealer preference.

It is important to recognize that the factors favoring physical and electronic auctions are not mutually exclusive. They may work together. For example, if a dealer agrees that it is important to physically inspect the vehicle, this does not necessarily mean that he will favor the physical auction. He might actually prefer electronic auctions, as long as he also believes that electronic auctions provide adequate vehicle representation. In other words, a dealer might prefer to touch and feel a vehicle, but this can be overcome if electronic representation is sufficiently good. An example of this can be seen with the franchise dealers. On average, franchise dealers prefer to touch and feel vehicles (average score = 5.3.) Their opinions on this aspect of the auction experience are quite similar to those of independent dealers and wholesalers. However, franchise dealers are more likely to favor electronic

auctions than are other dealers. This is partly because franchise dealers are more positive about electronic representation than are other dealer types (average score for franchise dealers is 4.1 compared to 3.3 and 2.6 for independents and wholesalers, respectively.) This illustrates how different aspects measured in the survey may work in conjunction with each other.

The 2:1 ratio of dealers who prefer physical to electronic auctions is likely to shrink over time as dealers become more comfortable with electronic auctions. Part of this shift will likely be caused by improvements in electronic condition reporting, adoption of industry standards for electronic auctioning, and advances in the technology used to represent vehicles electronically (e.g., 3-D imaging and models.) However, even if none of these improvements occur, a shift towards electronic auctions is still likely to occur. This is because the dealers with the strongest preference for the physical auction are older dealers who will be leaving the industry in favor of retirement. Younger dealers who will replace them will have more affinity for the electronic environment. Figure 2 illustrates this shift (over a 20-year horizon.)

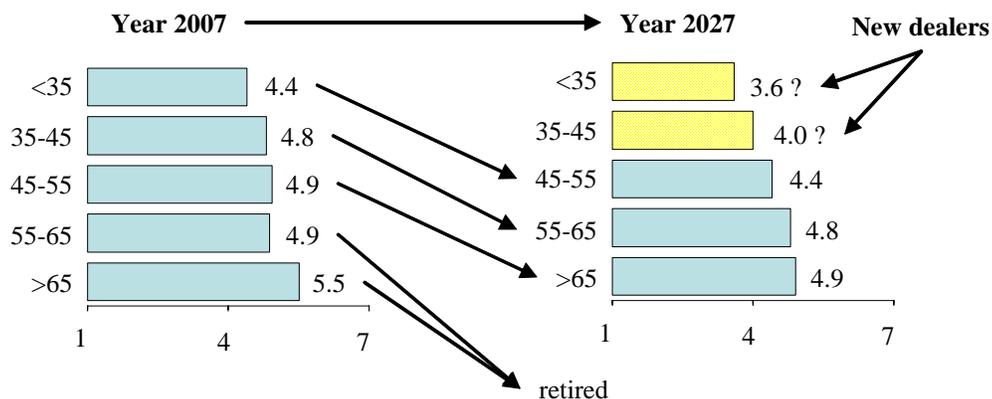


Figure 2: Potential shift in dealer preferences over time.

First, in 20 years time, the dealers who are currently over age 55 will have retired and left the industry. The dealers who are currently <35 will have gotten older and become the 45-55 age group. The same will apply to the current 35-45 and 45-55 age groups. Assume, conservatively, that these dealers' preferences for the physical auction remain fixed over the next 20 years. As shown in Figure 2, this means that their average scores of 4.4, 4.8, and 4.9 just shift down the chart. New dealers will enter the industry and become the <35 and 35-45 age groups, as illustrated by the yellow checked bars on the right-hand side of Figure 2. It is reasonable to expect that these new dealers will have a greater affinity for electronic auctions than do dealers currently in the industry. Thus, even if nothing else changes, the aging of the dealer population should cause a shift towards electronic auctions.

Some Strategic Considerations

The results have some strategic implications for auction companies. First, auction companies should consider segmenting their dealer customer base, as the results suggest that franchise dealers, independent dealers, and wholesalers value different aspects of the auction experience. If an auction caters primarily to franchise dealers, then it might consider investing in improved electronic vehicle representation and providing access to a wider range of vehicles. On the other hand, if an auction caters primarily to wholesalers and independent dealers, then it might consider investing in ways to improve the social and networking aspects of the auction experience.

Highlighting the aspects of the auction experience that dealers feel most strongly about provides some insight into how auction companies might design the optimal experience. The aspects that scored the highest across all dealers are as follows. First, dealers want to be well-informed about vehicles and their condition. Second, dealers want to complete the purchasing process, including taking ownership of vehicles, quickly. Third, dealers value the convenience of electronic auctions. Fourth, they appreciate the variety of vehicles available in electronic auctions. The physical auction is well-suited to satisfying the first two aspects, while electronic auctions are well-suited to the last two. It may be that there is no way to satisfy each of these aspects in a single auction experience and that trade-offs will be required. However, it may be possible to improve either the physical or electronic auction environments to satisfy all requirements.

For example, the convenience of the physical auction might be improved by reconsidering when sales events are held or holding smaller sales events that require less of a time commitment. Also, it may be possible to improve vehicle variety at the physical auction

by allowing dealers to review listings and bid on vehicles located at other locations. On the other side of the coin, it may be possible to augment the vehicle information provided in electronic auctions by improving condition reports. It will be important to strike the right balance between the detail and interpretability of condition reports, as too much detail may overload a dealer who is evaluating multiple vehicles. Also, it should be possible to reduce the delay between purchasing a vehicle electronically and receiving it. Possible solutions may lie in improved transportation programs and/or the establishment of strategically located marshalling facilities from which vehicles can be transported rapidly.

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Appendix A - Detailed Results of the Study

This section describes the detailed results of the survey. Each sub-section presents the results of individual parts of the survey along with a short interpretation. Comments provided by dealers are included in the section where they are the most appropriate. Overall interpretations and conclusions based on the entire survey are provided in the “Synthesis of the Overall Findings” and “Conclusion” sections.

Overall Preference for Physical vs. Electronic Auctions

We elicited each dealer’s overall preference for physical or electronic auctions in two ways. First, we asked each dealer to state his level of agreement with the statements that appear in Table 5. The third and fourth statements were framed in the opposite direction from the other statements and so were reverse-coded prior to data analysis. In other words, a “1” for the third or fourth statement was recoded as a “7” so that all items could be interpreted via the same scale. Figure 3 shows the overall responses to these statements broken out by age group. All results are based on a 1-7 scale.

Statement	Average Score (With Standard Deviation)			
	Overall	Franchise	Independent	Wholesaler
Given a choice, I would rather physically attend an auction than participate electronically.	5.2 (2.0)	4.9 (2.1)	5.6 (1.8)	5.8 (1.9)
The physical auction meets my needs better than electronic auctions.	4.9 (1.9)	4.5 (1.9)	5.4 (1.7)	5.4 (2.3)
I prefer to purchase vehicles online as opposed to at the auction (* reverse-coded.)	4.9 (1.9) <i>3.1 before reverse-coding</i>	4.6 (1.9) <i>3.4 before reverse-coding</i>	5.1 (1.9) <i>2.9 before reverse-coding</i>	5.9 (1.7) <i>2.1 before reverse-coding</i>

Electronic auctions meet my needs better than the physical auction (* reverse-coded.)	4.7 (1.8) <i>3.3 before reverse-coding</i>	4.5 (1.8) <i>3.5 before reverse-coding</i>	5.1 (1.8) <i>2.9 before reverse-coding</i>	5.5 (2.0) <i>2.5 before reverse-coding</i>
TOTAL	4.9 (1.8)	4.6 (1.8)	5.3 (1.6)	5.7 (1.7)

Table 5: Overall preference for the physical auction.

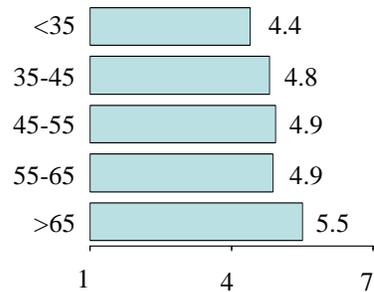


Figure 3: Overall preference for the physical auction by age.

Second, we asked each dealer for the percentage of vehicles they purchased at a physical auction vs. via electronic auctions. These results appear in Table 6.

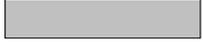
Question	Results
Of all the vehicles you buy, approximately what percentage do you purchase at a physical auction facility (vs. via the Internet)?	Franchise  54% Independent  72% Wholesaler  71%

Table 6: Percentage of purchases at a physical facility vs. via the Internet.

87 dealers had average scores for the statements listed in Table 5 that exceeded 4.0. We categorized these dealers as favoring the physical auction. The other 43 had average scores at or below 4.0. We categorized these dealers as favoring electronic auctions. Figure 4 displays the average score (with standard deviation) for the entire sample as well as the average scores for those dealers who favor the physical auction (i.e., the “pro-physical” dealers, shown in green) and for those dealers who favor electronic auctions (i.e., the “pro-electronic” dealers, shown in red.)

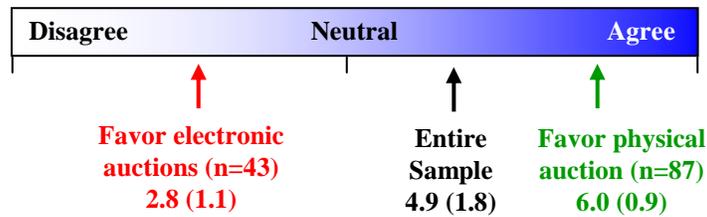


Figure 4: Overall preference for the physical auction.

Interpretation: Overall, dealers prefer physical to electronic auctions by a 2 to 1 ratio (approximately.) 87 dealers had an overall preference for the physical auction, while 43 preferred electronic auctions. This ratio is likely to shrink over time, as younger dealers are more neutral about their preference for the physical auction than are older dealers (see Figure 4.) Also, wholesalers and independent dealers have a stronger preference for the physical auction compared to franchise dealers, who are more neutral. For example, the average score for a wholesaler for his overall preference for the physical auction was 5.7, while the average score for a franchise dealer was only 4.6 (see Table 5.) Also, wholesalers purchased an average of 71% of their vehicles at physical auctions; this number was only 54% for franchise dealers (see Table 6.)

Advantages of the Physical Auction?

This section presents the results for those theories that favor the physical auction environment.

The Need to Physically Inspect Vehicles

Table 7 lists the statements used to determine whether it was important for dealers to be able to touch, smell, hear, etc. the vehicle along with the average scores by dealer type.

Statement	Average Score (With Standard Deviation)			
	Overall	Franchise	Independent	Wholesaler
I like to see the vehicle, hear the engine, etc.	5.3 (1.8)	5.2 (1.9)	5.5 (1.8)	5.5 (2.0)
I like to physically inspect vehicles before I purchase them.	5.7 (1.7)	5.5 (1.9)	5.9 (1.3)	5.7 (1.6)
I like to touch / see / hear / smell the vehicles that I bid on.	5.1 (2.0)	5.1 (2.0)	5.1 (1.8)	4.5 (2.7)
TOTAL	5.3 (1.7)	5.3 (1.8)	5.5 (1.5)	5.2 (1.8)

Table 7: The need to physically inspect vehicles.

Figure 5 shows: a) the average scores for the full sample, the pro-physical sub-sample, and the pro-electronic sub-sample, and b) the average score for the full sample broken out by age group.

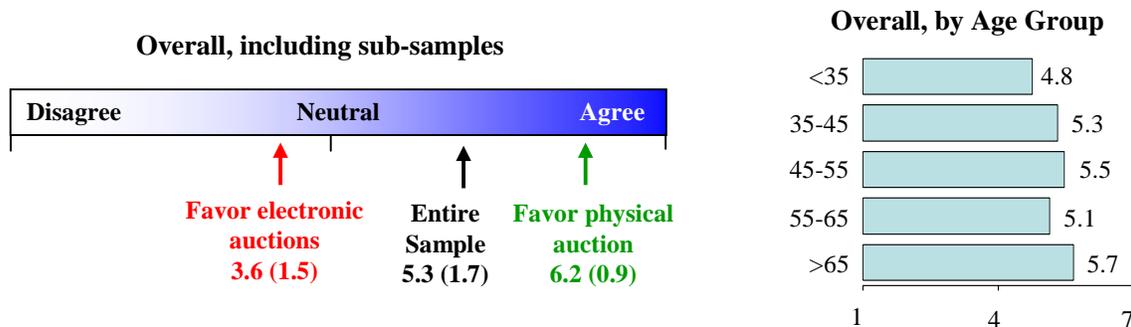


Figure 5: The need to physically inspect vehicles.

Interpretation: There is disagreement about whether it is important to physically touch and feel vehicles. Dealers who favor the physical auction strongly agree that this is important, but dealers who prefer electronic auctions are neutral or slightly disagree (see Figure 5.) This suggests that a dealer’s opinion about the need to physically inspect vehicles is predictive of his decision to attend the physical auction.

Older dealers are more likely to have a need to physically inspect vehicles than younger dealers, although all dealers agree that this is an important aspect of the auction experience (see Figure 5.) There are no appreciable differences between franchise dealers, independent dealers, and wholesalers regarding the need to physically inspect vehicles. All believe it to be important (see Table 7.)

Dealer Comments Regarding the Need to Physically Inspect Vehicles:

- “I have been in the auto business for over 30 years, to me, seeing, touching, hearing the vehicle is best.” – franchise dealer between ages 45 and 55.
- “Nothing like looking at a vehicle in person. Buying online is must to fill in gaps. Can't be every place.” - franchise dealer between ages 55 and 65.

The Need to Experience the “Buzz” of the Market

Table 8 lists the statements used to determine whether the “buzz” of the market influences dealers’ bidding and purchasing decisions. Figure 6 displays the results for the entire sample and the pro-physical and pro-electronic sub-samples, as well as the results by age group.

Statement	Average Score (With Standard Deviation)			
	Overall	Franchise	Independent	Wholesaler
The level of activity at the auction affects my bidding.	3.3 (1.8)	3.2 (1.7)	3.6 (1.9)	3.6 (2.3)
I consider the activity level at the auction when deciding how to bid.	3.4 (2.0)	3.1 (1.9)	3.7 (1.9)	3.7 (2.4)
I adjust my bidding strategy based on what is happening at the auction.	3.6 (1.9)	3.4 (1.8)	3.7 (1.9)	4.2 (2.5)
TOTAL	3.4 (1.7)	3.2 (1.7)	3.7 (1.7)	3.8 (2.2)

Table 8: The need to experience the “buzz” of the market.

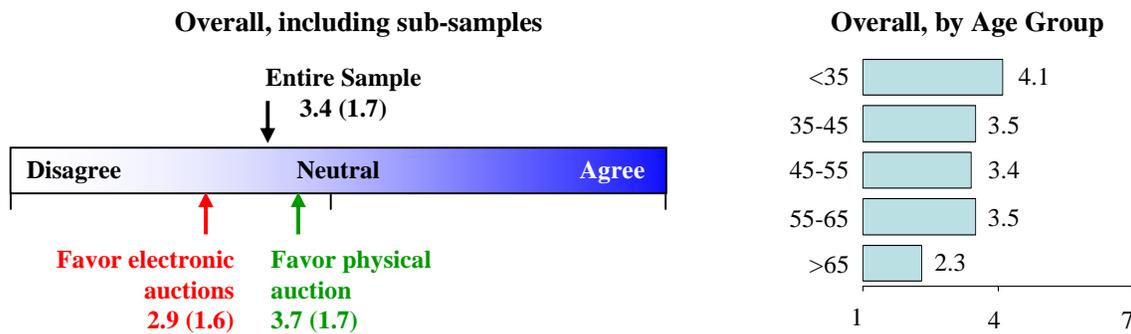


Figure 6: The need to experience the “buzz” of the market.

Interpretation: The ability to sense the “buzz” of the market does not appear to be a significant factor in the auction experience. Both the pro-electronic and pro-physical dealers disagreed that the “buzz” of the market influenced their bidding and purchasing decisions

(see Figure 6.) The same is true of all three dealer types, although independent dealers and wholesalers were more neutral about the importance of experiencing the market's buzz than were the franchise dealers (see Table 8.) Interestingly, the need to experience the market's buzz is more important for younger dealer than it is for older dealers (see Figure 6.)

The Need to Talk to Other Dealers and/or the Auction Staff

Table 9 lists the statements used to determine whether dealers believed that the ability to talk to other dealers and/or the auction staff is an important aspect of the auction experience. Figure 7 displays the results for the entire sample and the pro-physical and pro-electronic sub-samples, as well as the results by age group.

Statement	Average Score (With Standard Deviation)			
	Overall	Franchise	Independent	Wholesaler
I enjoy the social aspects of being at the auction.	4.0 (1.9)	3.9 (2.0)	4.1 (1.8)	5.0 (1.9)
It is important for me to mingle with other dealers at the auction.	3.1 (2.0)	2.9 (1.9)	3.1 (2.0)	4.0 (2.3)
I like to discuss business with other dealers at the auction.	4.4 (2.0)	4.5 (1.9)	4.2 (2.1)	4.3 (2.0)
I enjoy seeing and talking to the auction staff.	4.4 (1.9)	4.2 (1.9)	4.5 (1.8)	5.6 (1.8)
TOTAL	4.0 (1.6)	3.9 (1.6)	3.9 (1.7)	4.7 (1.8)

Table 9: The need to talk to other dealers and/or the auction staff.

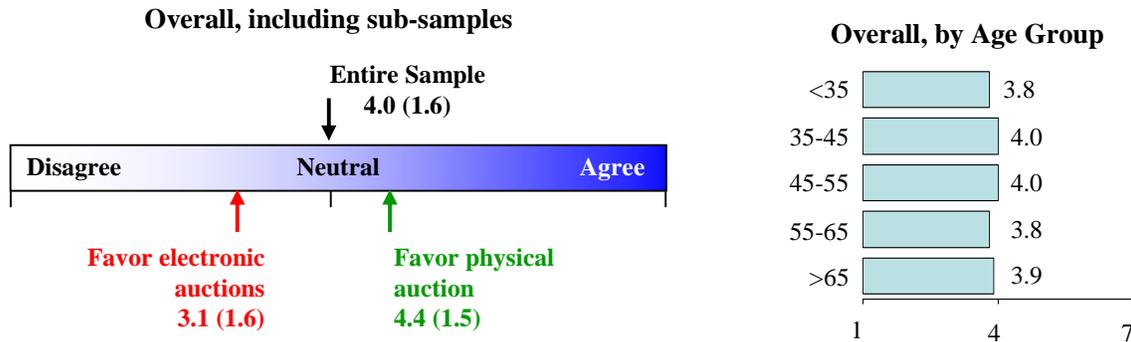


Figure 7: The need to talk to other dealers and/or the auction staff.

Interpretation: There is moderate support for the theory that dealers attend the physical auction due to social / relational factors associated with interaction with other dealers and/or the auction staff. Dealers that prefer the physical auction slightly agree that

the social elements of the auction experience are important (see Figure 7.) On the other hand, dealers who prefer the electronic auction tend not to value the social elements of the auction experience. Dealer belief about the importance of social interaction at the auction does not appear to be sensitive to dealer age (see Figure 7.) Last, wholesalers tend to value the social elements of the auction experience, whereas franchise and independent dealers do not (see Table 9.)

Dealer Comments Re: The Need to Talk to Other Dealers and/or the Auction Staff:

- “Physical auctions are an important break from the daily activity of running my dealership” – independent dealer between ages 45 and 55.

The Need to Have a Personal Relationship With the Seller

Table 10 lists the statements used to determine whether dealers found it important to have a personal relationship with the seller. Figure 8 displays the results for the entire sample and the pro-physical and pro-electronic sub-samples, as well as the results by age group.

Statement	Average Score (With Standard Deviation)			
	Overall	Franchise	Independent	Wholesaler
I develop personal relationships with the sellers I buy from.	4.1 (1.9)	4.1 (2.0)	4.0 (1.7)	4.5 (1.8)
I like to have a personal relationship with the seller when I buy a vehicle.	3.0 (2.0)	2.8 (1.9)	3.1 (2.0)	3.9 (2.2)
I consider my relationship with the seller when I bid on a vehicle.	3.1 (2.0)	2.9 (2.0)	3.2 (2.1)	4.0 (2.2)
TOTAL	3.4 (1.6)	3.3 (1.7)	3.4 (1.6)	4.1 (1.7)

Table 10: The need to have a personal relationship with the seller.

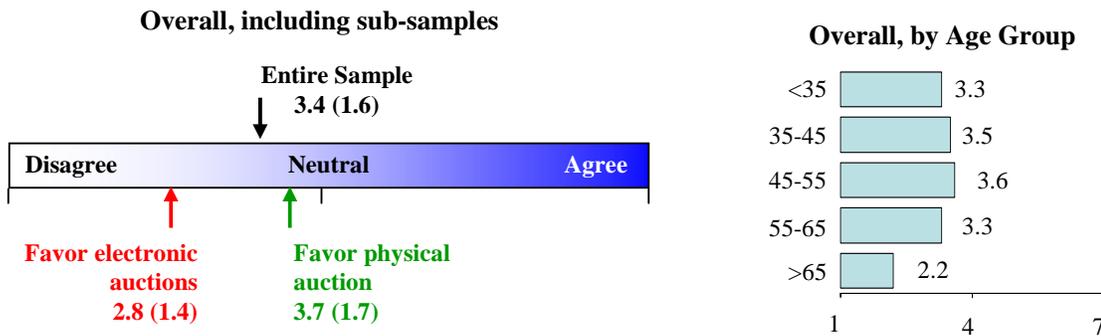


Figure 8: The need to have a personal relationship with the seller.

Interpretation: It appears that dealers do not find it important to have a personal relationship with the seller. Both the pro-electronic and pro-physical dealer sub-samples tended to disagree that this aspect of the auction experience was important (see Figure 8.) The dealer type most likely to believe in the importance of having a personal relationship

with the seller were the wholesalers, and even they were mostly neutral on the issue (see Table 10.) The results do not appear to be particularly sensitive to dealer age (see Figure 8.)

Dealer Comments Re: The Need to Have a Personal Relationship With the Seller:

- “The main problem with online auctions is the dishonest dealers you need to deal with (misrepresenting cars)” – franchise dealer between ages 45 and 55.

The Need to Receive Purchased Vehicles Quickly

Table 11 lists the statements used to assess the importance that dealers place on receiving purchased vehicles quickly. The second statement was framed in the opposite direction from the first statements and so was reverse-coded prior to data analysis. Figure 9 displays the results for the entire sample and the pro-physical and pro-electronic sub-samples, as well as the results by age group.

Statement	Average Score (With Standard Deviation)			
	Overall	Franchise	Independent	Wholesaler
After I purchase a vehicle, I need to get it to my dealership that same day.	5.3 (1.7)	5.4 (1.7)	5.0 (1.9)	5.1 (1.1)
I don't mind if a few days pass between when I purchase a vehicle and when I receive it (* reverse-coded.)	4.3 (2.0) 3.7 before reverse-coding	4.5 (1.9) 3.5 before reverse-coding	3.9 (2.0) 4.1 before reverse-coding	5.0 (1.9) 3.0 before reverse-coding
TOTAL	4.8 (1.7)	4.9 (1.7)	4.5 (1.8)	5.1 (1.1)

Table 11: The need to receive purchased vehicles quickly.

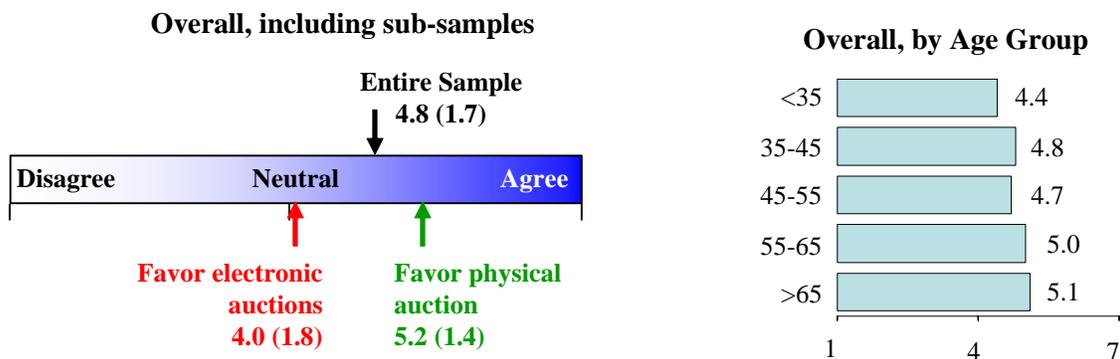


Figure 9: The need to receive purchased vehicles quickly.

Interpretation: There was disagreement about the need to receive purchased vehicles quickly. Pro-physical dealers tended to agree that this was important, while pro-electronic

dealers were neutral (see Figure 9.) This suggests that if a dealer needs a vehicle quickly, then he will prefer the physical auction environment. In general, the results were insensitive to differences in dealer type (see Table 11.) Older dealers tended to believe that quick receipt of purchased vehicles was more important than younger dealers (see Figure 9.)

The Need to Complete All Purchasing Administration Quickly

Table 12 lists the statements used to assess the importance that dealers place on completing all purchasing administration quickly – including arranging for payment and transportation as well as handling any necessary arbitration. Figure 10 displays the results for the entire sample and the pro-physical and pro-electronic sub-samples, as well as the results by age group.

Statement	Average Score (With Standard Deviation)			
	Overall	Franchise	Independent	Wholesaler
I like to take care of all purchasing-related activities the day I buy a vehicle.	5.4 (1.6)	5.6 (1.6)	5.2 (1.6)	5.1 (2.0)
I need to handle financing, any arbitration, title, etc. the day that I buy a vehicle.	5.1 (1.8)	5.1 (1.8)	5.0 (1.8)	5.6 (2.0)
TOTAL	5.3 (1.4)	5.4 (1.4)	5.1 (1.4)	5.4 (1.7)

Table 12: The need to complete all purchasing administration quickly.

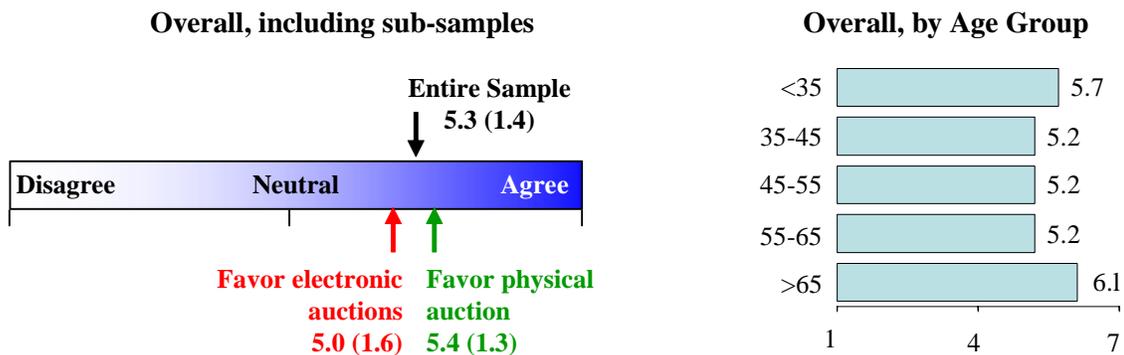


Figure 10: The need to complete all purchasing administration quickly.

Interpretation: All dealers, regardless of whether they favored the physical or electronic auction, agreed that it was important to complete purchasing administration quickly (see Figure 10.) Thus, this aspect of the physical auction experience is not

particularly helpful in predicting whether a dealer will prefer the physical or electronic auction environment. Results were generally insensitive to differences in dealer type or dealer age.

The Need to Observe Who Else is Bidding on a Vehicle

Table 13 lists the statements used to determine whether dealers are concerned about observing who else is bidding on a vehicle. Figure 11 displays the results for the entire sample and the pro-physical and pro-electronic sub-samples, as well as the results by age group.

Statement	Average Score (With Standard Deviation)			
	Overall	Franchise	Independent	Wholesaler
I take note of who else is bidding on a vehicle.	3.9 (2.0)	3.7 (2.0)	4.0 (2.0)	4.8 (2.5)
I adjust my bidding strategy based on who the other bidders are.	3.0 (1.8)	2.9 (1.8)	3.1 (1.9)	3.4 (2.4)
I may become interested in a vehicle if someone I know is bidding on it.	2.5 (1.7)	2.4 (1.7)	2.8 (1.7)	2.4 (1.7)
I am concerned that the auctioneer creates phantom bids to drive the price up.	5.1 (2.0)	4.9 (2.1)	5.7 (1.5)	4.4 (2.4)
TOTAL	3.6 (1.2)	3.5 (1.2)	3.9 (1.2)	3.8 (1.5)

Table 13: The need to observe who else is bidding on a vehicle.

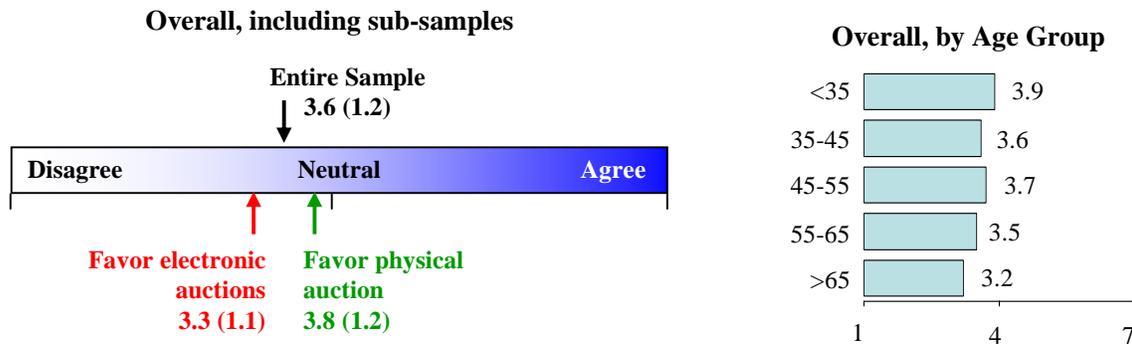


Figure 11: The need to observe who else is bidding on a vehicle.

Interpretation: Dealers tended to disagree that the ability to observe who else is bidding on a vehicle is an important aspect of the auction experience. This is consistent

regardless of dealer type (franchise, independent, or wholesaler), whether the dealer prefers the physical or electronic environment, and dealer age, although younger dealers tend to find it more important than older dealers. Thus, this theory seems to have little power to explain dealer behavior.

Most dealers agreed that they were concerned about the auctioneer creating phantom bids. However, this was consistent across pro-electronic dealers (average score = 4.8) and pro-physical dealers (average score = 5.3), suggesting that this concern does not appreciably influence a dealer's preference for physical vs. electronic auction environments. In other words, dealers are concerned about this issue, but it doesn't affect whether they choose to use physical or electronic auctions.

Dealer Comments Re: The Need to Observe Who Else is Bidding on a Vehicle:

- "Auctioneer bidding up Electronic Buyers when NO ONE is bidding!!" – independent dealer between ages 45 and 55.
- "It's harder to know if there is real money on Simulcast, they run you easier on Simulcast" – wholesaler between ages 55 and 65.
- "Don't like auctioneers off the money!" – franchise dealer over 65 years old.
- "I've been at an auction and watched the 'auctioneer' run the online buyer up several times when no one in the lane is bidding. Very deceitful!" – franchise dealer, no age range given.
- "I think auctioneers 'SHOULD' acknowledge on-line bidders a little bit more on Manheim." – independent dealer between ages 45 and 55.

The Need for a Dealer to Hide That He is Bidding on a Vehicle

Table 14 lists the statements used to determine whether dealers try to hide the fact that they are bidding on a vehicle. Figure 12 displays the results for the entire sample and the pro-physical and pro-electronic sub-samples, as well as the results by age group.

Statement	Average Score (With Standard Deviation)			
	Overall	Franchise	Independent	Wholesaler
I try to hide the fact that I'm bidding on a vehicle.	3.3 (1.9)	2.8 (1.8)	3.9 (1.9)	5.1 (2.0)
I try to conceal my bidding from other dealers.	3.5 (2.0)	3.0 (1.9)	3.9 (2.2)	5.2 (1.7)
I'd prefer that other dealers not know that I'm bidding on a vehicle.	3.9 (2.2)	3.5 (2.2)	4.4 (2.1)	5.0 (2.1)
TOTAL	3.6 (1.8)	3.1 (1.7)	4.1 (1.8)	5.1 (1.7)

Table 14: The need for a dealer to hide that he is bidding on a vehicle.

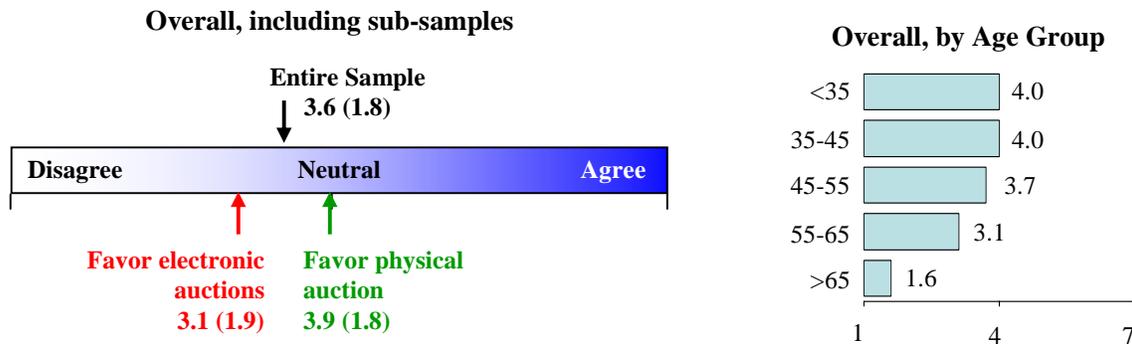


Figure 12: The need for a dealer to hide that he is bidding on a vehicle.

Interpretation: The ability to hide the fact that he is bidding on a vehicle does not appear to affect a dealer’s preference for the physical vs. electronic auction environment. Pro-electronic dealers disagreed that this aspect of the auction experience was important, and pro-physical dealers were neutral about it (see Figure 12.) Interestingly, wholesalers were concerned with trying to conceal their bids, whereas franchise dealers were not (see Table

14.) Also, younger dealers were more concerned with trying to conceal their bids than were older dealers (see Figure 12.)

General Comfort Level With Computers

Table 15 lists the statements used to assess dealers’ general comfort level with computers. A dealer who is uncomfortable using a computer might prefer the physical auction experience. Each of the statements was reverse-coded prior to analysis, as they each measured dealer *discomfort*, rather than comfort. Figure 13 displays the results for the entire sample and the pro-physical and pro-electronic sub-samples, as well as the results by age group.

Statement	Average Score (With Standard Deviation)			
	Overall	Franchise	Independent	Wholesaler
I find computers difficult to use (* reverse-coded.)	6.1 (1.5) <i>1.9 before reverse-coding</i>	5.9 (1.6) <i>2.1 before reverse-coding</i>	6.4 (1.1) <i>1.6 before reverse-coding</i>	6.3 (1.5) <i>1.7 before reverse-coding</i>
I am not very comfortable using computers in general. (* reverse-coded.)	5.7 (1.8) <i>2.3 before reverse-coding</i>	5.5 (1.9) <i>2.5 before reverse-coding</i>	6.0 (1.7) <i>2.0 before reverse-coding</i>	6.3 (1.5) <i>1.7 before reverse-coding</i>
Given a choice, I would prefer not to use a computer in my job. (* reverse-coded.)	5.5 (2.0) <i>2.5 before reverse-coding</i>	5.5 (1.9) <i>2.5 before reverse-coding</i>	5.4 (2.0) <i>2.6 before reverse-coding</i>	5.6 (2.4) <i>2.4 before reverse-coding</i>
TOTAL	5.5 (2.0) <i>2.5 before reverse-coding</i>	5.6 (1.5) <i>2.4 before reverse-coding</i>	5.9 (1.4) <i>2.1 before reverse-coding</i>	6.1 (1.7) <i>1.9 before reverse-coding</i>

Table 15: General comfort level with computers.

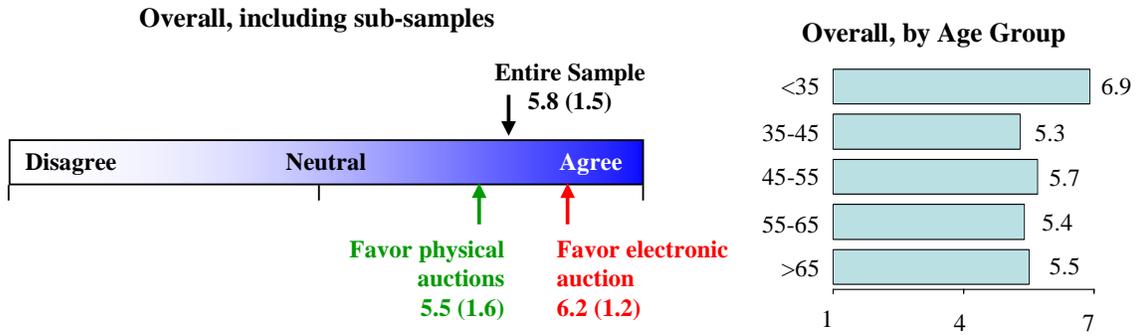


Figure 13: General comfort level with computers.

Interpretation: In general, dealers were comfortable using computers. Younger dealers were more comfortable than older dealers, but all dealers indicated strong comfort using computers.

Advantages of Electronic Auctions?

This section presents the results for those theories that favor electronic auctions.

The Increased Variety of Vehicles Available to Dealers in Electronic Auctions

Table 16 lists the statements used to assess whether dealers believe that electronic auctions provide them with access to a wider variety of vehicles. Figure 14 displays the results for the entire sample and the pro-physical and pro-electronic sub-samples, as well as the results by age group.

Statement	Average Score (With Standard Deviation)			
	Overall	Franchise	Independent	Wholesaler
The Internet allows me to buy from sellers who have vehicles I couldn't otherwise get.	4.8 (1.9)	4.8 (1.9)	5.0 (2.1)	4.3 (1.7)
I use the Internet because it lets me buy from sellers I wouldn't otherwise buy from.	4.1 (2.1)	4.3 (2.1)	4.0 (2.2)	3.2 (2.1)
I use the Internet to buy from wherever prices and selection are the best.	4.9 (1.9)	5.1 (1.8)	4.9 (1.9)	3.8 (2.4)
The Internet gives me access to vehicles that I need but can't get locally.	5.9 (1.4)	5.9 (1.3)	5.9 (1.4)	5.2 (1.9)
I need to access potential inventory from all over the country.	4.2 (2.1)	4.1 (2.1)	4.5 (2.1)	3.7 (2.5)
TOTAL	4.4 (1.4)	4.4 (1.3)	4.5 (1.4)	3.7 (1.5)

Table 16: The increased variety of vehicles available to dealers in electronic auctions.

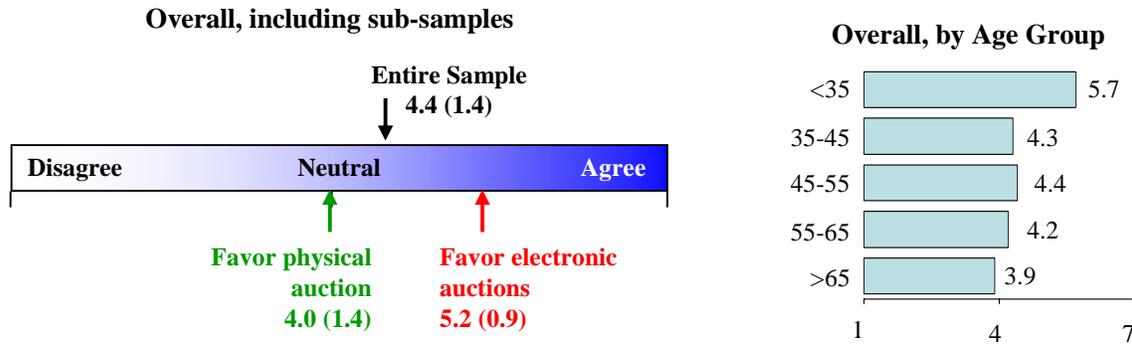


Figure 14: The increased variety of vehicles available to dealers in electronic auctions.

Interpretation: Dealers who prefer electronic auctions were more likely to agree with the statements in Table 16 than were dealers who prefer the physical auction (see Figure 14.) This suggests that dealers who favor the electronic environment do so because of the increased variety of vehicles available for purchase. Pro-physical dealers, by contrast, are neutral on these statements, which may explain why they prefer the physical auction.

Younger dealers are more likely to agree with the statements in Table 16 compared to older dealers, which indicates a generational effect (see Figure 14.) Also, franchise and independent dealers tended to agree more strongly about the need for enhanced vehicle variety compared to wholesalers (see Table 16.)

Dealer Comments Re: Increased Vehicle Variety:

- “Online purchases are a back-up for hard-to-locate units.” – independent dealer between ages 45 and 55.
- “Online auctions are great for increasing potential inventory and giving more selection – condition reports and picture need to improve. Auctions should go out of way to take pictures of damage - not to not show damage – worst part on online is the new

competition to buy! Sometimes you're at auction and get outbid by someone in another state; that sucks!" - wholesaler between ages 45 and 55.

- “Nothing like looking at a vehicle in person. Buying online is must to fill in gaps. Can't be every place.” – franchise dealer between ages 55 and 65.
- “Online sales have greatly expanded by buying power - locate and purchase desired vehicles” – franchise dealer between ages 55 and 65.

The Convenience of Electronic Auctions.

Table 17 lists the statements used to assess whether dealers find electronic auctions to be convenient. Figure 15 displays the results for the entire sample and the pro-physical and pro-electronic sub-samples, as well as the results by age group.

Statement	Average Score (With Standard Deviation)			
	Overall	Franchise	Independent	Wholesaler
I find electronic auctions to be very convenient.	5.4 (1.8)	5.6 (1.7)	5.4 (1.7)	3.8 (2.0)
Electronic auctions save me time.	5.7 (1.6)	5.9 (1.6)	5.6 (1.5)	4.7 (2.4)
Electronic auctions help me make better use of my time.	5.3 (1.8)	5.5 (1.8)	5.0 (1.8)	4.3 (2.3)
TOTAL	5.4 (1.6)	5.7 (1.7)	5.3 (1.5)	4.3 (2.2)

Table 17: The convenience of electronic auctions.

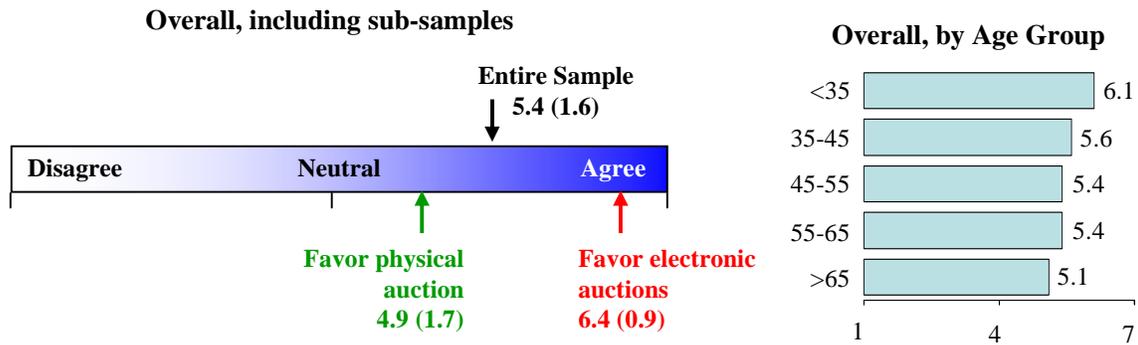


Figure 15: The convenience of electronic auctions.

Interpretation: All dealers, regardless of their overall preference, age, or dealer type, agreed that electronic auctions are convenient. Franchise dealers and younger dealers displayed stronger agreement than wholesalers and older dealers, respectively, but all dealers tended to agree with the statements listed in Table 17. Even dealers who favor the physical auction believe that electronic auctions are convenient, although not as strongly as do dealers who favor electronic environments (see Figure 15.) Thus, because all dealers find electronic

auctions to be convenient, this factor is not useful in predicting which type of auction experience a dealer will prefer.

Dealer Comments Re: The Convenience of Electronic Auctions:

- “Internet gives me chance to acquire inventory that I otherwise could not get because of distance, time, etc.” – franchise dealer between ages 55 and 65.
- “I sell off lease Nissans exclusively - the time and availability to buy gives me 1 choice of purchase – Internet” – independent dealer between ages 55 and 65.
- “Being a small store (6m) it is difficult for me to work an auction online, answer phones, & work customers at same time. Too many distractions. Also, how can you work multiple lanes online?” - franchise dealer between ages 45 and 55.
- “I see the convenience of buying online but I don't get comfort from it.” – independent dealer between ages 35 and 45.

The Capacity to Represent Vehicles Electronically.

Table 18 lists the statements used to assess whether dealers believe that electronic auctions provide adequate representation of vehicles. Figure 16 displays the results for the entire sample and the pro-physical and pro-electronic sub-samples, as well as the results by age group.

Statement	Average Score (With Standard Deviation)			
	Overall	Franchise	Independent	Wholesaler
I can get the vehicle information I need when I'm online.	4.1 (1.7)	4.3 (1.6)	3.7 (1.8)	3.1 (1.7)
Online condition reports provide me with everything I need to know about a vehicle.	3.9 (1.6)	4.3 (1.5)	3.2 (1.6)	3.0 (1.5)
I don't need to personally see a vehicle because I can get enough information online.	3.4 (1.9)	3.9 (1.9)	2.8 (1.8)	2.3 (1.8)
Simulcast / LiveBlock / Online Ringman gives me a sense of the activity at the auction.	3.9 (1.8)	4.2 (1.7)	3.6 (1.8)	2.7 (2.2)
Electronic auctions provide me with everything I need to know about vehicle and sale characteristics.	3.6 (1.7)	4.0 (1.7)	3.1 (1.5)	2.1 (1.3)
TOTAL	3.7 (1.5)	4.1 (1.4)	3.3 (1.4)	2.6 (1.3)

Table 18: The capacity to represent vehicles electronically.

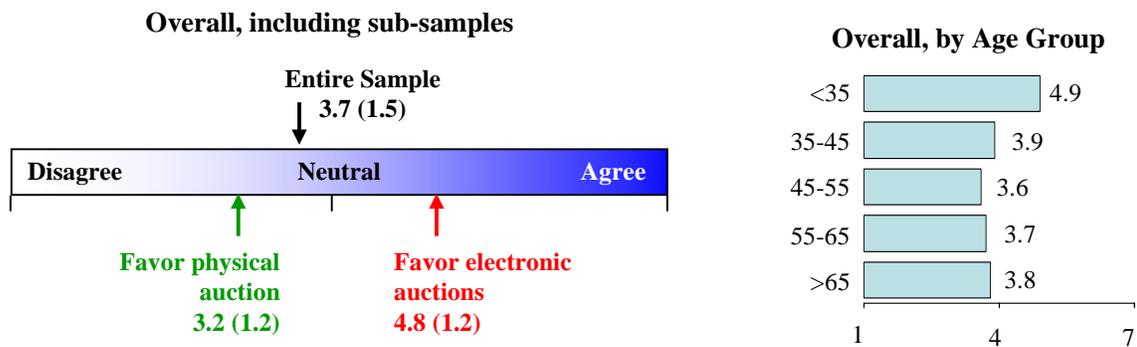


Figure 16: The capacity to represent vehicles electronically..

Interpretation: Opinion varies regarding whether electronic auctions provide adequate representation of vehicles. Dealers who agree that electronic representation is adequate favor electronic auctions; dealers who disagree favor the physical auction (see Figure 16.) This suggests that a dealer’s opinion about electronic representation is predictive of his decision to participate in physical vs. electronic auctions.

Franchise dealers are, on average, neutral about electronic representation, whereas wholesalers tend to be negative about it. Similarly, younger dealers are more favorable about electronic representation than older dealers.

Dealer Comments Re: The Capacity to Represent Vehicles Electronically:

- “I will not buy any vehicle online without a condition report!!!! <auction house xxx> has the most complete and accurate condition reports of any auction house I have used online. However even their condition reports need to be more complete. They will list a windshield chip but not an ABS light on? The fees being charged to us online buyers is terrible!!!! \$50.00 per vehicle or more and then \$75.00 per vehicle or more for post-sale inspections???? That is a minimum \$125.00 more per vehicle than if I was there in person???? Take that times 10 vehicles & it really cuts into the bottom line!!!! The auction house should be glad that I am online trying to give them business, not penalize me with additional fees!!!!” – independent dealer between ages 45 and 55.
- “Condition reports need to be better. Also, if a seller loses arbitration HE NOT BUYER should pay for PSI. This would eliminate a ton of problems. Bad sellers are the #1 problem at auctions. Thanks!” – independent dealer between ages 35 and 45.

- “<auction house xxx> ECR's are not reliable, <auction house xxx> ECR's are worthless!” – independent dealer between ages 45 and 55.
- “The companies that have auctions online need to get better equipment and cameras.” – independent dealer between ages 35 and 45.
- “I need condition reports but find them very inconsistent in correctness and detail.” – independent dealer between ages 45 and 55.
- “NADA should make or set a standard for all electronic condition reports to have a minimum requirement related to arbitratable items.” – wholesaler between ages 35 and 45.
- “I would use Simulcast, etc., if all vehicles listed on the website had condition reports. I have not been disappointed with any vehicles I purchased online that had a condition report. I will not bid on one that doesn't have a report.” – independent dealer between ages 55 and 65.
- “Vehicles should be better inspected – physically and better repped without having to go to arbitration” – franchise dealer between ages 55 and 65.
- “Online auctions are great for increasing potential inventory and giving more selection – condition reports and picture need to improve. Auctions should go out of way to take pictures of damage - not to not show damage – worst part on online is the new competition to buy! Sometimes you're at auction and get outbid by someone in another state; that sucks!” - wholesaler between ages 45 and 55.
- “The only cars you can buy on the internet and feel safe (ie no frame or excess paint work) are program cars. The condition reports are junk at most sales. More based on opinion than industry standard!” - wholesaler between ages 45 and 55.

- “My answers to the questions differ radically depending on if I'm buying factory program vehicles or just general auction assortments... For the factory, low mileage sales, the online auction is very convenient and generally accurate. For general auction, I would much rather be there to physically inspect the vehicle. I only buy factory program vehicles online. Nothing else.” – franchise dealer between ages 35 and 45.
- “I have had many problems with conditions reports being accurate - and not much help offered.” – independent dealer between ages 45 and 55.
- “I buy electronically from auctions that describe cars accurately like <auction hosue xxx>. Most auctions do not and will not stand by their description. Your survey kept repeating the same questions in different ways!” - wholesaler between ages 55 and 65.

Improved ability to monitor and manage bidding and purchasing activities.

Table 19 lists the statements designed to assess whether electronic auctions improve dealer ability to manage bidding and purchasing activities. Figure 17 displays the results for the entire sample and the pro-physical and pro-electronic sub-samples, as well as the results by age group.

Statement	Average Score (With Standard Deviation)			
	Overall	Franchise	Independent	Wholesaler
I like electronic auctions because it is easy to tell who else is bidding on a vehicle.	2.4 (1.7)	2.5 (1.7)	2.3 (1.7)	1.6 (1.3)
Electronic auctions make it easier for me to monitor my bidding activities.	3.6 (1.9)	3.7 (1.9)	3.4 (2.0)	3.3 (1.8)
Being online gives me a sense of control.	2.9 (1.6)	3.1 (1.5)	2.6 (1.6)	2.2 (1.8)
TOTAL	2.9 (1.2)	3.1 (1.1)	2.8 (1.4)	2.4 (1.2)

Table 19: Improved ability to monitor and manage bidding and purchasing activities.

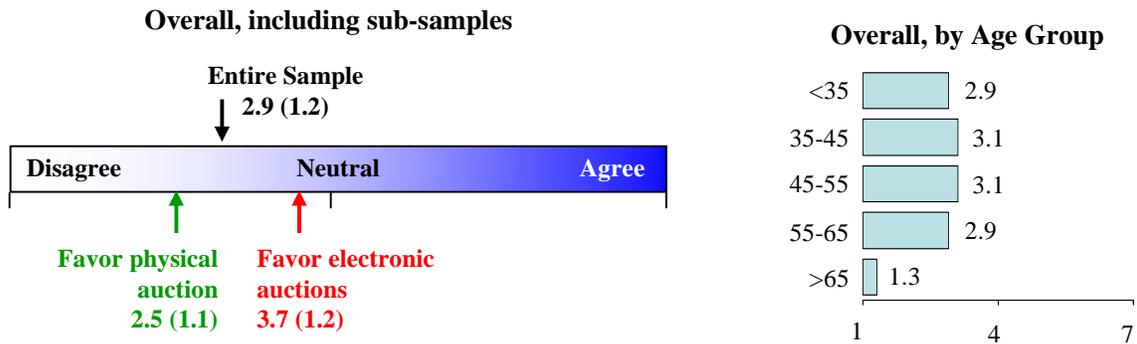


Figure 17: Improved ability to monitor and manage bidding and purchasing activities.

Interpretation: In general, dealers disagreed that the ability to monitor and manage bidding and purchasing activities was a benefit of electronic auctions. All dealers, regardless

of overall preference, dealer type, or age, tended to disagree with the statements listed in Table 19.

Other Survey Results

Table 20 provides additional survey results not reported above. These results suggest that many dealers compared attending a physical auction to participating in a sale via a webcast technology when completing the survey. Also, results suggest that dealers prefer acquiring vehicles via auction to other methods.

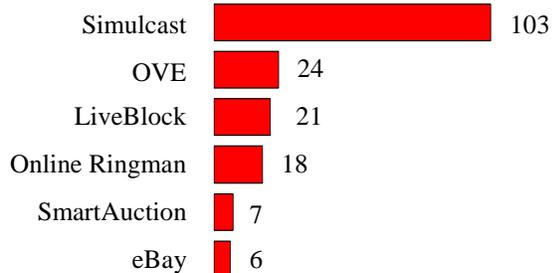
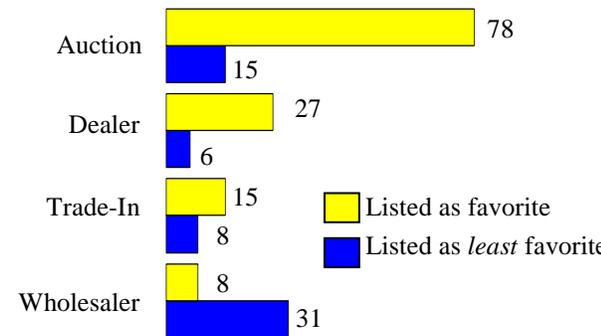
Question	Results															
<p>As you completed this survey, which electronic auction technologies were you thinking of (e.g., LiveBlock, Simulcast, Online Ringman, Online Vehicle Exchange, eBay, etc.)? (Results show how many times each technology was mentioned.)</p>	 <table border="1"> <thead> <tr> <th>Technology</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>Simulcast</td> <td>103</td> </tr> <tr> <td>OVE</td> <td>24</td> </tr> <tr> <td>LiveBlock</td> <td>21</td> </tr> <tr> <td>Online Ringman</td> <td>18</td> </tr> <tr> <td>SmartAuction</td> <td>7</td> </tr> <tr> <td>eBay</td> <td>6</td> </tr> </tbody> </table>	Technology	Count	Simulcast	103	OVE	24	LiveBlock	21	Online Ringman	18	SmartAuction	7	eBay	6	
Technology	Count															
Simulcast	103															
OVE	24															
LiveBlock	21															
Online Ringman	18															
SmartAuction	7															
eBay	6															
<p>What is your favorite way to acquire vehicles (e.g., auction, wholesaler, dealer trade)? What is your least favorite way to acquire vehicles? (Results show how many times each response was mentioned.)</p>	 <table border="1"> <thead> <tr> <th>Method</th> <th>Listed as favorite</th> <th>Listed as least favorite</th> </tr> </thead> <tbody> <tr> <td>Auction</td> <td>78</td> <td>15</td> </tr> <tr> <td>Dealer</td> <td>27</td> <td>6</td> </tr> <tr> <td>Trade-In</td> <td>15</td> <td>8</td> </tr> <tr> <td>Wholesaler</td> <td>8</td> <td>31</td> </tr> </tbody> </table>	Method	Listed as favorite	Listed as least favorite	Auction	78	15	Dealer	27	6	Trade-In	15	8	Wholesaler	8	31
Method	Listed as favorite	Listed as least favorite														
Auction	78	15														
Dealer	27	6														
Trade-In	15	8														
Wholesaler	8	31														

Table 20: Additional survey data.

Additional comments that did not appear in the section above are included below.

Dealer Comments:

- “Internet has hurt the used car market sales.” – wholesaler between ages 35 and 45.
- “The Internet will ruin the Auction Business as we know it.” – franchise dealer between ages 45 and 55.
- “I utilize both live and online sales. I preferred it when they were separate (i.e., Ford Quic was just online, and live was not simulcast). Live bidders should get preferential

treatment over an internet bidder. This treatment varies widely from auction to auction. The auctioneers at the <auction xxx + consignor yyy> factory sale – <auctioneer 1> and <auctioneer 2> - seem to be the most fair when balancing the needs of online buyers verses live bidders. At the other end of the spectrum, <auctioneer 3> at the <consignor zzz> factory sale will wait forever for a final online bid before finally dropping the hammer. On the topic of online pre-inspections, I only trust <manufacturer xxx> sales - they are 99% accurate - I've never arbitrated a <manufacturer xxx> purchase. The others (lease and factory) are not anywhere near as accurate or thorough.” – franchise dealer between ages 45 and 55.

- “Internet is not always reliable” - franchise dealer over 65 years old.
- "I like simulcast but have been ‘crashed’ on several times during an auction." – Independent dealer between ages 45 and 55.
- “They spend big bucks for on-line; but try and get info and/or training to use 'em.” – Independent dealer between ages 55 and 65.

Appendix B – Copy of the NAAA Cover Letter



National Auto Auction Association

Officers

Gregg Kobel
President
Crestwood, IL

John Rea
President Elect
Pearl, MS

Robert McConkey
Vice President
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Ellie Johnson
Kenly, NC

Jane Morgan
Charlotte, NC

Tammy Sullivan
Chattanooga, TN

Dave Wescott
Carmel, ME

Dennis Worthy
Caledonia, WI

<DATE>

Dear <FirstName>,

What do you think of the physical wholesale automotive auction experience? In this age of increasing technological sophistication, is the physical auction becoming a relic of a by-gone era? Will the wholesale market shift to online, electronic venues? Do the online environments offer unique advantages over the physical auction experience? Or are there elements of the physical auction that can't be replicated online?

Evidence suggests that an increasing number of wholesale transactions are occurring online, but that aspects of the physical auction experience remain important. **What do you think?**

Enclosed you will find a survey designed to get your perspective on these important issues. Please take a few moments to complete the survey and return it using the enclosed postage-paid envelope as soon as possible. The study is being conducted in association with researchers from Emory University. The results will help the National Auto Auction Association and our member firms better understand your needs and preferences, which will help us provide you with better service.

The survey is targeted for the person in your business responsible for acquiring vehicle inventory via auctions and related electronic methods. If this does not fall within your responsibility, please forward the survey to the appropriate person, so that they might fill it out.

Thank you very much! We appreciate your help with this important project.

Sincerely,

Gregg Kobel
President
National Auto Auction Association

5320 Spectrum Drive, Suite D • Frederick, MD 21703 • P: 301.696.0400 • F: 301.631.1359

Appendix C: Copy of Survey Instrument



This survey is being conducted as part of a research project studying the wholesale automotive market. The survey should take **8-10** minutes to complete. There are no reasonably foreseeable risks or discomforts associated with participating in this survey. Please return your completed survey using the enclosed postage-paid envelope.

Responses will be kept confidential. Your participation in this study is voluntary and you have the right to refuse to complete the survey. You may stop at any time, and you may also skip questions. If you have any questions about this research, please contact Eric Overby at (404) 727-3570. Eric is a researcher at Emory University in Atlanta, GA. If you have questions about your rights as a participant in this study, you may also contact Dr. James Keller, Chair, Institutional Review Board, Emory University, which oversees the protection of human research participants. He can be reached at (404) 727-7517 or jkeller@emory.edu.

As you complete the survey, you may sense some redundancy in the statements; this is done to account for the fact that individuals may interpret the statements differently.

******* PLEASE BEGIN THE SURVEY HERE *******

If you would like to receive a copy of the results of this survey upon completion, please provide your e-mail address: _____

How would you characterize your business (e.g., wholesaler, franchise dealer, independent dealer)? _____

How would you characterize the size of your business (e.g., small, medium, large)?

How would you characterize the location of your business (e.g., urban area, rural area, suburban area)? _____

How long have you used auctions or similar methods to acquire vehicles (# of years)? __

What % of your time do you spend acquiring vehicles? _____

Please indicate your level of agreement with the following statements, each of which pertains to your experience buying vehicles through an NAAA auction such as ADESA, Manheim, an independent auction, etc. (If you only use auctions to sell vehicles, there is no need to complete this survey.) Place a check in one (and only one) of the circles beside each statement.

- Any statements referring to the “electronic auction” relate to your experience using the Internet (e.g., Simulcast, LiveBlock, Online Ringman, CyberLots, eBay, etc.) to purchase vehicles from your home or office. If you have used multiple electronic auction technologies, please use as your frame of reference those that have provided you with the best experience.

	Disagree ← Agree → Don't Know		Disagree ← Agree → Don't Know
I like to physically inspect vehicles before I purchase them.	①②③④⑤⑥⑦	<input type="radio"/>	I consider the activity level at the auction when deciding how to bid.
The online condition reports provide me with everything I need to know about a vehicle.	①②③④⑤⑥⑦	<input type="radio"/>	Simulcast / LiveBlock / Online Ringman gives me a sense of the activity at the auction.
I develop personal relationships with the sellers I buy from.	①②③④⑤⑥⑦	<input type="radio"/>	I may become interested in a vehicle if someone I know is bidding on it.
I use the Internet because it lets me buy from sellers I wouldn't otherwise buy from.	①②③④⑤⑥⑦	<input type="radio"/>	I'd prefer that other dealers not know that I'm bidding on a vehicle.
I adjust my bidding strategy based on who the other bidders are.	①②③④⑤⑥⑦	<input type="radio"/>	Electronic auctions make it easier for me to monitor my bidding activities.
I like electronic auctions because it is easy to tell who else is bidding on a vehicle.	①②③④⑤⑥⑦	<input type="radio"/>	I consider my relationship with the seller when I bid on a vehicle.
After I purchase a vehicle, I need to get it to my dealership that day or the next.	①②③④⑤⑥⑦	<input type="radio"/>	The Internet allows me to buy from sellers who have vehicles I couldn't otherwise get.
I don't mind if a few days pass between when I purchase a vehicle and when I receive it.	①②③④⑤⑥⑦	<input type="radio"/>	I need to access potential inventory from all over the country.
I like to see the vehicle, hear the engine, etc.	①②③④⑤⑥⑦	<input type="radio"/>	I enjoy the social aspects of being at the auction.
I can get the vehicle information I need when I'm online.	①②③④⑤⑥⑦	<input type="radio"/>	I use the Internet to buy from wherever prices and selection are the best.
It is important for me to mingle with other dealers at the auction.	①②③④⑤⑥⑦	<input type="radio"/>	I like to touch / see / hear / smell the vehicles that I bid on.
I like to have a personal relationship with the seller when I buy a vehicle.	①②③④⑤⑥⑦	<input type="radio"/>	I don't need to personally see a vehicle because I can get enough information online.
The Internet helps me establish relationships with more sellers.	①②③④⑤⑥⑦	<input type="radio"/>	I like to take care of all purchasing-related activities the day I buy a vehicle.
I take note of who else is bidding on a vehicle.	①②③④⑤⑥⑦	<input type="radio"/>	Electronic auctions save me time.

	Disagree ←	Agree →	Don't Know		Disagree ←	Agree →	Don't Know										
I try to hide the fact that I'm bidding on a vehicle.	①	②	③	④	⑤	⑥	⑦	<input type="radio"/>	I find electronic auctions to be very convenient.	①	②	③	④	⑤	⑥	⑦	<input type="radio"/>
I like to discuss business with other dealers at the auction.	①	②	③	④	⑤	⑥	⑦	<input type="radio"/>	I need to handle financing, any arbitration, title, etc. the day that I buy a vehicle.	①	②	③	④	⑤	⑥	⑦	<input type="radio"/>
The level of activity at the auction affects my bidding.	①	②	③	④	⑤	⑥	⑦	<input type="radio"/>	I enjoy seeing and talking to the auction staff.	①	②	③	④	⑤	⑥	⑦	<input type="radio"/>
I am concerned that the auctioneer creates phantom bids to drive the price up.	①	②	③	④	⑤	⑥	⑦	<input type="radio"/>	Given a choice, I would rather physically attend an auction than participate electronically.	①	②	③	④	⑤	⑥	⑦	<input type="radio"/>
Electronic auctions provide me with everything I need to know about vehicle and sale characteristics.	①	②	③	④	⑤	⑥	⑦	<input type="radio"/>	I prefer to purchase vehicles online as opposed to at the auction.	①	②	③	④	⑤	⑥	⑦	<input type="radio"/>
The physical auction meets my needs better than electronic auctions.	①	②	③	④	⑤	⑥	⑦	<input type="radio"/>	Electronic auctions help me make better use of my time.	①	②	③	④	⑤	⑥	⑦	<input type="radio"/>
Electronic auctions meet my needs better than the physical auction.	①	②	③	④	⑤	⑥	⑦	<input type="radio"/>	The Internet gives me access to vehicles that I need but can't get locally.	①	②	③	④	⑤	⑥	⑦	<input type="radio"/>
I adjust my bidding strategy based on what is happening at the auction.	①	②	③	④	⑤	⑥	⑦	<input type="radio"/>	Given a choice, I would prefer not to use a computer in my job.	①	②	③	④	⑤	⑥	⑦	<input type="radio"/>
I try to conceal my bidding from other dealers.	①	②	③	④	⑤	⑥	⑦	<input type="radio"/>	I am not very comfortable using computers in general.	①	②	③	④	⑤	⑥	⑦	<input type="radio"/>
Being at the auction gives me a feeling of control.	①	②	③	④	⑤	⑥	⑦	<input type="radio"/>	I find computers difficult to use.	①	②	③	④	⑤	⑥	⑦	<input type="radio"/>
Being online gives me a sense of control.	①	②	③	④	⑤	⑥	⑦	<input type="radio"/>									<input type="radio"/>

Of all the vehicles you buy, approximately what percentage do you purchase: At a physical auction facility _____ Via the Internet _____

As you completed this survey, which electronic auction technologies were you thinking of (e.g., LiveBlock, Simulcast, Online Ringman, Online Vehicle Exchange, eBay, etc.)? _____

What auction companies do you use (physical and online)? _____ Besides using auctions, how do you acquire vehicles? _____

What is your favorite way to acquire vehicles (e.g., auction, wholesaler, dealer trade)? _____ What is your *least* favorite way to acquire vehicles? _____

Please indicate your age (check one): <25 25-35 35-45 45-55 55-65 >65

Please include any additional comments. _____

