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## Straight from the Horse's Mouth: An Examination of Social Media Usage and Advertising Methodologies in the Sale of Sporthorses

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Straight from the Horse's Mouth:

An Examination of Social Media Usage and Advertising Methodologies

in the Sale of Sporthorses

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#### 5 April 2017

## Submitted in partial fulfillment of the requirements for graduation with Distinction

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#### ABSTRACT

This study discovered general market conditions as well as buyer and seller behavior in the sporthorse market for the disciplines of Dressage, Show Jumping, and Eventing. The efficient sale of sporthorses in these disciplines is equally as important of a consideration as the marketing and advertising decisions for any other product such as automobiles or electronics. Equids differ from regular products in that they typically have markedly higher inventory costs associated with the maintenance of holding onto a live animal. Therefore, it is arguably more imperative for businesses to determine the quickest and most efficient means to sell them. This survey-based empirical study analyzed both sides to the market: buyers and sellers.

Among the information gathered from the sellers' side were important considerations involving the advertising of sporthorses such as the channels utilized, information included in the ad, perceived success of each channel, as well as a general descriptive of the industry. The buyers' side included information concerning their use of each channel, preferences for information included in the ads, purchasing habits, and general descriptive information. Both buyers and sellers were shown to have notable differences in demographics, preferences, and behaviors depending on riding discipline.

Overall market preferences for buyers included a strong preference for Facebook, horse advertising websites, and word of mouth advertising, as well as a strong preference for price and video inclusion in advertisements. A slight gap between buyer preferences and sellers' behavior in most areas was perceived. Facebook and horse advertising websites were shown to be correlated to quicker turnaround times for sellers. The likelihood to include price was also shown to be a significant factor in regression and strongly correlated to quicker turnaround times for sellers.

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#### **INTRODUCTION**

Through this study, we expect to discover behavioral patterns with new market media trends in the horse industry, specifically the advertising considerations of buying and selling sporthorses in the equestrian Olympic riding disciplines of Dressage, Show-Jumping, and Eventing.

Since businesses seek to cut costs and boost profits, eliminating inefficiencies in a marketing campaign for sporthorses can provide direct benefits such as quicker turnaround times,



Dressage (upper left), Show Jumping (upper right), and Cross Country (bottom). Eventing consists of all three.

lowered costs of maintaining the horse for sale (including but not limited to: board, veterinary care, farrier care, labor time spent riding/training, and competition expenses), and increased turnover rates on a yearly view. By advertising with the information considered most important in a buyer's horse search, as well as advertising in the most beneficial places, the results can not only allow professional riders to improve their business' bottom line, but also help buyers find their perfect appropriate "product" quicker and more efficiently. This market research study aims to create a compendium of information regarding sporthorse marketing which then can be utilized by the industry to improve marketing techniques and lower transaction costs: no such study has even touched upon before.

The current research study contains the following objectives: 1) measure the effectiveness of different media platforms in horse advertising, 2) identify key differences in advertising methods among three main riding disciplines, and 3) discern key factors in the

advertising content design affecting the success of advertising, such as presentation of price, pictures, video display, competition records, and bloodlines.

The intended outcomes of the study include: first, being able to pinpoint the most successful method of advertising within each discipline, second, allowing for the transfer of knowledge between disciplines in their advertising capabilities, and third, verifying the advantage of certain information in a sale ad in order to boost the success of the advertisement. Overall, the study is also conducted to discover the overall shape, characteristics, and features of the current sporthorse market, from both amateur buyer and professional seller perspectives.

#### **Background & Theory**

There are no known research studies on equine marketing methods. There are, however, studies on buyer preferences and pricing models. Gille, Kayser & Spiller (2010) studied buyer preferences for horse attributes with segmentation according to experience. Gille et al. (2010) discerned three major clusters were apparent: amateurs, experienced, and experts. Each of these segments had different demographics and preferences about criteria such as outward appearance, showing success, and the horse's level of education. Therefore, this study was concerned more about buyers' preferences for individual horse attributes rather than the buyers' behavior when searching for horses. Gille et al. (2010) concluded that sellers should take the three clusters into account when marketing a horse since buyers differ in the quantitative and qualitative information they deem important.

Research by Vickner and Koch (2001) found that sellers who breed as well as race horses did not experience a statistically significant price penalty when selling horses in auction. This is in contrast with previous research by Chezum and Wimmer (1997) who found that those who performed both functions experienced a price penalty at the auction block as their horses were viewed as being more likely the lower quality selection, with the breeder/racer keeping the higher quality horses for themselves. Vickner and Koch (2001) disproved this effect through the analysis of several other factors that influenced price at auction, three of which proved statistically significant: date of sale, influence of same-sired progeny, and buyer visits to the onsite health record repository. Furthermore, Taylor, Dhuyvetter, Kastens, Douthit, & Marsh (2006) found similar results in the Quarter Horse auction market concerning sale order, genetic and physical traits, pedigree, performance record, and offspring affecting the price.

Further research by Ng, Chong, Man-Tat, & Everard (2013) also found that bloodlines, track record of parents and siblings, maturity of the horse, and specific auction sites all played a role in pricing determination in the Australian racehorse industry. Furthermore, Robbins and Kennedy (2001) determined, in the British Columbia market, that the dam was an important factor in determining price of Thoroughbred yearlings through not its own performance, but the performance of the dam's progeny. It was also confirmed that the yearling's sire, sex, and age also played an important role in pricing, supporting other studies.

Moving on to marketing methods, this study holds the assumption made by Knight (1941) to be true in that "Men in general, and within limits, wish to behave economically, to make their activities and their organization "efficient" rather than wasteful. This fact does deserve the utmost emphasis; and an adequate definition of the science of economics ... might well make it explicit that the main relevance of the discussion is found in its relation to social policy, assumed to be directed toward the end indicated, of increasing economic efficiency, of reducing waste." This assumption of rationality governs all economic principles. Taking this assumption and applying it to sporthorse sales means that sellers wish to be as efficient as

possible in their promotion of a horse as to reduce waste, in this context, specifically in terms of their time and money spent caring for the horse.

The elimination of waste, or "transaction costs", in business signifies ability for benefit to both sides of the transaction. As Solow (2001) states, "any display of inefficiency simultaneously represents an opportunity for mutual gain, the parties to such transactions have an incentive to relieve inefficiencies (in cost-effective degree)." By lowering the transaction cost of inefficient marketing, sellers will be able to make a larger profit, as well as possibly price the horse a little lower, which would benefit the buyer.

The realm of marketing and advertising has a long, rich history of building comprehensive structures that are used to explain the factors on advertising practices. The American Marketing Association (2013) defines 'marketing' as: "the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large." Furthermore, the main considerations in marketing decisions involve the "marketing mix", otherwise known as the "four P's". The four P's include Product, Price, Placement, and Promotion. All four factors have an influence on the success or failure of a marketing campaign (Tălpău, 2014).

When making marketing decisions, business must account for all elements of their campaign. Marketing management is a much broader category that includes, according to Parker (1962), "the exchange functions of buying and selling, the physical distribution functions of transportation and storage, and the other functions which facilitate marketing—such as financing, risk-bearing, and communication." When there is inefficiency in the marketing campaign by a company, costs increase and so the consumer has to pay more. Just as consumers

pay for inefficiency of production, consumers also pay for extra motions or steps along the way in the management and integration of marketing activities (Parker, 1962).

Deuze (2016) states: "...As media are most certainly continuously mediating our lived experience as much as media are mirrors of it." The ever-changing landscape of social media presents both opportunities, such as increased audiences and closer customer connections, and threats, such as widely known bad reviews and confusing/mixed messages across platforms. With the prevalence of media and social media in our lives today, it can no longer be said that we live our lives with media. Rather, we live our lives in media (Deuze, 2016). It is therefore of utmost importance that the significance of social media's role in advertising be measured and recorded. Thus, we put our research context in multiple media platforms, including business websites, social media with rich media contents such as pictures and video, and equine specific marketplaces.

According to Edison Research (2017), 81% of the U.S. population has at least one social media profile, which translates to over 200 million users. Facebook attracts approximately 185 million people. According to eMarketer (2015), over 180 million U.S. citizens are forecasted to use YouTube in 2017. Social media is without a doubt a wide-spread source of information for the majority of the United States. As such, its use for advertising can have large effects on the success of businesses.

#### Significance

The significance of this study not only lies in the fact that the information gathered would allow the equine industry to economize and increase efficiency, which is a major topic in business, but it also holds significance in the fact that it would be the first known study to examine equine marketing and advertising methodologies at the high performance level in the three equestrian Olympic disciplines.

There is very little market research on the equine industry. The American Horse Council Foundation conducted a National Impact Study in 2005 which stated that the horse industry has an approximate \$39 billion in direct economic impact with over 2.7 million competition horses. However, further breakdown of these statistics is unavailable, so an estimate of the target population cannot be made, both in terms of buyers and sellers; although it can be assumed to be significantly lower since there are many other disciplines and buyers and sellers can own more than one horse.

Professional riders in the horse industry generally make their living by competing horses, training and selling horses, and instructing other riders. Currently, aside from the aforementioned research study, to my best knowledge, there is no further research on market behavior and marketing promotion in the sale of horses. Such research to determine the best advertising and marketing practices to reach the most people and conduct the most sales in the least amount of time would be beneficial to the industry by increasing efficiency of transactions.

Sellers would be able to have lower costs and less turnaround time in the sale of horses, while buyers would find their desired product quicker and more efficiently. The decrease in transaction costs such as length of time up for sale and continual maintenance of the horse while up for sale could mean that the overall equilibrium price of horses could be lowered (to benefit buyers) whilst maintaining per-unit profits for the sellers and allowing for greater volume, and thus greater total profits, within a given year.

#### **METHODS**

#### **Target Population**

This research study was comprised of two separate questionnaires, one for sporthorse buyers ("amateurs) and one for sporthorse sellers ("professionals"). The buyers' population was determined by their involvement in competing in at least one of the three disciplines: Dressage, Show Jumping, and/or Eventing. In order to provide a more accurate representation of the endconsumer, the survey was also limited to "amateurs" only, thereby eliminating the influence that professionals could have on the results, as professionals would most likely be purchasing horses in order to sell them down the line. The seller survey was limited to professionals in those three disciplines to target businesses who make up a large proportion of horse sales.

Amateur status was determined through the rulebook of the governing body of equestrian sport in the United States: The United States Equestrian Federation (USEF). According to the United States Equestrian Federation (2017), the rule, GR1306, states that "Regardless of one's equestrian skills and/or accomplishments, a person is an amateur if after his 18<sup>th</sup> birthday, as defined in GR101, he has not engaged in any of the following activities identified...below." The activities that makes one a professional, including but not limited to: accepting remuneration for riding, exercising, driving, showing, training, assisting in training, and conducting clinics or seminars (USEF, 2017).

Population size of the Dressage amateur segment, according to USDF membership rates, is estimated at 30,000 (United States Dressage Federation, 2017). This includes professionals, but the number is unknown. Population size of the Show Jumping amateur segment, according to the USHJA membership rates, is estimated at 37,000 which doesn't include professionals but does include Hunter discipline riders, who may experience cross over in the market (United

States Hunter Jumper Association, 2013). Lastly, the population size of the Eventing amateur segment, according to USEA membership rates, is estimated at 11,500 (United States Eventing Association, 2017). This also includes professionals, but the number is unknown.

The sampling procedure for "sellers" entailed contacting the top riders in each discipline. As each discipline is different in size and competition requirements, the sample sizes for each discipline were different. The lists included amateurs, some of whom were screened out prior to contacting, some of whom possibly ignored the contact email, and some of whom that were redirected out of the survey according to their response. Aside from amateurs who were screened out prior, the rest of the discrepancy between people contacted and identified resulted from inability to find any contact information for some riders.

For Dressage, the Fédération Equestre Internationale (FEI) world ranking databases were used in addition to the USEF Developing Horse Grand Prix and Developing Horse Prix St. Georges lists. A total of 106 riders were identified, with a total of 92 riders contacted.

The FEI world ranking database for Show Jumping is somewhat limited in its portrayal of the volume of competitions for each rider, so the United States Equestrian Federation (USEF) Rolex rankings were used. It contained 412 athletes, but only the top 250 were used, as after that, the points earned are not significant and included increasing numbers of amateurs. A total of 203 Show Jumping riders were contacted.

For Eventing, the FEI world ranking database for Eventing is also limited in its portrayal of volume of competitions for each rider, as it more heavily weights top results at each show, instead of completions. Therefore, the FEI Eventing Categorization of United States athletes was used. The FEI categories are determined by meeting a specified requirement of completions at each level with a certain qualifying score, called a Minimum Eligibility Requirement (MER).

More information on the determinants of these categories can be found in the FEI Eventing rulebook. (FEI, 2016). The research target population was all athletes in categories A, B, C, and D as these represented mostly professional riders who are consistently competing at a large enough volume to achieve these MER's. A total of 210 Eventers were categorized, 201 of which were contacted.

#### Distribution

To contribute to the knowledge of marketing in the equine industry the governing bodies for each of the respective disciplines were approached in an effort to maximize exposure to the survey. The United States Dressage Federation (USDF), United States Hunter Jumper Association (USHJA), and the United States Eventing Association (USEA) were all contacted to publicize the study. Additionally, the overall governing body of all United States horse sports, the United States Equestrian Federation (USEF), was contacted.

The questionnaires were made through the survey platform, Qualtrics. The buyer survey was distributed to the "general horse public" through an anonymous link via various channels. The United States Dressage Federation (USDF) published a blurb and the link in their monthly electronic newsletter to members in January. The United States Eventing Association wrote a brief article about the study, which included the link that was published on their website as well as posted on their Facebook page. Tamarack Hill Farm, a widely respected operation run by a knowledgeable past Olympian, Denny Emerson, also published a brief blurb with the link on their Facebook page. Horse Junkies United, an equine media site, wrote a brief article on their website that was also posted on Facebook. Eventing Nation, an equine media organization specifically for Eventers, wrote an article and posted on their Facebook page (see Appendix A).

The survey was also posted via the researcher's personal Facebook page and shared by the researcher's contacts.

The seller survey was distributed via a contact list that was compiled using the aforementioned ranking lists. For those whose email addresses were found, an individual link was sent out via Qualtrics' software. If there was not an email address listed, contact was made via contact forms on personal business websites or Facebook message to business or personal accounts. A total of 496 professionals were contacted, 327 of whom were contacted via Qualtrics email, 122 through Facebook message, and 47 through contact forms on their websites.

#### **Questionnaire Design**

The buyer survey included 28 questions while the seller survey included 36 questions (see Appendix for further reference). They both averaged around 5-15 minutes to take. The buyer survey included an incentive of an entry into a drawing for one of four \$25 gift cards to SmartPak, an equine retailing company. The seller survey included an incentive of an entry into a drawing for one of three \$100 gift cards to SmartPak. A total of over 1,500 responses were logged for the buyer survey, 1,112 of which contained usable data (not dismissed from survey via filter questions or incomplete survey). The seller survey garnered 67 usable responses, a usable response rate of 13.5%. Total responses (including unfinished as well as filtered out) numbered 89 responses, a total response rate of 17.9%. Data was exported to SPSS to analyze using basic descriptive analysis as well as ANOVA tests, Chi-square tests, correlation analysis, and regression analysis.

#### **ANALYSIS AND RESULTS**

#### **Buyer Results**

#### **Buyer Descriptive Analysis**

*Demographics – Discipline.* On a percentage basis, when splitting up their involvement in each of the three disciplines, approximately 54% competed in Eventing, 31% in Dressage, and 15% in Show Jumping. To assign respondents into categories based on their involvement, those with 40%-50% in two disciplines, or 25%-40% in all three disciplines were assigned into a "Multiple Discipline" (M.D.) category. All others who had a majority in a single discipline were assigned into that discipline category. There were 260 Dressage (23.4%), 111 Show Jumping (10%), 644 Eventing (57.9%), and 97 Multiple Discipline (8.7%). For purposes of statistical analyses comparing interdisciplinary differences, these recoded categories were used.

*Demographics – Location*. Out of the 1,112 respondents, 1,059 were located within the United States. The remaining 53 respondents were from outside the United States: Canada (38), Australia (4), Ireland (4), New Zealand (3), United Kingdom (2) Denmark (1), and Italy (1). The majority of respondents were located on the East Coast, with other large concentrations in Texas and California (see Appendix B). While the sporthorse market is assumed to be different overseas, the number of respondents from overseas was not significant enough to necessitate excluding them. The market in Canada is assumed to be similar and overlap the U.S. market.

*Demographics* – *Age.* As shown in Appendix C, ages ranged from 13-77. Ages were slightly skewed left of the normal curve, with a large peak around 25-30, with a noticeably sharp drop between 35-45, and a smaller peak around 45-50. Divided by discipline, two age subsets can be identified. The subsets consisted of the Show Jumping, Eventing, and M.D. in a younger subset with the Dressage riders in the older subset (F = 35.430, p < .05) (see Appendix D).

*Demographics – Gender.* In terms of gender, 97.9% of respondents were female, 1.8% male, and 0.3% non-binary or unanswered. When categorized by discipline, Dressage and Show Jumping each only had one respondent who was male (0.4% in dressage, 0.9% in Show Jumping) while M.D. had three (3.1%). Eventing had the largest count of males, with fifteen respondents (2.3%). Eventing also had two non-binary respondents (0.3%) (see Appendix D).

*Demographics – Income.* Average household income was \$140,165.66 (S.D. = \$210,309.68). Categorized by discipline, Show Jumpers had the highest household income, followed by Eventing, Dressage, then M.D. (see Appendix D).

*Purchasing Behavior – Frequency.* Horse purchase frequency experienced a peak at five years and ten-plus years (see Appendix E). Assuming a continuous timeline, respondents purchased a horse every six years (M = 71.74 months) on average. A shortcoming to the survey is that horse purchases every ten or more years were all grouped into one category, which ended up being larger than expected with 24.5% of responses, which slightly distorts the results towards a shorter time frame of purchase frequency, since all answers for this selection were treated as ten years. Therefore, real purchase frequencies can be assumed to be greater than six years.

An ANOVA test (F = 8.305, p < .05) revealed that Show Jumping, Eventing, and Multiple Discipline riders purchase in a shorter time frame of 68.75 months (approximately 5  $\frac{3}{4}$  years), while Dressage riders purchase less often: 81.53 months (approximately 6  $\frac{3}{4}$  years) (see Appendix D)

When running correlation analysis, percent involvement in each discipline was utilized. Purchase frequency was significantly correlated to Dressage and Eventing, while being significantly correlated to Show Jumping at a slightly lower confidence interval. Dressage was positively correlated to less often purchase frequencies (r = .148, p < .05) while Show Jumping (r = -.059, p < .1) and Eventing (r = -.098, p < .05) were negatively correlated to less often purchase frequencies. This also supports the aforementioned grouping relationship described with purchase frequency and recoded disciplines.

*Purchasing Behavior – Distance Willing to Travel.* Respondents can be categorized into two major groups in terms of distance willing to travel. The majority of respondents (60.8%) were willing to travel 51-100 miles, essentially willing to travel to neighboring states, given an average Midwest state size. The other major group is willing to travel over 500 miles (20.6%), including foreign countries (see Appendix F).

Chi-square tests show significant differences among groups (p < .05). Dressage buyers are willing to travel the farthest with 43.1% willing to travel 301 miles or further, compared to 32.4% of Show Jumper buyers and 35.1% of Eventer buyers.

*Purchasing Behavior – Budget.* Mean budgets when purchasing a horse are \$13,882.30 (S.D = \$24,950.12). In terms of budget, Multiple Discipline, Eventing, and Dressage buyers can all be grouped together with an average weighted budget within the group of \$11,605.72. Show Jumping buyers stand-alone in their own group with an average budget of \$24,877.36 (see Appendix E). Individually, Dressage buyers had a budget of \$14,132.57 (S.D. = 13,688.67), Show Jumper buyers had a budget of \$24,877.36 (S.D. = \$68,368.57), Eventer buyers had a budget of \$10,912.76 (S.D. = \$13,215.35), and Multiple Discipline buyers had a budget of \$9,448.96 (S.D. = \$12,650.45).

Differences in budget generally follow rational logic by increasing as the level of horse sought increases. When defined by level of horse sought, Dressage buyers are grouped into four different subsets (F = 23.275, p < .05). Those who are looking for Prospects and Intro Level

horses (66.93% of buyers) have an average weighted budget of \$8,637.54. Those who are looking for Training and Fourth Level horses (17.17% of buyers) have an average weighted budget of \$12,616.82. It is to be noted that there were only four responses for Fourth Level, which may explain the odd inclusion of it at a lower budget. Those who are looking for 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> Level horses (15.09% of buyers) have an average weighted budget of \$22,223.40. Finally, those looking for Prix St. Georges and Grand Prix horses (0.80% of buyers – five respondents) have an average weighted budget of \$36,030.00.

When defined by level of horse sought, Show Jumping buyers fall into three subsets (F = 11.117, p < .05). The first is defined by all levels from 1.30 meters and lower as well as 1.40 meters and 1.45 meters/3\*. This subset, inclusive of 98.33% of all buyers, has an average weighted budget of \$10,543.21. Those buying 1.50 meter/4\* or 1.60 meter/5\* horses (1.04% of buyers) have a budget of \$113,000. While those buying 1.35 meter/2\* horses (0.63% of buyers) have a budget of \$172,666.67. It is also to be noted that these last two subsets had only five and three respondents respectively.

When defined by level of horse sought, Eventer buyers can be put into two categories (F = 29.426, p < .05): those buying Prospects, Beginner Novice, and Novice horses and those who are buying Training, Preliminary/1\*, Intermediate/2\*, and Advanced/3\* horses. Those who are buying Prospects, Beginner Novice, and Novice horses (85.33%) have an average weighted budget of \$8684.18. Those who are buying Training, Preliminary/1\*, Intermediate/2\*, and Advanced/3\* horses (14.67%) have an average weighted budget of \$22,044.35. Again, it is to be noted that there were only seven responses for the category of Intermediate/2\* and Advanced/3\* combined.

When budgeting for travel expenses, 31.9% don't travel far enough to worry about budgeting for them and 46.8% pay for it separate from their horse budget. Only 19.7% include it in their horse budget. The remaining 1.6% had other various ways of budgeting such as paying for it separate for short trips but having to factor travel expenses in for longer distances and/or out of country shopping. The breakdown between budgeting decisions was fairly similar across disciplines.

#### **Buyer Analytics**

*Purchasing Behavior – Trainer Involvement and Test Riding.* 69.2% reported that they search for a horse on their own, with the remaining 30.8% having their trainer help them search. Separated by discipline, Show Jumpers were far more likely to have their trainer help them find horses (41.4%) compared to Dressage (30.8%), Eventers (30.4%), and M.D. (21.6%).

A majority of buyers need to personally test ride before purchasing. Divided by discipline, Eventers and Multiple Discipline buyers displayed the most independence from trainers.

*Purchasing Behavior – Importing.* Responses were mixed on the subject of importing. 42.0% of respondents said they do not consider importing, 42.0% also said that they do consider it, but the cost is a concern that may prevent them, while 16% said that if they find the right horse, they do not mind importing. However, only 11% of all respondents reported ever having imported a horse in the past.

When split by discipline, Show Jumper riders are more likely to have imported in the past (19.8% of Show Jumpers) compared to only 12.4% of Dressage riders, 8.5% of Eventing riders, and 13.4% of M.D. riders. It also follows that Show Jumping riders are also the most likely to

consider importing with 28.8% who don't mind importing and another 39.6% who would consider it but are concerned about the cost. This is compared to 13.5%-15.5% who don't mind importing in the other disciplines.

*Purchasing Behavior – Media Channel.* Most respondents (80.4%) stated that their method of search does not change depending on the price/level of the horse. Qualitative responses from the 19.6% who said it does change overwhelmingly included statements saying that the higher quality and/or higher price of the horse, the more they would rely on their trainer, word of mouth/industry contacts, and personal contact to professionals via their website instead of general Facebook pages or horse advertising websites.

The most used channels were horse advertising websites (M = 3.26), word of mouth (M = 3.16), and Facebook (M = 3.08) rated on a 1-5 scale. The least used channels were LinkedIn (M = 1.01), Twitter (M = 1.03), and Instagram (M = 1.18) (see Appendix G-1).

When broken down by discipline, some of the channels are used more by one discipline than others. Horse advertising websites (F = 5.376), word of mouth (F = 2.982), and auctions (F = 2.952) can all be subdivided into two subsets according to discipline (p < .05) (see Appendix G-2).

For most channels, budget is not significantly related to channel likelihood. Facebook has a negative relationship with increasing budget (r = -.073, p < .05) while YouTube has a positive relationship with increasing budget (r = .081, p < .05). However, these are fairly weak correlations. Horse advertising websites (r = -.057) and flyers (r = -.055) both had weak negative correlations with increasing budget at a lesser significance (p < .1).

*Purchasing Behavior – Advertisement Information.* The highest rated pieces of information were price (M = 3.60), videos (M = 3.49), conformation pictures (M = 3.24), and

riding pictures (M = 3.22) rated on a 1-4 scale. The lowest rated pieces of information were bloodlines (M = 2.07) and competition records (M = 2.65) (see Appendix H).

When broken down by discipline, bloodlines and competition records can be divided into subsets. Bloodlines can be broken down into three subsets while competition records can be broken into two (p < .05).

Five out of eight pieces of advertisement information were significantly correlated to budget (see Appendix I). With increasing budget: breed is negatively correlated (r = -.071), price is negatively correlated (r = -.074), videos are positively correlated (r = .060), competition record is positively correlated (r = .147), and bloodlines are positively correlated (r = .101) (p < .05). These are all fairly weak correlations, with competition record and bloodlines being the strongest correlations.

*Distance Willing to Travel Related to Channel.* Three channel likelihoods were able to significantly be subdivided by distance willing to travel (p < .05). It should be noted that there were only 31 responses who would travel less than 50 miles, less than 2.8% of responses.

YouTube is broken into three subsets (F = 3.875, p < .05): those willing to travel less than 50 miles (M = 1.77), those willing to travel 51-100 miles (M = 2.28), 101-200 miles (M = 2.35), 201-300 miles (M = 2.42), and 401-500 miles (M = 2.43), and then those willing to travel greater than 500 miles (M = 2.61) and 301-400 miles (M = 2.70).

Word of mouth can be divided into two subsets (F = 2.631, p < .05): those willing to travel 201-300 miles (M = 2.95), 301-400 miles (M = 3.11), 401-500 miles (M = 3.12), and greater than 500 miles (M = 3.14) versus those willing to travel less than 50 miles (M = 3.19), 51-100 miles (M = 3.26), and 101-200 miles (M = 3.32).

Instagram can be divided into three subsets (F = 3.111, p < .05), however these subsets do not follow any rational pattern of longer distances versus shorter distances.

Running correlation analysis, YouTube was positively correlated to distance (r = .117), personal business websites were positively correlated to distance (r = .072), while flyers were negatively correlated to distance (r = .069) (p < .05). Word of mouth was negatively correlated to distance (r = .049, p < .1).

*Channels Related to Other Channels.* Several channels had moderate strength with significant correlation to other channels. Facebook was significantly correlated to YouTube (r = .311), word of mouth (r = .185), personal business websites (r = .202), Instagram (r = .185), horse advertising websites (r = .232), and flyers (r = .152) (p < .05).

YouTube was significantly correlated to Facebook (r = .311), Twitter (r = .131), word of mouth (r = .178), personal business websites (r = .264), Instagram (r = .224), horse advertising websites (r = .214), and flyers (r = .181) (p < .05).

Personal business websites were significantly correlated to Facebook (r = .202), YouTube (r = .264), word of mouth (r = .272), Instagram (r = .219), auction (r = .121), horse advertising websites (r = .271), and flyers (r = .262) (p < .05).

One other notable significant correlation was between horse advertising websites and flyers (r = .369, p < .05).

*Preference for Professional Versus Amateur Seller.* On a scale of 1-7, respondents rated that they were slightly more likely to contact a seller if they were a professional rather than an amateur (M = 4.28). Given a test value of three, a one-sample t-test indicates that this distribution is significantly skewed towards professional.

Running ANOVA testing determines two subsets for preference between professional and amateur sellers. Multiple Discipline buyers were the fairly neutral group while Dressage, Eventing, and Show Jumping preferred professional sellers slightly more (F = 2.711, p < .05).

#### Summary of Buyer Findings – Segmentation, Targeting, and Positioning

*A Typical Buyer*. The typical buyer is a female 36-year old with a yearly household income of \$140,000. It has been about six years since her last horse purchase. She has a budget of about \$14,000. She is most likely to search for her next horse through Facebook, horse advertising websites, and word of mouth. Secondarily, she uses YouTube and personal business websites. When looking at advertisements, the inclusion of price and videos are most important to her. If either of these items are not included, she is much less likely to make contact. The next two most important pieces of information are conformation and riding pictures. She is willing to travel up to 400 miles to find a horse, which she would like to test ride. She has never imported a horse, but is open to the possibility depending on the price. She also has a slight preference for horses that are for sale by professionals instead of amateurs, although she is still willing to consider both.

*Buyers by Discipline.* When targeting by discipline, slightly different consumer profiles emerge. The average Dressage horse buyer is a female, 44-year old with a yearly household income of about \$140,000. It has been about seven years since her last horse purchase. She has a budget of about \$12,000. She is also most likely to search for her next horse through Facebook, horse advertising websites, and word of mouth, although she is slightly more inclined to use horse advertising websites than the average buyer. She also deems price and videos the most important pieces in the advertisement, however she has a stronger preference for bloodlines and

competition records than the average buyer. She is willing to travel up to about 450 miles to find a horse. She is slightly more inclined to have her trainer test ride in addition to herself. She has never imported a horse, but does consider it as long as the cost is still within her budget.

The average Show Jumping horse buyer is a female, 33-year old with a yearly household income of \$160,000. It has been about 6 years since her last horse purchase. She has a budget of about \$25,000. She is also most likely to search for her next horse through Facebook, horse advertising websites, and word of mouth. However, she is slightly less likely to use horse advertising websites and slightly more likely to use word of mouth and personal business websites than the average buyer. She also values price and videos as the most important pieces to an ad. She is willing to travel up to about 350 miles to find a horse. She is slightly more inclined to have her trainer test ride in addition to herself. She is the most likely to have imported a horse in the past and is also the most open to importing one in the future.

The average Event horse buyer is a female, 34-year old with a yearly household income of \$141,000. It has been about 6 years since her last horse purchase. She has a budget of about \$12,000. She is also most likely to search on Facebook, horse advertising websites, and word of mouth. The inclusion of price and videos in an ad are most important to her. Bloodlines are even less important to her than the average buyer. She is willing to travel 350 miles to find a horse. She is the least likely to need her trainer to test ride, although she would like to test ride herself. She is the least likely to have imported a horse in the past, but would be open to importing a horse staying within budget.

#### **Seller Results**

#### **Seller Descriptive Analysis**

*Demographics – Discipline*. On a percentage basis, when splitting up their involvement in each of the three disciplines, approximately 53.2% competed in Eventing, 26.7% in Dressage, and 20.1% in Show Jumping. Respondents were then assigned into their respective discipline categories based on which ranking list they were on. There were two respondents who rated percent involvement equally between two disciplines, however they were categorized into the discipline of their ranking based on the performance lists. There were 16 Dressage (24.2%), 11 Show Jumping (16.7%), and 39 Eventing professionals (59.1%).

*Demographics – Location.* They are located primarily on the East Coast except for a sizable portion living in California. The most common primary locations were California (n = 12), Florida (n = 8), Pennsylvania (n = 8), and Virginia (n = 5). The most common secondary location was overwhelmingly Florida (n = 20) followed by South Carolina (n = 7) (see Appendix J).

*Demographics* – *Age.* Ages ranged from 21-63 (M = 36, S.D. = 10.6). Ages were slightly skewed left of the normal curve with a peak at age 32 (see Appendix L). Age was fairly steady across disciplines: Dressage (M = 37.19), Show Jumping (M = 36.33), and Eventing (M = 35.46) (see Appendix K).

*Demographics – Gender.* Gender was slightly more equal than the Buyer survey with 53 females (81.5%) and 12 males (18.5%). However, gender was fairly different amongst disciplines with Dressage being all female, followed by Eventing where one-in-five are male, and then Show Jumping where two-in-five are male (see Appendix K)

*Level.* Levels competed up to in Dressage in the past five years ranged from Prix St. Georges to Grand Prix for the Dressage professionals and 1<sup>st</sup> Level to Grand Prix for Eventing professionals. Levels competed up to in Show Jumping in the past five years ranged from 1.45 meter/3\* to 1.60 meter/5\* for Show Jumping professionals and 1.00 meter to 1.50 meter/4\* for Eventing professionals. Many eventing professionals experienced crossover into the other two disciplines. Levels competed up to in Eventing in the past five years ranged from Training to 4\* for Eventing professionals (see Appendix M). Many of the peculiarly low level of attainment for some of the professionals that were ranked in that discipline, in particular the one Eventing professional who only has gone Training, were due to the professional having competed up to higher levels more than five years ago.

*Business Size Demographics.* The mean number of horses owned by the professional was 8.70 horses (S.D. = 16.21). Dressage was closest to the average (M = 8.94, S.D. = 23.10). Show Jumping was far above the average (M = 18.82, S.D. = 25.93), while Eventing was below the average (M = 5.83, S.D. = 5.42) (see Appendix N)

The total average number of horses competed in a year was 10.75 (S.D. = 9.45). Dressage was below that average (M = 6.44, S.D. = 4.82), Show Jumping was again far above the average (M = 23.27, S.D. = 15.40), while Eventing was close to the average (M = 9.03, S.D. = 5.16) (see Appendix N).

The total average number of competitions attended was 19.87 (S.D. = 9.80). Dressage was below that average (M = 13.38, S.D. = 7.53), Show Jumping was above the average (M = 26.18, S.D. = 8.84), and Eventing was close to the average (M = 20.73, S.D. = 9.56) (see Appendix N).

The total average number of horses competed in a single competition was 3.99 (S.D. = 3.50). Dressage was slightly below that average (M = 2.81, S.D. = 0.98), Show Jumping was above the average (M = 9.18, S.D. = 6.34), and Eventing was slightly below the average (M = 3.03, S.D. = 0.95) (see Appendix N).

*Business Size Horse Sales.* The total average number of horses sold in a year was 6.78 (S.D. = 10.06). Dressage was below average (M = 4.31, S.D. = 8.38), Show Jumping was above average (M = 13.27, S.D. = 14.49), and Eventing was about average (M = 5.98 S.D. = 8.68). The total average number of horses up for sale at a given time was 3.68 (S.D. = 3.69). Dressage was about average (M = 3.25, S.D. = 4.84), Show Jumping was above average (M = 5.82, S.D. = 5.10), and Eventing was about average (M = 3.26, S.D. = 2.37) (see Appendix N).

When comparing the composition of horses sold that are owned by the professional/business versus horses owned by clients, each discipline is slightly different from the other. Overall, 37.35% of horses were owned by the professional/business and 62.65% were owned by a client. However, Dressage professionals exhibited 27.81% professional/business ownership versus 72.19% ownership by clients. Show Jumping was slightly more even with 32.5% ownership by professional/business and 67.5% ownership by clients. Lastly, Eventing was the closest to being most evenly split with 42.51% ownership by professional/business and 57.49% ownership by clients.

#### **Seller Analytics**

*Negotiation Behavior.* Negotiation behavior was fairly lax and unspecific. 20% will take a certain percentage below asking price, 39% take a hard dollar amount below asking price, and 41% exhibit other behavior in negotiation. Typical negotiation percentage was around 10% off of asking price. Those who responded that they will take a hard dollar amount below asking price stated that it often depended on the owner's wants such as how quickly they wanted to sell, or the horse's record and soundness, or that it depended on the results of the pre-purchase examination (veterinary examination). Those who responded with "Other method" typically listed the same reasoning: client desires, pre-purchase examination results, how long the horse has been up for sale. A large amount between all categories stated they have very fluid negotiations depending on the each situation. Some respondents also stated that they do not negotiate any money below the asking price.

*Sourcing for Clients.* 6.0% of respondents do not source horses for clients. 41.8% charge a commission based on a percentage of sales price. 35.8% charge the commission based on sales price plus out of pocket expenses such as travel. 3.0% charge only to cover their out of pocket expenses not including their time. 6.0% charge to cover out of pocket expenses plus a rate for their time. 1.5% charge a flat rate. 1.5% source horses for clients but do not charge. 4.5% answered "other", stating it depended on the situation, such as if the client is going to board/train with them.

Average number of horses source for clients was 4.37 (S.D. = 6.2), with distinct differences among disciplines. Dressage professionals and Eventing professionals sourced significantly less horses than Show Jumping professionals (p < .05) (see Appendix N).

*Channel Selection.* Rating on a scale from 1-5 for their likelihood to use each channel, some channels were far more likely to be used than others. Word of mouth was the most likely channel to be used (M = 4.64), followed by Facebook (M = 4.16), YouTube (M = 4.03), personal business websites (M = 3.52), and horse advertising websites (M = 3.21). LinkedIn was the least

likely channel to be used (M = 1.06), followed by auctions (M = 1.13), Twitter (M = 1.27), Instagram (M = 1.81), and flyers (M = 2.21).

Categorizing by discipline reveals distinct differences in channel usage. Show Jumping professionals were much less likely to use Facebook (M = 2.91) compared to Eventing (M = 4.30) and Dressage (M = 4.69) (p < .05). Eventing (M = 3.80) and Show Jumping (M = 3.82) were less likely to use YouTube than Dressage (M = 4.75) (p < .05). Show Jumping was much less likely to use personal business websites (M = 2.27) than Eventing (M = 3.65) and Dressage (M = 4.06) (p < .05). Lastly, Show Jumping was also much less likely to use horse advertising websites (M = 1.73) than Eventing (M = 3.40) and Dressage (M = 3.75) (p < .05) (see Appendix O).

Rating the most successful channels by number of inquiries on a scale from 1-9, word of mouth (M = 8.07) and Facebook (M = 7.28) were rated highest. Horse advertising websites (M = 5.90), YouTube (M = 5.80), and personal business websites (M = 5.33) were ranked in the middle. While flyers (M = 4.25), Instagram (M = 2.82), auction (M = 2.08), Twitter (M = 1.60), and LinkedIn (M = 1.26) were ranked lowest.

Rating the most successful channels by number of successful sales on a scale from 1-9 yielded similar results, with the exception of Facebook which experienced a notable decrease. Word of mouth (M = 7.97) still came out on top, with Facebook retaining second best channel while sliding down in rating (M = 6.35). Horse advertising websites (M = 5.93), YouTube (M = 5.61), and personal business websites (M = 5.19) stayed relatively the same. Flyers (M = 3.98), Instagram (2.50), auction (M = 2.43), Twitter (1.50), and LinkedIn (M = 1.18) all stayed relatively lower.

Categorized by discipline, Show Jumping professionals stood out, having substantially less success for number of inquiries when advertising by Facebook (M = 6.10), flyers (M = 2.43), and horse advertising websites (M = 3.57) compared to the overall average as well as specifically Dressage and Eventing professionals. However, the gap between disciplines regarding Facebook became insignificant when rated by success through sales. Show Jumping still ranked significantly lower in success in number of completed sales when advertising by personal business websites (M = 3.43), flyers (M = 2.00), and horse advertising websites (M = 3.67). Some of these lower ratings are explained by Show Jumping professionals' lower likelihood to use Facebook, personal business websites, and horse advertising websites.

53.7% of respondents stated that their preferred method of advertising does not change depending on the price/level of the horse. 46.3% stated that their method did change. Frequently given explanations included cheaper horses going on Facebook or horse advertising websites, while more expensive horses are either not advertised or advertised exclusively through word of mouth.

*Advertisement Information.* When rated on a 1-5 scale, sellers were most likely to include breed (M = 4.88), height (M = 4.75), riding pictures (M = 4.46), and videos (M = 4.43). However, significant differences were displayed between disciplines, with price separated between Show Jumping (M = 2.45) versus Dressage (M = 4.38) and Eventing (M = 4.08) (p < .05). Videos also caused some significant separation with Show Jumping (M = 4.18) and Eventing (M = 4.33) in one subset while Dressage (M = 4.88) was in the other (p < .05) (see Appendix P).

At a lesser significance, riding pictures were also separated between Show Jumping (M = 3.91) versus Dressage (M = 4.50) and Eventing (M = 4.60) (p < .1). Additionally, competition

record was significantly different amongst disciplines with Eventing (M = 3.13), Show Jumping (M = 3.36), and Dressage (M = 4.00) (p < .1).

Average Sale Price. The average price of a horse across all disciplines was \$45,856.06 (S.D. = \$44,682.79). When split by discipline, Show Jumping horses garnered the highest prices (M = \$93,181.82, S.D. = \$78,303.02) followed by Dressage (M = \$60,000, S.D. = \$33,065.59), and then Eventing (M = \$26,705.13, S.D. = \$16,157.82) (p < .05) (see Appendix Q).

*Average Turnaround Time*. Due to limitations in the survey platform, answers to the question asking respondents to list their average length of time up for sale had to be gathered in categories which went in half-month increments until reaching one year. After that, there was an option for one-to-two years and two-or-more years. When recoding into numeric whole and part months, the option for one-to-two years was converted into 18 months, which was only chosen by one respondent. There were no responses with the two-or-more year answer. The total average length of time up for sale (turnaround time) was 4.26 months. However, significant groups were subdivided. Eventing (M = 3.6) and Dressage (M = 4.53) were in one subset while Show Jumping (M = 6.18) was in another (p < .05) (see Appendix Q).

*Turnaround Time Related to Channel.* Turnaround time was moderately negatively correlated to likelihood to use Facebook (r = -.244) and horse advertising websites(r = -.247) (p < .05). At a lesser significance, turnaround time was positively correlated (r = .231) to likelihood to use auctions (p < .1).

These were not seen in regression analysis at a significant level. Regression of channel usage likelihood to turnaround time did not yield very significant results (R square = .183). However, likelihood to use auction had a positive predictive factor ( $\beta$  = 2.178) on turnaround time (p < .05).

*Turnaround Time Related to Total Channel Ratings*. Rating from two separate questions regarding number of successful sales from each channel and number of inquiries from each channel were combined to create a total channel rating. However, for lesser used channels such as LinkedIn and auction, as well as Twitter and Instagram to a lesser extent, there were very few ratings, which could skew the resulting analyses. Correlation analysis reveals that higher ratings of Facebook (r = -.290) and horse advertising websites (r = -.325) both correlate to shorter turnaround times (p < .05).

Running regression analysis using total channel ratings on turnaround time (R square = .900), Facebook and Instagram had negative predictive factors ( $\beta$  = -1.412,  $\beta$  = -1.16, respectively) on turnaround time (p < .05). At a lesser significance, YouTube ( $\beta$  = .673), LinkedIn ( $\beta$  = 3.241), auction ( $\beta$  = .827), and flyers ( $\beta$  = -.438) also had significant predictive factors on turnaround time (p < .1) (see Appendix R).

*Turnaround Time Related to Information Inclusion.* Turnaround time was moderately negatively correlated (r = -.356) to likelihood to include price in the advertisement (p < .05). No other pieces of information were significantly correlated with turnaround time. This relationship was also seen in regression analysis were likelihood to include price had a strong negative predictive factor ( $\beta$  = -1.284) on turnaround time (p < .05).

*Channel Related to Channel.* Likelihood to use Facebook was significantly (p < .05) strongly correlated to likelihood to use YouTube (r = .470), personal business website (r = .511), horse advertising websites (r = 4.20), and flyers (r = .288). Other notable significant correlations (p < .05) included personal business websites to YouTube (r = .383), personal business websites to word of mouth (r = .252), personal business websites to horse advertising websites (r = .468), and horse advertising websites to flyers (r = .380).

*Price Related to Channel.* Likelihood to use Twitter was strongly positively correlated (r = .542) to higher priced horses (p < .05). Conversely, likelihood to use horse advertising websites was moderately negatively correlated (r = -.311) to higher priced horses (p < .05). At a lesser significance, price was negatively correlated to likelihood to use personal business websites (r = -.238) and positively correlated to likelihood to use Instagram (r = .227) (p < .1).

*Price Related to Information Inclusion.* There were only two pieces of information that were moderately correlated with price. The likelihood to include price (r = -.376) and riding pictures (r = -.372) were both moderately negatively correlated with higher priced horses (p < .05).

*Average Number of Horses Sold Per Year Related to Channel.* Using average number of horses sold per year as a proxy to measure business size of horse sales, no significant correlations were made in relation to likelihood to use any channel.

#### Average Number of Horses Sold Per Year Related to Information Inclusion. No

significant correlations between number of horses sold per year were made in relation to likelihood to include certain pieces of information at the p < .05 level. However, bloodlines were positively correlated (r = .230) to number of horses sold per year at a lesser significance (p < .1).

*Average Horse Level Related to Channel.* The only discipline that showed significant correlations between average level of horse and channel was Show Jumping. Higher level Show Jumping horses were moderately negatively correlated (r = -.362) to likelihood to use Facebook, negatively correlated (r = -.336) to likelihood to use personal business website, and negatively correlated (r = -.451) to likelihood to use horse advertising websites (p < .05). Higher level Show Jumping horses also exhibited correlations to one other channel, YouTube (r = -.283), at a higher p-value (p < .1).

*Average Horse Level Related to Information Inclusion.* Higher level Dressage horses exhibited moderate positive correlation to likelihood to include breed (r = .306) and price (r = .266), (p < .1). However, conversely, higher level Show Jumping horses exhibited moderate negative correlation to likelihood to include price (r = -.327, p < .05).

*Estimated Yearly Revenue from Horse Sales Related to Channel.* Yearly revenue from horse sales was extrapolated from average price and average volume of horses sold per year. This was also used as a proxy to measure business size of horse sales. Likelihood to use Facebook was negatively correlated to estimated yearly revenue (r = -.313, p < .05). At a lesser significance, likelihoods to use horse advertising websites and flyers were also negatively correlated (respectively, r = -.248, r = -.216) to estimated yearly revenue (p < .1).

*Estimated Yearly Revenue from Horse Sales Related to Information Inclusion.* Higher yearly revenue from horse sales was negatively correlated with likelihood to include breed (r = -.279, p < .05). Higher yearly revenue was also negatively correlated with likelihood to include price at a lesser significance (r = -.247, p < .1). Higher yearly revenue was positively correlated with likelihood to include bloodlines at a lesser significance (r = .214) while negatively correlated with likelihood to include bloodlines at a lesser significance (r = .212) (p < .1).

*Revenue Streams.* The majority of seller revenue was fairly evenly split amongst lessons/clinics (M = 27.38%), selling horses (M = 23.54%), and training (M = 35.78%) (see Appendix S). However, interdisciplinary revenue sources varied, with Dressage earning most of their revenue from training (M = 49.38%), Show Jumping being fairly evenly distributed amongst all four specified sources (lessons/clinics, selling horses, training, boarding) as well as "other", but with an emphasis on selling horses (M = 35.00%), and Eventing also being fairly evenly distributed between lessons/clinics, selling horses, and training.

Overall, it can be said that training is the most important revenue source for Dressage professionals, selling horses is the most important revenue source for Show Jumping, while Eventing is perhaps the most diversified in their revenue streams between lessons/clinics, selling horses, and training.

#### **Summary of Seller Findings**

Average Seller Descriptions. The average seller is a 36-year old woman. She is based on the East Coast, but most likely has two locations, one more northern and one more southern. She owns about nine horses, but competes about eleven horses through the year. She attends twenty competitions, where she usually competes four horses in each. She sells about seven horses a year, while sourcing another four for clients. She typically has four horses up for sale at any given time, a third of which are owned by her/her business while the other two-thirds are owned by clients. She will typically advertise using word of mouth, Facebook, YouTube, and her personal business website. Depending on the horse, she may also list it on horse advertising websites. The horses she sells are an average of \$46,000. The horse is usually up for sale for about four months.

Average sellers are slightly different when subdivided by discipline. The average Dressage seller is a 37-year woman, who may be based on the East Coast or in California. She also owns nine horses in a year. However, she usually only competes six or seven in a year. She also attends fewer competitions: about thirteen. She typically only competes three horses at each competition. She also sells fewer horses in a year: about four, while having three horses up for sale at any given time. She rarely sources horses for clients, possibly only one or two in a year. Almost three-quarters of the horses she sells are owned by clients, who she sells on their behalf. She is slightly more likely to use Facebook, horse advertising websites, and her personal business website to advertise. She is much more likely to use YouTube to advertise. The horses she sells are typically around \$60,000 and are up for sale for about four-to-five months.

The average Show Jumper seller is a 36-years old, and may be a man or woman, based in Florida. They own far more horses than the average seller, typically about nineteen in a year. They therefore also compete more horses in a year: twenty-three. They attend twenty-six competitions where they usually compete nine horses. They typically sell thirteen horses in a year, with about six up for sale at any given time, while sourcing nine-to-ten horses for clients. About two-thirds of the horses they sell are owned by clients. They are much less likely to use Facebook, personal business websites, and horse advertising websites. They are also slightly less likely to use YouTube. The horses they sell are typically around \$93,000 but are for sale for six months.

The average Eventer seller is a 35-year old woman, based on the East Coast with a secondary location in either South Carolina or Florida. She owns about six horses in a year while competing nine horses. She attends about twenty-one competitions where she competes three horses in each. She sells six horses per year while sourcing about four more for clients. She typically has three horse up for sale at any given time. Half of these are owned by her/her business while the other half are owned by clients. She is slightly less likely to use YouTube, but slightly more likely to use Facebook, horse advertising websites, and her personal business website. The horses she sells are typically around \$27,000 and are for sale for three-to-four months.

# **MARKET IMPLICATIONS**

Overall, important descriptions, preferences, and relevant market information was gathered concerning both buyers and sellers. Gaps between preferences and behavior concerning importing were identified, with possible future research to analyze whether this gap can be filled. Important distinguishing characteristics between disciplines were identified, with each discipline having certain areas where it stood out from the other two. Sellers in each discipline placed different emphasis on their business capabilities, preferences for certain channels, and information.

While most factors could not be used to significantly predict using regression, there were several notable factors that were correlated with quicker turnaround times and overall more efficient advertising. Facebook and horse advertising websites were significantly correlated with quicker turnaround times. The inclusion of price in an ad was both a significant regression factor as well as a strong correlation to quicker turnaround times. Interestingly, buyers rated video inclusion highly, but rated their use of YouTube in the middle of the pack. This may be due to their consideration of YouTube as not a primary search channel but rather a medium for delivering the videos.

As horse's prices increased, sellers were less likely to include price and riding, while also being less likely to use horse advertising websites while being more likely to use Twitter. However, at the same time, as a horse's level increased, different correlations emerged depending on discipline. Higher level Dressage horses were more likely to be advertised with breed and price, while higher level Show Jumping horses were less likely to include price.

Additionally, there is somewhat of a gap between buyer preferences with seller preferences for channels and information. Buyers emphasized Facebook, word of mouth, and

horse advertising websites for their most used search channels. However, sellers emphasized Facebook, word of mouth, and YouTube as their most used channels. At the same time, buyers emphasized the importance of videos and price in the advertisement, while sellers were mixed on what they included, according to discipline.

For example, Show Jumpers exhibited the lowest likelihood to include price and videos in their ads, which could also explain why they also had the longest turnaround time out of all three disciplines. Show Jumpers were also the least likely to use Facebook, YouTube, personal business websites, and horse advertising websites, which included some of the most used channels for buyers. Overall, Show Jumper sellers seemed to exhibit the least amount of advertisement involvement in terms of both channels and information, while at the same time, they had the largest volumes out of all three disciplines in terms of number of sales and revenues.

We are unable to conclude whether Show Jumpers' slow turnaround time may be a result of weak marketing efforts, high inventories, or alternative advertising means. When taken in consideration with their higher volume, the slow turnaround time may, in part, also be explained as a result of this large volume of "inventory". It is possible that there is a larger surplus of horses for sale in the Show Jumping market than the Eventing market which would lead to longer turnover times.

Quantitative data shows that Show Jumpers attend many more competitions and compete many more horses than the other disciplines, while rating word of mouth advertising highly. When taking this in combination with qualitative data that suggests that Show Jumpers may use competitions as a primary method of "advertising" their horses, this could explain their apparent lack of advertising efforts via the traditional methods studied in the survey. Whether or not this is the case, Show Jumpers could possibly gain a temporary competitive advantage over their competitors by including price and videos in their advertisements, as well as expanding and utilizing Facebook and horse advertising websites more often.

Consideration in interpreting the results should also be taken in light of the differences in the target populations between the buyer and seller surveys. The seller survey targeted the top tier professional riders while the buyer survey targeted the general buyer, many of whom would occupy an entirely different segment of the market than what the top professionals are developing products for and marketing towards. This would also explain why there is a sizable gap between buyers' budgets and sellers' average horse prices. The buyers' budget mean for those who would be looking for a horse produced in this top tier environment was pulled lower by the budgets of those who would occupy a different section of the market. As discussed in the following section, future research could focus on the breakdown of specific segments into tiers according to experience, price, or level.

# **DISCUSSION FOR FUTURE RESEARCH**

As this study focused more on the advertising considerations of purchase behavior, future studies can be done on particular preferences for what buyers view as the ideal horse in terms of items such as specific height, breed, color, markings, sex, previous experience, etc. Additional research can dig deeper on buyer preferences and behavior regarding importing, as a possible gap is apparent between knowledge of importing and desire to import.

Additionally, future studies can focus on the breakdown of specific horse advertising websites, as qualitative results showed that, in consideration of price and level of the horse, there

were some differences in choice when choosing a website. Research could also focus on the separation of price and/or level into multiple tiers and the resulting behavior on channel and information inclusion, as qualitative data also suggested that behaviors, specifically likelihoods, changed on an individual level depending on the price of the horse being advertised.

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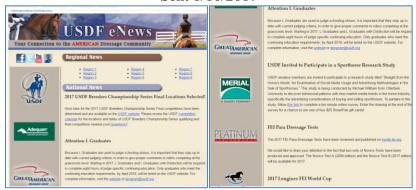
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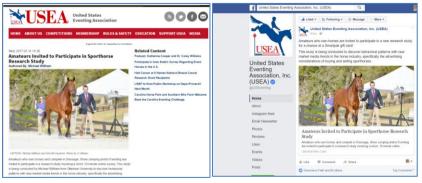
# APPENDIX

### Appendix A Publications of the Amateur/Buyer Survey

USDF Newsletter Publication Sent 1/10/2017



### USEA Publication Published 1/11/2017



### Tamarack Hill Farm Publication Published 1/11/2017





# Horse Junkies United Publication

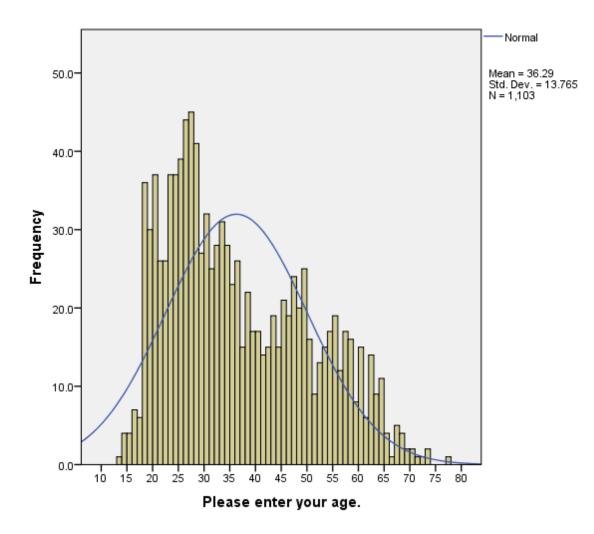
### **Eventing Nation Publication** Published 1/17/2017 & 1/20/2017







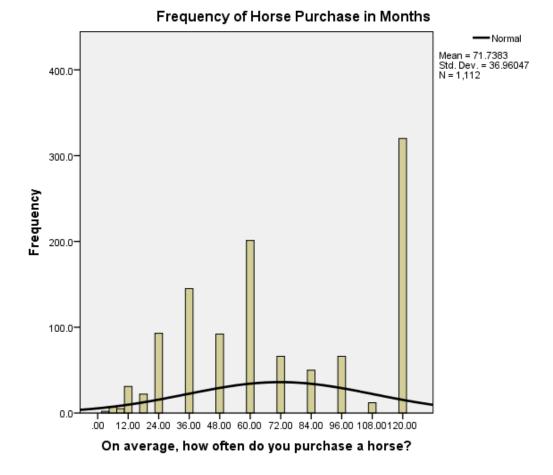
Appendix B Buyers' Locations



Appendix C Buyers' Age Distribution

	Buyer Descriptive Statistics									
Variable	Levels		Ν	Mean / (%)	Std. Deviation	Min	Max			
Discipline	Total		1112							
_	Dressage		260							
	Show Jumping		111							
	Eventing		644							
	Multiple Discipline		97							
Age	Total		1103	36.29	13.765	13	77			
	Dressage		257	43.67	13.89	18	69			
	Show Jumping		110	33.05	11.899	18	71			
	Eventing		640	34.08	13.134	13	77			
	Multiple Discipline		96	35.07	12.705	14	64			
Income	Total		996	\$140,165.66	\$210,309.68	\$5,000	\$5,000,000			
	Dressage		232	\$139,573.28	\$148,824.69	\$15,000	\$2,000,000			
	Show Jumping		99	\$159,717.17	\$499,175.02	\$15,000	\$5,000,000			
	Eventing		575	\$140,587.13	\$145,772.97	\$12,000	\$2,000,000			
	Multiple Discipline		90	\$117,493.33	\$156,928,73	\$5,000	\$1,000,000			
Gender	Total		1111							
		Female	1089	(98.02%)						
		Male	20	(1.80%)						
		Non-binary	2	(0.18%)						
	Dressage	Female	258	(99.61%)						
		Male	1	(0.39%)						
	Show Jumping	Female	110	(99.10%)						
		Male	1	(0.9%)						
	Eventing	Female	627	(97.36%)						
		Male	15	(2.33%)						
		Non-binary	2	(0.31%)						
	Multiple Discipline	Female	94	(96.91%)						
		Male	3	(3.09%)						
Purchase	Total		1112	71.74	36.96					
Frequency	Dressage		260	81.53	36.23					
(in months)	Show Jumping		111	67.49	38.70					
	Eventing		644	68.58	36.39					
	Multiple Discipline		97	71.32	36.55					
Budget	Total		1102	\$12,882.30	\$24,950.12	\$150	\$500,000			
	Dressage		258	\$14,132.57	\$13,688.67	\$150	\$100,000			
	Show Jumping		106	\$24,877.36	\$68,368.57	\$1,000	\$500,000			
	Eventing		642	\$10,912.76	\$13,215.35	\$250	\$200,000			
	Multiple Discipline		96	\$9,448.96	\$12,650.45	\$700	\$75,000			

Appendix D



Appendix E Horse Purchase Frequency (by months)

	Appendix 1	
	<b>Buyer Travel Behavior</b>	
Variable	Levels	Frequency/(%)
Distance Willing to	Less than 50 miles	31 (2.8%)
Travel	51-100 miles	190 (17.1%)
	101-200 miles	266 (23.9%)
	201-300 miles	220 (19.8%)
	301-400 miles	73 (6.6%)
	401-500 miles	103 (9.3%)
	Greater than 500 miles	229 (20.6%)
	(including other countries)	

Appendix F

# Appendix G-1

### **Buyer Channel Preferences**

Media Channels	Mean	Standard Deviation	Min	Max
Horse Advertising Website	3.26	1.170	1	5
Word of Mouth	3.16	1.110	1	5
Facebook	3.08	1.234	1	5
YouTube	2.42	1.177	1	5
Personal Business Website	2.37	1.086	1	5
Flyers	1.96	.924	1	5
Auction	1.37	.638	1	5
Instagram	1.18	.513	1	5
Twitter	1.03	.214	1	4
LinkedIn	1.01	.133	1	3

# Appendix G-2

# Buyer Channel Preferences with Significant Differences Among Disciplines

Channel	Discipline	Mean
Word of Mouth	Multiple Disciplines	2.87
	Dressage	3.12
	Eventing	3.21
	Show Jumping	3.22
Horse	Show Jumping	3.03
Advertising	Eventing	3.22
Website	Multiple Disciplines	3.24
	Dressage	3.50
Auction	Eventing	1.34
	Dressage	1.36
	Show Jumping	1.43
	Multiple Disciplines	1.53

(Likelihood to use Channel: 1-5 scale)

(Likelihood to Condet Die to Information. 1 + searc)							
Media Channels	Mean	Standard Deviation	Min	Max			
Price	3.60	.681	1	4			
Videos	3.49	.734	1	4			
Conformation Pictures	3.24	.808	1	4			
Riding Pictures	3.22	.843	1	4			
Height	3.10	.970	1	4			
Breed	3.04	.943	1	4			
Competition Record	2.65	1.023	1	4			
Bloodlines/Relatives Accomplishments	2.07	.962	1	4			

# Appendix H-1 Buyer Information Preferences (Likelihood to Contact Due to Information: 1-4 scale)

# Appendix H-2

Buyer Information Preferences with Significant Differences Among Disciplines (Likelihood to Contact Due to Information: 1-4 scale)

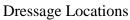
Channel	Discipline	Mean
Competition Records	Multiple Disciplines	2.37
	Eventing	2.64
	Show Jumping	2.68
	Dressage	2.77
Bloodlines/Relatives	Eventing	1.94
Accomplishments	Show Jumping	2.09
	Multiple Disciplines	2.22
	Dressage	2.33

Budget & Information Preference Correlation								
Breed	Price	Videos	Riding	Conformation	Competition	Bloodlines/Relatives		
071**	074**	.060**	Pictures .053*	Pictures 036	Records .147**	Accomplishments .101**		
	Breed	Breed Price	Breed Price Videos	Breed Price Videos Riding Pictures	Breed Price Videos Riding Conformation Pictures Pictures	Breed Price Videos Riding Conformation Competition Pictures Pictures Records		

Appendix I



Appendix J Sellers' Locations All Sellers

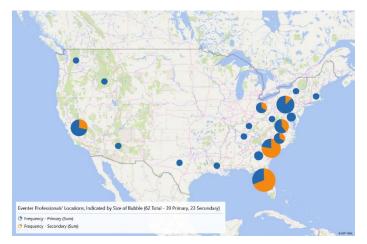




Show Jumper Locations

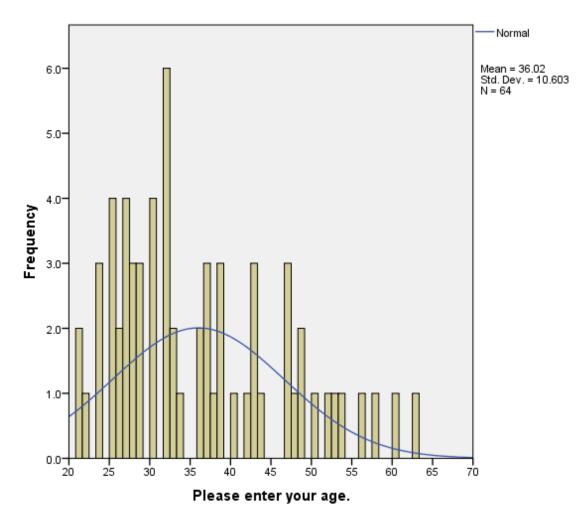


**Eventer Locations** 



				endix K			
		Sell	er Descri	iptive Statistics	5		
Variable			Ν	Mean / (%)	Std. Deviation	Min	Max
Discipline	Total		67				
	Dressage		16				
	Show Jumping		11				
	Eventing		39				
Age	Total		64	36.02	10.603	21	63
0	Dressage		16	37.19	10.728	22	60
	Show Jumping		11	36.33	14.816	21	58
	Eventing		39	35.46	9.687	21	63
Gender	Total		65				
		Female	53	(81.54%)			
		Male	12	(18.46%)			
	Dressage	Female	16	(100%)			
	-	Male	0	(0%)			
	Show Jumping	Female	6	(60%)			
		Male	4	(40%)			
	Eventing	Female	31	(79.49%)			
	-	Male	8	(20.51%)			

Appe	ndix	Κ	
eller Descrij	ptive	Statis	stic
		1.77	



Appendix L Sellers' Age Distribution

25-

20-

15-

10-

5

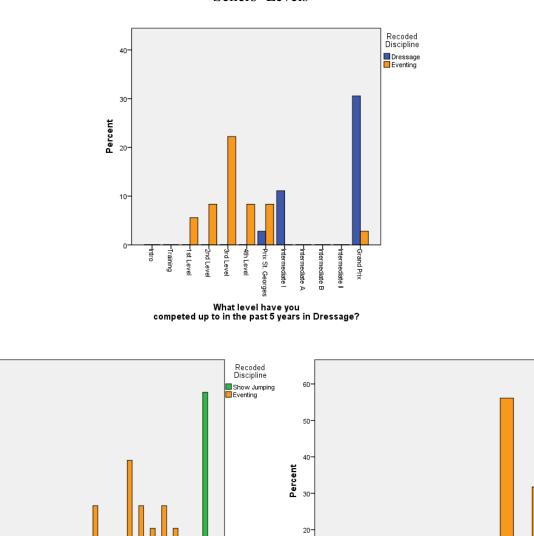
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-0.80 meter -0.75 meter -0.70 meter

1.60 meters/5 1.55 meters/4 1.40 meters/4 1.40 meters/2 1.40 meters/2 1.30 meters/1 1.30 meters/1 1.5 meters/1 1.15 meters/1 1.15 meters/1 1.15 meters/1 1.05 meter 0.05 meter 0.90 meter 0.90 meter

What level have you competed up to in the past 5 years in Show ...

Percent



10-

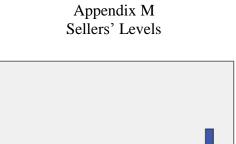
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Beginner Novice Novice

Training Intermediate/2\* Preliminary/1\* Advanced/3\*

What level have you competed up to in the past 5 years in Eventing?

4\*



Recoded Discipline

Dressage

Seller Business Size Demographics							
Variable		Ν	Mean / (%)	Std. Deviation	Min	Max	
Avg. Number of Horses	Total	67	8.70	16.21	0	95	
Owned by Professional	Dressage	16	8.94	23.10	0	95	
in a Year	Show Jumping	11	18.82	25.93	1	85	
	Eventing	40	5.83	5.42	0	25	
Avg. Number of Horses	Total	67	10.75	9.45	1	50	
Competed in a Year	Dressage	16	6.44	4.82	2	20	
	Show Jumping	11	23.27	15.40	5	50	
	Eventing	40	9.03	5.16	1	25	
Avg. Number of	Total	67	19.87	9.80	4	45	
Competitions Attended	Dressage	16	13.38	7.53	5	35	
in a Year	Show Jumping	11	26.18	8.84	12	40	
	Eventing	40	20.73	9.56	4	45	
Avg. Number of Horses	Total	67	3.99	3.50	1	20	
Competed in a Single	Dressage	16	2.81	0.98	1	5	
Competition	Show Jumping	11	9.18	6.34	2	20	
	Eventing	40	3.03	0.95	1	5	
Avg. Number of Horses	Total	67	6.78	10.06	0	50	
Sold in a Year	Dressage	16	4.31	8.38	1	35	
	Show Jumping	11	13.27	14.49	1	40	
	Eventing	40	5.98	8.68	0	50	
Avg. Number of Horses	Total	67	3.68	3.69	1	20	
Up for Sale at Any	Dressage	16	3.25	4.84	1	20	
Given Time	Show Jumping	11	5.81	5.10	1	20	
	Eventing	40	3.26	2.37	1	10	
Avg. Number of Horses	Total	67	4.37	6.20	0	35	
Sourced for Clients in a	Dressage	16	1.44	0.73	0	3	
Year	Show Jumping	11	9.45	9.67	1	30	
	Eventing	40	4.15	5.48	0	35	

Appendix N Seller Business Size Demographics

Sell	ler Channel I	Preferences		
(Likeliho	od to use Ch	annel: 1-5 scale	?)	
Media Channels	Mean	Standard Deviation	Min	Max
Word of Mouth	4.64	.732	1	5
Facebook	4.16	1.136	1	5
YouTube	4.03	1.325	1	5
Personal Business Website	3.52	1.521	1	5
Horse Advertising Website	3.21	1.420	1	5
Flyers	2.21	1.238	1	5
Instagram	1.81	1.258	1	5
Twitter	1.27	.790	1	4
Auction	1.13	.385	1	3
LinkedIn	1.06	.295	1	3

annels	Mean	Standard Deviation	Mi
(Likelihood	l to use Char	nnel: 1-5 scale)	
Seller	Channel Pro	eferences	
	Appendix C	)-1	

Appendix O-2 Seller Channel Preferences with Significant Differences Among Disciplines (*Likelihood to use Channel: 1-5 scale*)

Channel	Discipline	Mean	
Facebook	Show Jumping	2.91	
	Eventing	4.30	
	Dressage	4.69	
YouTube	Eventing	3.80	
	Show Jumping	3.82	
	Dressage	4.75	
Personal Business Website	Show Jumping	2.27	
	Eventing	3.65	
	Dressage	4.06	
Horse Advertising Website	Show Jumping	1.73	
	Eventing	3.40	
	Dressage	3.75	

(Likelihood te	(Likelihood to Include Information: 1-5 scale)				
Media Channels	Mean	Standard Deviation	Min	Max	
Breed	4.88	.370	3	5	
Height	4.75	.682	2	5	
Riding Pictures	4.46	.943	1	5	
Videos	4.43	.783	2	5	
Price	3.88	1.187	1	5	
Competition Record	3.37	1.358	1	5	
Bloodlines/Relatives Accomplishments	3.28	1.265	1	5	
Conformation Pictures	3.22	1.312	1	5	

Appendix P-1 Seller Information Inclusion Preferences (Likelihood to Include Information: 1-5 scale

Appendix P-2 Information Inclusion Preferences with Significant Differences Among Disciplines (Likelihood to Include Information: 1-5 scale)

Channel	Discipline	Mean
Riding Pictures	Show Jumping	3.91
	Dressage	4.50
	Eventing	4.60
Competition Record	Eventing	3.13
	Show Jumping	3.35
	Dressage	4.00
Price	Show Jumping	2.45
	Eventing	4.08
	Dressage	4.38
Videos	Show Jumping	4.18
	Eventing	4.33
	Dressage	4.88

	Seller Ave	rage Pi	rice and Turn	around Times	5	
Variable		N	Mean	Standard Deviation	Min	Max
Avg. Horse Price	<b>Total</b> Eventing	<b>67</b> 39	<b>\$45,856.06</b> \$26,705.13	<b>\$44,682.79</b> \$16,157.82	<b>\$5,000</b> \$5,000	<b>\$300,000</b> \$100,000
	Dressage Show Jumping	16 11	\$60,000.00 \$93.181.82	\$33,065.59 \$78,303.02	\$30,000 \$20,000	\$150,000 \$300,000
Avg. Turnaround Time (in months)	Total	67	4.22	3.057	1	18
	Eventing	40	3.56	2.222	1	12
	Dressage	16	4.53	2.813	2	12
	Show Jumping	11	6.18	4.941	2	18

Appendix Q

Variable	Estimate	Std. Error	Sig.	
Constant	17.481	5.109	.019**	
Facebook	-1.412	.342	.009***	
YouTube	.673	.285	.065*	
Word of Mouth	417	.307	.231	
Personal Business Website	.089	.176	.633	
Instagram	-1.160	.445	.048**	
LinkedIn	3.241	1.298	.055*	
Auction	.827	.326	.052*	
Horse Advertising Website	.170	.254	.533	
Flyers	438	.212	.094*	

Discipline	Statistic	Lessons/Clinics	Selling Horses	Training	Boarding	Other
Dressage	Mean	22.31	23.00	49.38	4.69	0.63
(N = 16)	Std. Dev.	16.43	32.37	27.20	9.39	2.5
Show Jumping	Mean	12.50	35.00	14.50	18.50	14.00
(N = 10)	Std. Dev.	17.20	27.49	12.35	18.11	23.19
Eventing	Mean	33.42	20.82	35.66	9.68	2.18
(N = 39)	Std. Dev.	21.22	20.50	21.75	14.76	11.40
Total	Mean	27.38	23.54	35.78	9.81	3.62
(N = 65)	Std. Dev.	20.85	25.03	24.38	14.64	13.21

Appendix S Seller Revenue Streams By Discipline (in %)