

Spring 2017

Study of Selection Behavior of Wine for Different Markets

Sarah C. Tobias

University of New Hampshire, Durham, scj68@wildcats.unh.edu

Follow this and additional works at: <http://scholars.unh.edu/honors>



Part of the [Hospitality Administration and Management Commons](#), and the [Marketing Commons](#)

Recommended Citation

Tobias, Sarah C., "Study of Selection Behavior of Wine for Different Markets" (2017). *Honors Theses and Capstones*. 348.
<http://scholars.unh.edu/honors/348>

This Senior Honors Thesis is brought to you for free and open access by the Student Scholarship at University of New Hampshire Scholars' Repository. It has been accepted for inclusion in Honors Theses and Capstones by an authorized administrator of University of New Hampshire Scholars' Repository. For more information, please contact nicole.hentz@unh.edu.

STUDY OF SELECTION BEHAVIOR OF WINE FOR DIFFERENT MARKET SEGMENTS

Sarah Tobias

Nelson A. Barber, PhD, Faculty Advisor

Hospitality Management, Peter T. Paul College of Business and Economics

University of New Hampshire, Durham, NH

Spring 2017

**STUDY OF WINE SELECTION BEHAVIOR
FOR DIFFERENT MARKET SEGMENTS**

Table of Contents

Table of Contents	2
Abstract	3
Introduction.....	4
Review of Literature	6
Methodology	10
Results.....	12
Conclusion	16
Limitations	17
Future Research	19
References.....	20
Appendix A – Measurement Items	23

Abstract

Purpose – To identify the attributes that are most important to consumer's selection of new wine, depending on consumers' age, gender, income, subjective knowledge and objective knowledge of wine. This will help wine marketers improve their marketing efforts to target the right segment of consumers.

Design/Methodology – An online survey was administered through Amazon Mechanical Turk with open-ended, multiple choice, five-point Likert-type scale, and ranking questions. A total of 80 respondents completed the survey that all correctly answered the attention check question to ensure reliable results.

Findings – Results showed that variety was significant between gender, and brand loyalty was significant between gender and generation as males and GenX were more loyal. Also, vintage was more important in new wine selection depending on the subjective wine knowledge of consumers, and price was more important depending on the subjective and objective knowledge of consumers. Both those with higher subjective and objective knowledge found price more significant.

Research Limitations – The respondents on Amazon Mechanical Turk may not represent the general wine consumer across every market, and therefore results may not be generalizable. The attitudes acknowledged in the survey may also not be representative of actual wine selection as the correlation between attitudes and behavior is weak. Future research projects could include: analyzing actual purchase data of wine, and studying specifically United States wine consumers.

Introduction

The wine industry has undoubtedly experienced significant growth within the past decade and is continuing to increase today. Not only are consumers purchasing more wine than before, but also more consumers are purchasing wine. As the demand for this industry has increased, the supply has also increased in response. Many new wineries and new products are being introduced to the market each year creating higher competition. This is leading to a more diverse market in an already fragmented industry. Therefore, growth in interest and increase in products calls for greater marketing efforts from wineries, specifically in the United States (Hussain, Cholette, & Castaldi, 2007).

Historically, many U.S. wineries did not put consumers at the starting point of their marketing plans and activities as they entered the business for their lifestyle, product, or production (Hussain et al., 2007). Instead, wineries need to redirect their focus around their consumer's needs to stay profitable. As noted in a research study, wineries are in dire need of understanding and connecting with their American consumers (Lockshin & Corsi, 2012). Many wine producers lost their marketing focus toward consumers or are uncertain who their target consumer is; thus at this point in the industry it is critical given the scope of product offerings and competitive conditions. In fact, the market share of U.S. wineries is eroding even faster with increased competition from foreign wines (Hussain et al., 2007). In order to stay competitive in the market today, marketers must redesign their marketing strategies specifically around their target consumers.

Although marketing strategies consist of a wide range of activities, a well-defined target marketing strategy is key to a successful marketing program (Barber, Almanza, &

Donovan, 2006). However, in order to properly target the right consumers and connect with them, marketers must first segment the market.

Typically, market segmentation divides the market into groups based on demographic, geographic, psychographic, and behavioral traits (Kotler, Bowen, & Makens, 2014). Often times consumers with related traits will tend to have similar buying behaviors allowing marketers to target specific groups of consumers. In the wine industry, there has been many studies on market segmentation and their consumption and buying behavior (Lockshin & Corsi, 2012). Many of these studies have shown typical market segmentation is significant to consumer behavior in the wine industry, but these seems to be certain characteristics that are more significant than others.

With wine product offerings continuing to change, as well as wine consumer demographics [e.g. Millennials are now entering the wine market at a faster pace and are quite diverse], it is necessary for marketers to consistently research and examine these trends. This study will expand upon previous research of wine consumers in different markets by focusing on their selection of new and unknown wine products, since the growth of the industry has led to the release of many new and different products. The market will be segmented according to the factors that are found to be the most significant from previous literature. The study may be helpful for wine producers and marketing professionals to better understand these relationships. This will allow wineries, specifically in the United States, to formulate a better marketing strategy specifically to match their product offerings with their target customer's needs. By doing so, companies can enhance their customer relationship management to ensure more loyal customers and greater profits for the long term.

Review of Literature

Market Segmentation

Several studies have examined the impact of market segmentation on the factors of the marketing mix in the wine industry. There have been many statically significant correlations found between segments and their buying behavior that varies across studies. To begin with, in terms of demographics the differences between these traits are found to be most important when distinguishing new versus long term buyers (Lockshin & Corsi, 2012). This becomes very relevant for studying a new wine product since significant results may be seen for this product. Additionally, these results may help predict a long term buyer, who would be a loyal consumer. Specifically, in this segment the age of the consumer has been shown to have an effect on their consumption behavior (Hussain et al., 2007). In fact, a review of all wine consumer behavior studies from 2003 to 2013, show that Generation Y are more likely to be wine consumers than Generation X (Lockshin & Corsi, 2012). This emphasis the need for marketing strategies aimed at this generation since their demand may be higher. Typically, younger drinkers find the price and region or origin of wine as more important product attributes (Riviezzo, De Nisco, & Garofano, 2011). They also tend to be attracted to more innovative and distinctive product labels (Lockshin, Jarvis, d'Hauteville, & Perrouty, 2006). Yet as age increases, consumers are more likely to be loyal to specific brands (Riviezzo et al., 2011). Overall though, few people stay exclusive to brands over a long period of time (Lockshin et al., 2006).

Another demographic trait that is frequently used in predicting wine buying behavior is the income level of consumers (Lockshin et al., 2006). This may be a good

forecaster of the quality levels or price points that wine consumers are looking for since income often affects the purchasing power of the consumer. In fact, in a study of the determinants of wine consumption with U.S. consumers, income was found to be positively related to wine consumption (Hussain et al., 2007). Generally, as the income levels of consumers increased, the price of the wine bottles these consumers purchased increased as well. This may mean consumers with higher income levels may not be as price sensitive or consider it an important selection factor in new wines.

Beyond demographic segmentation which is used in many markets, behavioral segmentation is highly valued in the wine market as these traits have shown to be the most significant. Foremost, the knowledge of a consumer has been found to be the most important determinant in wine consumption, which significantly affects purchase behavior as well (Hussain et al., 2007). The knowledge of a wine consumer consists of both subjective knowledge and objective knowledge (Robson, Plangger, Campbell, & Pitt, 2014). Where subjective knowledge is based upon the consumer's self-perceived knowledge and self-confidence, and objective knowledge is what a consumer actually knows (Barber et al., 2006). There is typically a positive link between these two degrees of knowledge as a more educated consumer generally has a higher level of confidence too. However, those with lower subjective knowledge tend to prefer labels with modern colors, but classic information (Lockshin & Corsi, 2012). Additionally, those with lower subjective knowledge do not find the region of wine as important as those with higher subjective knowledge, according to an online study from U.S. respondents (Robson et al., 2014). In terms of objective knowledge, those who are more knowledgeable generally value branding of wine more and usually show higher brand loyalty. These consumers

also tend to look at specialist media like Wine Spectator and Decantor, which are professional reviews for making wine selections (Robson et al., 2014). On the other hand, consumers with lower objective knowledge typically use more television advertisements with simple messages to make their wine selections (Robson et al., 2014). They also pay more attention to awards or medals that wines have previously won, as these can help show quality wine to these consumers (Robson et al., 2014). It is evident from these previous studies that promotional material is used and valued differently across consumers with varying objective and subjective wine knowledge levels. This is one valuable way in which to segment wine consumers on a behavioral basis since studies have shown significant differences in their buying behaviors.

Additionally, usage frequency is another common part of behavioral segmentation that is relevant in the wine market (Kotler et al., 2014). In past studies, consumption frequency of wine has been divided between regular drinkers who drink wine daily or multiple times a week, occasional drinkers who drink wine once a week or 2-3 times a month, potential drinkers who drink wine 2-3 times a quarter or 2-3 times a year, nondrinkers and exdrinkers (Thach & Chang, 2015). These differences in drinking experience are highly important in determining consumer behavior, and also relate to consumer knowledge levels (Essays, 2015). A study of three segments with different consumption frequency of Spanish wine drinkers showed that higher consumption frequency was related to higher knowledge levels (Martínez, Mollá-Bauzá, Gomis, & Poveda, 2006). This relation could suggest that the important factors for highly knowledgeable wine consumers are similar to high consumption frequency wine consumers too. For instance, the attitude of brand loyalty is both higher with

knowledgeable consumers and consistent drinkers (Riviezzo et al., 2011). Also, these consumers are more likely to purchase their wines at small, local wineries versus supermarkets or general liquor stores (Robson et al., 2014). This trend is important for marketers as it shows the best places to distribute wine products for this segment. Marketers can also make their product attractive to this segment by highlighting the product attributes that are most important for these consumers. There have been significant results that show that high frequency wine consumers do not value the designation of origin as much as lower frequency wine consumers (Martínez et al., 2006). The attitude towards price also changes as the higher consumption frequency is, the lower relative price importance is (Martínez et al., 2006). However, these conclusions were made from a study of Spanish wine consumers, who could exhibit different buying behavior than consumers in another geographic or demographic market segment. Yet these studies still show how consumption frequency impacts wine selection, which makes this market segmentation important for marketers. Overall, the differences between these consumer segments show how wine marketing strategies should be adjusted to appropriately target the right consumer segments.

Research Questions

Through the conclusions researched from many wine consumer segmentation studies, it is evident that significant results can be found which are valuable to marketers. This research study will examine consumers in the United States specifically, while focusing on their selection behavior for new wine products. The study is aimed at answering the following two questions:

1. How does wine consumer segmentation of age, income, subjective knowledge, and objective knowledge impact the selection of new wine?
2. How does wine consumer segmentation of age, income, subjective knowledge, and objective knowledge impact loyalty?

Methodology

Data Collection Method

A survey was created using Qualtric.com and posted on the Amazon Mechanical Turk website (MTurk) for respondents to complete.

MTurk is an online survey system operated by Amazon.com that connects potential participants around the world with tasks. Researchers suggested that MTurk provides a valuable opportunity for data collection and it was concluded that MTurk participants generate reliable results consistent with standard decision-making biases (i.e. present biased, risk-averse for gains, risk-seeking for losses, show delay/expedite asymmetries, and show the certainty effect) (Goodman, Cryder, & Cheema, 2013). Other researchers also discussed the feasibility of using MTurk to recruit participants in social science and the general conclusion is that MTurk respondents are not skewed as compared to the U.S. population characteristics (Paolacci, Chandler, & Ipeirotis, 2010).

The participants for this survey were required to be of legal drinking age in their jurisdiction, and actively consume or purchase wine. MTurk workers completed the posted survey upon their consent. Upon submission of each participant's survey, the responses were approved and those that were significantly incomplete or negligible were omitted. The negligible responses included those that incorrectly answered an attention

check question, which was included to ensure reliability of the resulting data and that the respondents were not computerized. The approved survey participants were compensated US\$3.00 for their work through MTurk. In total, eighty approved participants completed the survey.

The questionnaire consisted of multiple choice questions, open-ended questions, five point Likert-type scale questions, and ranking questions [see Appendix A]. The survey assessed socio-demographic characteristics including age, gender, and income level, behavior characteristics including knowledge level and frequency of use, and lastly psychographic information including opinions and motives towards wine selection. The subjective and objective knowledge questions were based off a study by Robson *et al.* (2014), where subjective wine knowledge was first assessed from five questions on a scale, and then objective wine knowledge was assessed from four multiple choice questions, with varying levels of difficulty. This format was designed to question the consumer's subjective knowledge prior to their objective knowledge since respondents were better able to judge their own level of knowledge following completion of objective knowledge questions (Robson et al., 2014). The psychographic questions included a scale question on brand loyalty and then a ranking question on the most influential attributes on selecting a new wine. The attributes that respondents ranked were price, brand, label, region, their knowledge of the product, vintage, variety, and reviews, and each of these received a different score depending on how influential it was for consumers. These questions were constructed to answer the research questions, and provide potential areas for future research as well. They may confirm the results of the studies discussed in the literature review, or provide new data for wine marketers to consider.

Results

Data Analysis

Frequencies and percentages of age, gender and income were determined using SPSS (release 21). t tests and MANOVA were employed to analyze wine drinkers' preferences, age, gender, income and level of knowledge. Statistically significant results were found while analyzing these variables in different ways.

Respondents Overview

In total, there were 80 respondents that completed the online survey posted on MTurk. However, given the low respondent numbers for baby boomer, six in total (those 55 to 59 years of age), they were removed from the sample size for further analysis. Therefore, the analyzed respondents were millennials who are 21 to 35 years of age and generation X who are 36 to 54 years of age. Out of the respondents, there were 45 Millennials and 29 GenX. In terms of gender, there were 48 male respondents (64.9%) and 26 female respondents (35.1%), so there was a greater number of male respondents. The last demographic analyzed in this research study was income and that was segmented based on the mean of the respondents within 1 or 2 standards deviations. There were 8 respondents that made less than \$16,500, 43 respondents that made between \$16,501 and \$55,800, 14 respondents that made between \$55,801 and \$95,000 and 9 respondents that made over \$95,001. The distribution of the responds shows slightly lower income than the income distribution across the United States as the average income is around \$56,516, and the average of the survey respondents was \$55,787 (United States Census Bureau, 2016).

After segmenting income, the subjective knowledge of the respondents was segmented based on the scores of responses from five-point Likert scale questions. The mean score of responses was 3 which equates to respondents feeling neutral about their confidence in wine knowledge. The respondents scoring less than one standard deviation from the mean were defined as those with low subjective wine knowledge, and the respondents scoring greater than one standard deviation from the mean were defined as those with high subjective wine knowledge. In total, there were 13 respondents with low subjective wine knowledge, 41 with moderate subjective wine knowledge and 20 with high subjective wine knowledge. This shows how respondents were generally confident in their level of wine knowledge. Following this, respondents were segmented by their objective wine knowledge based off their answers from four questions. The respondents that answered no questions correctly were considered unknowledgeable, 1 question correctly were novice, 2 questions correctly were intermediate, 3 questions correctly were advanced, and 4 questions correctly were expert. Following this segmentation, 5 respondents were unknowledgeable, 30 were novice, 23 were intermediate, 13 were advanced, and 3 were expert. Therefore, the average respondent was around a novice or intermediate level of objective wine knowledge as found true in other wine related studies (Robson et al., 2014).

The respondents were also grouped by usage frequency as this trait is important to help determine wine buying behavior. There were 16 regular drinkers which are classified as drinking wine 2-3 times a week or more, 43 occasional drinkers which are classified as drinking wine 2-3 times a month or more, and 15 potential drinkers which are classified as drinking wine 2-3 times a year or more (Thach & Chang, 2015).

Therefore, most respondents of this survey enjoy wine fairly frequently and may represent an average wine consumer in terms of their selection behavior.

To analyze the attributes most important in consumer's wine selection, the scores of each attribute were calculated and compared. The specific attributes measured in this research study included: price, brand, label, region, your knowledge of product, vintage, variety, and reviews of product. Each attribute received a rating between 1 which equated to least important and 8 which equated to most important. Overall, vintage and label had the highest mean scores of 5.4, followed by reviews at 5.0 which shows these are the three most important attributes regardless of any demographic characteristics. Whereas the least important attributes include price with a score of 2.5, then loyalty with a score of 3.0 and brand with a score of 4.1. The following table shows the mean scores overall and mean scores between different groups:

Table 1. Descriptive characteristics of participants [n=74]

Characteristic ²	Overall Mean	Gender		Generational Groups		Subjective Knowledge			Objective Knowledge			
		Male	Female	Millennials	GenX	Low	Moderate	High	Novice	Intermediate	Advanced	Expert
Vintage	5.4	5.9	5.2	5.4	5.5	5.5*	5.8*	4.7*	5.7	5.6	4.7	3.7
Label	5.4	5.3	5.4	5.2	5.7	5.7	5.5	4.9	5.3	5.4	5.8	6.0
Reviews	5.0	4.9	5.2	4.9	5.3	4.1	5.3	5.0	4.6	5.7	5.3	3.7
Region	4.9	4.9	5.1	5.3	4.4	4.7	4.9	5.3	5.3	5.1	4.1	4.0
Variety	4.2	4.6*	3.5*	4.4	3.9	5.1	3.9	4.4	4.3	3.6	3.8	5.7
Brand	4.1	4.1	4.1	4.2	3.9	4.3	4.2	3.7	4.1	4.0	4.5	3.3
Loyal ¹	3.0	3.7*	2.7*	2.6*	3.6*	2.9	2.9	3.2	2.7	3.1	3.1	3.7
Price	2.5	2.5	2.4	2.3	2.7	1.8*	2.1*	3.4*	2.1*	2.3*	2.8*	5.3*

* MANOVA p<.05; ¹ measured on an 5-point bi-polar scale; ² measured on an 8-point bi-polar scale.

Significant Data

As noted in Table 1, there were statistically significant results for characteristics among certain respondent groups. For instance, males find the variety significantly more important in the selection of a new wine than females [RQ1] and are also significantly more loyal to wine brands than females [RQ2]. There was also a significant difference with loyalty to wine brands in the generational groups. GenX (mean of 3.6) was found to be more loyal than Millennials (mean of 2.6) to wine brands [RQ2], but this was the only significant difference amongst generational groups.

In terms of levels of subjective knowledge, those with moderate knowledge find vintage to be significantly more important in the selection of a new wine than those with high or low knowledge [RQ1]. However, those with high subjective knowledge find price significantly more important (mean of 3.4) than those with low or moderate knowledge [RQ1]. There was also significance found with price for consumers with different levels of objective knowledge. Those who were found to have expert objective wine knowledge

find price significantly more important in their selection of new wine (mean of 5.3) than those who have novice, intermediate, or advanced objective wine knowledge [RQ1].

Therefore, pricing a new wine is particularly important especially if you are targeting wine connoisseurs or those who feel they are a connoisseur.

Interaction Effect

The interaction effect was only significant between age group and objective knowledge. The data was statistically significant between these groups on the dependent variables vintage [RQ1], with GenX with advanced knowledge [M = 3.5] stated vintage more important than Millennials and advanced knowledge, while GenX and expert knowledge [M = 7.0] were more loyal to a brand than Millennials with expert knowledge [RQ2], $p < .05$.

Conclusion

The results of this study suggests market segmentation in the wine industry is important in determining wine selection behavior of consumers. There were statistically significant results found amongst different respondent groups in terms of wine characteristics they found most important. Some of the results were supported by previous research studies, while others identified new findings for wine consumer segmentation.

For instance, the data of this research study showed that males believe variety was more important than females for selecting new wine which is similar to the results found by Barber in a study of wine consumers in Connecticut where males reported that they preferred to know about the grape type more significantly than females. Additionally, the trend that brand loyalty increases with age that was discussed in the literature review was

also found true in this study (Riviezzo et al., 2011). However, the significant data found amongst the segments in objective and subjective wine knowledge was not reported in any of the reviewed literature. The attribute of price was found to be more important for both higher objective and subjective knowledge consumers. Yet many of the differences discovered in previous studies in these segments was not found statistically significant in this research study. Therefore, research should continue in the objective and subjective knowledge of wine consumers since there appears to be many differences across many studies. This shows how this segmentation is very complex, but important in predicting wine selection. On the other hand, the segmentation with income and consumption frequency shows little differences which may mean these segmentations are not as influential.

Overall, this research study shows how consumer segmentation in the wine market can be very complex as each study can produce different results. There may be additional influences and factors that affect consumers wine selection decision, and these can be hard to fully understand. Even though wine marketing research can be complex, it is necessary that wine marketers continue their research to be able to formulate the best marketing strategy. With competition increasing especially in the United States, it is necessary that each company has an appropriate marketing technique. This technique will be best when marketers can understand their targeted consumers and specifically their preferences in wine selection.

Limitations

Although there was statistically significant data found from this research study, there were also limitations that should be noted.

First, the results may have been slightly biased by using Amazon Mechanical Turk as the method of data collection. While the samples of respondents from this system are not wildly inaccurate, general conclusions have shown that it does not perfectly match characteristics of the population either (Robson et al., 2014). This means that the results from this study should not be generalizable, especially when looking at markets outside of the United States. MTurk also poses issues with the attention of respondents as the reliability may not be accurate (Robson et al., 2014). Even though an attention check question was assessed, the respondent may have not been attentive at other points in the survey.

Another area of limitation is with the scope of characteristics measured. Since wine selection and buying behavior is very complex it can often be too large of an experiment to be practical (Lockshin et al., 2006). Respondents may have been overwhelmed at times during the survey, which may have caused biased results of certain attributes. They may have also been confounded due to the halo effect which is defined as the tendency to allow an estimation of one characteristic to influence the estimation of another characteristic (Spear, 1996). Since many characteristics were assessed in this study, certain responses may have been affected by this effect.

Additionally, the attitudes and opinions measured in the online survey may not be entirely accurate as there some restrictions to gaging attitude. It has been acknowledged in literature that attitudinal measures often tend to provide biased estimates of true preferences, as consumers tend to overstate the importance of product characteristics (Lockshin et al., 2012). Therefore, some attributes may have been concluded to be more influential than they actually are for consumers. Also, these direct survey responses were

not able to measure subconscious influences which may have impacted the results (Lockshin et al., 2012). These attitudes may also not be representative of the actions of these wine consumers as there is a weak correlation between attitudes and behaviors (Lockshin et al., 2006). This means that markets will not be able to entirely predict consumer behavior solely from acknowledged attitudes, so they should further study actual purchase data to improve their strategic marketing plans.

Future Research

As mentioned above, future research can include researching actual purchase data of new wine products as this will not include biases from attitudes. From these statistics, marketers can then segment the buyers to determine which market segments are most commonly purchasing their products.

Besides this, there also seems to be a lack of studies of United States wine consumers (Hussain et al., 2007). Although this study focused on this market, there should be further studies on solely this market as well to further analyze wine selection behavior. This geographic segment is certainly important to study further as the wine industry has seen a lot of growth in the United States. Thus, this is a good market for new wine products to enter, but they must formulate the right marketing strategy to target this segment.

References

- Barber, N., Almanza, B. A., & Donovan, J. R. (2006). Motivational factors of gender, income and age on selecting a bottle of wine. *International Journal of wine marketing, 18*(3), 218-232.
- Essays, UK. (2015, March 23). Market Segmentation In The Wine Industry Marketing Essay. Retrieved from <https://www.ukessays.com/essays/marketing/market-segmentation-in-the-wine-industry-marketing-essay.php?cref=1>
- Geraghty, S., & Torres, A. M. (2009). The Irish wine market: a market segmentation study. *International Journal of Wine Business Research, 21*(2), 143-154.
- Goodman, J. K., Cryder, C. E., & Cheema, A. (2013). Data collection in a flat world: The strengths and weaknesses of Mechanical Turk samples. *Journal of Behavioral Decision Making, 26*(3), 213-224.
- Goodman, S. (2009). An international comparison of retail consumer wine choice. *International Journal of Wine Business Research, 21*(1), 41-49.
- Hussain, M., Cholette, S., & Castaldi, R. (2007). Determinants of wine consumption of US consumers: an econometric analysis. *International Journal of Wine Business Research, 19*(1), 49-62.
- Kotler, P., Bowen, J. T., & Makens, J. (2014). *Marketing for Hospitality and Tourism* (6th ed.). New York, NY: Pearson Education.
- Lockshin, L., & Corsi, A. M. (2012). Consumer behaviour for wine 2.0: A review since 2003 and future directions. *Wine Economics and Policy, 1*(1), 2-23.

Lockshin, L., & Hall, J. (2003). *Consumer purchasing behaviour for wine: what we know and where we are going* (Doctoral dissertation, University of South Australia, Wine Marketing Research Group).

Lockshin, L., Jarvis, W., d'Hauteville, F., & Perrouty, J.-P. (2006). Using simulations from discrete choice experiments to measure consumer sensitivity to brand, region, price, and awards in wine choice. *Food Quality and Preference*, 17(3), 166–178.

Martínez, L. M. C., Mollá-Bauzá, M. B., Gomis, F. J. D. C., & Poveda, Á. M. (2006). Influence of purchase place and consumption frequency over quality wine preferences. *Food Quality and Preference*, 17(5), 315-327.

Paolacci, G., Chandler, J., & Ipeirotis, P. G. (2010). Running experiments on amazon mechanical turk.

Riviezzo, A., De Nisco, A., & Garofano, A. (2011, June). Understanding wine purchase and consumption behavior: A market segmentation proposal. In *6th AWBR International Conference, June*.

Robson, K., Plangger, K. A., Campbell, C. L., & Pitt, L. F. (2014, June). Objective and subjective wine knowledge: evidence from an online study. In *Proceedings of the 8th international conference of the academy of wine business research*.

Spear, J. (1996). Halo Effect. *American Educational Research Journal*, 19, 519-528.

Thach, L. & Chang, K. (2015). 2015 Survey of American Wine Consumer Preferences. *Wine Business Institute*. Retrieved from

<https://www.winebusiness.com/news/?dataid=160722&go=getArticle>

Honors Thesis

United States Census Bureau. (2016). *Income and Poverty in the United States: 2015*.

Retrieved from <https://www.census.gov/library/publications/2016/demo/p60-256.html>.

Appendix A – Measurement Items

Measurement	Scale
<p>Indicate how important the following factors are to your wine selection process:</p> <ul style="list-style-type: none"> • Price • Brand • Label • Region • Vintage • Variety • Wine Reviews 	<p>Least important to Most Important</p>
<p>Subjective Knowledge Questions: Indicate how strongly you agree with the following statements:</p> <ul style="list-style-type: none"> • I don't understand much about wine.^R • I am confident in my knowledge of wine. • Among my friends, I am the wine expert. • I know less about wine than others do.^R • I am very knowledgeable of the wine products I buy. 	<p>Strongly disagree to Strongly agree</p>
<p>Objective Knowledge questions:</p> <ul style="list-style-type: none"> • Which of the following is a red wine? • Which grapes are never used to make Champagne? • Which is not a famous French wine region? • A peppery character is most associated with which wine? 	<p>Right or wrong response</p>
<p>How frequently do you typically drink wine?</p> <ul style="list-style-type: none"> • Once a week • 2-3 times a week • 2-3 times a month • 2-3 times a quarter • Never 	
<p>How loyal are you to wine brands?</p>	<p>Not at all Loyal to Extremely Loyal</p>