

THE RELATIONSHIP OF WINE PRICES AND THE QUALITATIVE AESTHETICS OF
WINE LABELS

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by
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Abstract

This study was undertaken to determine the relationship between price and various wine label design elements. These variables included golden mean, uniform font, proportion of yellow and orange, direction, realistic, abstract, winery/grape image, winery emblem, font type changes, font size changes, horizontal label, vertical label, Sonoma, and Napa. The researcher wanted to determine whether specific combinations of color and images on wine labels reflect greater aesthetic content and relate to their recommended price.

Fifty wine labels were randomly selected from a given sample and several researchers evaluated each label looking specifically at the design elements listed above. A regression analysis was performed to determine if there was an overall relationship between price and all of the variables. The regression analysis also determined whether there was a relationship between price and each individual variable. An F-test and t-test were performed in order to evaluate these relationships.

The results of the study showed there was a substantiated relationship between price and the art-design variables as a set, and there was a statistical relationship between price and specific label design elements. This relationship was evident between price and direction, price and winery emblem, and price and Napa. The findings of this study are useful for consumers to determine what types of wine label aesthetics reflect a higher price.

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Chapter 1

INTRODUCTION

The wine industry has expanded throughout the world producing a variety of products consumed by millions of individuals. Over half of the United States population is consuming wine compared to less than half several years ago. Rather than simply being reserved for strictly people over the age of forty, individuals in their twenty's and thirty's are starting to discover the qualities of wine. Wine is a pleasant stimulant of our senses that appeals to individuals throughout the world.

California is the top producer of wine in the United States, contributing about eighty-five percent of the total wine market to the United States. In addition, the United States produces a large percentage of wine that is exported to other countries (Hodgen 2008). The wine industry has seen both its ups and downs, but overall the industry has become more competitive as consumers demand various types of wine.

The first thing consumers notice when purchasing a bottle of wine is the label. Labels are an important source of information that tell the type and origin of the wine. It is often the only resource individuals have in deciding whether to purchase a bottle of wine. The type of information included on the label is important in determining the quality of wine. Items such as country of origin, variety, alcohol content, producer, bottler, and quality can provide the consumer with a great deal of knowledge (Thomas and Pickering 2003). Various wineries put a different emphasis on the importance of labels. Certain labels are sophisticated and simple while

others use lots of colors and intricate designs. The label is a focal point that needs to trigger the consumer to pick up the bottle of wine (Boudreaux and Palmer 2007).

There are a number of characteristics that set wine labels apart from others including color, shape, graphics, and design. These aspects will often influence the consumer's purchasing decision. In addition, it is interesting to notice the price relationship involved with labels based on layout, imagery, and color. The purpose of packaging is to communicate the appropriate information to trigger a purchase response about that bottle of wine to consumers. Some feel one way to differentiate a brand is to understand the marketing behind wine labels.

The label should convey a message to consumers. It should also tell a story about the type and quality of wine in the bottle. Image is one attribute that has the strongest effect on market success (Cutler 2006). Graphics such as drawings and pictures can be direct representations that provide a clue to the nature of the wine. Label colors are another quality that catches a consumer's eye. Warmer tones such as burgundy and neutrals are normally seen as successful, desirable, and expensive. On the other hand, brighter colors such as red, orange, or green have been interpreted as exciting, fun, and imaginative (Boudreaux and Palmer 2007). Certain labels are more traditional with a simple layout while others are more contemporary with a sporadic layout. Everything from word placement to the type font and design used on the label may affect consumer perceptions. Wine marketing is an important tool used to distinguish wine labels. The use of color, shape, and design attract consumers and in turn effects their purchasing decision.

Problem Statement

What is the relationship between wine price and qualitative aesthetics such as color and design of wine labels?

Hypothesis

There will be no specific combinations of color and images that reflect greater aesthetic content, which will also relate to their recommended price.

Objectives

1. To assess design elements present in a randomly selected set of wine labels by desirable ratings.
2. To determine the relationship between price and wine label aesthetics.

Justification

Overall, California holds a large portion of the wine industry, producing numerous varietal wine offerings consumed throughout the United States. There are approximately 2,843 wineries in California. The Central Coast plays a large role in wine production with 90,300 acres planted with wine grapes on about four million acres in the region. This region produces almost 15 percent of California's total wine grape production with three hundred sixty wineries residing on the coast (Wine Institute 2009). The Coastal areas of California are prosperous regions due to their proximity to the Pacific Ocean and the diversity of soils and topography. California and the central coast produce the majority of wine that is consumed throughout the United States.

Wine labels are often the first thing consumers observe when deciding which wine to purchase. There are over 60,000 wine labels registered in California and a large portion of those

are from the central coast (Wine Taster 2005). Often the aesthetics of these wine labels such as color or design can persuade the consumer to purchase the bottle of wine. Various elements are included on the wine label such as the brand, vintage data, appellation of origin, American viticulture area, varietal, etc. (Wine Taster 2005). These elements allow consumers to distinguish the wine from competitors. Rather than consumers reducing their consumption of wine due to the current economic situation, they are beginning to switch to lower cost brands. There has been a decrease in the sale of expensive brands while cheaper wines are selling at a higher rate. Based on this it is clear the economy has a large impact on the wine industry.

Chapter 2

LITERATURE REVIEW

Label Design

The shape of the bottle and the use of colors and images in wine labels attract the attention of potential purchasers and distinguish one specific wine bottle from competitors. Jennings and Wood (1994) suggested that by utilizing design principles, wineries can provide a better consumer understanding and allow a match with consumer tastes and preferences. They feel labels are the main product recognition factors with unique shapes, colors, and positions. Traditionally, old world wines tend to be more classic and restricted in design variation. On the other hand, new world producers use bolder colors, exotic shapes, and various sizes in order to create a distinctive look that reflects the wine inside. Design is an effective marketing tool, and in order to create value for the consumer it is important to be involved in all aspects of the process including wine production and label design (Jennings and Wood 1994).

Product packaging is the aesthetic means of communicating to people from different backgrounds, interests, and experiences. Package design is an important issue for marketers because a large number of purchase decisions are made at the point of sale. In order to stand out from the competition, the packaging design must visually attract and stimulate interest from the consumer in the blink of an eye. Rettie and Brewer (2000) conducted a study on the verbal and visual components of package design by examining brain laterality. They found the design and

layout of information affects the way consumers absorb and retain information. The left side of the brain generally absorbs visual information, while the right side absorbs verbal information. This enables producers to create a better design in order to convey the appropriate message and make the right impact on the target market.

Color and Aesthetics

Colors and shapes have meaning and are a fundamental tool in marketing. Color can be an identifier of the brand when it is consistently used on the packaging design. Klimchuk and Krasovec (2006) did extensive research on how product packaging graphics communicate to consumers through the use of color. One of the first things humans notice when they look at an object is its color. Colors are communicated psychologically and cause the consumer to create a mental association. In packaging design, red is commonly used as an attention grabber and orange is associated with warmth, energy, and enthusiasm. Yellow is the most stimulating of the spectrum and can be linked to life, sun, idealism, energy, and playfulness, while green has a calming effect conveying relaxation and peacefulness. Blue is often linked to confidence, strength, and trust. Black on the other hand, can create depth and shows strength and clarity; white communicates purity, freshness, and innocence. Color schemes are an important component in label design. Schemes that are complementary or contrasting, analogous or monochromatic or dominant or recessive can help distinguish a product.

De Mello and Pires Goncalves de Borbobia (2009) did an experiment using data from Spain to explore preferences for selected color and shape combinations in label design. The study proposed the more colorful the label, the stronger its effect on quality and willingness to purchase. Some combinations such as brown, yellow, black, and green in labels that feature

rectangular or hexagonal patterns were very effective. This work shows that color may signal a product's attributes and influences consumer perception.

Consumers have developed a range of color associations for various products. According to Grossman and Wisenblit (1999), color associations can be learned due to physiological responses to color or cultural implications. Colors have value for consumers and often depend on the specific product. Meanings of color are created by marketers when they combine certain colors and images in advertising to represent the brand. The use of color enables products to be differentiated from competitors.

Interestingly enough, colors can be linked to health and culture. From cross-cultural studies it has been found that certain colors can evoke different reactions due to cultural beliefs. Furthermore, colors can affect emotions. Singh (2006) discussed these issues and concluded that colors such as yellow and orange are happy colors while red, black, and brown are sad colors. There are associations between colors and restaurants, colors and waiting times, colors and brands, and colors and trends. Singh (2006) emphasized that packaging can dramatically affect sales, and in order to have a positive impact on consumers, choices should be based on the target audience. Color is an important marketing variable because it can control image standardization. It is not only a brand identifier, but also conveys the quality and price of the bottle.

In addition to color, according to Klimchuk and Krasovec (2006) images are an effective design tool that makes a strong visual impression. Before reading the text on labels, consumer's eyes notice the color and image. The image can be direct in communicating the brand personality and product attributes. There are a number of styles such as illustrations, photographs, symbols, and characters that convey a visual language. It is crucial for people such

as wine producers to explore different design strategies using color and images in order to visually identify their product. In packaging, imagery can be used to depict the target market, set a mood, provide credibility or appeal to the appetite.

Brand Personality

Not only does branding identify a product, but it creates perceptions on the quality, reliability, and value of a product. Boudreaux and Palmer (2007) conducted a study to examine the impact of brand personality and purchase intent based on three wine label design elements: image, color, and layout. In order to conduct this study, ninety fictitious labels were collected using all combinations of three layouts, six colors, and five illustration subjects. The six colors selected were burgundy, navy, bright red/orange, “neutral”, green, and pink. The layouts consisted of one traditional with an unprinted white background, one with a solid color background, and a modern design with a half unprinted, half solid color background.

Boudreaux and Palmer (2007) concluded that image had the strongest effect on market success and brand personality. Images function as representations that provide meaning. Grape and vineyard images were the most successful, while the modern labels depicted by unusual graphics received the lowest scores. In addition to images, color played a major role in the study. They suggested that those colors that are desirable be used boldly, while undesirable colors should be used as accents such as yellow. The warmer colors such as burgundy and neutrals were seen as more successful, desirable, and expensive. The brighter colors such as green and red-orange were more imaginative and exciting. Overall, pink was a poor color choice for wine labels. Traditional full-color label layouts seem to directly correlate with consumer preference and purchase intent. This was followed by modern and traditional/unprinted layout. This suggests the bold use of color is one way to establish brand personality.

There are unique combinations of design factors that produce desirable holistic designs. One color theory study conducted by Orth and Malkewitz (2008) identified the key types of package design. These included massive, contrasting, natural, delicate, and nondescript categories. These design concepts were analyzed to understand consumer brand impressions. The goal of the research was to investigate how firms can develop a package design in order to receive a desired response from consumers. They started by selecting a product category attribute for research, determining the design characteristics, obtaining ratings of them, and then assessing consumer responses.

Orth and Malkewitz (2008) concluded that massive package designs are generally associated with impressions of excitement and include very little sophistication. Consumers identify these labels as low in quality, inexpensive, and not classy. Designs that are considered contrasting such as “critter” labels are linked to excitement and lead to impressions of harshness. Natural designs are recognized as high in quality, feminine, healthy, and expensive. These include both old and new world labels. Delicate package designs are judged as high quality, classy, and pricey. Lastly, packages that are nondescript, meaning they have very few design characteristics, create a feeling of high-price and do not evoke happy memories. Klimchuk and Krasovec (2006) explained that product appearance is an integral part of a brand’s image. The visual representations of characteristics define the brand and create a connection with the consumer. Ideally, a purchase takes place when the package design provides the consumer with clear and specific information with unique features.

Perception of Wine Packaging

The main factors that influence wine packaging perceptions are the characteristics of the bottles and labels. According to a study by Rocchi and Stefani (2006), these features are the first thing consumers notice when viewing wine bottles. This contradicts Boudreaux and Palmer who concluded image had the strongest effect on market success. In this study however, a sample of thirty consumers were asked to identify the differences between eleven wine bottles. The results found color and the shape and size of the bottle are important features of packaging. In addition, the message about the wine is conveyed through the use of color, materials, and graphic elements of the label. Respondents believed distinction was related to spending time designing the bottle and assessing the use of colors, images, and graphics. There is also the distinction between tradition and innovation. For some respondents, tradition was a sign of reliability while others thought it showed a lack of innovation. Generally, innovativeness was appreciated because it showed attention to detail and care in assessing the wine label.

The designs of wine labels attract consumers and add value to the product. Bloch (1995) examined how a product was related to consumer physiological and behavioral responses. When a design elicited a positive psychological response, the consumer was attracted to the product. This included extended viewing and touching of the product. In this study Bloch discussed Gestalt theory applications, which suggested that people prefer objects with symmetry, unity, and harmony among elements. There are also cultural and social influences that determine the assessment of a label. Perception of wine packaging is an important area for wine marketers to consider when designing wine labels.

Chapter 3

METHODOLOGY

Procedures for Data Collection

Several Cal Poly Agribusiness students participated in identifying aesthetic principle content for the relationship between price and wine label aesthetics. From a subsample of over one hundred California wine labels generated by Washington State University, each researcher randomly selected fifty labels to evaluate.

All fifty wine labels were examined based on identifiable qualitative aesthetics and design principles. The researchers were given a matrix including different characteristics that define a label to use for evaluation. Characteristics were chosen based on simple features of the wine label relating to aesthetics, beauty, and design elements. These included attributes such as color, shape, size, image, and parameter. Certain qualities were examined such as the golden mean, the font direction and whether the image was realistic or abstract. These design elements are often found in wine labels and the goal was to see whether they relate to price. Once the respondent evaluated their fifty labels, three other students involved in the study were asked to evaluate those same labels. This enabled the researcher to have several different evaluations for each label. The main goal was to evaluate and see if there were specific design and shape elements present. Based on the factors mentioned above, data from each individual was gathered. This enabled researchers to better understand whether there was a correlation between price and wine label aesthetics.

Procedures for Data Analysis

Researchers combined all scores used in evaluating the wine labels. After the data was collected, it was entered into a Microsoft Office Excel spreadsheet. In order to manipulate the data, a statistical regression analysis tool was utilized. The statistical analysis included analysis of variance (ANOVA). The regression model was $P_{\text{wine}} = f(\text{golden mean, uniform font, proportion yellow/orange, direction, realistic, abstract, winery/grape image, winery, emblem, font type changes, font size changes, horizontal label, vertical label, Sonoma, Napa})$. This enabled the researcher to understand if there was a strong or weak correlation with the value that would separate label prices by individual aesthetic characteristics.

The correlation of determination (R^2) indicated the percentage of variation of the dependent variable that was explained by the variation in the independent variable. In this study, the null hypothesis is that there is no relationship between the qualitative aesthetics of wine labels and the price of the wine. The alternative hypothesis on the other hand, is that there is a relationship between wine label aesthetics and price. Based on the regression, the researcher determined whether to accept or reject the null hypothesis. This led to determining the relationship between price and wine label aesthetics.

Assumptions

It is assumed the sample size, $n=50$, is sufficient in providing accurate results. Observers had the ability to see color and evaluate the wine labels accordingly. Variables such as color, images, and design are understood to be important variables that may be significant to the price. It is also assumed all of the wine selected will be seven hundred fifty milliliter bottles with cork

closures. There will be no box wine, no plastic bottles, and no wine bottles with alternative closures.

Chapter 4

DEVELOPMENT OF THE STUDY

Data Collection Problems

There were a few major data collection problems when performing this study. A number of the labels were duplicates so it made it difficult to select fifty different labels to evaluate. A replacement scheme would have enabled it to be more efficient. Most of the labels were often difficult to view because the image and font were not very clear when enlarged. This made it hard to observe the image and sometimes even hard to read what region the wine came from. Several variables were used to evaluate the labels. These factors included the golden mean, the proportion of yellow and orange, the direction of the label, whether the image was realistic or abstract as well as a number of others. Since the labels were so obscure at times, it made it difficult to evaluate and determine the various design elements.

Analysis

An example of a chart used to collect data for the various wine labels appears as Table 1. The dependent variable used in this study is “price.” The independent variables consist of golden mean, uniform font, proportion of yellow and orange, direction, realistic, abstract, winery/grape image, winery emblem, variable font type changes, font size changes, horizontal label, vertical label, Sonoma, and Napa. Most of these variables involved dummy variables;

however, when assessing the font type changes and font size changes, evaluators simply tallied the number for each.

From Table 1, one can see that zeros and ones were used to evaluate the labels. Evaluators assessed each label factor. For example, in the column “Sonoma,” if the wine was from Sonoma it was assigned a 1 and if it was from any other region it was assigned a 0.

After the researcher evaluated the fifty labels he or she selected, three other agribusiness students involved in the study were asked to evaluate those exact same labels. In Table 1, one will notice after each label, there are three blank spaces. These rows were for the other evaluators to assess each label design variable. To determine the consistency of the rating scale used to evaluate the wine labels, five labels were selected to analyze. This is a chart of the labels selected with each of the student’s ratings.

Table 1: Data Collection Sheet: 1-7

[illegible]

Table 2: Evaluation of the First Five Labels

				Golden Mean	Font	Yellow/Orange	Direction	Realistic	Abstract	Winery/ Grape Image	Winery Emblem	Font type changes	Font size changes	Horizontal Label	Vertical Label	Sonoma	Napa
Label #	Winery	Californian Region	Price	Yes=1, else=0	Uniform =1, else=0	<=25% yellow/orange= 1, else=0	move to right=1, else=0	yes=1, else=0	yes=1, else=0	Yes=1, else=0	Yes=1, else=0	(Tally)	(Tally)	Yes=1, else=0	Yes=1, else=0	Yes=1, else=0	Yes=1, else=0
49	Cornerstone	Napa	60	1	1	1	0	0	0	0	0	0	6	0	1	0	1
				1	1	1	0	0	0	0	0	1	3	0	1	0	1
				1	1	1	0	0	0	0	0	0	5	0	1	0	1
				1	1	1	0	0	0	0	0	0	6	0	1	0	1
77	Girard	Napa	40	0	0	1	0	0	0	0	0	1	4	1	0	0	1
				0	0	1	0	0	0	0	0	2	4	1	0	0	1
				0	0	1	0	0	0	0	0	1	4	1	0	0	1
				0	0	1	0	0	0	0	0	1	4	1	0	0	1
21	Beaulieu Vineyard	Other California	12	0	0	1	0	1	0	1	0	4	5	0	1	0	0
				1	0	1	1	0	0	1	0	3	4	0	1	0	0
				0	0	1	1	1	0	1	0	4	5	0	1	0	0
				0	0	1	0	1	0	1	0	4	5	0	1	0	0
				0	0	1	0	1	0	1	0	4	5	0	1	0	0
61	Flora Springs	Napa	50	1	0	1	0	1	0	0	0	1	4	0	1	0	1
				0	0	1	0	1	0	1	0	3	3	0	1	0	1
				1	0	1	0	1	0	1	0	3	4	0	1	0	1
				1	0	1	0	1	0	1	0	3	4	0	1	0	1
11	Aquinas	Napa	50	0	1	1	0	0	0	0	0	0	2	0	1	0	1
				1	1	1	0	0	0	0	0	2	3	0	1	0	1
				0	1	1	0	0	0	0	0	0	2	0	1	0	1
				0	1	1	0	0	0	0	0	0	2	0	1	0	1
				0	1	1	0	0	0	0	0	0	3	0	1	0	1

After reviewing the ratings of the labels on Table 2, a great deal of consistency between evaluators was found. Most of the ratings were similar with a few exceptions. There were several differences with the golden mean. In order to determine the golden mean, the panel of agribusiness students, looked at whether the ratio was within 5% of the standard. The reason for differences may be how each student determined if the label image had a greater than or less than ratio of 5%.

In addition, the tallies of font type changes were evaluated differently. The majority of the labels used different font styles when writing the winery name or the variety. This was also noticed when calculating the font size changes on each of the labels. The reason for the tally differences could be due to the way the researchers evaluated the labels. Some individuals counted the number of different font types and font sizes whereas others actually counted the number of changes that took place with the font type as well as the font size. Overall, researchers evaluated the uniformity of the font, the proportion of yellow and orange, the direction, and whether the image was realistic or abstract fairly consistently. There was very little error between the researcher's scores when examining the region of the wine and whether the label was horizontal or vertical.

Table 3: Regression Analysis of Price vs. Wine Label Variables

Price vs. Wine Label Variables								
Regression Statistics								
Multiple R	0.5861							
R Square	0.3435							
Adjusted R Square	0.2938							
Standard Error	24.5995							
Observations	200.0000							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	14.0000	58577.6729	4184.1195	6.9143	0.0000			
Residual	185.0000	111950.4071	605.1373					
Total	199.0000	170528.0800						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	39.3284	12.3244	3.1911	0.0017	15.0140	63.6428	15.0140	63.6428
Golden Mean	-7.8055	6.5293	-1.1955	0.2334	-20.6869	5.0760	-20.6869	5.0760
Font	5.7724	5.3656	1.0758	0.2834	-4.8132	16.3581	-4.8132	16.3581
Yellow/Orange	5.1899	4.6452	1.1173	0.2653	-3.9745	14.3543	-3.9745	14.3543
Direction	10.9459	4.8700	2.2476	0.0258	1.3381	20.5537	1.3381	20.5537
Realistic	-4.2651	4.6864	-0.9101	0.3640	-13.5108	4.9807	-13.5108	4.9807
Abstract	-9.5142	5.2861	-1.7999	0.0735	-19.9429	0.9145	-19.9429	0.9145
Winery/ Grape Image	4.4612	5.4118	0.8244	0.4108	-6.2155	15.1380	-6.2155	15.1380
Winery Emblem	-9.3641	4.0040	-2.3387	0.0204	-17.2635	-1.4647	-17.2635	-1.4647
Font type changes	-2.1125	2.0376	-1.0368	0.3012	-6.1324	1.9073	-6.1324	1.9073
Font size changes	-2.6939	1.7441	-1.5446	0.1242	-6.1348	0.7470	-6.1348	0.7470
Horizontal Label	0.5616	7.6682	0.0732	0.9417	-14.5668	15.6899	-14.5668	15.6899
Vertical Label	7.7046	7.6441	1.0079	0.3148	-7.3762	22.7854	-7.3762	22.7854
Sonoma	3.2155	4.9519	0.6494	0.5169	-6.5539	12.9849	-6.5539	12.9849
Napa	21.3762	4.7502	4.5001	0.0000	12.0047	30.7478	12.0047	30.7478

After collecting the data, a regression was performed on Excel in order to determine the relationship between the dependent and independent variables. In other words, the study determined the relationship between price and the design elements used in wine labels. The results of the regression shown in Table 3 displayed an R squared of 0.345. This indicates that 34% of the price of the wine is explained by all of the different variables, which include golden mean, font, yellow/orange, direction, realistic, abstract, winery/grape image, winery emblem, font type changes, font size changes, horizontal label, vertical label, Sonoma, and Napa. Based on this regression, the linear equation for the price of wine is as follows:

$$P_{\text{wine}} = 39.328 + (-7.80 * \text{Golden Mean}) + (5.77 * \text{Font}) + (5.18 * \text{Yellow/Orange}) + (10.94 * \text{Direction}) + (-4.265 * \text{Realistic}) + (-9.514 * \text{Abstract}) + (4.46 * \text{Winery/Grape})$$

$$\begin{aligned} &\text{Image})+(-9.36*\text{Winery Emblem})+ (-2.11*\text{Font type changes})+(-2.69*\text{Font size} \\ &\text{changes})+(0.56*\text{Horizontal label})+(7.70*\text{Vertical Label})+(3.22*\text{Sonoma})+ \\ &(21.37*\text{Napa}). \end{aligned}$$

This regression showed significant results to the study. In this study, the researchers assigned a significance level of 95%. Based on this significance level, the alpha would be 0.05. An F-test was performed in order to determine if there was an overall relationship between price and the set of wine label design factors. The regression output calculated an F value of 6.9143. The associated p-value for this was the significance F, which was 0.00000. Based on this, $0.00000 < 0.05$, which means one would reject the null hypothesis. This means there is an overall relationship between price and wine label design elements. This shows the model has explanatory power.

When looking at the regression output and performing a t-test, the researcher would reject the null hypothesis for “direction”, “winery emblem”, and “Napa” variables because their respective p-values were less than 0.05. This shows that there is a relationship between direction and price, winery emblem and price, and Napa and price. Furthermore, the researcher would fail to reject the null hypothesis for all of the other individual factors. These design elements included golden mean, font uniformity, proportion of yellow and orange, realistic, abstract, winery/grape image, font type changes, font size changes, horizontal label, vertical label, and Sonoma. This decision would show there is no relationship between the price of wine and each of the variables listed above.

Chapter V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

From a selected set of wine labels generated by Washington State University, researchers analyzed the qualitative characteristics included in the labels. The data was evaluated by regression analysis. The regression enabled the researcher to analyze whether there was a relationship between the price of wine and various label design elements. These variables included golden mean, font type, font size, realistic or abstract image, horizontal or vertical label, and whether it was from Sonoma or Napa.

After analyzing the data, it has been found that there is an overall relationship between price and all of the wine label variables. There are certain qualitative characteristics that did show a strong correlation between increased wine prices. The study showed there was a relationship between price and direction, price and winery emblem, and price and Napa. The relationship cannot be seen between price and golden mean, price and font, price and the proportion of yellow and orange, price and realistic images, price and abstract images, and price and an image of a winery or grapes. In addition, there was a not a strong correlation between price and font type changes, price and font size changes, price and vertical labels, and price and Sonoma. Therefore, the researcher's hypothesis was correct and there are specific qualitative characteristics of wine labels such as direction that reflect greater aesthetic content, and will also

relate to their recommended price. Based on this information, the researcher can conclude that when certain characteristics are included on wine labels such as direction or Napa, the price will ultimately be greater.

Conclusions

Based upon analysis and by understanding statistical results, the reader can see if each variable chosen is significant or insignificant to the study. There were several hypothesized important variables that ended up not being significant at all. The variables were not significant because the number of labels evaluated were minimal. Either a larger sample size was needed to prove there is a relationship or there simply was not a clear relationship between price and the chosen variable.

If a consumer wanted to find out what types of wine label aesthetics reflect a higher price, they could gain a great deal of valuable information from this study. The information could enable them to understand what artistic qualities to look for in wine labels when they are seeking a specific price range. The study could also be useful for a wine bottling company or wine label designing company. If they wanted to create a label that reflected their price, they could look at this data. This could tell them, for example, they should include either a realistic or abstract image or different font sizes and font types in their wine label. These characteristics provide greater aesthetic content to wine labels and would be portrayed in the wine price.

Recommendations

The goal of this study was to see if price was a function of the different variables used on wine labels. The project researcher recommends the use of this data because it clearly demonstrates what qualitative characteristics used on wine labels are related to the price of the

bottle. A number of other studies were researched in order to support the data and analysis. After examining the labels and learning more about the attributes included on wine labels, the researcher found a clear relationship between price and specific attributes.

The project researcher did encounter a few difficulties when working on this study during the school year. The researcher had to work with a panel of agribusiness students to collect the data. This made it difficult with scheduling and finding time to gather and analyze the significance of the data. If this project were further studied, the individual could spend more time researching previous studies and understanding why certain qualities are included on wine labels. He or she could also analyze the data to a greater extent and discover how much the price actually changes for each characteristic. There should also be a larger group of individuals used to evaluate the labels. In addition, it would be helpful if the given set of wine labels were a clear image rather than blurry.

For those wishing to continue the research study, the researcher recommends having a clear set of guidelines for how the labels will be evaluated. Researchers should determine how they will assess each characteristic such as golden mean, the changes in font size or font type, and the direction of the image portrayed in the wine label.

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Appendix

1. Attached is a Microsoft Excel Sheet with Full Data Collection.
2. Attached are pictures of the fifty wine labels that were evaluated.

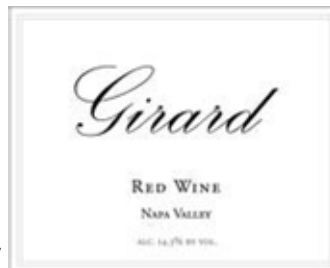
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70	Jallo of Sonoma	Cabernet Sauvignon Sonoma	2002	13	86	0	0	1	1	0	1	2	7	1	0	1	0
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70	Jallo of Sonoma	Cabernet Sauvignon Sonoma	2002	13	86	0	0	1	1	0	1	3	3	1	0	1	0
70	Jallo of Sonoma	Cabernet Sauvignon Sonoma	2002	13	86	0	0	1	1	0	1	2	4	1	0	1	0
79	Guenec	Victorian Claret North C Other California	2003	22	84	0	0	1	0	1	0	1	3	1	0	0	0
79	Guenec	Victorian Claret North C Other California	2003	22	84	0	1	1	0	1	0	2	3	1	0	0	0
79	Guenec	Victorian Claret North C Other California	2003	22	84	0	0	1	0	0	0	1	2	1	0	0	0
79	Guenec	Victorian Claret North C Other California	2003	22	84	0	1	1	0	1	0	1	3	1	0	0	0
84	Kendall-Jackson	Cabernet Sauvignon-Shi Other California	2001	9	83	0	0	1	0	1	0	1	2	4	1	0	0
84	Kendall-Jackson	Cabernet Sauvignon-Shi Other California	2001	9	83	0	0	1	0	0	1	2	4	1	0	0	0
84	Kendall-Jackson	Cabernet Sauvignon-Shi Other California	2001	9	83	0	0	1	0	0	0	1	2	4	1	0	0
84	Kendall-Jackson	Cabernet Sauvignon-Shi Other California	2001	9	83	0	0	1	0	0	0	1	2	4	1	0	0
20	Keuleu Vineyard	Cabernet Sauvignon Cal Other California	2002	12	84	0	0	1	0	0	0	0	2	5	0	1	0
20	Keuleu Vineyard	Cabernet Sauvignon Cal Other California	2002	12	84	0	0	1	1	0	0	0	4	4	0	1	0
20	Keuleu Vineyard	Cabernet Sauvignon Cal Other California	2002	12	84	0	0	1	1	0	1	0	4	4	0	1	0
45	Clos Pegase	Cabernet Sauvignon Nap Napa	2002	60	89	0	1	1	0	1	0	1	0	3	0	1	0
45	Clos Pegase	Cabernet Sauvignon Nap Napa	2002	60	89	0	0	1	0	1	0	1	3	3	0	1	0
45	Clos Pegase	Cabernet Sauvignon Nap Napa	2002	60	89	0	1	1	0	0	1	0	2	0	1	0	1
45	Clos Pegase	Cabernet Sauvignon Nap Napa	2002	60	89	0	1	1	0	0	1	3	3	0	1	0	1
58	Estancia	Meritage Alexander Vall Sonoma	2003	30	87	0	0	1	0	0	0	0	2	5	0	1	0
58	Estancia	Meritage Alexander Vall Sonoma	2003	30	87	1	0	1	0	0	0	0	3	4	0	1	0
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58	Estancia	Meritage Alexander Vall Sonoma	2003	30	87	0	0	1	0	0	0	0	2	5	0	1	0
48	Cornerstone	Cabernet Sauvignon Hos Napa	2003	60	90	0	0	1	0	0	0	0	1	6	0	1	0
48	Cornerstone	Cabernet Sauvignon Hos Napa	2003	60	90	0	1	1	0	0	0	0	1	3	0	1	0
48	Cornerstone	Cabernet Sauvignon Hos Napa	2003	60	90	0	0	1	0	0	0	0	0	4	0	1	0
48	Cornerstone	Cabernet Sauvignon Hos Napa	2003	60	90	0	1	1	0	0	0	0	1	6	0	1	0
83	Justin	Cabernet Sauvignon Pas South Coast	2002	23	91	0	0	1	1	0	1	0	1	4	1	0	0
83	Justin	Cabernet Sauvignon Pas South Coast	2002	23	91	0	1	1	0	1	0	1	3	0	0	0	0
83	Justin	Cabernet Sauvignon Pas South Coast	2002	23	91	0	0	0	1	1	0	1	3	0	1	0	0
83	Justin	Cabernet Sauvignon Pas South Coast	2002	23	91	0	1	1	0	1	0	1	4	0	0	0	0
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88	Louis M. Martini	Cabernet Sauvignon Sonoma	2002	50	93	0	0	0	0	0	0	0	3	6	0	1	0
88	Louis M. Martini	Cabernet Sauvignon Sonoma	2002	50	93	0	0	1	0	0	0	0	2	5	1	0	1
88	Louis M. Martini	Cabernet Sauvignon Sonoma	2002	50	93	0	0	1	1	0	0	0	2	6	1	0	1
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56	Dry Creek	Cabernet Sauvignon Sonoma	2002	21	86	0	0	0	1	0	0	1	2	4	1	0	1
17	Barnett	Cabernet Sauvignon Spr Napa	2002	60	92	0	0	1	0	1	0	1	0	2	4	0	1
17	Barnett	Cabernet Sauvignon Spr Napa	2002	60	92	0	0	1	0	1	0	1	0	3	3	0	1
17	Barnett	Cabernet Sauvignon Spr Napa	2002	60	92	0	0	1	1	1	0	1	0	3	4	0	1
17	Barnett	Cabernet Sauvignon Spr Napa	2002	60	92	0	0	1	0	1	0	1	0	2	4	0	1
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65	Iscan Oakville	Magnificat Napa Valley Napa	2003	45	87	0	0	1	0	0	1	0	1	2	4	0	1
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86	Kenwood	Cabernet Sauvignon Sonoma	2002	35	83	0	0	1	0	1	0	0	1	2	6	0	1
86	Kenwood	Cabernet Sauvignon Sonoma	2002	35	83	1	0	1	0	1	0	0	1	2	3	0	1
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69	Jallo of Sonoma	Cabernet Sauvignon Ale Sonoma	2003	30	85	0	0	1	0	0	0	0	1	2	4	1	0
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90	Merryvale	Cabernet Sauvignon Oak Napa	2002	75	92	0	0	0	0	0	0	0	3	4	1	0	0
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99	Murphy-Good	Cabernet Sauvignon Ale Sonoma	2001	22	84	0	0	1	0	0	0	1	2	3	0	1	0
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44



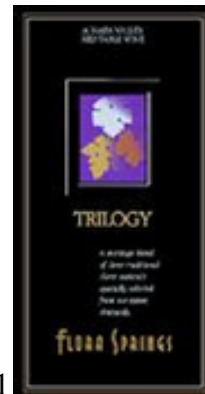
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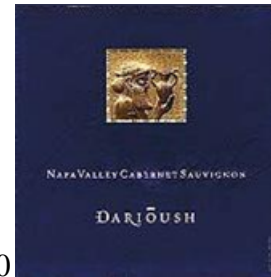
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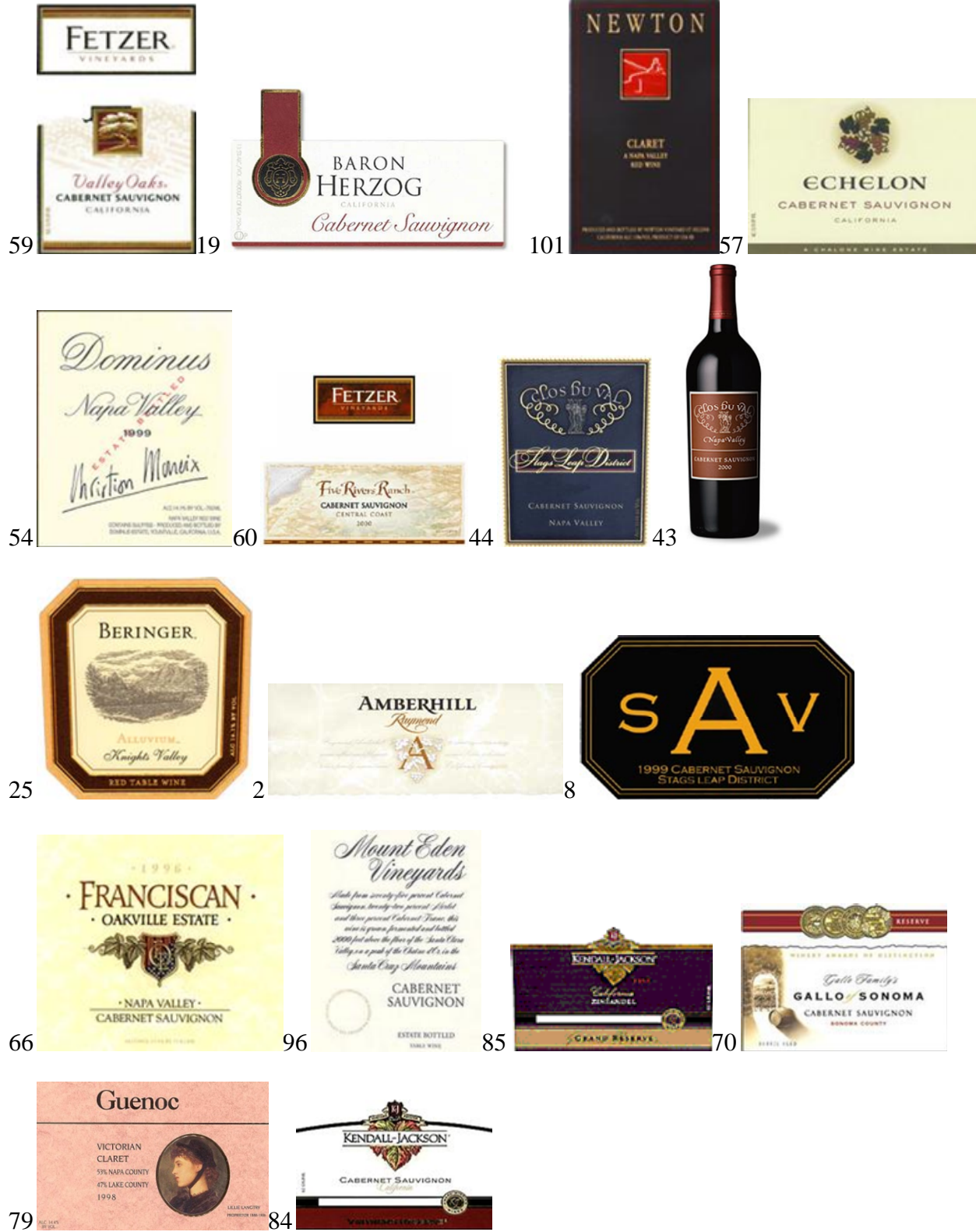


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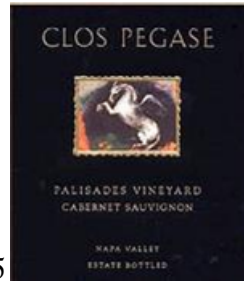
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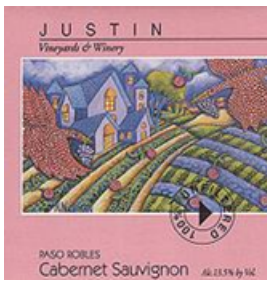
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58



48



83



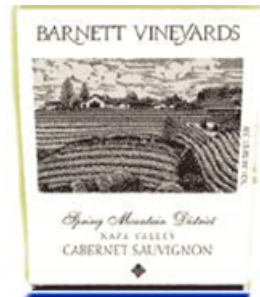
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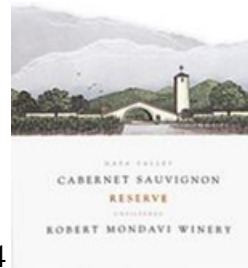
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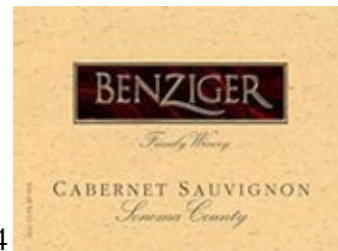
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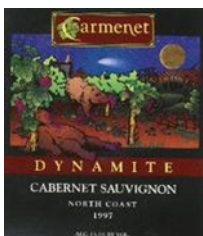
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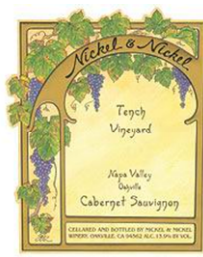
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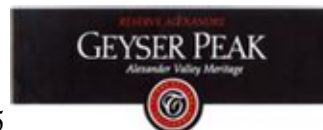
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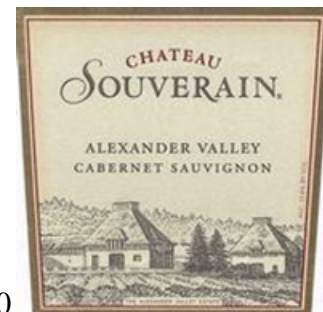
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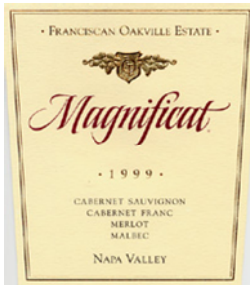


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65



67



86



69



90



99

