

Memorandum



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Date: April 16, 2008

Introduction

In order to better understand the attractiveness of the Kentucky bourbon industry, our team has put together the following analysis and evaluation.

Industry Name

Bourbon is a whiskey created, distilled, and aged in the United States, primarily in Kentucky

Classifications

The North American Industry Classification System (NAICS) classification for the bourbon industry is 312140-Distilleries, which is described as “spirits, distilled (except brandy), manufacturing.”¹

The Standard Industrial Classification (SIC) is 2085-Distilled and Blended Liquors, and includes many alcoholic distilled liquors manufactured by blending processes.²

Output Description

According to Title 27 of the Code of Federal Regulations, bourbon carries the following distinctions:³

¹ NCAIS. Retrieved April 2, 2008, from U.S. Census Bureau Web site: <http://www.census.gov/cgi-bin/epcd/srchnaics07defs>

² SIC Description for 2085 . Retrieved April 2, 2008, from U.S. Department of Labor Web site: http://www.osha.gov/pls/imis/sic_manual.display?id=470&tab=description

³ Title 27--Alcohol, Tobacco Products and Firearms. Retrieved April 2, 2008, from Code of Federal Regulations Web site: <http://frwebgate.access.gpo.gov/cgi-bin/get-cfr.cgi?TITLE=27&PART=5&SECTION=22&YEAR=1999&TYPE=TEXT>

- 🍷 Made from a fermented mash with a minimum of 51% and a maximum of 79% corn
- 🍷 Distilled at less than 80% alcohol/volume (160 proof)
- 🍷 Stored in a new, charred, white oak barrel at a maximum of 62.5% alcohol/volume (125 proof) for at least 2 years
- 🍷 The original color and flavor of the whiskey can not be filtered or altered in any way
- 🍷 Must be produced and stored (for at least one year of the aging) in Kentucky to be called Kentucky Bourbon

Kentucky whiskey that does not have the above distinctions cannot be termed bourbon.

Geographic Scope

Over 95% of bourbon is produced in Kentucky, most of the competitors lie within just a few miles of each other, as indicated in the map below⁴.



Supply Chain Picture

<u>INPUTS</u>	<u>PROCESS</u>	<u>OUTPUTS</u>	<u>DOWNSTREAM</u>
Corn Wheat Rye Malted-Barley Water Energy	→ Distillery (Continuous or batch, depending on size) →	Bourbon →	Bourbon distribution

⁴ Kentucky Bourbon Trail. Retrieved April 3, 2008, from Cocktail Times Web site: <http://www.cocktailtimes.com/bourbon/>

Most of the supplies used in making bourbon come from manufacturers in and around Kentucky. Many of these companies would have little business if not for the massive amount of bourbon produced in the state. One of the key ingredients, limestone water, is indigenous to the area, and basically free.

For the most part, the distilleries ship their product to distributors, who in turn distribute to retail outlets and restaurants. Usually, there is no savings by buying the product directly from the distillery.⁵

Industry Size

Employees: The number of people employed by the industry in Kentucky is over 11,000.

Revenue and Volume: For the year 2006, there were 14.7 million 9-liter cases of bourbon sold in the U.S. This translated to over \$1.7 billion in revenue for the industry. The table below reflects the amount of Premium, High-End Premium and Super Premium bourbon sold for the years 2002-2006.⁶ High End Premium and Super-Premium brands have grown the most; revenues for High End Premium were up nearly 28% in 2007 from 2002 and Super-Premium was up over 60%.⁶

Sales Volume
Volumes by year and price category
9-liter cases (000)

Table 1:

Year	Value	Premium	High End Premium	Super Premium	Grand Total
2002	2,972	4,281	5,576	309	13,137
2003	2,972	4,278	5,823	332	13,405
2004	2,927	4,318	6,237	385	13,867
2005	2,816	4,388	6,666	431	14,301
2006	2,633	4,499	7,116	496	14,744
2007	2,619	4,415	7,310	568	14,911

The bourbon industry exported 24,753,101 proof gallons (PG) of bourbon in 2007. In December of 2007, they exported 1,863,964 PG; a chart depicting the percentages exported to each destination is depicted below. The chart clearly shows that bourbon is very popular in Australia.⁶

⁵ Whisky Magazine. Retrieved April 7, 2008, from Whisky Magazine Web site: <http://www.whiskymag.com/>

⁶ Distilled Spirits - Exports By Volume December 2007. Retrieved April 5, 2008, from Discuss.org Web site: http://www.discus.org/pdf/Distilled_Spirits_Exports_Volume_December2007.pdf

Chart 1:

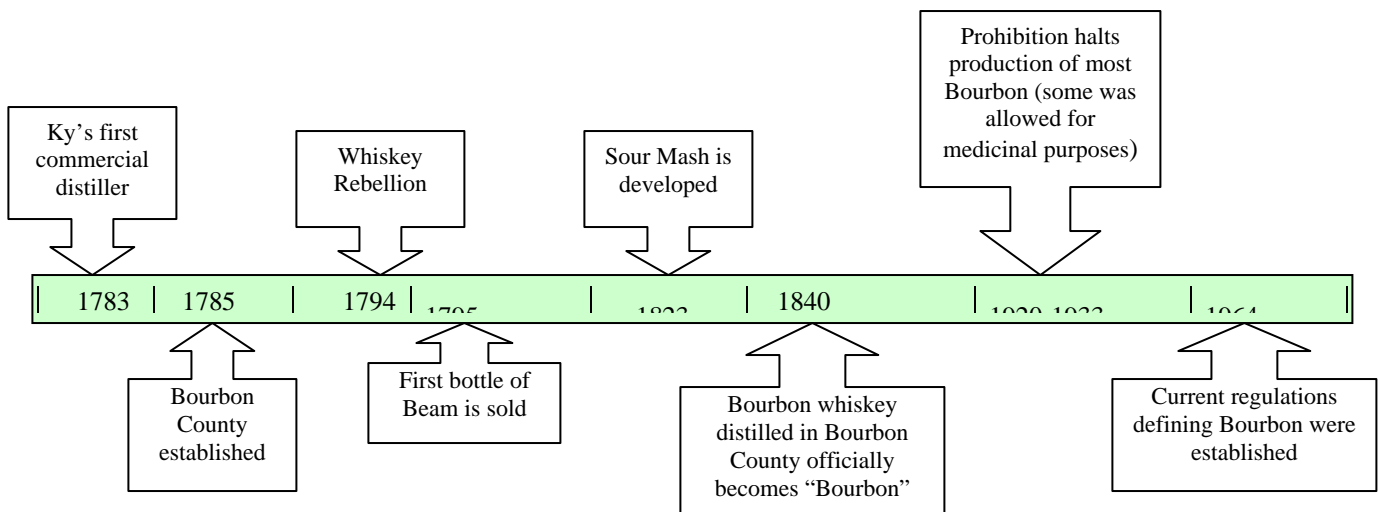
Bourbon Exports



Age

Settlers from Virginia in 1774 brought the practice of distilling spirits to Kentucky. The region offered arable land suitable for corn production; an abundance of limestone-filtered water; and a vast amount of oak trees that were used in the construction of barrels.⁷ All of these elements made Kentucky a perfect place for the production of whiskey.

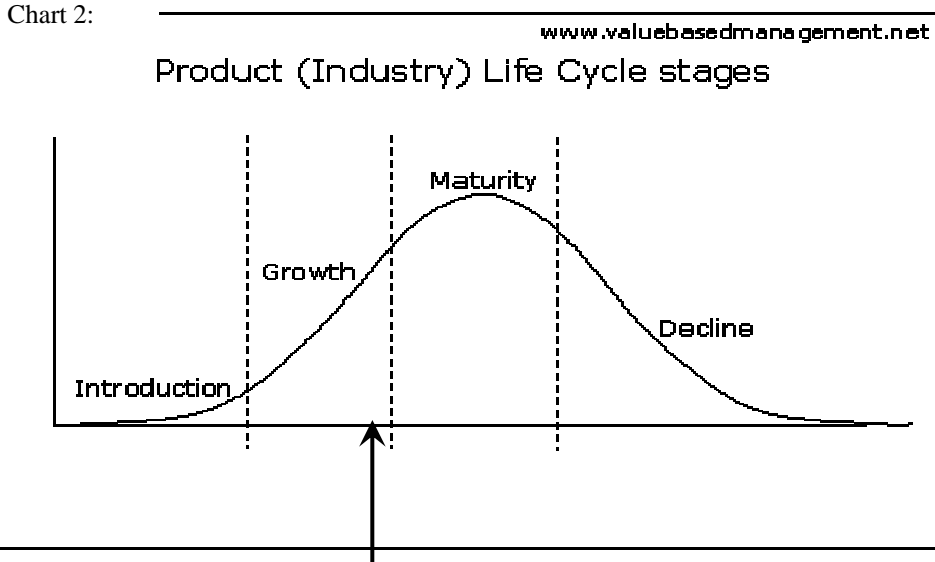
The timeline below gives a short history of how bourbon evolved over the last 225 years.⁴



⁷ The Louisville Bourbon Experience. Retrieved April 2, 2008, from The Louisville Bourbon Experience Web site: <http://www.johnpaul.com/links/bourbon.pdf>

Industry Life Cycle Position

Due to the history of bourbon, it would seem practical for the industry to be in the maturity phase, but there are many indications that the industry is still growing. Although many of the distillers have long developed their product, many of the companies continue to differentiate their product to consumer demands, which has risen over the last ten years or so. Advertising is up, and distilleries are still increasing capacity by adding warehouses.



Competitors

Below is the main list of competitors in Kentucky. Many of these distilleries brand under different names in addition to their own.⁸ The number of brands is being used to depict the size of each distillery.

Table 2:

Distilleries

Distillery	Location	Brands
Heaven Hill Distillery	Bardstown, KY	84
Buffalo Trace Distillery	Frankfort, KY	26
Jim Bean Beam Distilleries	Clermont, KY	24
Wild Turkey Distillery	Lawrenceburg, KY	12
Four Roses Distillery	Lawrenceburg, KY	4
Labrot and Graham Distillery	Versailles, KY	1
Maker's Mark	Loretto, KY	1

⁸ Kentucky Distiller's Association, Retrieved April 3, 2008, from Kentucky Distilleries Association.com
 Web site: http://kybourbon.com/english/pages/main_frame.html

Key Trade Groups

The key trade groups for bourbon are the Kentucky Distiller's Association⁹ and the Distilled Spirits Council of the United States.⁶

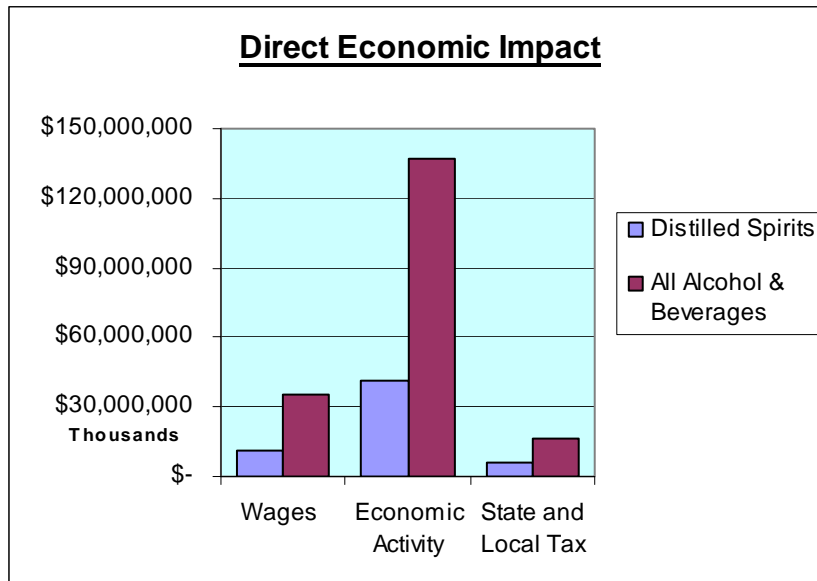
Key Trade Publications

Publications relating to the bourbon industry include Whisky Magazine⁵, Beverage Industry¹⁰, The Bourbon County Reader, and The Malt Advocate.⁸

Economic Impact:

Based on 2004 figures, the direct economic impact (generated within the industry) in the distilled spirits industry area is approximately one third of the alcohol and beverage as a whole.⁶

Chart 3:



Rivalry

Price-Based Rivalry

Since there has not been an increase in demand for bottom-shelf bourbons there is a possibility for a 'price-war' to exist, but this is assumed.^{11,12} Therefore, it is assumed that

⁹ Kentucky Distiller's Association, Retrieved April 3, 2008, from Kentucky Distilleries Association.com
Web site: http://kybourbon.com/english/pages/main_frame.html

¹⁰ Beverage Industry. Retrieved April 3, 2008, from Bevindustry.com Web site: <http://www.bevindustry.com/>

¹¹ Givens, Ron. "Distillers Create a Buss of Their Own with Premium and Super-Premium Whiskeys."
BevNetwork. http://bevnetwork.com/monthly_issue_article.asp?ID=130.

there is greater competition in the bottom-shelf bourbon market with regards to price, although there has not been obvious changes in price recently. The usual price for bottom-shelf is \$12 for a 750mL¹³. Since customers do not want to spend a large amount of money, they choose the bourbon that is lowest in cost. This could cause a price-war between competitors. One good thing that is happening to bottom-shelf bourbon is that it is also increasing in quality.¹²

Non Price-Based Rivalry

The increase in the demand for bourbon pertains specifically to high-end, single barrel, and small batch bourbons.¹⁴ The top-shelf bourbons have distinct tastes, larger amounts of alcohol, and have aged for longer amounts of time.¹¹ Companies have reacted to this by expanding their “distilling capacity, but most have increased their barrel storage capacity.”¹³ There has also been an increase in advertisement.¹¹ Advertisement for some companies are through “point-of-purchase materials, trade print advertising, and experiential event marketing.”¹⁵

Industry Concentration

The concentration of this industry refers to the variety of bourbon produced by each company. Some companies produce very few types, but they are high-end. Other companies produce many different types, and their range in quality is huge. This has made their industry very concentrated. The CR4 is 83%, but Wild Turkey is quite a bit lower in variety as the others in the top four. Since CR4 is high, this indicates that rivalry is low.

Table 3:

Distilleries	Types
Heaven Hill	43
Buffalo Trace	26
Jim Beam Group	23
Wild Turkey	12
Barton Brands	9
Four Roses	6
Brown-Forman Corp.	6
Maker’s Mark	1
Total	126

Reference: www.kybourbon.com⁹

¹² Passmore, Nick. “The Kings of Bourbon.” Food and Wine.

http://www.forbes.com/2004/10/27/cx_np_1027feat.html.

¹³ Jason. April 12, 2008 West Side Liquors, West Harrison, Indiana

¹⁴ Wheatley, Harlen. “RE:” Email to Buffalo Trace Distillery. 4 Apr. 2008.

¹⁵ Charters, Candy. Email to Buffalo Trace. 15 Apr. 2008

Specific Assets

The majority of equipment used to produce bourbon is common and only takes a few months to acquire. There is still some equipment that has to be specially made, and there are companies that specifically produce them.¹³ Most companies have modernized their mills to speed the process of production and the capacity, and by using pressure cookers. Others have taken pride in using the original equipment, such as Maker's Mark, they still use roller mills and mash tubs. The disadvantage of doing this is that they are unable to produce as much as their competitors¹⁶. The most important asset is warehouses, since top-shelf bourbon is highly demanded.^{11, 12} Some companies have been forced to increase the capacity of distilleries or warehouses.¹⁶ Companies must have more space to store barrels since they have increased production.¹¹ Buffalo Trace has based their strategies "on a 23 year planning model."¹³ If the demand for bourbon were to suddenly decrease, companies would have a large surplus which would cause a decrease in price.

Stability of Demand

The demand for bourbon has significantly risen over the last 15 to 25 years.^{12,17,18} From 2002 to 2004 high-end premium bourbon rose 6.8% and super premium bourbon rose 11.9% . It also seems it will continue to increase as more people become more interested in bourbon.¹¹ Customers do not care about the cost of bourbon because they are concentrated more on the taste. The price of top-shelf bourbon has definitely been increasing;¹³ this has led to a decrease in bourbons that are not expensive.¹⁶

Product Differentiation

The main difference in bourbon is its life in the barrel. The longer its life in the barrel the more expensive it is.¹⁹ The longer life causes a distinct taste in the bourbon. Each distillery has certain ingredients added to produce 'their' taste. Examples of this are Wild Turkey adding vanilla and caramel,²⁰ others use "milder-tasting wheat," and using four grains instead of three.¹ Another characteristic that is caused from age is the amount of alcohol.²¹

Buyer Switching Costs

Most buyers of the bourbon industry are retailers, restaurants, and bars. These buyers provide more than one brand of bourbon, because that is what their customers demand. If

¹⁶ MacMillan, Douglas. "Making a Market for Maker's Mark." Business Week.

http://images.businessweek.com/ss/06/10/makers_mark/index_01.htm?chan=search.

¹⁷ <http://www.heaven-hill.com>

¹⁸ <http://makersmark.com>

¹⁹ Kiley, David. "Online Extra: Along the Great American Whiskey Trail." Business Week.

http://www.businessweek.com/magazine/content/07_30/b4043087.htm?chan=search>.

²⁰ <http://www.wildturkeybourbon.com>

²¹ Kentucky Bourbon. <http://www.america.edu/TED/kentuckybourbon.htm#envi>.

a buyer were to stop serving one brand, then their customers may be unhappy and go to a different provider. This would also cause the buyers' profits to decrease. This also indicates that switching costs are low.

Bargaining Power of Suppliers

Supplier Overview

The typical grain mixture for producing bourbon is a combination of 70% corn while the remaining 30% are wheat or rye and malted barley.²² "The main ingredient in bourbon is corn, which varies from 51% to 79% depending on the brand. The other ingredients are rye, malted barley (10-15% each), and in some cases red winter wheat (10%). Distilleries are meticulous about selecting their crops, and once approved by quality control, the grains are stored in silos. The grains are then ground in a hammer mill into fine flour."²³

The bourbon must be stored in new, white oak barrels. "The wood is cut into staves, which are super heated and bent into ovular form. The barrel is then "toasted" by sending it through a small fire for about 12 minutes to caramelize the sugar in the wood. Next, it is applied to a larger fire for 6 to 12 seconds to burn out the inside and produce a charcoal layer. The charring must cover the barrel evenly so the whiskey has a consistent flavor. Finally the barrel is closed by a "Bung" and transported to the distilleries. Once the barrels have been used, they are often re-sold to age Scotch."²¹

The limestone water used by all distillers in Kentucky comes from within the state because of the high source of limestone, which forms the bedrock of this region. "The limestone breaks down overtime to form massive caves. The springs that flow from these caves provide iron-free water sources for the bourbon process."²⁴

Bourbon is bottled in a plethora of different shaped bottles that often are unique to a particular brand or distillery. Usually the shape of the bottle has to conform to the equipment it must pass through in processing; this may not be achieved without multiple re-designs.²⁵ It is because of these specifications that bottles for bourbon may be higher than some, but there are numerous bottlers to service the industry.

²² Bourbon whiskey. Wikipedia. http://en.wikipedia.org/wiki/Bourbon_whiskey, April 4, 2008.

²³ Jones, Mike. Identification. Kentucky Bourbon. <http://www.american.edu/TED/kentuckybourbon.htm#general>, April 2004.

²⁴ Jones, Mike. Geographic clusters. Kentucky Bourbon. <http://www.american.edu/TED/kentuckybourbon.htm#general>, April 2004.

²⁵ The Best Packages of 2007. Retrieved April 8, 2008, from Beverage Industry Web site: http://www.bevindustry.com/Articles/Feature_Articles/BNP_GUID_9-5-2006_A_1000000000000235162

Supplier Size

Kentucky bourbon is found all throughout the world and could be compared to some their suppliers by the geographic region they satisfy. The table depicts the geographic reach of the bourbon industry compared to its suppliers.^{6,8,22}

Table 4: **Geographic Reach**

Supply	Geographic Reach
<i>Bourbon</i>	<i>UK, Germany, Australia, Japan, Spain, France, Italy, Canada, New Zealand, Greece.</i>
Corn, Wheat, Rye, Malted Barley	Sold all over the world to many different countries.
Barrels	Mainly United States and Canada. Brown-Forman Cooperages does a lot of international business as well.

This table shows that our suppliers deal with many other countries as well as the United States. Compared to the grain industry, the bourbon industry is relatively small. However, when comparing the bourbon industry to the barrel making industry of Brown-Forman, the bourbon industry seems like a giant.

Supplier Concentration

The bourbon industry is a concentrated industry in that; roughly 95% of all bourbon is made in the United States. “According to the Kentucky Distillers Association, Bourbon is America's only native spirit.²⁶ And almost all bourbon, 95%, is produced in Kentucky. According to the association, 529,000 barrels of bourbon began the aging process in Kentucky in 1996.”²⁷ Most of the main bourbon distillers get all of their supplies from the state of Kentucky, which makes for more concentration in the industry, and a lower potential for sustainable profits in the industry. With the shrinking economy, prices of grains are increasing and distilleries are forced to pay higher prices for their goods, which in turn causes the price of bourbon to increase.

Supplier Substitutes

As stated earlier, 95% of all bourbon is made in Kentucky. Because of this, Kentucky distilleries get most of their supplies from Kentucky and the surrounding states. Since the bourbon industry is so heavily regulated, there are less available substitutes for supplies in

²⁶ Bourbon History. Retrieved April 7, 2008, from KY Distiller's Association Web site: http://kybourbon.com/english/pages/main_frame.html

²⁷ Day, Teresa. However you take it. Straight, or with a splash of history. <http://www.visitlex.com/quick/bourbon.html>, February 2008.

the industry. Because of this, there is a reduction in the profit potential for the industry. Take corn for example, one of the main ingredients in bourbon; corn prices have been increasing lately because of the demand for corn-based ethanol.²⁸ This has a direct effect on the bourbon industry; as stated earlier, the main ingredient in bourbon is corn, which varies from 51%-79% depending on the brand. Therefore, the decrease in corn production and increase in the price of corn has increased the bargaining power of the suppliers. The distilleries are stuck paying the high costs for corn because there are not many substitutes.

A majority of the barrels used by most bourbon companies come from Brown-Forman Cooperages, which is located in Louisville, Kentucky.²⁹ There are many other barrel making companies in the United States; however, because of the nature of the business, most barrels are selected from Brown-Forman Cooperages. Brown-Forman is known all over the world for crafting the highest quality oak barrels for the aging of premium spirits.⁶ Because they are made in Kentucky; most companies will buy from Brown-Forman because of their location and ease of supply, however you can just as easily go outside of Kentucky to buy your supplies.

Threat of Forward Integration

The bourbon industry does not have to worry about the threat of forward integration by suppliers mainly because of the regulations in the industry. "Strict standards and regulations govern production and ensure excellence."³⁰ Take, for example the corn industry, if they wanted to try to get into the bourbon industry it would be too costly and highly risky. There are many components that go into producing, housing, and selling bourbon, which would make it hard for a supplier to get involved with. Overall it is not very feasible for one of the suppliers to integrate into the bourbon industry mainly because of the strict regulations sanctioned by the federal government.²⁷

Bargaining Power of Buyers

The buyers of Bourbon consist of individuals who come to the distilleries and buy while visiting the distillery, which is an extremely small portion, and then there are the main sources of buyers. The buyers consist of bars, restaurants and retail liquor stores. These are the main companies that the distilleries sell to, and where people come to buy bourbon. The list below shows the top 10 exports of bourbon, which is a very large market in other countries.¹⁸

²⁸ Robinson, Elton. More beans, less cotton and corn in 2008. Delta Farm Press. <http://deltafarmpress.com/corn/acres-planted-0328/>, March 31, 2008.

²⁹ Brown-Forman Cooperages. <http://www.bluegrasscooperage.com/UsedBarrelBrochureModified.pdf>, April 5, 2008.

³⁰ Jones, Mike. Identification. Kentucky Bourbon. <http://www.american.edu/TED/kentuckybourbon.htm#general>, April 2004.

Top 10 Destinations for 2003 exports of bourbon

Table 5:

Country	Value (USD)	Volume (gallons)
UK	87,042,302	2,895,394
Germany	64,945,892	2,614,775
Australia	49,447,732	5,364,757
Japan	36,708,722	2,051,930
Spain	24,838,110	478,839
France	23,681,302	622,150
Italy	20,164,590	434,404
Canada	11,408,026	537,680
New Zealand	8,321,417	764,493
Greece	5,328,102	115,247

Buyer size

The buyer size is large, but small when looking at the individual buyers. There are many different buyers of Bourbon, however they are not all connected; there are many distributor buyers. There are not one or two major buyers who could bring the price down on the bourbon industry, such as a Wal-Mart or Kroger. “The bourbon industry consists of many distributors and wholesalers.”³¹ Distributors deliver to retailers, such as the Party Source, and bars and restaurants in a continuous effort to keep stock fresh and full. However, due to distributors and wholesalers buying in bulk, they are able to drive the price down from the distilleries; however there are SIN Taxes and regulations governing the sale of alcohol.

Numbers such as these posted by Party Source for Friday night sales, April 11, 2008 are based on how many bottles their inventory would need to be restocked. Chandra, Party Source employee informed me that they have weekly shipments of all kinds of alcohol to replace what has been sold. Based on the numbers of bottles sold at stores like this, they would reflect in the purchase size of the distributors; so they are able to fill orders on time and with the right quantities.³²

³¹ http://www.business.com/directory/food_and_beverage/beverages/alcoholic/distributors_and_wholesalers/
- 2008 Business.com, INC.

³² [Chandra. April 12, 2008. Party Source employee](#)

Table 6: **Friday Night sales from Party Source, Bellevue Kentucky**³³

	1.75 L	1 L	750 ml	375 sq ml	Flask	200 ml
Old Grand Dad 86	23 on hand sold 2	15 on hand sold 1	18 on hand sold 0	3 on hand sold 0	N/A	4 on hand sold 0
Makers	170 on hand sold 13	159 on hand sold 8	181 on hand sold 17	58 on hand sold 3	30 on hand sold 0	75 on hand sold 2
Jim Beam	342 on hand sold 42	257 on hand sold 4	358 on hand sold 8	30 on hand sold 2	43 on hand sold 2	66 on hand sold 1
KY Gentleman	194 on hand sold 23	13 on hand sold 1	11 on hand sold 2	N/A	N/A	N/A
KY Tavern	334 on hand sold 24	27 on hand sold 1	22 on hand sold 1	31 on hand sold 5	N/A	200 on hand sold 0

Buyer concentration

The large buyers of bourbon and liquor industries are liquor stores such as Party Source, in Bellevue Kentucky; they purchase from the distributors that are able to obtain the right types of alcohol at the lowest cost. “Also restaurants keep anywhere between 30-50 bottles of each type of alcohol they serve.”³⁴ “This is dependent on the location and area and type of establishment however some may be kept in larger quantities than others.”³⁵ These types of businesses are continuous buyers from the distillers and are constantly buying more bourbon to keep their stock filled. Just Party Source alone as mentioned above buys thousands of bottles in one month and hundreds of one type of bourbon. Depending on the area and price, Chandra said, “It really depends on what time of year it is as to which bourbon we sell the most of, during holidays they sell more high end bourbon.”

Alternative buyers

The bourbon industry does sell to a small concentrated segment of businesses within the world such as liquor stores, bars and restaurants. Which would normally cause lower profit potential; however when dealing with liquor it is different due to many different types and tastes associated with each type. Many “drinkers” will only drink a certain type of alcohol whether it is bourbon, whiskey, scotch, vodka, gin or any other type of alcohol. This in turn does not allow stores or bars to restrict their purchase of one or the other based on the customers they provide to not drinking other types of alcohol except

³³ Chandra. April 12, 2008. Party Source employee

³⁴ Chandra. April 12, 2008. Party Source employee

³⁴ According to surrounding restaurants within the West Chester, OH area. (Bravo, Applebee’s, B-Dubs, P.F. Changs and Champs)

³⁵ According to surrounding restaurants within the West Chester, OH area. (Bravo, Applebee’s, B-Dubs, P.F. Changs and Champs)

that distinct alcohol. This holds true for bourbon after reading many chat rooms regarding bourbon, many people said, “They only drink” or “They haven’t felt the need to go higher in price.” These are a few examples as to why buyers can’t refuse to buy the bourbon because of the price not being low enough.³¹

Standard products

The bourbon industry is quite standard however the tastes are extremely different even within the standardization of producing the bourbon. Tastes are reflected based on the percent of ingredients used and temperature in which the bourbon is fermented at. Depending on the distillery they are meticulous on choosing which materials to use within their bourbon. After the bourbon is created it is placed in a warehouse for at least two years and then tasted to see if it meets the standards of the producer. This is where even though the creation of the bourbon is similar the tastes can be extremely different and depending on how long it is kept within the barrel also greatly affects the taste. This is a prime example of standard products with very high brand loyalty.

Switching costs

Switching costs may seem to be minor compared to some industries with specialized equipment, however when looking into the alcohol industry in general. Many of the quality names in the industry have been around for hundreds of years. Many could find a “better tasting” same type of drink but due to brand loyalty have never tried another bourbon or tequila or vodka. So when looking deeper into the switching costs associated with switching to another type of liquor. The switching costs would be great based off brand loyalty and the time and money placed into raising the brand loyalty, and not necessarily the costs for replacing the equipment.

Threat of backwards integration

The threat of backwards integration from the buyer to the producer is not a big threat due to laws and regulations placed on the industry by the government. There are label requirements that are outlined in “The Beverage Alcohol Manual, which is an excellent source of guidance on basic mandatory labeling requirements and other regulatory matters involving distilled spirits.”³⁶ Under Title 27, Alcohol, Tobacco Products and Firearms, there are hundreds of codes that must be followed when dealing with alcohol related products. With these intense and strict laws which are listed under Title 27 being in place, this would deter any thought of backwards integration.

³⁶ http://www.distilling.com/newsletters/american_distiller70.html - American Distilling Institute

Availability of full information

With the availability of the information on the bourbon industry being out there for the public to view. It really doesn't help someone who would want to enter the industry or try to begin producing his or her own bourbon. Due to the "missing" information on the exact "recipe" to use for making the bourbon, and also with all the rules and regulations placed by the government it isn't feasible to just jump in and start up a distillery.

Threat of Entry

Government policy

The distilled spirits industry is one the most heavily regulated industries in the United States. As stated earlier in this analysis, the production of bourbon is held to a very strict set of standards that must be adhered to in every step of the process. On May 4, 1964 the U.S. government recognized bourbon whiskey as a distinct product.³⁷

There are also very stringent federal, state, and local licensing procedures to distill, store, and bottle whiskey. The federal Distilled Spirits Producer (DSP) license is one of the most difficult licenses to obtain in America. According to Bill Owens, founder of the American Distilling Institute, the average licensing period is 14 months, and all new distilleries experience severe negative cash flow in the period before opening.³⁸ There are also state and local licenses and fees which vary from state to state.

On top of licensing and production standards, distilled spirits carry a heavy excise tax that constitutes a significant percentage of the retail price paid by consumers. The federal tax is \$13.50 per proof gallon of ethyl alcohol which is about \$2.14 per 750ml bottle of 80 proof spirits.³⁹ Federal, state, and local taxes made up \$7.23 of the \$13.10 price of an average 750ml bottle of 80 proof spirits in 2005. That is 55% of the total retail price. The federal tax on distilled spirits is more than double that of beer and almost triples the tax on wine.⁴⁰ Overall, this is a heavily taxed and regulated industry.

Product Differentiation

Due to strict standards of production, differentiation of bourbon can only be found in the length of aging, the alcohol/volume (to a small extent), or in the batch size. Most of the Kentucky bourbon distilleries have a continuous production process through the use of a patent or continuous column still that has two chambers.

³⁷ <http://www.american.edu/TED/kentuckybourbon.htm>

³⁸ <http://www.distilling.com/PDF/renaissance.pdf>

³⁹ <http://books.google.com/books?id=4iZZA9iIW4C&printsec=frontcover#PPP1,M1>

⁴⁰ <http://www.discus.org/economics/>

The other distillation process is carried out in a “pot” still. The pot still is more labor intensive because the still must be loaded for each cycle, dregs must be emptied, and you can only distill a single batch of alcohol at one time. The continuous process requires less labor, allows you to distill multiple batches of alcohol, and produces a more pure and uniform product.

The major differences in bourbons are found in the batch size. There are three main types of bourbon: standard straight bourbon, small batch bourbon, and single barrel bourbon. Standard straight bourbon is simply deemed ready for bottling after it is aged a set period of time, and is mixed and bottled. These are mainly the value/premium brands such as Jim Beam, Evan Williams Black Label, Heaven Hill, Kentucky Gentleman, Benchmark, and Ancient Age. Small batch bourbon is produced by the distiller sampling and selecting a small number of barrels to be mixed together for bottling. Some well known small batch bourbons are Maker’s Mark, Knob Creek, Booker’s, Baker’s, Basil Hayden’s, and Woodford Reserve. Single barrel bourbon is the selection of a single barrel of bourbon for bottling. Examples are Evan Williams Single Barrel, Blanton’s Single Barrel, Elijah Craig 18 yr old, Eagle Rare Single Barrel, and Wild Turkey Kentucky Spirit.⁴¹

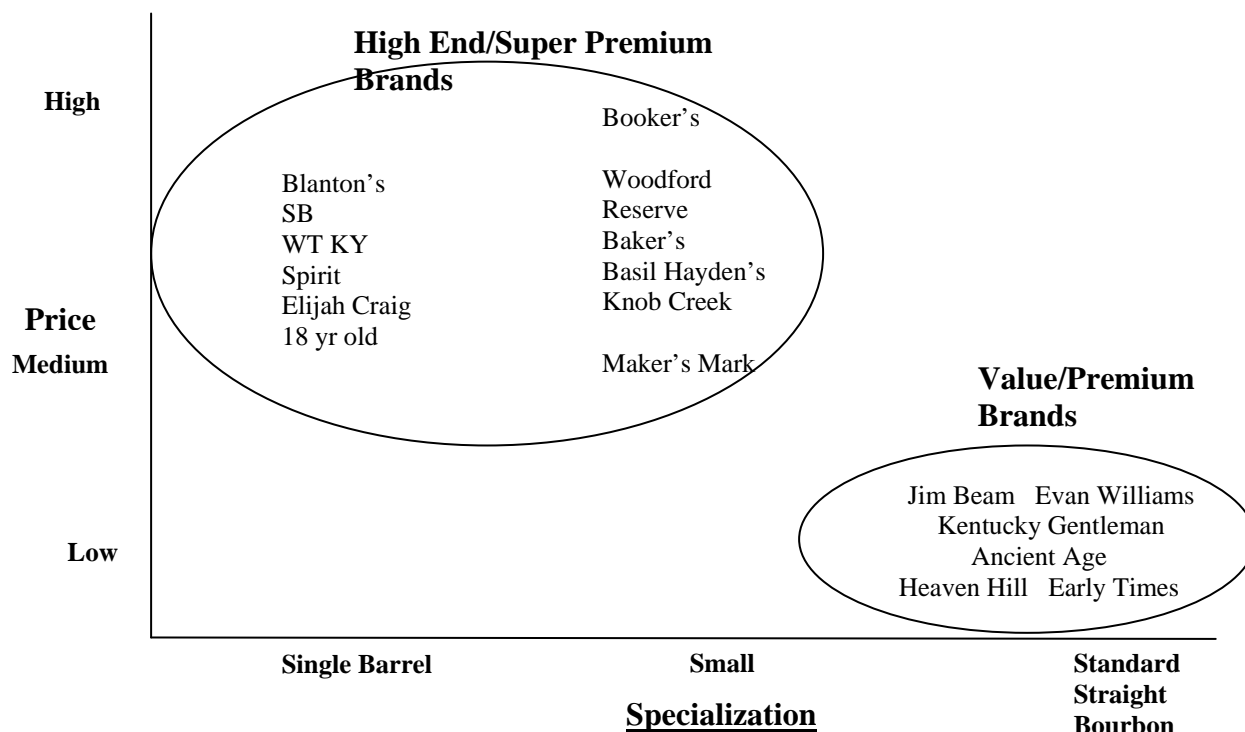
Brand loyalty is extremely strong in this industry. Bourbon drinkers all have their favorite brands that they drink all of the time. Bourbon companies tap into this with their advertising and brand imaging. NASCAR fans are very brand loyal to the companies who sponsor their favorite driver. Jim Beam sponsors Robby Gordon, and Jack Daniels (technically not bourbon) sponsors Clint Bowyer⁴². These are also the two best selling whiskeys in the U.S. The secure hold on market share by the established major producers definitely deters entry. Here is a map of the strategic groups of the bourbon industry based on price and specialization.

⁴¹ <http://www.straightbourbon.com/faq.html>

⁴² <http://www.nascar.com/drivers/list/cup/dps/>

Strategic Map of U.S. Bourbon Industry

Figure 1



Access to Distribution Channels

Distribution of bourbon from suppliers to wholesalers is subject to individual state regulation as stated in the 21st Amendment. There are two distribution system types in the U.S. The first is an open license system where private companies purchase the bourbon from the supplier and distribute it to on-premise establishments (restaurants, bars, and other places where consumption permitted) and off-premise retail outlets (package and liquor stores).⁴³ The second is a control system where the state government runs a monopoly and controls the wholesaling and distribution of all distilled spirits. Some states even operate the retail outlets while others sell to private retail businesses. Thirty-two states and the District of Columbia have an open system, and eighteen have a control system. The states that have a control system are: Alabama, Idaho, Iowa, Maine, Michigan, Mississippi, Montana, New Hampshire, North Carolina, Ohio, Oregon, Pennsylvania, Utah, Vermont, Virginia, Washington, West Virginia, and Wyoming. Of these eighteen, fourteen of them control retail sales. This means that citizens purchase liquor from state package stores or a designated agency outlet. These control states make

⁴³ <http://books.google.com/books?id=4iZZA9iIW4C&printsec=frontcover#PPA17,M1>

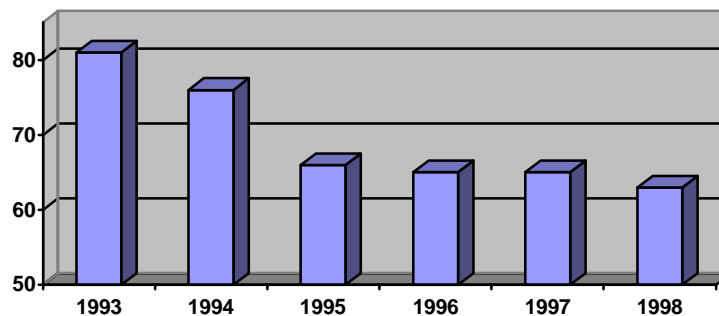
up about 28% of the population, and account for 25% of distilled spirits sales in the United States.⁴⁴

The distilled spirits industry operates on a three tier system because of federal law that separates the industry into producers/suppliers, wholesalers, and retailers and prevents any vertical integration to take place. However, in recent times there has been a lot of horizontal integration taking place to maintain profits and increase market share. This is a typical strategy that firms will take in a mature industry. Because of this the major producers have more market share. The wholesalers are consolidating which will make it harder for new smaller entrants to gain access. In the period between 1960 and 2000, the number of wholesalers of wine and spirits decreased 75% from 10,000 to around 2,000. Today there are around 1,800 licensed wholesalers in the United States. This means markets that used to have 12-24 wholesale competitors now have just 2-4. The top 25 wholesalers by sales made up over 60% of the total U.S. market in 1999. Retail outlets are also moving towards large retail chains as opposed to small package stores.⁴⁵ This factor will deter entry into the industry.

Excess Capacity

The distilled and blended liquor industry has a declining capacity utilization rate. This graph shows the capacity utilization from 1993-1998:

Graph 4: **Percent Capacity Utilization of Distilled and Blended Liquor**⁴⁶



Since 1998, the capacity utilization rate has leveled off. From 2002 to 2006 it maintained a level around 66%. This decline can be attributed to an increase in storage capacity, accompanied with a flat to declining overall demand. Demand for value/premium bourbons is flat/declining, and demand for high-end and super premium brands is increasing.⁴⁷ The major distillers already have capacity in place for much larger volumes of demand, but the only increase in demand is coming from the high-end products. High-end products by definition are low volume/high price, which will not make a noticeable

⁴⁴ <http://www.alcbev.state.ut.us/Background/regulate.html>

⁴⁵ <http://books.google.com/books?id=4iZZA9iIW4C&printsec=frontcover#PPA15,M1>

⁴⁶ <http://books.google.com/books?id=4iZZA9iIW4C&printsec=frontcover#PPT14,M1>

⁴⁷ http://www.discus.org/pdf/Bourbon_TrailII_Updated_August_2007.pdf

change in current utilization levels. As a result, these declining rates will be a deterrent to potential new entrants into the industry. At the same time, it provides opportunity for existing firms to horizontally integrate or for outside investors to acquire existing firms.

Capital Requirements

Actual costs to build a new bourbon operation could not be found. Instead I will use an example of a Scotch distillery that is reopening after 20 years. The initial investors are spending £5 million (over \$10 million) to cover the first year's operating expenses. The distillery will employ roughly 20 people and they estimate it will take 6-7 months before they become fully operational. In the meantime, they will sell old remaining stocks of whiskey.⁴⁸

Let us compare that with the requirements for a bourbon distillery. First, you have to apply for a license. Then, you have to build a facility or buy an existing facility that will accommodate your needs. Next you must conduct a great deal of research and experimentation, or else hire someone who knows the process. After an average of 14 months you have your license, and now you can finally begin to distill. You need to tap into suppliers for raw materials and machinery. You also need to acquire barrels to age the bourbon for a bare minimum of 2 years (most age for at least 4 years). So, you are looking at around 5-6 years before your first product will be ready for bottling and sale. Don't forget warehouses to store your barrels while they age. Then you have to break into a distribution channel that can get your product on store shelves and in bars and restaurants. Marketing and creating awareness of your new product will also be a major concern early in the distribution process. Overall, a large portion of your capital expenditures will be on property, plant, and equipment. The extended period of time between the production and sale also increases risk.

There is the option of opening a micro-distillery that produces small amounts of premium quality whiskey. Your start-up costs would be significantly reduced, but you would still be investing a lot of money with no return for an extended period of time. Many small distilleries form partnerships with the larger firms. The large distillers can give you the capital and capacity to produce whatever quantity or quality you desire, and you can tap their name and connections to create awareness and provide marketing for you. The large firm will require a portion of your profits, of course. Many small firms go this path because they would have no chance of sustainable profits otherwise.

Economies of Scale

Due to the large initial start-up investment, a highly regulated and involved process, and storing/aging periods, a firm will realize declines in unit cost as volume increases. This is evident in the fact that a few large firms dominate the bourbon market. They have long established facilities, processes, equipment, knowledge, and access to distribution

⁴⁸ <http://www.harpers.co.uk/news/5345/Scotch-distillery-to-reopen-af.ehtml>

channels. A large distiller will produce 40,000-50,000 barrels (8 to 10 million liters) annually, and a small batch distiller will produce between 1,250-2,500 barrels (250,000 to 500,000 liters) a year.⁴⁹ Let us hypothetically say that the large firm's capital cost is \$100 million and the small firm's is \$10 million. We can put this in a table to make it clear:

Table 7:

Economy of Scale for Bourbon Industry (Hypothetical)

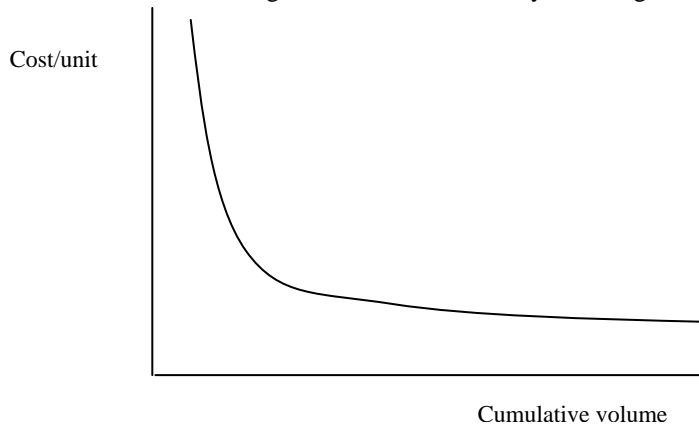
Firm size	Capital cost	Barrels/year	Cost/Barrels per Year
Small	\$10 million	2,500	\$4,000
Large	\$100 million	50,000	\$2,000

The large firm's cost of capital is ten times greater than the small firm's, but the large firm's output is 20 times greater than that of the smaller firm. This happens because of a combination of many factors including efficiency, lower material cost, higher productivity, division of labor, and many other factors. The economy of scale in the bourbon industry is evident by the small number of new entrants, and the few, concentrated, large firms that dominate the industry.

Learning/experience curve

This goes hand in hand with the economy of scale. Since the initial start-up period is so costly and time consuming, the learning curve for bourbon distillation is very steep. A sample learning curve is illustrated in the figure below.

Figure 2: Bourbon Industry Learning Curve



Newer distillers cannot compete with the large, established firms because they have upwards of a 200 year head start. These firms have learned bourbon distilling inside out, and have passed down what works and what doesn't work through generations. A new

⁴⁹ http://www.hoovers.com/distillers/--ID__354--/free-ind-fr-profile-basic.xhtml

entrant could potentially jump further down the learning curve by hiring industry experts along with a master distiller, but this would require a lot of capital. This steep learning curve in the bourbon industry is a major barrier to entry.

Substitutes

In the bourbon industry there are several different substitutes available. The type of substitute would depend on the consumer’s purpose for drinking. They could be drinking to get messed up and drowned themselves in their sorrows; they could be drinking for taste, or even for a preference based on aging, alcohol content, or price.

Drugs

If the person consuming the alcohol is just looking for a way to get messed then they could also use alternative and substitute drinking bourbon for taking drugs. There are several different drugs that are available for the consumer to choose from. This could range from abusing prescription medications to purchasing illegal street drugs.

Taste

On the other hand, if the consumer was drinking for taste there are also several substitutes available for them to choose from. The substitutes that we decided to use in this area of analysis include rum, tequila, and vodka. All of these different substitutes serve the same purpose but are different in content, taste, and price.

Table 8

Substitute	Profitability of Industry	Switching Cost
Vodka	High	Low
Tequila	High	Low
Rum	High	Low

The first substitute researched was vodka. The process of distilling vodka has been around since the 1400’s and was created by the Russians.⁵⁰ Although the taste of vodka and bourbon are very different, they are made from similar ingredients. Such ingredients include wheat and grains. Both use food items high in starch, but the main ingredient in bourbon is corn whereas the main ingredient in vodka is potatoes. Making vodka requires a five step process which is very similar to the making of bourbon.⁵¹ So, the switching cost between the makings of the two types of alcohol would be low. In fact, many vodka lovers

⁵⁰ Making Vodka” Retrieved March 29, 2008, from The Cocktail Times Website: <http://cocktailtimes.com/distillery/vodka.production.shtml>

⁵¹ Stone, John. “Making Vodka for Amateurs” Retrieved March 28, 2008, from <http://www.gin-vodka.com/vodka.html>

fail to realize that they can make vodka in their own home. “All it takes is some patience, equipment, and proper distilling skills.”⁵²

Next, we choose to analyze the substitute tequila. “Tequila is made from the blue agave plant, which is a member of the lily family.”⁵³ This plant has spiny broad leaves called pencas where the majority of the flavor comes from.⁵⁴ As with vodka, the taste of tequila and bourbon are very different. Not only are the taste different but the ingredients used for making them are very different as well. However, there would be low switching cost between the makings of the two products. Unlike vodka, gin, and other liquors, it would be very difficult for anyone to make tequila in their home. The blue agave plant, which is the main ingredient in tequila, is only found in Mexico. Therefore, like bourbon, tequila is only made in one area, Mexico.⁵⁵ Depending on the type, some bourbon’s are aged for at a minimum of one year and at a maximum of twenty years.⁵⁶ However, depending on the different types of tequila the minimum aging is 14 days and the maximum is ten years.⁵⁷

The third substitute examined was rum. The process of distilling rum has been around since the seventeenth century and originated in the Caribbean where the majority of rum is still made today.⁵⁸ Other areas that rum is made is Canada, Europe, and few distilleries exist in the southern part of the U.S.⁵⁹ Just as with the other alcoholic beverages researched the taste between rum is very different than that of bourbon. Again, the process of making rum is very similar to that of bourbon so the switching cost between the makings of the two types of alcohol would be low. The main ingredient in rum is molasses; other ingredients include water and wild yeast.⁶⁰ Depending on the different types of rum, the minimum aging is one year and the maximum can be as long as twenty-two years.

All of the substitute products listed are very profitable. In fact, all of the different alcoholic beverages have been in production for at least 100 years or even more in most cases. As noted the switching cost that would be involved from deciding to distill one type as opposed to another would be relatively low. The only thing that would be different between the different beverages is the actual ingredients that go into each product. If

⁵² “How to Make Your Own Vodka” Retrieved March 28, 2008, from

http://www.essortment.com/food/makevodkahome_sbcy.htm

⁵³ “Making Tequila” Retrieved March 29, 2008, from The Cocktail Times Website:

<http://cocktailtimes.com/distillery/tequila.production.shtml>

⁵⁴ “Making Tequila” Retrieved March 29, 2008, from The Cocktail Times Website:

<http://cocktailtimes.com/distillery/tequila.production.shtml>

⁵⁵ Argen, David (2005) “The Making of a Quality Tequila” Retrieved March 29, 2008, from The Guadalajara Reporter Website: <http://www.loscabosguide.com/tequila/pressnews/casanoble31dec05.htm>.

⁵⁶ “Kentucky Bourbon” Retrieved March 25 2008, from

<http://www.american.edu/TED/kentuckybourbon.htm>

⁵⁷ Argen, David (2005) “The Making of a Quality Tequila” Retrieved March 29, 2008, from The Guadalajara Reporter Website: <http://www.loscabosguide.com/tequila/pressnews/casanoble31dec05.htm>.

⁵⁸ “Rum” Retrieved March 29, 2008, from The Webtender Website:

<http://www.webtender.com/db/ingred/304>

⁵⁹ “All About Rum” Retrieved March 29 2008, from <http://www.tastings.com/spirits/rum.html>

⁶⁰ “Rum” Retrieved March 29, 2008, from The Webtender Website:

<http://www.webtender.com/db/ingred/304>

anything was going to cause a problem here it would be the fact that some are confined to one certain area of the world.

Other Consumer Preferences

As previously mentioned, the consumer's choice of switching to a substitute could also be influenced by preferences such as aging, alcohol content, and price. The higher quality products have a longer aging period, more alcohol content, and a higher price. Consumers may choose a substitute that has as much aging, but has more alcohol content for a cheaper price. In other words, they may be more concerned with feeling like they are getting their money's worth.

Table 9

Product	Aging	Alcohol Content (%)⁶¹	Price (1 liter)*
Bourbon	1-20 years	40 - 75	\$13 - \$180
Rum	1-22 years	40 - 95	\$4 - \$120
Vodka	No aging	40 - 50	\$8 - \$75
Tequila	14 days - 10 years	45 - 50.5	\$3 - \$140

*Source: Price information was retrieved from Hollywood Tobacco & Liquor in Florence, KY.

When observing the above table, one can see that a one liter bottle of rum that has been aged for the same amount of time as bourbon contains more alcohol and cost less. On the other hand, if price was the only preference then all of the other available products listed are cheaper than bourbon. As previously stated, it is all based on purpose and preferences of the consumer.

⁶¹ "Alcohol Content in Some Common Drinks" Retrieved April 1, 2008, from

Five Forces Analysis

Force	Key Drivers	Influences on Industry Profits
Intensity of Rivalry	CR4 = 83% Must have distinct taste and quality High demand now, but must plan for at least 6 years into the future.	(0)
Bargaining Power of Suppliers	Large purchase of specialized equipment (+) Forward integration low (+) Low number of grain substitutes (-)	(0)
Bargaining Power of Buyers	(-) Sell mainly to the beverage distributors, (+) Hundreds of distributors; many new entrants to the beverage distribution; Bars, restaurants, and retail liquor stores must have bourbon stocked.	(+)
Threat of Entry	Government Policies (+) Brand Loyalty (+) Distribution (0) Specialized Assets (+) Economies of Scale (+) Learning Curve (+)	(+)
Threat of Substitutes	Drugs Taste preference Aging, Alcohol Content, Price Preference	(0)

Overall, the above analysis indicates that the bourbon industry may be a good industry to be in, but a difficult one to enter. Although there is not major intensity of rivalry since most of the companies have been working well together for years, a new entrant may be met with resistance. The threat of entry is very good because there are many factors that are keeping companies from entering. Substitutes may be a negative, but some people are loyal to bourbon and won't switch. Overall score would probably be a (+2).