The influence of the Prohibition era on the structure of the whiskey industry

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THE INFLUENCE OF THE PROHIBITION ERA ON THE STRUCTURE OF THE WHISKEY INDUSTRY

by

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(A.B., Boston University, 1948)

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Master of Arts

1948
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<td></td>
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INTRODUCTION
INTRODUCTION

The growth and economic organization of an industry are usually the result of a great number of different forces. Some of these forces are economic in nature and some are of a more indeterminate character. It cannot be said that the growth of an industry is the result of any single force. The principle of the mutual interdependency of forces must be constantly kept in mind when considering any social endeavor. Thus, the problem of determining and evaluating the factors responsible for the growth and organization of an industry is a difficult one.

The development and structure of the post-prohibition whiskey industry lends itself to the inclusion of a more accurate analysis than is usually applicable to the study of an industry. The period of time during which the whiskey industry developed has not been long; and, although the factors which have influenced this development may not be clear, certain important influences can be identified and evaluated. A study of the reestablishment of the whiskey industry offers an opportunity to observe under relatively favorable conditions the development of an industry. Certainly, the observed growth of the industry since 1937 is subject to a more definite relationship of cause and effect than can probably be made.

The objective of this paper will be to show that the post-prohibition industry was molded to a certain extent by factors
arising out of the era of prohibition (1920-1973). To provide
a suitable frame of reference, the structure of the pre-prohibition
industry will be examined. Next, certain of the influencing
factors responsible for the development and structure of the
post-prohibition industry arising out of the illicit nature of
the manufacture and consumption of whiskey during the era of
prohibition will be reviewed. To be specifically considered are
the results of these influences on demand, foreign penetration,
profit opportunities, marketing, production, and government
regulation. Finally, the economic structure of the contemporary
industry will be discussed to show how the influences of
these factors resulting from the prohibition era.

The focus was primarily on the economic aspects of
the whiskey industry. Such controversial questions as
the social value of prohibition versus non-prohibition were
avoided as these problems were, in most respects, beyond
the competence of this economist. The primary concern of this study
was with the growth and structure of the whiskey industry and
the factors responsible for this development and organization.
CHAPTER I

THE PRE-PROMPTITION INDUSTRY 1861-1919
This chapter is an attempt to analyze the economic structure of the whiskey industry in the era before prohibition. The analysis is made in order to show more clearly the effect of certain influences with one of the prohibition era on the growth and structure of the industry after repeal. The first part of the chapter is devoted to a historical review of the trend toward monopoly in this early period. The latter portion of this chapter attempts to draw general conclusions concerning the economic organization of the industry before prohibition.

The alcohol and spirits industry first came to assume importance in the United States after the Civil War. Previous to the Civil War, alcohol production was of little importance. Distilling was in the hands of a large number of small, home producers manufacturing almost entirely for beverage purposes. However, with the advent in the latter part of the 19th century of a manufacturing economy in the agricultural economy, alcohol production began to grow in importance on an industrial level. Alcohol was used for the production of patent medicines, brewing (ale), perfumery, cooking, varnish, and furniture polish. In addition, the use of alcohol as a beverage increased considerably after the Civil War. In 1860, for example, per-capita consumption of distilled spirits was 0.51 gallons per year. In 1870, this figure had risen to 1.64. (1) (2)

The First Whiskey Pool, 1871

The first attempt at the formation of any sort of a combination of distillers to maintain a degree of control over the market occurred in 1871. The most important reason for its formation, from an economic point of view, was the governmental fiscal policy during the Civil War. As part of the general policy of imposing excise taxes to help finance the war, the taxes on alcohol were steadily increased, whereas previously, they had been nominal. On July 1, 1862, the tax was made 20 cents per gallon; on June 7, 1864, 50 cents a gallon; on July 1, 1864, 1.20 a gallon; and on January 1, 1865, a tax of 2.00 was levied. At each increase of the tax rate, a considerable time elapsed before the highest rate was to be applied. This caused a scramble to get plants into operation before the new, higher rate was imposed.

"...and time intervened before the various amounts were collected, and during this time, the distillers and the speculators nearly the whole benefit of the tax fell out upon it. The result was that during this time, new distilleries were erected all over the country, and at the end of the war, there was three times the capacity that could be utilized." (4)

It was during this period that the great whiskey scandal

(3) Ibid., p. 71.
occurred in the industry.

The effects of the increased revenue tax were felt not only on the production side of the distilling industry, but on the consumption side as well. Previous to the imposition of the relatively new excise taxes, alcohol was chiefly used for such purposes as burning, clothing, and cooking. When alcohol rose from about 40 cents a gallon to well over a dollar, the use of it was severely curtailed for these purposes.

Thus, the alcoholic beverage industry found itself in the position of possessing considerably increased productive facilities and greatly reduced income. The obvious answer to this problem was to curtail production. In 1871, all of the distilleries North of the Ohio River, the heart of the distilling industry, agreed to limit production to two thirds of capacity. This pool type of control soon passed when severe crop failures in Europe from 1876-1878 increased the demand for U.S. exports of whiskey. The following table indicates spirits removed for export during that period:

<table>
<thead>
<tr>
<th>Date</th>
<th>Amount (in barrels)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1875</td>
<td>1,650,000</td>
</tr>
</tbody>
</table>

This was an association of internal revenue officers and distillers formed under the administration of President Grant for the purpose of combatting the enforcement of the excise law. It was based on a number of representatives from a number of states, in further the period from July 3, 1872, the government had been defrauded of nearly $4,700,000 in taxes. Source: New International Dictionary (New York, Dodd, Mead & Company, 1905), volume iii, p. 146.
<table>
<thead>
<tr>
<th>Year</th>
<th>Taxable Proof gal.</th>
<th>% of total prod.</th>
<th>Year</th>
<th>Taxable Proof gal.</th>
<th>% of total prod.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1873</td>
<td>2,353,630</td>
<td>3.45%</td>
<td>1881</td>
<td>15,926,402</td>
<td>13.53%</td>
</tr>
<tr>
<td>1874</td>
<td>4,000,160</td>
<td>8.9%</td>
<td>1882</td>
<td>9,192,725</td>
<td>7.04%</td>
</tr>
<tr>
<td>1875</td>
<td>567,413</td>
<td>0.96%</td>
<td>1883</td>
<td>5,380,427</td>
<td>7.19%</td>
</tr>
<tr>
<td>1876</td>
<td>1,308,900</td>
<td>2.25%</td>
<td>1884</td>
<td>9,596,735</td>
<td>12.70%</td>
</tr>
<tr>
<td>1877</td>
<td>2,599,522</td>
<td>4.29%</td>
<td>1885</td>
<td>10,871,015</td>
<td>14.24%</td>
</tr>
<tr>
<td>1878</td>
<td>5,499,252</td>
<td>9.83%</td>
<td>1886</td>
<td>5,846,050</td>
<td>7.02%</td>
</tr>
<tr>
<td>1879</td>
<td>14,535,531</td>
<td>22.62%</td>
<td>1887</td>
<td>2,923,913</td>
<td>2.85%</td>
</tr>
<tr>
<td>1880</td>
<td>14,705,000</td>
<td>18.55%</td>
<td>1888</td>
<td>1,514,705</td>
<td>2.15%</td>
</tr>
</tbody>
</table>

The Western Export Association, 1881

After 1880, good crops in Europe, poor crops at home, and some changes in the tariff laws of leading European countries, especially duties against the United States, cut off this demand, and left the distilleries of this country with a capacity to produce four times what the home market could absorb. (6)

This caused great over-production and distress among the distillers. They could not export except at a loss; their cattle were in the barns (the feeding of cattle on the slop from the distilleries was an important adjunct of the distilling business), so that it was difficult to close the distilleries; their warehouses were filled, and the market was broken. In November 1881, a general meeting was called to form a pool. The Western Export Association was formed, the officers of which were authorized to levy a monthly assessment on each distiller running his distillery. This assessment was to be proportionate to the amount of grain used in manufacture, and high enough to pay the losses arising from the exportation of a quantity of spirits sufficient to relieve the home market.

An appeal was made to Congress, asking that an export bounty be given equal to that granted by Germany; or, if a

bounty for export should not be given for fear of lessening the revenue, that the internal revenue be raised to 11 and then a bounty of 10 cents for export be granted. Congress and the people, however, had not forgotten the whiskey ring scandal; and, consequently, Congress did not dare legislate in favor of distillers.

This first pool lasted until 1828, when it broke down because certain members refused to pay their bills. The distillers had been able to keep prices somewhat higher by this means; but, after the breaking of the pool, they ran at low profits, any or each at a loss, or else went down during the summer — a proceeding which in itself involved a loss. In September, 1829, they organized again for one year on a similar plan; but it was found necessary to make an attempt to limit the output of the distilleries to a small percentage of their capacity, in addition to the relief of the market by exporting. However, this new pool met with the same fate as that of its predecessor.

From 1829-1837, there were several attempts to reactivate the pool. They met with varying degrees of success. Usually, the pool would exist for a year and then suspend its operations for a period of time. Sometimes these pools attempted to limit production and sometimes they did not.

Various attempts were made by the pool to limit prices and to subsidize the exportation of the surplus production. The following table indicates pool assessments from September,
1884, to April, 1887:

<table>
<thead>
<tr>
<th></th>
<th>1884 cents per bu. mashed</th>
<th>1885 cents per bu. mashed</th>
<th>1886 cents per bu. mashed</th>
<th>1887 cents per bu. mashed</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>8</td>
<td>16</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>February</td>
<td>6</td>
<td>9</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>March</td>
<td>6</td>
<td>10</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>April</td>
<td>6</td>
<td>10</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>May</td>
<td>7</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>June</td>
<td>9</td>
<td>8</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>July</td>
<td>6</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>August</td>
<td>9</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>September</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>October</td>
<td>6</td>
<td>12 per gallon</td>
<td>12 per gallon</td>
<td>12 per gallon</td>
</tr>
<tr>
<td>November</td>
<td>6</td>
<td>12 per gallon</td>
<td>12 per gallon</td>
<td>12 per gallon</td>
</tr>
<tr>
<td>December</td>
<td>0</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>

Source: J. R. Atherton; Testimony before Congressional Committee on manufacturing, p. 7. (taken from Finkley, Trust, Pools and Corporations)
Generally, these pools were unsuccessful in achieving any
extent of price control in the industry. The pooling agree-
ments suffered from the usual defect of all such arrange-
ments. The pool had no means by which to control the supply
even to the extent that, when, if at all, one of the firms, to
save a slice of profit by underselling the wine set by the pool,
it could freely be as without fear of legal action by the pool.
Another reason was that the means of control attempted to
establish a distillery was relatively small. If market-
conditions were favorable to the industry, new small dis-
tilleries would be established almost overnight to take advan-
tage of the favorable conditions. This served to reduce what
had the pool any hope of upon the market.

Because of the fact that the pools were unable to main-
tain prices and eliminate competition, a new type of organiza-
tion, modeled along the lines of the new recently formed
Standard Oil Trust, was evolved. The former members of the
old pool became members of the new organization which was
called "The Distillers' and Cattle Feeders' Trust." The
former members of the old pool sold all of their stock certificates to the trust in exchange for trust certificates in
return. The par value of the trust certificates was $100.
The trust certificate was our used to represent, as nearly
as possible, the cash value of the equipment of the
various firms which made up the trust. The trust was to continue for twenty-five years, after which time it could be dissolved by a vote representing 66 2/3 of the value of the trust certificates.

The trust was to be run by a board of trustees composed of nine men operating under a $100,000 bond. Their duties were as follows:

"exercise supervision so far as their ownership of stock enables them to do over the several corporations or associations whose stock is held by said trustees. As stockholders of said corporations they shall elect or endeavor to elect honest and competent men as directors thereof, who shall be paid a reasonable compensation for their services. They may elect themselves as such directors and officers, and shall endeavor to secure such judicious and efficient management of such corporations as shall be most conducive to the interests of the holders of the trust certificates." (7)

At the first meeting of the certificate holders, three trustees were elected to hold office for one year, three were elected to hold office for two years, and three were elected to hold office for three years. Thereafter three were to be elected each year to replace the retiring members. In order to be elected to the position of a trustee, it was necessary to hold at least 500 shares of stock. This meant that the men who controlled the individual firms making up the trust also controlled the trust.

(7) Ripley, op. cit., p. 31.
The trust controlled the member firms by various means. First, they appointed the managers of the various member distilleries. Second, they maintained a close watch on the activities of the member firms through a complex recording system which made daily reports from the member distilleries mandatory. However, the most important device for control was the authority of the trust to limit the production of the distilleries or close them altogether. This type of firm control enabled the trust to control the productive facilities of the industry to such an extent that the former device of assessments to subsidize the export surplus was no longer required.

At the outset of the trust there were 17 member distilleries. In 1889, the trust had closed all but 12 of these distilleries. These 12 distilleries supplied the market. The prices of whiskey and corn were not materially altered by the trust and remained fairly constant except for periods during which the trust was engaged in driving competitors from the field. One of these periods of low prices occurred during the first six months of the trust. It was found that all of the former members of the trust were not willing to join the new trust. Thus, the trust, in order to force them to join, lowered prices until this objective was accomplished. When all of the former members of the pool had become members of the trust, prices were moved up to their previous level. However, this price manipulation had an
adverse effect upon the industry. The price rise, which was put into effect after the recalcitrant pool members had joined the trust, had the consequence of forcing those producers to enter the field of distilling. Hence, the trust was obliged to

lower prices again in 1886 to force potential competitors out of the market. Although the price decrease amounted to only 10 per cent, it had the effect of closing the firms which had entered the market in response to the higher price. The chart on the following page indicates the market fluctuations in the price of whiskey on the whiskey exchange at Peoria during this period.
CHART # 2

MATERIAL PRICES AT PROKIA FOR WHISKEY
1881-1888

Whiskey Prices in dollars and cents per gallon

Pool Organized

Source: Reports of the U. S. Internal Revenue Commission, 1881-1888.
The first price reduction occurred in September 1885, when the price was reduced from $1.14 to $1.05 on a gallon of whiskey. The price was restored in October of the following year. The second price reduction occurred in June 1887, when the price was again dropped from $1.14 a gallon to $1.05 a gallon.

The Distilling and Cattle Feeding Company, 1889

However, it was about this time that public sentiment was being aroused against the various combination movements that had been occurring on a large scale during this decade in imitation of the original Standard Oil Trust. To avoid unfavorable publicity and possible legal action under any of the various state anti-trust laws, the trust was reorganized into a corporation called the Distilling and Cattle Feeding Company. The trustees of the former corporation subscribed for all of the stock of the new corporation and elected themselves as members of the board of directors. The majority of the directors of each of the companies within the trust ordered a conveyance of all the property held by the trust corporation to the new corporation. As directors of the corporations they exchanged the trust certificates for shares in the new corporation. Ownership by the new corporation was extended to include almost all of the competing distilleries. However, the Distilling and Cattle Feeding Company did not become the stabilizer that its members had hoped that it would. This was because the new company
experienced a series of scandalous speculations.

Finally, suit was brought against the company in the State of Illinois for revocation of its charter on the grounds that the company had created a monopoly in manufacture and distribution. In 1893, the charter of the corporation was revoked. The statement of the court was as follows:

"There can be no doubt, we think, that the Distillers' and Cattle Feeders' Trust, which preceded the incorporation of the defendant, was an organization which contravened well-established principles of public policy, and it was therefore illegal. The new corporation succeeded to the trust, and its operations are to be carried on in the same way, for the same purposes, and by the same agencies as before. The trust then being repugnant to public policy and illegal, it is impossible to see why the same is not true of the corporation which succeeds to it and takes its place. The control exercised over the distillery business of the country—over production and prices—and the virtual monopoly formerly held by the trust are in no degree changed or relaxed, but the method and purposes of the trust are perpetuated and carried on with the same persistence and vigor as before the organization of the corporation. There is no magic in a corporative organization which can purge the trust scheme of its illegality, and it remains as essentially opposed to the principles of sound public policy as when the trust was in existence. It was illegal before, and it is illegal still, and for the same reasons."

In answer to the objection that the defendant corporation by its charter was authorized to purchase and own distillery

(3) Supreme Court of Illinois, Distilling and Cattle Feeding Company v. People, 156 Ill. 446, (1895).
property, and that there was no limit to the amount of prop-
erty that they might thus acquire, the court said:

"It should be remembered that grants of power in
corporate charters are to be construed strictly, and
that which is not clearly given is by im-
plication denied. The defendant is authorized
to own such property as is necessary to carry
on its distilling business, and no more. Its
power to acquire and hold property is limited
to that purpose, and it has no power by its
charter to enter upon a scheme of getting into
its hands and under its control all, or sub-
stantially all, the distilling plants and the
distilling business of the country, for the
purpose of controlling production and prices,
of crushing out competition, and of establish-
ing a virtual monopoly in the business. All such
purposes are foreign to the powers granted by
the charter. Acquisitions of property to such
an extent and for such purposes do not come
within the authority to own necessary property
for the purpose of carrying on a general dis-
tillery business. In acquiring properties in
the manner and for the purposes shown by the
information, the defendant has not only mis-
used and abused the powers granted by its
charter, but has usurped and exercised powers
not conferred by, but which are wholly foreign
to that instrument. It has thus rendered
itself liable to prosecution by the state by
quo warranto. We are of the opinion that upon
the facts shown by the information, the
judgement of ouster is clearly warranted."

The Distilling Company of America

After the revocation of the charter of the Distilling and
Cattle Feeding Corporation in Illinois, the company re-
organized in New York State under the name of the American

(9) Supreme Court of Illinois, op. cit.
Spirits Manufacturing Corporation. The company took over the ' newest and best distilleries in the field. Other plants and 

branches of the 'business were independently incorporated when 

the time of 1899, in four major companies. In 1899 these 

four companies were united under the American Spirits 

Manufacturing Corporation. The name given to this 

entity was the Distilling Company of America, and it was capitalized 

at $125,000,000. Eventually, over 90% of the securities of this 

company were acquired by the Distillers Security Corporation, a holding company organized in New Jersey. 

Later, to some extent as a result of 1899, became the M. E. Yourer Products Corporation.

The U. S. Yeast Products Corporation became the National Distillers Products Corporation in 1932, and was bought up by the Ford and another, until the time of 1918. In one of the major times in the industry, during the First World War the company up to a quarter of $20,000,000 of alcohol production. However, this national prohibition led in 1919 forced it to 

drop its distilling operations. It entered into the production of yeast, cereal products, and molasses. The 

depression of 1921, however, caught it unawares, and the banks forced the corporation into receivership. In 1928, once the

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(10) Ibid.

(11) Ibid.

depression was over, the banks reorganized the company and changed its name to the National Distillers Products Corporation. The corporation disposed of its yeast and brewing businesses and concentrated on the production of medicinal whiskies. During the years between the formation of the National Distillers Products Corporation and the repeal of the 18th amendment, the company gained possession, through the purchase of warehouse receipts, of about nine million gallons of whiskey. These nine million gallons constituted almost the entire U. S. supply of whiskey; and, as the Volstead Act was repealed, the National Distillers Products Corporation was in a position to dominate the U. S. market.

From the discussion of the historical development of the pre-prohibition whiskey industry, a few generalizations may be made relevant to the structure of the industry during this period.

Essentially, it may be said that the economic structure of the industry was such that a relatively pure type of competition could have existed. Secondly, it may be stated, as a corollary, that this type of economic organization was constantly challenged by various attempts to introduce monopolistic elements into the structure.

By the concept of "competition" we mean the relationship among the buyers and the sellers in a specific market.
A distinguishing feature of a pure type of competition is that of individual buyers or sellers are influenced by factors other than his own efforts. According to economic theory, such a situation will be found only when the following conditions are realized:

1. **Standardized product.** The products of the various sellers are sold in a market and are regarded as such by the consumers. This condition can only be the pre-production industry to have the market and the consumer can realize. The beer produced and sold by the distiller was not aged, blended, or bottled. These functions of aging, blending, and bottling were performed by a large number of small retailers who purchased the whiskey in bulk from the distiller.

2. **Individual sellers do not set their own price.** The price is usually determined on a larger, centralized market. Peoria was the market in which the whiskey was sold by the distiller and purchased by the retailer. It was in this market that the factors of supply and demand were brought into focus and the price was determined. The selling, buying, and production of products in this market was such that the fluctuations of the supply and demand.

3. **Large number of sellers, each seller independent.** The number of sellers in the industry was relatively large. In Peoria, one can see the influence of pressure before the turn of the century. However, from 1900, the laws of the state and the federal government, as a result of
the number of sellers in the market. The table which follows shows the number of distillers from 1899 to 1931 as well as total production of whiskey during these years. From the table, it can be seen that each distillery, on the average, was responsible for a small percentage of the total production of the industry. However, this table gives no indication of the number of sellers controlled or owned by the Distilling Company of America.
<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Distilleries</th>
<th>Total Production (tax gallons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1899</td>
<td>965</td>
<td>79,701,170</td>
</tr>
<tr>
<td>1901</td>
<td>805</td>
<td>75,414,812</td>
</tr>
<tr>
<td>1902</td>
<td>805</td>
<td>70,672,971</td>
</tr>
<tr>
<td>1903</td>
<td>805</td>
<td>56,506,070</td>
</tr>
<tr>
<td>1904</td>
<td>805</td>
<td>71,097,421</td>
</tr>
<tr>
<td>1905</td>
<td>805</td>
<td>70,933,074</td>
</tr>
<tr>
<td>1906</td>
<td>805</td>
<td>86,552,661</td>
</tr>
<tr>
<td>1907</td>
<td>805</td>
<td>54,502,027</td>
</tr>
<tr>
<td>1908</td>
<td>805</td>
<td>70,152,174</td>
</tr>
<tr>
<td>1909</td>
<td>805</td>
<td>82,467,904</td>
</tr>
<tr>
<td>1910</td>
<td>805</td>
<td>100,647,155</td>
</tr>
<tr>
<td>1911</td>
<td>805</td>
<td>98,200,574</td>
</tr>
<tr>
<td>1912</td>
<td>805</td>
<td>99,815,029</td>
</tr>
<tr>
<td>1913</td>
<td>805</td>
<td>88,698,797</td>
</tr>
<tr>
<td>1914</td>
<td>805</td>
<td>44,562,489</td>
</tr>
<tr>
<td>1915</td>
<td>805</td>
<td>59,240,671</td>
</tr>
<tr>
<td>1916</td>
<td>805</td>
<td>57,551,674</td>
</tr>
<tr>
<td>1917</td>
<td>805</td>
<td>17,523,511</td>
</tr>
<tr>
<td>1918</td>
<td>805</td>
<td>-</td>
</tr>
<tr>
<td>1919</td>
<td>805</td>
<td>-</td>
</tr>
<tr>
<td>1920</td>
<td>805</td>
<td>-</td>
</tr>
<tr>
<td>1921</td>
<td>805</td>
<td>-</td>
</tr>
<tr>
<td>1922</td>
<td>805</td>
<td>-</td>
</tr>
<tr>
<td>1923</td>
<td>805</td>
<td>-</td>
</tr>
<tr>
<td>1924</td>
<td>805</td>
<td>-</td>
</tr>
<tr>
<td>1925</td>
<td>805</td>
<td>-</td>
</tr>
<tr>
<td>1926</td>
<td>805</td>
<td>-</td>
</tr>
<tr>
<td>1927</td>
<td>805</td>
<td>-</td>
</tr>
<tr>
<td>1928</td>
<td>805</td>
<td>-</td>
</tr>
<tr>
<td>1929</td>
<td>805</td>
<td>-</td>
</tr>
<tr>
<td>1930</td>
<td>805</td>
<td>-</td>
</tr>
<tr>
<td>1931</td>
<td>805</td>
<td>-</td>
</tr>
</tbody>
</table>

Firms operating during the period of prohibition produced no whiskey except in 1920. Manufacturing during this period consisted of blending existing stocks for medicinal purposes.

4. Freedom of entry. There is difficulty in establishing this criterion quantitatively. It cannot be stated definitely that it was possible for a firm to enter the market at will because of a lack of figures to indicate the movement of firms into the industry in response to price changes. However, according to Ripley, this phenomena did occur on many occasions before the turn of the century in response to high prices established by the various short-lived pooling arrangements.

5. Freedom from external control of price and output levels. This refers essentially to government action to establish prices or control production. During the era under consideration, there was no government interference to control either prices or production.

6. All selling activities, such as advertising and the use of brand names, are absent. These activities are of no use to a firm as long as it remains in pure competition. The firm can sell as much as it likes at the market price and nothing above that price. Hence, there would be no reason to engage in any of these activities. The pre-prohibition distiller was engaged in some of these activities, because he produced a standardized product for sale on an organized market of buyers and sellers.

The pre-prohibition whiskey industry was made up of a large number of small producers operating in a condition of relatively pure competition.
The second important characteristic of this period was the consistent attempt to control the market by means of trusts, pools, and combinations and culminating in the formation of the Distilling Company of America. One of the reasons for the failure of many of these attempts at economic control seems to stem from the fact that the Distilling Company was formed with only a small number of the productive operations of manufacturers and in a tenuous manner.

The distresses which beset the products and operations, and which showed the weakness of the attempt, none of U. S. affair. (17)

Because of this fact, the independent distillers were able to put out a price at which they were equal to or better than the super-corporations or trusts which were organized for differentiated product sale. They could not be excluded by the exclusion of all other sellers, and because the trust and super-corporations had to market their product through the centralized marketing channels, they were unable to exclude the small producers who were willing to sell at a lower price. According to Chamberlin, the primary requisite of successful control is control over the price through product differentiation. This control was lacking in the attempt at consolidation during this era.


CHAPTER II

INFLUENCES OF THE ERA OF PROHIBITION
The passage of the 21st Amendment in January, 1933, halted the legal activities of the alcoholic beverage-producing industry and stopped the legitimate consumption of spirituous liquors. However, the cessation of legitimate whiskey manufacture did not cause the production and sale of whiskey to be discontinued. Supplies of whiskey were made available through bootleg production, smuggled foreign production, and home production. Likewise, although consumption of alcoholic beverages as liquor, wine, and ale was still forbidden.

The fact that demand continued to exist accounted for the period of prohibition and its far-reaching implications for the development of the illegal activities to exist. Further, the type of illegal product, i.e., the whiskey during the era of prohibition, "of the order in which it was consumed had influences upon the organization of the industry after repeal.

Although demand continued to exist until the period of prohibition and emerged as a strong factor in the inception of repeal, the facilities for supplying this demand had been discontinued during prohibition and, hence, were incapable of satisfying the demand existing immediately after repeal. The existence of this established demand and the nonexistence of adequate productive facilities to meet this demand encouraged
the penetration of the American whiskey industry by foreign
whiskey producers.

Foreign penetration was one of the factors responsible
for the establishment of a high degree of product differen-
tiation in the American whiskey industry. Product
differentiation was an integral part of the competitive
pattern of the foreign producer in contrast with the home
producer when the issue was first entered into. Association
in the United States, the methods of competition and production
which had proved successful in the originating country were
transplanted to their plant in this country. These had effects
upon the development of the post-prohibition industry.

During the prohibition period, one of the major results
of prohibition was of public utility. In addition, the type of
methods used in illicit whiskey traffic was normally unscrupulous
and frequently had resulted in other illegal activities.
These two factors were responsible for the close
supervision of every aspect of the post-prohibition industry
by the Federal government.

A final result of the prohibition era was the favorable
profit opportunities created by repeal. The most
important of these was the elimination of many
factors which had operated in illicit whiskey traffic and frequently
the incentive to other illegal activities.
These two factors were responsible for the close
supervision of every aspect of the post-prohibition industry
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important of these was the elimination of many
factors which had operated in illicit whiskey traffic and frequently
the incentive to other illegal activities.
These two factors were responsible for the close
supervision of every aspect of the post-prohibition industry
by the Federal government.
was being developed to meet the existing demand, served to give impetus to a rapid expansion in stocks and productive facilities in the industry.

A closer examination of these influences arising out of the era of prohibition on the structure and development of the whiskey industry will be the subject of this chapter.
Demand

The fact that demand continued to exist during the period of prohibition had an important influence upon the growth of the post-prohibition whiskey industry. No statistics are available to indicate the magnitude of consumption during the prohibition era. However, there is general agreement among the members of the trade and the staff of the Federal Alcohol Administration that consumption remained relatively high during this period. The chart on the following page indicates per-capita consumption from 1910-1947. Care must be used in evaluating these figures. Although correction has been made to allow for changes in the size of the legal consuming population due to the prohibition of the sale of alcoholic beverages in certain areas, adjustment has not been made for changes in the age composition of the segment of the population that consumes legally. To arrive at an accurate picture of per-capita consumption it would be necessary to attempt to determine the approximate age groups of the population which are responsible for consumption. That this would be an important factor is indicated by the table below showing changes in the composition of the population from 1900-1947.

Table 15

<table>
<thead>
<tr>
<th>Population by age groups, selected years 1900-1947</th>
<th>1900</th>
<th>1920</th>
<th>1930</th>
<th>1940</th>
<th>1947</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Ages</td>
<td>75,995,000</td>
<td>105,711,000</td>
<td>122,775,000</td>
<td>131,669,000</td>
<td>143,980,000</td>
</tr>
<tr>
<td>Under 20</td>
<td>33,661,000</td>
<td>43,543,000</td>
<td>47,869,000</td>
<td>45,866,000</td>
<td>48,031,000</td>
</tr>
<tr>
<td>20-64</td>
<td>39,332,000</td>
<td>57,168,000</td>
<td>68,406,000</td>
<td>77,544,000</td>
<td>84,189,000</td>
</tr>
<tr>
<td>65 and over</td>
<td>2,962,000</td>
<td>4,334,000</td>
<td>6,384,000</td>
<td>9,191,000</td>
<td>10,360,000</td>
</tr>
</tbody>
</table>

Source: Department of Commerce
This base would change year by year as this segment of the population increased or decreased relative to the total population. In addition, of course, correction would have to be made for the portions of this narrowed base living in areas which were "dry". These computations are beyond the scope of this paper. Nonetheless, some rough indication of per-capita consumption is given by the unrefined data appearing on the chart on the previous page.

The existence of a demand during the period of prohibition meant that the reestablished industry did not have to create a demand for its products over a long period of time. The existence of this demand was one of the factors which allowed a relatively great expansion of the whiskey industry in a comparatively short period of time following repeal. The problem of the industry immediately after repeal was the creation of a supply capable of satisfying the existing demand.

Not only did demand continue to exist during the era of prohibition, but also this demand was shaped and directed by the peculiar nature of consumption engendered by the illegality of the production and consumption of spirituous beverages during this period.

Previous to the passage of the 18th Amendment, drinking was a custom which was not extensively carried on in private homes.
Wines and cordials were consumed in relatively large quantities, but the consumption of whiskey was usually relegated to the saloon and the private club. Further, drinking in the presence of women was usually frowned upon, except for light wines and cordials. Moreover, the drinking of whiskey by women was not socially accepted. Whiskey was a man's drink not consumed in the presence of women.

The bar and the cocktail lounge, which have become an integral part of the post-prohibition culture, had not yet been established. The cocktail itself had not been invented. However, with the advent of the so-called "roaring twenties", American morals underwent a change. As part of this change in morals, the consumption of alcohol in the form of whiskey came to assume an air of respectability. It was no longer considered proper for a lady to drink or to be seen in a drinking establishment. It was during this period that the cocktail came into vogue. The probable reason for this invention was the fact that much of the whiskey produced during the prohibition era was of such a poor quality that it was necessary to dilute it to take the harshness out of the taste. (1)

It was during the period of prohibition that the consumption of whiskey in the home became a widespread custom. The probable reason for this change in cultural habits was the fact that the consumption of whiskey was illegal, and it was

much easier to drink at home than to take the chance of being caught in a speakeasy.

When the 18th Amendment was repealed, the American drinking public had a set of consumption habits which bore little relation to any previous habits. The cocktail was here to stay, and the speakeasy gave way to the cocktail lounge and the bar. To provide whiskey and other liquors for home consumption, the institution of the package store was devised.\(^{(2)}\)

In order to meet this new type of demand, the distiller found it necessary to concern himself with the activities of a large number of wholesalers and retailers engaged in the function of distribution. In 1939, for example, there were 1,420 wholesale establishments\(^{(3)}\) handling distilled spirits, and 19,136 package stores\(^{(4)}\) handling distilled spirits as well as malt beverages.\(^{(5)}\)

\(^{(2)}\) Ibid.


\(^{(4)}\) Ibid., Vol. I, "Retail Trade".

\(^{(5)}\) Ibid. In terms of selling cost to the distiller, this means that about 5.38 cents of every manufacturer's sales dollar, including excise taxes in sales and costs, is devoted to the function of distribution. Excluding excise taxes from sales and costs, this figure becomes about 10.79 cents per dollar of sales.

Many difficulties are encountered in attempting to analyze the demand situation in the post-prohibition period. The most important difficulties result from the smallness of the period of time in which it is possible to study variations in demand, and from the extenuating circumstances which have existed during the period. It is generally believed in the trade that demand is subject to change because fluctuations in the level of national income or in tax structure.

The table below shows the average state excise taxes, the federal excise taxes, and the average total taxes for selected years.

<table>
<thead>
<tr>
<th>Year</th>
<th>Avg. State Tax</th>
<th>Federal Tax</th>
<th>Avg. Total Tax</th>
</tr>
</thead>
<tbody>
<tr>
<td>1936</td>
<td>0.88</td>
<td>2.25</td>
<td>3.13</td>
</tr>
<tr>
<td>1939</td>
<td>0.86</td>
<td>2.25</td>
<td>3.11</td>
</tr>
<tr>
<td>1941</td>
<td>0.93</td>
<td>3.00</td>
<td>3.93</td>
</tr>
<tr>
<td>1942</td>
<td>1.03</td>
<td>4.00</td>
<td>5.03</td>
</tr>
<tr>
<td>1943</td>
<td>1.08</td>
<td>5.00</td>
<td>6.08</td>
</tr>
<tr>
<td>1944</td>
<td>1.10</td>
<td>6.00</td>
<td>7.10</td>
</tr>
<tr>
<td>1945</td>
<td>1.22</td>
<td>9.00</td>
<td>10.22</td>
</tr>
<tr>
<td>1946</td>
<td>1.42</td>
<td>9.00</td>
<td>10.42</td>
</tr>
<tr>
<td>1947</td>
<td>1.40</td>
<td>9.00</td>
<td>10.40</td>
</tr>
</tbody>
</table>


The assumption that the demand for whiskey is related to income levels and the price level of whiskey is examined in the chart on the following page.
Chart 18

PER-CAPITA CONSUMPTION, PER-CAPITA DISPOSABLE INCOME, AND AVERAGE RETAIL PRICE OF ALL WHISKEYS 1936-1947

(Plotted on semi-logarithmic scale)

The chart on the previous page is plotted on semi-logarithmic paper and indicates the rate of change in consumption, income and price. It may be seen that in the years from 1932 to 1942, per-capita consumption increased at about the same rate as the increase in disposable income and the increase in price. However, between 1942 and 1943, per-capita consumption declined sharply, even though per-capita disposable income continued to increase. It will be noted that this was accompanied by both price increases and decreases in supply, which resulted from the conversion of the productive facilities of the industry from whiskey production to industrial alcohol production. The chart on the following page indicates production of whiskey, withdrawals of whiskey, production of grain neutral spirits, and total bottled output for all types of whiskey for the years 1934-1947. A sharp decline in all categories is evident during the years 1942 and 1943. In 1944 production increased again as distillers were given short holidays in which to produce grain neutral spirits.

(6) Neutral Spirits—According to regulation definition, "Neutral spirits or alcohol are distilled spirits, distilled from any material at or above 190 proof. During the period of unlimited national emergency proclaimed by the President on May 27, 1941, the term neutral spirits also included any spirits distilled at less than 190 proof which are so distilled or so treated in the process of distillation, or so refined by other processes after distillation, as to lack taste, aroma and other characteristics of whiskey, brandy, rum or other potable beverage spirits." These spirits are used for blending with straight whiskey.
Chart 10

Production of neutral, unaged, and aged neutral spirits, and output of bottled whiskey
1933-1947

(source: Prepared from data supplied by the Licensed Beverage Industries, Inc., the Distilled Spirits Institute, Inc., and the Alcohol Tax Unit.)
In response to increased supplies of bottled whiskey, per-capita consumption increased at a rate about equal to the rate of price increases and faster than the rate of increase in per-capita disposable income, indicating a possible income elasticity effect at certain high levels of income. Between 1946 and 1947 per-capita consumption declined at a rate greater than the rates of price decline and per-capita income decline. Possible reasons for this were consumer resistance to poor quality wartime whiskies and price increases of more essential commodities.

It would appear that the level of income has more effect on per-capita consumption than price. However, price probably has an effect on the composition of consumption, if not upon the total amount of consumption. The factor of substitution is a difficult one to analyze. There are two possible types of substitution that must be taken into consideration. First, there is the possibility of substituting a low-priced whiskey for a high-priced whiskey in response to price increases or decreases in the level of disposable income. Because of the limited scope of this paper, this factor cannot be given adequate consideration. The second type of substitution may

---

(7) By income elasticity is meant that as income increases the amounts spent for the commodity under consideration increase at a rate greater than the rate of increase in income.

(8) Many wartime whiskies were blends of straight whiskey and grain neutral spirits produced from such substances as distilled potatoes and vegetables.
arise from a shift in consumption from whiskey to wines and beer in response to changes in per-capita disposable income and changes in price. The chart on the following page compares changes in consumption of whiskey, malt beverages, and wines. From this chart, it may be seen that per-capita consumption of whiskey declined in 1942 and 1943. The probable reason for this, as previously pointed out, was an increase in price and a decrease in supply. During this same period, however, it may be seen that the per-capita consumption of beer did not experience a decline, but continued to increase steadily. The consumption of wine appeared to suffer a decline comparable to the decline in the consumption of whiskey. Between 1943 and 1946 per-capita consumption of whiskey increased in response to increased supplies of whiskey. During this same period, per-capita consumption of wine continued to decrease, and per-capita consumption of beer, while still increasing, was increasing at a decreasing rate. In 1945, per-capita consumption of beer began to decline. Whiskey and wine consumption both showed increases during this period. In 1946, per-capita consumption of whiskey and wine both decreased at a sharp rate, while per-capita consumption of beer once again increased. From shifts in demand during this brief period, it would appear that the demand for alcoholic beverages may be relatively inelastic in total, but the demand for individual beverages, such as wine, beer, whiskey, may be elastic to a certain degree.
Chart # 10

A COMPARISON OF PER-CAPITA CONSUMPTION OF MALT BEVERAGES, WHISKEY AND WINE

1936-1947

(Plotted on semi-logarithmic scale)

As previously pointed out, upon repeal of the 18th Amendment, the available stocks of whiskey were meager and the productive facilities of the industry were limited. This presented an attractive temptation to foreign producers. It must be borne in mind that during the period when the United States was undergoing the great experiment of prohibition, the other areas of the world were not undergoing the same experience. This meant that, while the whiskey industry in the United States was dormant for a period of about 15 years, such countries as Canada and England were not only producing whiskey and perfecting the techniques of distilling but were also maintaining personnel familiar with the problems of all phases of the distilling industry from production to distribution.

It may be said that the operations of foreign distillers set the pattern for the development of the American whiskey industry. They influenced the structure of the American industry in a number of ways. First, at the beginning of the era of repeal, foreign distillers held the only large supplies of aged whiskey. British Distillers Co., Ltd., for example, held over 100,000,000 gallons (9) of fully-aged scotch.

whiskey. (10) This meant that they would enjoy a virtual monopoly in the Scotch whiskey market. Canadian corporations, such as Hiram Walker-Gooderham & Worts, Ltd., and Distillers Corp.-Seagram Ltd., also held large amounts of aged whiskey. However, a heavy import duty of five dollars per tax gallon prevented these foreign whiskies from ever flooding the U.S. market. (11)

Nevertheless, considerable amounts of foreign whiskey have appeared on the American market. This is indicated by the following table, which shows the origin of the imports and their relation to the total amount of whiskey consumed in the U. S.

(10) Scotch whiskey always means only to whisky produced in Scotland and manufactured in compliance with the laws of Great Britain. Any similar type of whisky must include the word "type" and read "Scotch type whiskey." Scotch whiskey is made chiefly from barley. The production process is similar to that used in other countries except that the malted barley is kiln dried over a peat fire. The peat smoke impregnates the barley and ultimately gives the scotch whisky a smoky taste.

(11) Tax gallon refers to the unit of spirits subject to the federal excise tax and import duty. (current $5.00) A gallon of spirits of 160 proof would be subjected to a tax of $5.50, while a gallon of spirits of 100 proof would be subjected to a tax of $5.00. However, where the spirits are less than 100 proof, the tax is based upon the wine (physical) gallonage rather than the proof content. For the most part tax gallons and proof gallons are synonymous.
Table #11

**IMPORTS OF FOREIGN WHISKEY—CONSUMPTION COMPARISONS**

1934-1945

(in tax gallons)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Whiskey Imported</th>
<th>Total Spirits Consumption Foreign and Domestic</th>
<th>Foreign Imports As a Percent of Total Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>1934</td>
<td>5,624,483</td>
<td>57,964,708</td>
<td>9.7%</td>
</tr>
<tr>
<td>1935</td>
<td>5,847,205</td>
<td>69,670,446</td>
<td>6.5%</td>
</tr>
<tr>
<td>1936</td>
<td>13,374,339</td>
<td>122,117,965</td>
<td>10.9%</td>
</tr>
<tr>
<td>1937</td>
<td>14,365,219</td>
<td>135,352,692</td>
<td>10.6%</td>
</tr>
<tr>
<td>1938</td>
<td>10,329,628</td>
<td>126,892,827</td>
<td>8.1%</td>
</tr>
<tr>
<td>1939</td>
<td>9,861,852</td>
<td>134,653,694</td>
<td>7.7%</td>
</tr>
<tr>
<td>1940</td>
<td>9,737,366</td>
<td>144,991,927</td>
<td>6.7%</td>
</tr>
<tr>
<td>1941</td>
<td>10,721,778</td>
<td>158,156,921</td>
<td>6.5%</td>
</tr>
<tr>
<td>1942</td>
<td>9,919,468</td>
<td>190,242,257</td>
<td>5.2%</td>
</tr>
<tr>
<td>1943</td>
<td>9,494,720</td>
<td>145,529,454</td>
<td>6.6%</td>
</tr>
<tr>
<td>1944</td>
<td>7,696,625</td>
<td>166,704,541</td>
<td>4.6%</td>
</tr>
<tr>
<td>1945</td>
<td>8,598,806</td>
<td>190,044,174</td>
<td>4.5%</td>
</tr>
</tbody>
</table>

null
The fact that the tariffs prevented foreign distillers from importing whiskies into the U.S. was the principal reason they decided to seek other methods of entering the U.S. whiskey market. Thus, the British Distillers Corp. Ltd. entered into an agreement with the National Distillers Products Corporation in the U.S. to erect jointly distilleries in the U.S. and share jointly the profits from the operation of these distilleries. The Canadian Corporation, which operated as a subsidiary of the British Distillers Corporation Ltd., Distillers Corp.-Seagram Ltd., purchased the shares of the company owned by the British Corporation (37%) and became independent. After separating itself from the DCL (Trade name for British Distillers Corp. Ltd.), Seagram decided to jump the tariff barrier and establish distilleries in the U.S. The Canadian rival of the DCL and Seagram, Kirin Walker, also decided that the only way to obtain a share of the American market was to operate distilleries in the U.S. The erection of large, modern distilleries took place throughout the U.S.

Not only did these British and Canadian corporations bring with them the necessary capital to erect modern, large distilleries, but they also brought with them the technical "know how" of all phases of the whiskey business.

The penetration of the American whiskey industry by Canadian and English producers introduced an important element into the American industry. As was pointed out in the first chapter, the product of the pre-prohibition distiller was of a
standardized nature. The raw whiskey, produced by the various distilleries, was homogeneous in character and sold on an organized market.

The foreign distiller did not produce a standardized product. The product of the foreign distillers was fully aged and blended bottled whiskey. Product differentiation was long heed an integral part of the whiskey business in such countries as Canada and Great Britain. The Canadian and British distillers were accustomed to marketing branded whiskies through well established retail and wholesale outlets. When these Canadian and English firms imported whiskey into the United States they imported bottled, aged whiskey, not whiskey in bulk. To market this product they established agreements with various jobbers in this country. Thus, a pattern of distribution was established. When these Canadian and English corporations undertook distilling operations in the United States, they produced for this already established distributing system.

Marketing

In the era before prohibition most brands of whiskey were not marketed on a national scale. The number of brands that enjoyed a national market could be counted on the fingers of one hand. Not only were brands sold on local markets, but the importance of a brand name was at a minimum. This was occasioned by the transitory nature of the whiskey business.

(12) Fortune magazine, "Distillers: Jr., Ltd.," Vol. VIII, Number 5, November, 193."
Producers were constantly entering and leaving the field of whiskey production. In addition, the package store in which the consumer has an opportunity to become familiar with the various brand names had not yet been established on any great scale.

However, largely as a result of the activities of those producers who received their originating impetus from foreign sources, the practices of product differentiation and individual marketing by the various firms were introduced in the American industry.

In order to successfully promote specific brand names, it became necessary for the distiller to enter into extensive advertising campaigns. The national marketing of brand names has caused the consumer to become conscious of the brand names of the whiskey which he purchases.

"Buyers are fully aware that whiskies are improving in quality and insist upon an improved product. The label on the bottle is a guide to its contents. According to the Federal Alcohol Administration, consumers have shown a surprising disposition to scan labels before purchasing the ware. This has intensified the competitive character of the industry."(13)

The fact that marketing operations are an important element of the whiskey industry is illustrated by an examination of advertising costs in 1939 and 1940. In 1939,

4.79 cents of every sales dollar of the six largest corporations in the whiskey producing industry was charged off to advertising.\(^{14}\) In 1940, a more representative figure is available. There are 17 firms included as a base for this figure. The 1940 figure uses corporations ranging from those having assets of less than $1,500,000, to those having assets of $34,624,000 to $92,531,000. The use of this larger sample indicates that in 1940, advertising costs amounted to 5.38 cents on the sales dollar, including Federal excise taxes in sales and costs, and 10.79 cents, excluding Federal excise taxes in sales and costs.\(^{15}\)

**Production**

Product differentiation, brought about partly by the penetration of foreign distillers, has had a direct effect upon the development of the post-prohibition industry. Similarly, the practice of direct selling to wholesalers and retailers by the producer, brought about by a change in consumption patterns as well as the activities of Canadian and British firms, has made itself felt upon the organization of the reestablished industry.

Production is one of the elements of the industry upon which these two factors have made themselves felt. The pre-

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\(^{14}\) Federal Trade Commission Industrial Reports, op. cit., June, 1941, p. 16.

\(^{15}\) Ibid., September, 1942, p. 11.
prohibition distiller was concerned merely with producing alcohol. He was not concerned with the processes of ageing or distribution. As soon as the whiskey was produced, it was immediately marketed, either for cash or for warehouse receipts. This fact was one of the primary reasons for the failure of the various combination movements in the early era. Because the early manufacturer was concerned only with manufacturing, distilling could be carried on with a relatively small capital investment. This allowed the establishment of new distilleries in response to favorable changes in price. In addition, the sale of the product of a distiller who entered the market in response to price increases was easily accomplished through the centralized exchange in Peoria.

To provide the product for exclusive brand promotion the post-prohibition distiller has undertaken many production operations which were performed by a large number of small middlemen in the pre-prohibition era. The post-prohibition distiller produces the raw whiskey, ages it, blends it, and distributes it. The assumption of these functions by the distiller has meant that the industry has become integrated to a degree far greater than existed in the early era. The pre-prohibition distiller did not have to worry about the processes of ageing and storing and inventory accumulation. This function was carried on by a large number of small middlemen. Ageing and storing, however, constitute a large portion of the expense incurred by the post-prohibition distiller.
"Ageing means the storage, after distillation and before bottling, in oak containers. In the case of American type whiskies produced on or after July 1, 1936, other than corn whiskey, it means storage in charred, new oak containers. Corn whiskey need not be aged in charred barrels. (However, when corn whiskey has been treated with charred chips or stored in charred oak barrels, it becomes bourbon whiskey.) The period of ageing in Government bonded warehouses in this country is limited to eight years, at the end of which time whiskey must be tax paid and withdrawn from the warehouse." (16)

The following table shows the value of cooperage used by whiskey distillers.

**TABLE 12**

**COOPERAGE USED BY WHISKEY DISTILLERS 1933-1945, AND VALUE OF PRODUCTS**

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Barrels</th>
<th>Approx. Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1933</td>
<td>239,717</td>
<td>1,445,815</td>
</tr>
<tr>
<td>1934</td>
<td>1,515,017</td>
<td>8,807,386</td>
</tr>
<tr>
<td>1935</td>
<td>2,999,404</td>
<td>14,491,351</td>
</tr>
<tr>
<td>1936</td>
<td>3,955,268</td>
<td>15,882,933</td>
</tr>
<tr>
<td>1937</td>
<td>2,858,322</td>
<td>9,551,997</td>
</tr>
<tr>
<td>1938</td>
<td>1,609,983</td>
<td>6,650,177</td>
</tr>
<tr>
<td>1939</td>
<td>1,711,013</td>
<td>6,768,219</td>
</tr>
<tr>
<td>1940</td>
<td>2,203,344</td>
<td>10,763,071</td>
</tr>
<tr>
<td>1941</td>
<td>2,688,037</td>
<td>11,067,159</td>
</tr>
<tr>
<td>1942</td>
<td>1,424,576</td>
<td>2,525,079</td>
</tr>
<tr>
<td>1943</td>
<td>1,426,871</td>
<td>5,196,028</td>
</tr>
<tr>
<td>1944</td>
<td>545,551</td>
<td>10,616,054</td>
</tr>
<tr>
<td>1945</td>
<td>972,756</td>
<td></td>
</tr>
</tbody>
</table>

Source: Prepared from data supplied by The Associated Cooperage Industries of America, Inc.

Not only is it necessary to purchase specially constructed barrels in which to age raw whiskey, but it is also necessary to construct and maintain warehouses in which to store the barrels of ageing whiskey.

The importance of the accumulation of stocks by the distiller is indicated by the table on the following page which indicates the inventories held in bonded warehouses for the period 1933-1934.
## Table # 13

### U. S. WHISKEY INVENTORIES—BEFORE AND AFTER EVAPORATION AND LEAKAGE LOSSES

(In U. S. Government Bonded Warehouses)

<table>
<thead>
<tr>
<th></th>
<th>Orig. entry</th>
<th>Evap. and leakage</th>
<th>Distilled net after losses</th>
<th>Loss of original entry stage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>End of Month</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>1934</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>June</td>
<td>87,717,962</td>
<td>5,269,772</td>
<td>22,423,000</td>
<td>9.2</td>
</tr>
<tr>
<td>December</td>
<td>91,029,512</td>
<td>7,329,512</td>
<td>27,700,000</td>
<td>8.5</td>
</tr>
<tr>
<td><strong>1935</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>June</td>
<td>152,207,215</td>
<td>17,287,815</td>
<td>133,550,000</td>
<td>9.7</td>
</tr>
<tr>
<td>December</td>
<td>207,187,540</td>
<td>17,827,730</td>
<td>189,360,000</td>
<td>9.2</td>
</tr>
<tr>
<td><strong>1936</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>June</td>
<td>500,066,508</td>
<td>27,876,808</td>
<td>237,675,000</td>
<td>9.3</td>
</tr>
<tr>
<td>December</td>
<td>774,427,128</td>
<td>77,142,128</td>
<td>377,725,000</td>
<td>9.6</td>
</tr>
<tr>
<td><strong>1937</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>June</td>
<td>445,285,667</td>
<td>42,560,667</td>
<td>395,725,000</td>
<td>10.9</td>
</tr>
<tr>
<td>December</td>
<td>450,786,067</td>
<td>56,177,067</td>
<td>394,609,000</td>
<td>12.4</td>
</tr>
<tr>
<td><strong>1938</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>June</td>
<td>471,159,529</td>
<td>24,124,529</td>
<td>406,035,000</td>
<td>11.3</td>
</tr>
<tr>
<td>December</td>
<td>468,784,711</td>
<td>77,142,711</td>
<td>391,642,000</td>
<td>14.7</td>
</tr>
<tr>
<td><strong>1939</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>June</td>
<td>478,299,618</td>
<td>74,649,618</td>
<td>403,650,000</td>
<td>15.6</td>
</tr>
<tr>
<td>December</td>
<td>469,024,711</td>
<td>77,140,711</td>
<td>391,884,000</td>
<td>16.4</td>
</tr>
<tr>
<td><strong>1940</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>June</td>
<td>480,937,608</td>
<td>16,366,608</td>
<td>464,571,000</td>
<td>16.7</td>
</tr>
<tr>
<td>December</td>
<td>479,162,310</td>
<td>72,202,310</td>
<td>396,960,000</td>
<td>17.2</td>
</tr>
<tr>
<td><strong>1941</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>June</td>
<td>504,184,621</td>
<td>45,430,621</td>
<td>456,654,000</td>
<td>16.9</td>
</tr>
<tr>
<td>December</td>
<td>510,910,830</td>
<td>72,130,830</td>
<td>438,780,000</td>
<td>17.1</td>
</tr>
<tr>
<td><strong>1942</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>June</td>
<td>516,816,857</td>
<td>10,247,857</td>
<td>426,569,000</td>
<td>17.1</td>
</tr>
<tr>
<td>December</td>
<td>459,754,371</td>
<td>61,852,371</td>
<td>397,902,000</td>
<td>17.4</td>
</tr>
<tr>
<td><strong>1943</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>June</td>
<td>434,829,466</td>
<td>79,409,466</td>
<td>355,420,000</td>
<td>18.7</td>
</tr>
<tr>
<td>December</td>
<td>388,770,751</td>
<td>70,679,751</td>
<td>318,091,000</td>
<td>19.3</td>
</tr>
<tr>
<td><strong>1944</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>June</td>
<td>348,646,751</td>
<td>74,171,751</td>
<td>274,475,000</td>
<td>31.7</td>
</tr>
<tr>
<td>December</td>
<td>717,412,794</td>
<td>69,077,794</td>
<td>648,335,000</td>
<td>11.2</td>
</tr>
<tr>
<td><strong>1945</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>June</td>
<td>307,537,545</td>
<td>66,777,545</td>
<td>240,800,000</td>
<td>21.7</td>
</tr>
<tr>
<td>December</td>
<td>741,235,256</td>
<td>64,810,256</td>
<td>676,425,000</td>
<td>19.6</td>
</tr>
</tbody>
</table>

**Source:** Prepared from data of the Alcoholic Tax Unit, Bureau of Internal Revenue, Treasury Department.
Another indication of the importance of accumulated stocks is shown by the chart on the following page. The chart compares investment in inventories with total investment by the four leading producers in the whiskey industry during the years 1933-1947. It can be seen from this chart that a large portion of the total investment of the four leading firms is in inventories.
Chart #14

TOTAL CAPITAL INVESTMENT AND INVESTMENT IN INVENTORIES BY FOUR COMPARABLES IN THE WHISKEY INDUSTRY 1937-1947

Distillers Corp. - Seagram Ltd.
National Distillers Products Corp.
Walker-Gooderham & Worts, Ltd.
Schenley Distillers Corp.

Source: Standard and Poor's Industrial Surveys, Brewing and Distilling, B4-2, Section 2, April 2, 1945.
A factor which makes the storage and inventory process relatively expensive is the element of evaporation. At any given time the age composition of whiskey or other spirits in Government-bonded warehouses will range anywhere from one month to eight years, and a hundred gallons of whiskey which were deposited for ageing eight years ago and still remain untouched are currently shown as a hundred gallons original entry gauge—actually there are only about 64 gallons remaining. Approximately 36 gallons have been lost through evaporation and leakage during the eight year ageing period. (The Federal excise tax is not paid until the spirits are withdrawn from the warehouse, and in this instance the distiller would pay the tax on the 64 gallons remaining—not the hundred gallons originally stored. However, the 36 gallon loss here referred to is the maximum loss allowed; if 40 gallons have been lost, the distiller would still have to pay a Federal excise tax on 64 gallons—four gallons of which would be non-existent.) The table showing accumulation of inventories during the period 1934-1947 also shows the losses through evaporation and leakage during this same period.

Reference to the table on inventories shows the substantial differences between the original entry gauge figures on whiskey inventory reported by the Alcohol Tax Unit and the estimated amount actually outstanding as of the end of June and December of each year from 1934 through the end of 1945. The volume of whiskey actually remaining in U. S. Government
warehouses at the end of 1945, for example, was 19.5 lower than the original entry guage amount which the Government reported for the same date. (This 19.5 loss also indicates the approximate average age of the remaining whiskey. A 19.5 evaporation and leakage loss would indicate that the average age of the whiskey in Government warehouses was about 3.5 years.) The widening in losses which occurred between 1934 and 1945 was the result of the increase in average age of the whiskies, which resulted from the unusually large production of whiskey in 1936-1937 and the increasing age of the whiskey still on hand from these years.

These factors of aging and storing led up to a considerably changed method of production for the modern distiller. It is a necessary pre-requisite of the whiskey industry to have possession of substantial inventories of aged whiskey. Large stocks of whiskey in the process of aging must be maintained by the modern distiller, if he is to have a product to market.
During the era of prohibition much of the whiskey produced was of inferior quality. This was caused by the crude methods of production and little care used in the manufacture of alcoholic beverages. Efficient production operations could not be undertaken because of the illegality of the manufacture of whiskey. In other words, it could not be properly aged or blended. This factor, in part, responsible for.styled governmental regulation of production in the post-prohibition era.

Another reason for governmental regulation of certain phases of the industry in the post-prohibition era stems from the type of individuals engaged in the production and distribution of alcoholic beverages in the pre-prohibition era. The federal government desired to prevent the entry of these individuals into the post-prohibition industry.

To carry out these objectives, federal government intervention in the post-prohibition industry has assumed two shapes. First, the federal government has intervened to establish uniform standards of production by setting up and enforcing standards of production, aging, and blending. Second, the federal government, through its licensing power, attempts to prevent "undesirables" from entering the industry.
In 1933 the federal government took upon itself the supervision of the alcoholic beverage industry, through the newly created Alcohol Administration set up under executive order pursuant to the Act of Congress of August 29, 1932. After the 1933 act invalidated the Act of Congress of August 29, 1932, the policy of the Alcohol Administration was to establish voluntary standards in the industry for the production of the new legally and the legitimate products. The administration is responsible for the establishment of such standards which must be used in the production — (a) — they are as follows:

1. Straight Rye
   At least 80% of the grain used in manufacture (usually 60% rye, 20% corn, 20% malt)

2. Straight Bourbon
   At least 51% of the grain used in manufacture (usually 60% rye, 20% corn, 20% malt)

3. Straight Whiskey
   At least 51% of the grain used in manufacture

4. Blended Whiskey
   Not less than 20% straight whiskey of 100 proof and separately, or in combination, all grain neutral spirits

5. Blended Straight Rye, Corn, or Bourbon
   Not less than 51% straight whiskey, of 100 proof, and grain neutral spirits, plus other alcoholic mixtures of the generic type

6. Spirit whiskies
   At least 5 years, or more, of age, or consist entirely of neutral spirits of the same type

7. Labeled Whiskey
   Aged under government lock for at least three years

In addition to setting the limits of production, the Ad- 
ministration is responsible for labeling and advertising under 
definite standards prescribed by the Act.

The Act was amended in June 1930, by the addition of a 
title which removes the Federal Alcohol Administration 
as a division of the Treasury Department and establishes 
an independent three-man board. The Act is a relatively small 
organization with a total personnel in the neighborhood of 
about 160.

Not only is the Administration concerned with minimum 
standards of production and advertising, but it is also res- 
ponsible for preventing "undesirables" from entering the in-
dustry. Permits are required from the FAA to enter any phase 
of the industry which is interstate in nature. The adminis-
trator is authorized to issue permits to persons in the business 
of importing distilled spirits, wines, or malt beverages; rec-
tilling, or blending of distilled spirits, or producing wine; and 
wholesaling distilled spirits, wines, or malt beverages. (18)

Another use of the licensing fee device has been to prevent 
the entrance of "undesirables" into the alcoholic beverage in-
dustry. For example, Alabama taxes manufacturers of alcoholic 
beverages $1,000 annually for each place of manufacture, 
(continued on next page)
Continued

but wine makers using 75% of Alabama raw materials in their wineries pay $25 for each place of manufacture. The "liquor monopoly" states are in a particularly advantageous position to favor local agricultural products. The "wine law provides that in purchasing liquor, the state commission must give priority to those beverages made from "wine products. The Ohio liquor control board is empowered to fix prices so that its profits do not exceed 70% of the sales price, but as to liquor made from Ohio fruits, the profit may not exceed 10%. Other states stimulate local agricultural production by requiring their use in liquor manufacture. Minnesota, Iowa, North Dakota, and Oregon secure a market for their barley by providing that malt beverages sold in the state must contain 66 2/3% barley malt.

Another method of encouraging the local liquor industry consists in tax exemptions or taxation at lower rates on alcoholic beverages produced for export to another state. Such statutes give the brewer or distiller in the exempting state an advantage over competitors in other states who receive no such exemption. At least 23 states grant such exemptions to home producers. Georgia and New Jersey, however, burden exports by levying additional taxes or higher license fees for exporting-wholesalers than for importing-wholesalers selling solely in the state. The Pennsylvania provision is especially interesting. It provides that the excise tax on imports be refunded in an amount equal to the tax levied by the state of destination on imports from Pennsylvania, if such state is in substantial competition with the state of Pennsylvania. This illustrates how the power of taxation is employed for the purpose of equalizing competition.

While encouraging exports, the states discourage imports. No less than 30 states have enacted direct or indirect import restrictions. Three states discriminate against imported beverages directly by taxing them at a (continued on next page)
higher rate than local beverages. Georgia for example, levies a tax of five cents a gallon on domestic wine containing not more than 14% alcohol, but foreign wines of the same alcoholic content must pay 40%.

But it is more common to impose restrictions on the importer, than on the imports itself. At least six states charge a higher additional fee for importing into the state than is charged for wholesaling or distributing the local product. In Washington the wholesalers annual license fee for domestic wine is 50 cents, but the importer must pay 250. Massachusetts charges solicitors for foreign beverages a 100 to 300 annual license fee, as against 10 for those soliciting the local product. At least six states provide that importers or importing distributors must have resided in the state for a specified period of time. Similarly, corporations may be allowed to import only if a given number of their directors are citizens of the importing state. At times beverage importers and dealers are required to maintain a place of business in the state or are discriminated against for failure to do so. For example, Louisiana requires that dealers maintaining a regularly established place of business in the state pay only a $1000 annual fee, but failure to maintain such a place of business subjects the dealer to a $10,000 fee.

Other factors are the discriminatory and retaliatory legislation and several port of entry statutes. Nine states provide for embargoes or retaliatory taxes directed against states discriminating against their alcoholic products. In some cases the legislation is mandatory, while in others the state agency is entrusted with the power of imposing the retaliatory provisions. In 1939, Missouri repealed its retaliatory law and Indiana abolished its so called port of entry law and enacted a new measure containing reciprocal and retaliatory features. Kansas and California have port of entry laws similar to those found in the motor vehicle field, but while the Kansas law is mandatory, the California law empowers the Board of Equalization to put it into effect, if it is thought necessary.

One of the most important types of government regulation with respect to maintaining minimum standards in the alcoholic beverage industry is that type which has as its object the elimination of fraudulent advertising. The Federal Alcohol Administration has jurisdiction over such matters as labeling and advertising. However, in general practice such matters are handled by the Federal Trade Commission. A review of the activities of the Federal Trade Commission with respect to the liquor industry indicates that complaints have been of three types. The first type may be generally classified as cease and desist writs against rectifiers falsely claiming to be engaged in the process of distilling.

"In the course and conduct of its business as aforesaid, by the use of the word "Distilleries" in its corporate name, printed on its stationery, catalogues, advertising and labels affixed to the bottles in which it sold and shipped its said products, and in various other ways, respondent represented to its customers and furnished to its vendees, both retailers and the ultimate consuming public, that it was a distiller and that the said whiskies, gins and other spirituous liquors therein contained were by it manufactured through the process of distillation from wort, malt or wine, which, as a matter of fact, respondent is not now and never has been a distiller, does not now and never did distill the said whiskies, gins and other spirituous liquors by it so bottled, labelled, sold or transported. Respondent does not now and never did own, operate or control any place or places where spirituous liquors are manufactured by a
process of original and continuous distillation from mash, wort or wash. (20)

The following is a list of firms to which cease and desist orders have been issued on the grounds of mislabeling and false advertising. (21)

Table 15

<table>
<thead>
<tr>
<th>CASES AND DECISIONS AGAINST THE LIQUOR INDUSTRY</th>
</tr>
</thead>
<tbody>
<tr>
<td>OF THE FEDERAL TRADE COMMISSION</td>
</tr>
</tbody>
</table>

Advertising business status falsely--facturers claiming to be distillers.

- United Distilling Co. 1936
- Morgan Distilling Corp. 1936
- Beech Distilling Corp. 1936
- Potomac Distilling Corp. 1936
- Old Colony Distillery Inc. 1956
- Distiller's Exchange, Inc. 1936
- Hauer Distilling Co. 1936
- C. G. Taylor Distributing Co. 1936
- Irish Mills Distillers, Inc. 1936
- Anchor Distilleries Inc. 1936
- Valley Springs Distillery Inc. 1936
- Arrow Distilleries Inc. 1936
- Consolidated Distillers Corp. 1937
- Rosecrest Distillers 1937
- Federal Distillers Corp. 1937
- Imperial Distillers Corp. 1937
- Griffin Distillers Products Co. 1937
- Eeo Distillers, Inc. 1937
- Hercules Products and Distilling Co. 1937
- Paramount Distillers, Inc. 1937

Misbranding or mislabeling

- Fed. Distilled Products 1936
- United Distilling Co. 1936
- Grove Distillers and Wine Co. Inc. 1936
- Centerville Distilling and Dist. Co. 1936

The Second type of FTC action may be said to result from the Miller-Tydings Act of 1937, which makes lawful contracts or agreements prescribing minimum prices for resale of commodities sold and shipped in interstate commerce, if such agreements are lawful in the state in which the merchandise is to be resold. However, the Act does not apply to the District of Columbia. Hence, the FTC has seen fit to issue cease and desist orders to those distillers and wholesalers attempting to maintain resale price agreements in the District of Columbia. Such orders have been issued against Seagram, Schenley, National, and Hiram-Walker, as well as several small distillers. In addition, orders have been issued by the commission to a number of wholesale outlets. (22)

(22) Reports of the Regular Sessions of the Federal Trade Commission, June 10, 1938 to Feb. 29, 1940, Dockets 1909, 2949, 2982, 2989, 2990, 2991, 2992.
A third type of order issued by the FTC refers to Section 7 of the Clayton Act which prohibits a corporation from acquiring capital stock in a competing corporation. Such a case was brought against the Schenley Corporation for acquiring a part capital stock of the Blenheim Distilling Corporation of Louisville, Ky. This is the only case of this nature involving the whiskey industry.

**Profits**

The repeal of the 18th Amendment created a fertile area for profitable investment. There existed a relatively well established demand with very little supply to meet this demand. Those companies in possession of stocks of aged whiskey or productive facilities were in a position to earn substantial profits.

In 1974, four companies—Seagram, National, Schenley, and Hiram Walker—owned 71% of the stocks of whiskey in existence and controlled 60% of the productive facilities of the industry. In this same year these companies earned a return on their invested capital of 23%, 28.1%, 46.2%, and 10.1% respectively. These high rates of return attracted new firms into the whiskey business. The following table indicates the number of firms producing whiskey during the period 1937-1979.

A steady increase in the number of firms may be detected between 1934 and 1939. The exception to this trend appears in 1938 which was generally a poor business year.

Not only did the number of firms increase during this period because of the favorable profit outlook, but also those companies originally dominating the market continued to expand at a rapid rate. This is indicated by the following chart which shows profits (as a percent return on invested capital), and capital investment. (The position of those firms which are in a dominant position in the industry will be discussed in the chapter that follows.)
Chart 4-17

TOTAL CAPITAL INVESTMENT AND AVERAGE RATE OF PROFIT AS A PERCENT OF INVESTED CAPITAL FOR FOUR COMPANIES IN THE WHISKEY INDUSTRY

Schenley Distillers Corp.
Jos. E. Seagram & Sons, Inc.
Miran-Walker & Sons, Inc.
National Distillers Products Corp.

Source: Standard and Poor's Industrial Surveys, Brewing and Distilling, # B-4, Sept. 6, 1940.
CHAPTER III

THE POST-AQUSITION INDUSTRY
THE POST-PROHIBITION INDUSTRY

It has been shown that certain influences of importance to the whiskey industry have arisen out of the era of prohibition. These influences have made themselves felt on the structure of the whiskey industry during the period following prohibition. The objective of this chapter will be to show how these influences have affected the post-prohibition whiskey industry. To accomplish this objective, the structure of the post-prohibition industry will be examined and analyzed. Next, the factors arising from the prohibition era will be related to the present structure of the industry.

Economic Concentration

The whiskey industry today is concentrated in the hands of four large distillers:

Joseph E. Seagram & Sons, Inc.
Hiram Walker & Sons, Inc.
Schenley Distillers Corporation
National Distillers Products Corporation

1. Production

A clear indication of the extent to which the Axis (the trade name given to the aforementioned four companies) dominates the industry can be seen from an examination of the production of this group as compared with the production of the industry as a whole. This comparison is made in the chart on the following page.
Chart 438

PRODUCTION OF WHISKEY IN THE UNITED STATES BY FOUR COMPANIES COMPARED WITH TOTAL PRODUCTION
(Tax Gallons)

Schenley Distillers Corp.
National Distillers Products Corp.
Joseph E. Seagram & Sons, Inc.
Hiram Walker & Sons, Inc.

Another factor which strengthens the economic position of the Axis in the industry arises from economies of production which they are able to achieve.

These economies are in the nature of lowered unit costs stemming from the operation of the Axis distilleries at a point nearer capacity production than those operated by their independent rivals. In contrast to the independent distilleries, the distilleries of the Big 4 are operated in a continuous manner. Independent distilleries are frequently operated on a part-time schedule. The Axis firms, because of their control over large amounts of capital, are able to make substantial inventory commitments three to six years in advance. The independent distiller often lacks the resources to make possible large-scale production for inventories. Constant accumulation of large stocks by the Axis firms allows the distilleries of the Big 4 to operate on a full-time schedule. This continuous production schedule probably results in a considerably reduced unit cost for the Axis plants.

Doubtless the Axis firms are able to achieve other economies as a result of their large size and integrated operations. Such economies would be in the nature of lowered distribution costs due to integration between the distiller and the wholesaler, and lowered costs of certain raw materials—bottles, barrels, and other containers—because of volume purchases. In addition, the Axis firms may benefit from economies in transportation costs arising out of the geographical dispersion of distilleries and bottling plants.

(1) Hearings before the TNJC, op. cit., p. 2560.
2. Inventories

Inventories, because of the peculiar nature of the whiskey industry, are as important a factor as production in determining the economic position of the Big Four in the industry. An indication of the concentration of the industry in the hands of the Axis is shown by a comparison of total stocks of whiskey held in government warehouses by the entire industry with the stocks of whiskey held in government warehouses by the firms of the Axis. The chart which follows indicates the inventory position of the Big Four and the entire industry for the periods 1935-1938.

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(2) U.S. GOVERNMENT (INTERNAL REVENUE) BONDED WAREHOUSE-
Distilled spirits (except for cordials and liqueurs and, sometimes gin) are stored in U. S. Government bonded warehouses following production—usually for aging. The excise tax is not payable until they are withdrawn, except for bottled-in-bond spirits. Distilled spirits are usually stored in barrels approximating 50 gallons each, although neutral spirits may also be stored in tanks or steel drums. The warehouses are set up under the laws and regulations of the Bureau of Internal Revenue. Although the proprietor of a bonded warehouse is a private individual or firm, the operations as well as the warehouse itself are kept under the direct supervision of officers of the Bureau of Internal Revenue, who carry the keys to the warehouse, keep government record of all entries and withdrawals of spirits, etc. The warehouse owner may enter the premises only in the presence of a government officer. No spirits may be withdrawn except with government permission.
CHART #19

STOCKS OF WHISKEY IN FONDED WAREHOUSES HELD BY
FOUR COMPANIES COMPARED TO TOTAL STOCKS

Tax Gallons

Schenley Dist. Corp.
National Dist. Products Corp.
Jos. E. Seagram & Sons, Inc.
Miriam Walker & Sons, Inc.

1933 1934 1935 1936 1937 1938
25,100,000 60% 55% 48% 52% 54%
91,629,000 71%
207,117,000
374,467,000
452,308,000
466,900,000

Source: Hearings before T.J.C., op. cit., p. 2080.
in even more accurate indication of the activities of the
axis than is shown by a single comparison of the stocks of
whiskey held by the Big Four with the stocks held by the
entire industry is given in a comparison of the stocks of
whiskey four years old and over held by the entire industry
with the stocks of whiskey four years old and over held by
the Big Four. Such a comparison is made in the chart below:

**Chart #20**

**TOTAL STOCKS OF WHISKEY FOUR YEARS OLD AND OVER**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gallons</td>
<td>2,138,306</td>
<td>2,451,74</td>
<td>1,777,333</td>
<td>1,184,810</td>
<td>24,060,77</td>
</tr>
</tbody>
</table>

Schenley Distillers Corp.,
National Distillers Products Corp.,
Joseph E. Seagram & Sons, Inc.,
Hiram Walker & Sons, Ltd.

Source: Hearings before WMJ, 80th Cong., 2nd Sess., p. 2631.
These figures are particularly significant because it is the stocks of aged whiskey that form the basis for the production of the more expensive blends and straight whiskies. A supply of aged, straight whiskey is invaluable to a distiller, because it can be stretched any number times than its actual amount in the manufacture of blended whiskey. This is done by a process of cutting or blending the original straight whiskey with grain neutral spirits. These grain neutral spirits do not require aging before use. Immediately upon manufacture they can be used in the process of blending along with other types of whiskey. Hence, a distiller in possession of a stock of aged whiskies can considerably extend his supply by the application of grain neutral spirits. A large percentage of the whiskey sold is of the blended type.

A large stock of aged whiskey is also of great value to a distiller in that it allows him to enter into the production of the more expensive types of straight whiskies. This latter type of whiskey accounts for a large volume of the high profit sales units of the industry.

Hence, the ownership by the Axis of a large portion of

---

(3) "BLENDED WHISKEY" - There are, in general, two types of blended whiskies (although the regulation definition of blended whiskey refers specifically to No. 2 following): (1) whiskey comprising a blend of two or more straight whiskies and designed to combine the various characteristics inherent in each of the whiskies making up the blend; (2) a blend of straight whiskey and neutral spirits: such a blend is known as "blended whiskey" which, under Federal Regulations, must contain at least 20% by volume of straight whiskey. There is also "spirit whiskey" which contains between 51 and 201 straight whiskey, the balance being neutral spirits or other whiskey. However, practically all blended whiskey placed on the market contains more than the minimum 20% of straight whiskey. The average ratios at the present time range from 30-40% whiskey and 20-70% neutral spirits. Whiskey blended with neutral spirits modifies the heavy "body" found in straight whiskey.
the aged stocks of whiskey in the country gives them a position of vastly enhanced economic control of the industry. They are in a position to market on a volume which assures them a profitable operation because of the ownership of supplies which are irreplaceable in the short run.

3. Distribution Facilities

The foregoing indicates that the productive facilities of the whiskey industry are concentrated, to a large extent, in the hands of four large producers. However, a mere review of the amalgamation of the productive facilities of the industry fails to show completely the economic domination of the Axis firms. Not only has there been considerable concentration of the productive facilities of the industry, but there has been an equal consolidation of the distribution and marketing functions of the industry by the Big Four.

One of the most important ways by which the Axis maintains control of the distribution facilities of the industry is through its control of the important brand names of whiskey. This means that the firms of the Big Four are in a much more advantageous position to deal with the various wholesale and retail outlets than the independent producers. By the control of certain name brands, the large distillers is in a position to dictate, virtually, to the wholesaler, who is, in turn, able to dictate to the retailer. A distributor is almost always dependent upon the sales of the established name brands of whiskey.

(4) The material in this section was taken from the TNEC hearings on the whiskey industry already cited and from personal contact with men engaged in the whiskey industry.
large distiller for a large portion of his revenue. An indication of the competitive advantage that is given to the large distiller can be seen from the following illustration which describes a current occurrence in the industry. Let us suppose that a wholesaler is planning the introduction of one of the Axis firm's lines, and distributor is in a bind that too long. The wholesaler, as soon as he learns that the large firm would frown on any such action, would find it necessary to look another better face in products. The large distiller, if faced with such a request, has the defense that the addition of another line to his merchandise would impair the marketing efficiency of the wholesaler. For additional guarantee, it is said by the large distiller, would present the distributor with such a degree of coverage at its expense, and this would result in a fall in sales of both the large distiller's products and those of the small distiller. Then, the wholesaler is virtually forced to deal exclusively with the large distiller as owner of his franchise.

The control of these various products is held to be strengthened by the Axis in a series of ways. Frequently, it is in the form of mounting the entire equipment of a small distiller pending an action that has been the sale of his franchise.
purchases the brand name of the distiller. The small distiller markets no bottled whiskey or "invents" a new brand name. If the small distiller markets no whiskey through the normal distributive channels, he may sell in bulk to the large distiller. An interesting variation on this device recently occurred in the industry with the purchase by the Schenley Distillers Corporation of the bulk stocks of the United Distillers Corporation. This had the effect of removing the bottled products of United Distillers from competition with the bottled products of the Schenley Distillers Corporation. United Distillers Corporation now is in the position of producing entirely for the Schenley Distillers Corporation.

However, the usual method for the acquisition of a brand name is by outright purchase of the complete equipment and brand name of a small distiller by a member of the Axis. In such cases the Axis firm may operate the plant of the small firm, or it may close it completely. In any case, the Axis firm takes over the brand name of the distiller. Such a situation occurred in 1947, when Joseph E. Seagram & Sons, Inc., purchased the Frankfort Distilleries. The productive facilities of the latter company were operated by the Seagram firm, and whiskey was marketed under the old brand name.

Another practice which results in a considerable degree of integration of the distributive function is the practice of subsidizing a wholesaler. Let us assume that a large distiller is dissatisfied with the distribution of his products...
in a certain area. The distiller has rarely to revoke the franchise of the existing distributor and give it to another wholesaler. Frequently, however, instead of ceding the franchise to a different wholesaler, the distiller desires to establish an outlet over which he can maintain a tighter control. To accomplish this, a device similar to the old "Tied House" of the pre-prohibition era has been devised: the subsidized wholesaler. The distiller chooses a man to open a wholesale outlet in the particular area, and then helps him financially to establish the business. Often, the man chosen is not already in the employ of the company, or keeping the wholesaler in debt to the distiller, the latter is able to exert a large degree of control over the activities of the former.

Other devices by which the distiller gains control over the distribution function are free gifts and extensions of credit. The large distillers are in a position to make "deals" with the wholesaler that could not readily be availed of by the small independent manufacturer. Thus, for example, the distributor is given a bonus if he buys a given amount of the large distiller's merchandise. In that case, for example, the distiller may try to "push" the device of credit extensions in self-explanatory terms as he offers longer periods of payment for merchandise than the small distiller.
4. World War II and Concentration

World War II accentuated the trend of consolidation in the industry by the Axis. The most significant aspect of the concentration movement during this period was the entrance of the Big Four into wine production. Seagram acquired the Cresta Blanca Wine Company and the Heublein Wine Company. National Distillers purchased the Italian Swiss Wine Company. Likewise, Beraud became owners of Paul Masson, Inc., and Knapp Seiler, of R. Curtiss Wine Company.

In 1942, the Big Four produced 85% of the wine in California, and in 1945, controlled 50% of the stocks of wine undergoing the aging process. They now own about 35% of the storage capacity of the California wine industry.\(^5\)

In addition to obtaining a substantial amount of the California wine industry during the war, the Axis firms branched out into other lines of endeavor. The most important of these enterprises was the barrel-making industry. During the war, a ceiling price on barrels was established by the C. I. O. Moreover, there was no ceiling price on white oak timber used in the manufacture of barrels. This had the effect of forcing many of the cooperative firms of the country out of business. These defunct firms were purchased by some of the larger distillers, principally the Seagram Corporation. The Justice Department looked into this situation during 1944 but could

find no grounds for any legal action.\(^6\)

**Monopolistic Competition**

Monopolistic competition can be defined as a market situation in which each seller has some control over the price. Chamberlin states that such a situation may arise from one or more of the following sources:\(^7\)

1. **Product Differentiation.** If buyers consider the products of the various sellers to be different, if they have a definite preference for the product of one seller over the product of another seller, the products are no longer standardized. There may be significant physical differences, as in the case of radios or often the case with whiskies.

2. **Smallness of the number of firms.** In many cases the number of units in the industry is sufficiently small that each seller realizes that the number of units which he places on the market will affect the price he receives. In other words, he realizes that he cannot sell an unlimited amount, that at each price there is only a definite sales potential.

Stigler adds additional criteria which are helpful in considering the structure of the whiskey industry.\(^8\)

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3. Vertical Integration. "The ownership or control of plants which supply materials or markets for the finished product."(9)

4. Restricting entry to the firm.

5. The prevention of price competition.

The following material is an attempt to show how the post-prohibition industry meets these criteria:

1. Product Differentiation. The product of the whiskey industry today is not homogeneous, raw whiskey, but fully aged and bottled whiskey. That the product is highly differentiated is demonstrated by the large number of whiskey brands which are on the market. The four largest distillers jointly control about 90 brand names.(10) In addition, there are numerous small brands which come and go. Another indication that there is product differentiation can be seen in the large amounts spent on advertising by the whiskey industry, as indicated in the second chapter.

2. Smallness as number of firms. The smallness of the number of firms has already been discussed. The fact that each seller's activities affects the price they receive will be considered in the next section and consideration will be given to oligopoly and price policies.

9 Ibid., p. 209
3. Vertical Integration. It would appear that this condition is one found in the whiskey industry today. That this is true is particularly evident from the previous material presented on concentration. Many of the manufacturing plants have been concentrated in the hands of a few firms, as well as much of the aged stocks. In addition, there has been vertical integration in that the distiller has considerable control over distribution through the wholesaler and retailer.

4. Restricting entry. The accumulation of stocks is the most effective obstacle to the entrance of new firms into the whiskey producing industry. In order to have a product to market it is necessary to be in possession of stocks of aged whiskey. A new firm would have difficulty in obtaining stocks of aged whiskey from a bulk producer. Most of the stocks in the whiskey industry are not for sale. In addition, it would require a period of time of from three to six years for a distiller to produce stocks of aged whiskey. The profit outlook for the small firm is not sufficiently favorable to encourage the amount of investment required to erect a distillery and produce whiskey and then wait a minimum of three years until the product can be marketed and profits earned. This is indicated by the chart below showing profits in the whiskey industry by size groups.
<table>
<thead>
<tr>
<th># of corps.</th>
<th>Aggregate total investment</th>
<th>Aggregate sales</th>
<th>Aggregate profit after taxes but before debt interest</th>
<th>Average rate of return after income tax but before debt interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>$4,105</td>
<td>$4,914</td>
<td>Assets under 1,500</td>
<td>2.86</td>
</tr>
<tr>
<td>4</td>
<td>8,610</td>
<td>20,742</td>
<td>Assets 1,500-2,000</td>
<td>1.72</td>
</tr>
<tr>
<td>4</td>
<td>33,923</td>
<td>78,572</td>
<td>Assets 2,000-2,999</td>
<td>3.52</td>
</tr>
<tr>
<td>4</td>
<td>179,578</td>
<td>278,532</td>
<td>Assets over 22,000</td>
<td>9.68</td>
</tr>
</tbody>
</table>

17  226,116  382,351  24,873  8.55

*Schenley Distillers Corporation
National Distillers Products Corporation
Jos. E. Seagram & Sons, Inc.
Miran Walker & Sons, Inc.

The four companies with an aggregate total investment of $179,578,000 earned a profit of 9.98% before the deduction of debt interest but after income tax deduction. On the other hand, four manufacturers with an aggregate total investment of only $8,610,000, earned a return of only 1.32% before the deduction of debt interest but after income tax deduction.

5. The prevention of price competition. The government, both on the federal level and on the local level, has supported the elimination of price competition in the whiskey industry through the enactment of laws allowing price maintenance agreements.

Fair-Trade Acts applicable to the sale of all commodities, including alcoholic liquor*, have been enacted in all the States except the District of Columbia, Missouri, Texas, and Vermont. These Acts are permissive in character in that they authorize the making of certain price-maintaining contracts which otherwise might violate the state anti-trust laws. The Wholesale Posting Law and certain provisions of the Unfair Sales Act of the state of Massachusetts represent a typical set of price maintenance laws. The Wholesale Posting Law makes discrimination against any wholesaler or retailer by any manufacturer or wholesaler illegal. Not only does the law prohibit price discrimination, but it also prohibits such discrimination that may exist in discount rates, rebates, free

(12) Ibid., "Massachusetts Fair Trade Provisions."
goods, allowances, or any other form of undue ent. The means of enforcement are in the regulations which require wholesalers and manufacturers to post their wholesale prices with the Alcoholic Beverage Commission on or before the tenth of each month. The lists are open for inspection by any interested party. If a retailer feels that he has had to pay a higher price than some other retailer, he may make a complaint to the commission. The commission makes an investigation. If evidence of discrimination is found, the commission calls in the offending party for a hearing and attempts to settle the matter out of court. If this proves to be ineffective, the offending party is brought to court.

While this law does not prohibit price cutting, it does limit the effectiveness of "tied houses" and protects the small retailer. However, in conjunction with the two other provisions of the Fair Trade Act, which have far-reaching for the liquor industry, it considerably limits price cutting activities. The first of these is the Unfair Sales Act which makes it mandatory to sell at a price above cost. This Act is supposed to make it difficult for the wholesaler or manufacturer through retail outlets to flood the market of an area in an attempt to drive out a competitor. The second of these Fair Trade Laws has two provisions which are pertinent to the liquor industry. The first provision makes it mandatory for the retailers of the state to sell the same product at a uniform price. The latter provision of the law provides the
legal sanction for a practice that has long been widespread in the liquor industry of allowing the manufacturer to set the retail price and enter into contractual agreements with the wholesalers and retailers to sell the product at the set price.

Price Policies

According to Stigler, a condition of oligopoly exists when the price policy of one firm has an influence on the price policies of other firms. Such a situation appears in the post-prohibition whiskey industry. Because of the limited scope of this paper, price policies of the various firms in the industry cannot be considered individually. However, there appears to be ample evidence in the periodic price wars of the industry to indicate that the price policies of one firm have a direct influence on the price policies of other firms. It would seem that the dominant firms in the industry operate on the assumption that the demand for the products of their firms is relatively elastic. By inducing the public to concentrate their purchases of whiskey on the products of the particular firm, that firm hopes to achieve a market which is insensible to shifts in consumer purchases. Each firm hopes to achieve an inelastic demand schedule and a position of dominance in the industry. A firm's desire to achieve a position of

(13) Stigler, op. cit., p. 250.
dominance in the industry frequently leads to price cutting. However, price cutting by one firm in the industry soon leads to price cutting by other firms in the industry.

The struggle for dominance in the entire alcoholic beverage industry has always been over whiskey, which accounts for 80% of the distilled beverages sold in the United States. By offering wholesalers discounts as high as 40%, allotting them free goods with volume orders, extending credit, and other forms of persuasion, distillers induce the wholesalers to take on more liquor than they may have wanted. Through the jobbers, the distillers offer similar inducements to retailers, coaxing them into promoting first one brand and then another. As the market loads up, distillers resort to outright price cutting. These tactics reach perfection in large cities—particularly in the key market of New York City where about 51 of all U.S. liquor is sold—and where brand leadership has often been determined for the whole United States.

In the sales race in the 1920's first National and then Schenley led the field. However, Seagram captured leadership after the industry's price war in 1933-1939. By 1940, the drive for volume produced the inevitable result: wholesalers and retailers had more stock on hand than they could sell at existing prices. The distillers offered higher discounts than

ever before. While the big distillers fought for leadership, the discounts passed the 40% mark. Relayed to the retailer, they ended up as reduced prices for the consumer, who, by October, 1940, was able to purchase a 2.75 fifth of whiskey for as little as $1.69. In 1941, Schenley and National gave up, leaving Seagram on the top of a saturated market.

Implications of the Prohibition Era

The resultant influences of the prohibition period have been responsible, in part, for the economic structure of the post-prohibition whiskey industry.

The demand for alcoholic beverages in the immediate post-prohibition era was influenced by the peculiar nature of consumption and production engendered by the prohibition era. With the repeal of the 18th Amendment, the bar and package store took the place of the speakeasy and home production. To supply this demand, the distiller entered into distribution functions. This was one of the factors responsible for the vertical integration of production and distribution in the post-prohibition industry.

Another factor responsible for integration was foreign penetration. With the repeal of the 18th Amendment a large demand existed with small facilities for supplying this demand.

(16 Fortune magazine, op. cit., June, 1941, p. 141.)
This provided a natural opportunity for penetration by those firms existing in countries that had not experienced periods of prohibition. The entrance of foreign distillers into production in the United States further introduced elements of product differentiation and encouraged vertical integration of production and distribution. Canadian and English distillers were accustomed to producing fully aged, bottled whiskey. 17 British and Canadian distillers had operated on a vertically integrated pattern for a number of years previously to their entry into the American industry. They did not produce in bulk and sell to a rectifier, who completed the processes of aging, bottling and distribution but entered into the complete production process as well as many of the functions of distribution. Upon entering the American industry, the British and Canadian distillers followed the same pattern of integrated production and distribution operations which were part of their pattern in producing for the home market. This established a pattern for the American distiller.

Government regulation became an integral part of the post-prohibition period because of the need to protect the consumer from poor types of whiskey such as those produced under prohibition. It is true that the desire of the Government to exclude "undesirables" of the prohibition era for entering the re-established industry worked to inhibit this decision.

to the advantage of large producers and has limited entry into the industry. In its attempt to protect the public from poor quality whiskey, the government has fostered the concentration movement. The large, integrated producer, by the nature of his operations, seldom runs afoul of such prohibited practices as misbranding and false advertising. In addition, the control of stocks of aged whiskey by the large producers has done much to discourage the entrance of new firms into the industry. A new firm would be unable to purchase any aged stocks of whiskey to enter into immediate selling activities. Hence, it would be necessary to assume all of the expenses of production without any possibility of returns for three to six years. This control of aged stocks of whiskey by the large producers has also meant the decline of the rectifier and blender. The rectifier and blender are dependent on purchases of aged whiskey from bulk producers. However, as more and more of the producers in the industry are being absorbed by the axis, the rectifier is being cut off from his supply. This is shown by a decline in the number of rectifiers in the industry from 260 to 148 during the years 1935-1939. 18.

This repeal of prohibition provided excellent profit opportunities for those in possession of large stocks of whiskey or adequate productive facilities. The four companies which now dominate the U. S. industry gained control over

almost the entire stock of whiskey at the time of repeal. In addition, they were the first firms in production at this time. Hence, they were able to obtain an important foothold in the industry. This restricted the ability of new firms to enter the industry because the dominant firms controlled most of the stocks.

The firms that were originally dominant in the industry were able to rapidly expand their productive facilities because of the large profits which they earned. Although many other firms attempted to enter the market to take advantage of the favorable profit outlook, they were not as successful as the firms originally controlling the greatest portion of stocks and productive facilities.
CHAPTER IV

SUMMARY AND CONCLUSIONS
The objective of this paper has been to determine the extent to which the era of prohibition has influenced the development of the post-prohibition whiskey industry. To provide background, certain aspects of the pre-prohibition industry have been considered in the first chapter.

Two important generalizations can be made about the structure of the whiskey industry during this early period. First, it may be said that the industry was composed of a large number of small producers. In addition, the distillers of this era were engaged in only a small part of the manufacturing and wholesaling of raw whiskey. The functions of blending, bottling, and distributing were performed by a large number of small wholesalers. Hence, the manufacturer of raw whiskey did not engage in any advertising activities. In addition, the production of each distiller was small relative to the total production and exerted little influence on price. Although, there are indications that a certain amount of freedom of entry existed. In summary, a cautious generalization of this period would be that it was an era in which the structure of the industry tended to foster competition and to reduce the extent of cartelization.
could be said that the whiskey industry was characterized by various attempts at some form of monopoly control. The first of these was a pooling agreement in 1871 which was joined with a large increase in whiskey exports due to severe crop failures in Europe. A second and more successful attempt to form a combined alcoholic interests in the North-west, and later the North-west Association was formed to surrender surplus surpluses and in turn these were turned into higher prices. This was achieved through the Western Export Association which was formed to subsidize exports through assessments on member firms. This soon collapsed when certain member producers refused to pay their assessments. In 1885 the Distillers' and Cattle Feeders' Trust was formed along the lines of the Standard Oil Trust. However, although successful in maintaining price and eliminating competition, the Trust was dissolved in 1889 because of various public sentiment against such monopolistic activities. The Distilling and Cattle Feeding Company was organized to take its place in 1889. This company enjoyed a life span of only 6 years. Its charter was revoked in 1895 by the Illinois Supreme Court. The American Distilling Company was formed to eventually replace the Trust. This company was later acquired by the Distillers Security Corporation. The latter holding company emerged as the National Distillers Products Corporation after repeal of the 18th Amendment.
With the repeal of the 18th Amendment, certain conditions existed as a result of the era of prohibition which had implications for the development and structure of the post-prohibition industry. The second chapter is devoted to a consideration of these factors.

One of the most important of these factors was demand. Demand had continued to exist during the period of prohibition and had been supplied by various types of illicit production. The illegality of production and consumption during the prohibition era gave rise to the speakeasy and home production. Upon repeal of the 18th Amendment and the reestablishment of the industry, the speakeasy became the cocktail lounge and the package store took the place of home production. In addition, the high demand existing at the time of repeal encouraged foreign penetration of the American market. Foreign distillers introduced the elements of product differentiation by the distiller into the American industry.

Foreign penetration, changes in patterns of consumption, and the resultant product differentiation by the distiller induced changes in production and distribution. The distiller entered into all phases of production—ageing, blending, and bottling—and also entered into many areas of distribution.

Another influence arising out of the era of prohibition was increased government intervention into the activities of the industry.
The federal government desired to protect the consumer from poor quality whiskey and prevent "undesirables" from engaging in any phase of the whiskey industry.

Thus, the element of high profits which came about because of the existence of a high demand and of inadequate supply, and influences upon the development and structure of the whiskey industry. Those firms which received their original impetus from foreign sources, and which were able to gain an early control over inventories and production facilities, were able to extend their original advantage because of high rates of return which they earned.

In the third chapter an attempt is made to relate the structure of the post-prohibition industry to the influences arising out of the era of prohibition.

An examination of the structure of the industry revealed that the production and distribution facilities are concentrated in the hands of four large producers—Seagram, Schenley, National Distillers, and Fireman's. In addition, the existence of an imperfect type of competition was apparent. Five criteria of imperfect or monopolistic competition were set up and applied to the industry.

1. Product differentiation
2. Smallness of number of firms
3. Vertical integration
4. Restricted entry
5. Prevention of price competition
Finally, an attempt was made to analyze the influences coming out of the prohibition era. It may have been responsible for the type of monopolistic competition which exists.

The changes in demand resulting from the prohibition era and foreign penetration reacted to introduce product differentiation into the activities of the distiller. These two factors also introduced vertical integration and a natural corollary of product differentiation. The distiller found it necessary to enter into all phases of production and distribution.

Government regulation has been an important part of the whiskey industry and has been responsible, in a small manner, for the integration and concentration that we observed. Government intervention has also helped, to a certain extent, to limit entry of new firms in the whiskey industry. However, the control of aged stocks by the large firms has been the most important reason in restricting entry of new firms.

The repeal of prohibition provided excellent profit opportunities for those firms in possession of stocks or productive facilities. The firms originally controlling production and stocks continued to do so because of the high profits which they earned and reinvested in additional stocks and productive facilities.
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Appendix A  Fundamentals of whiskey making
First Steps in Whiskey Making. Whiskey is made from grain. Bourbon is made from a mash containing 51% or more corn grain, rye from a mash containing 51% or more rye grain. Most bourbon mash also contains rye and malted barley, rye mash contains usually corn and malted barley. The grain is ground to a meal and cooked with malt and water. Malt is sprouted barley just as grain sprouts when planted. While the grain contains no dextrose but only starch, malt changes the grain starches into dextrose so that they will ferment. This is necessary because yeast, the fermenting agent, cannot act on starch but can and does act on fermentable sugars, such as dextrose (grain sugar), fructose (fruit sugar), etc.

The fermentation process is activated by the use of yeast. Yeast cells change the grain sugars into alcohol, carbon dioxide gas and secondary compounds. The carbon dioxide passes off or is recovered and made into dry ice or other by-products. After 3 or 4 days, the yeast has done its work. Distillers use only the finest cultured yeast (as opposed to wild yeast); their chemists spend years breeding and perfecting the yeast strains, the nature of which are jealously guarded trade secrets. No yeast strain is exactly like any other and most distilling companies have been caring for their particular yeast cells for many years.

Then comes distillation. The science of distilling has been practiced for centuries. The principle of distillation
is simple: both alcohol and water become vapors under heat, alcohol vaporizing at about 176 degrees F, while water at 212 degrees Fahrenheit. When the mixture is heated, the alcohol passes off as a vapor and goes through long coils where it is condensed into a liquid—and comes out of the still as new whiskey.

Whiskey must be aged. Like tobacco, whiskey must be cured and aged before it is ready to be enjoyed. New whiskey as it leaves the still is a colorless liquid and a very far cry from the smooth, flavorful, mellow product as the consumer knows it. In other words, whiskey is not matured until it is properly aged.

American whiskey is aged anywhere from two to eight years—the average age is four years. Thus, normally, a whiskey which is made in, say, January, 1942, does not reach the market until January, 1946. Some rye whiskey will mature more quickly than other rye—some bourbon more quickly than other bourbon—depending on numerous factors, such as temperature, atmospheric conditions, the age and character of the barrels and the way in which the whiskey is made. Generally speaking, however, bourbon whiskey will reach full maturity more quickly than rye whiskey.

Our Federal laws require that all whiskey must be tax-paid and taken out of bond at the end of eight years. Scotch whiskey is aged much longer (as much as 20 years, generally, eight years).

Then whiskey leaves the still, it is placed in charred
oak barrels and kept in warehouses under the supervision of the United States Government. The barrels allow air to filter in, the oxygen and the compounds in the wood interacting with the whiskey over a period of years to give it color, flavor, character and mellowness.

All during the aging process, a certain amount of the whiskey is lost through leakage and evaporation. Over a period of years, these losses are substantial. For example, over a four-year period, about 22% of the whiskey originally stored away is lost in this manner.

The aging of whiskey in charred barrels is essential. Chemistry, despite all its advances, has failed to find a quicker method.

When the whiskey leaves the Government warehouse, it is bottled. Whiskey undergoes no change in taste and flavor or "age" once it has been sealed in the bottle.

Summarized from Liquor Store and Dispenser, October, 1944.
Appendix B  Glossary of Terms
Ageing—Whiskey must be aged. Ageing means the storage, after distillation and before bottling, in oak containers. In the case of American-type whiskies produced on or after July 1, 1936, other than corn whiskies, it means storage in charred, new oak containers. Corn whiskey need not be aged in charred barrels. (However, when corn whiskey has been treated with charred oak chips or stored in charred oak barrels, it becomes bourbon whiskey.)

The product which first emerges from the still during the production process is colorless and has little of the taste, body or general characteristics of the product ultimately offered to the consumer. When the whiskey is laid away for ageing, however, it develops color, flavor, character. The ageing process involves essentially a reaction between the wood and the whiskey, or other spirit compounds over a period of time.

Technically there is a maximum maturation period in the ageing of each barrel of spirits—a point in ageing beyond which the spirits no longer improve in character or taste. Various whiskies reach the peak of perfection at some time during this age span—depending on their individual character. The period of ageing in Government bonded warehouses in this country is limited to eight years, at the end of which time whiskey must be tax-paid and withdrawn from the warehouse.
In the United Kingdom, there is no limitation on the length of time which whiskey may be aged tax-free in bonded warehouses; accordingly, Scotch whiskey is frequently aged as long as 20 years. In Canada, there is a tax-free age limitation of 15 years.

_Alcohol—See "Neutral Spirits."

Alcoholic Beverages—The term alcoholic beverages, whenever used is taken to mean distilled spirits, wines and malt beverages collectively.

Blended Whiskey—There are, in general, two types of blended whiskies (although the regulatory definition of "blended whiskey" refers specifically to No. 2 following): (1) whiskey comprising a blend of two or more straight whiskies and designed to combine the various characteristics inherent in each of the different whiskies making up the blend; (2) a blend of straight whiskey and neutral spirits; such a blend is known as "blended whiskey", which, under federal regulations, must contain at least 20% by volume of straight whiskey. There is also a "spirit whiskey" which contains between 50% and 60% straight whiskey, the balance being neutral spirits or other whiskey. However, practically all blended whiskey placed on the market contains more than the minimum of 20% of straight whiskey. The average ratios at the present time range from 30-40% for straight whiskey and 60-70% for neutral spirits. Whiskey blended with neutral spirits is relatively light and mild. The neutral spirits tend to modify the heavy "body."
found in straight whiskey.

Blending Spirits--See "Neutral Spirit."

Bonded Warehouse--See "U. S. Government Bonded Warehouse."

Bottled in Bond--Beverage spirits of 100 proof, which have been stored continuously for at least four years in wooden containers, may be bottled in bond. Whiskey (or other spirits) must be of same distillation and season of inspection and made in same distillery. Under federal regulations, the distiller, if he so chooses, is allowed to bottle this whiskey without paying the excise tax, provided he keeps the bottled product in a bonded warehouse until he is ready to remove it and put it into consumption channels. When the bottled-in-bond whiskey is removed, it is then tax-paid by the distiller.

Whiskey bottled in bond is bottled under supervision of the United States Government. Actually, all whiskey is supervised by government officers with respect to proof, production, labeling, etc. Although some rum, gin, and brandy are bottled in bond, the amount is negligible in relation to the volume of whiskey bottled in bond.

Bourbon--Under federal regulations, bourbon is whiskey distilled from a fermented mash of grain containing at least 51% corn grain--the balance of any other grain but is generally rye and barley malt. Bourbon must be stored in new charred oak barrels or treated with charred oak chips.

Brandy--Brandy is a distillation of fermented mash of fruit or fermented fruit juices. The raw material used in brandy, sp-
in the order of their importance, grapes, raisins, apples, peaches and small quantities of other fruits. In general usage, brandy refers to grape brandy--apple brandy is usually known as apple jack, cherry brandy as kirsch or kirschwasser, etc. France is the principal brandy-producing country of the world, although the United States also produces a sizable volume of American brandy. "Cognac" is a brandy produced in the Cognac area of France.

Distilled spirits--Distilled spirits comprise whiskey, gin, rum, brandy, neutral spirits, cordials or liqueurs, etc., made by a distillation process and usually containing at least 20% of alcohol by volume. (See individual names for descriptions of each type.)

Distilling--For a brief description of the distilling process, see "Fundamentals of Whiskey Making," Appendix B.

Dried Grains--This product consists of solid material obtained from stillage. Through screening, the coarse solids are removed and by drying, the moisture content is greatly reduced.

Dark distillers' grain is produced from whole stillage.

Light distillers' dried grain consists of the suspended solids in the whole stillage. This product is obtained by drying the liquid resulting from the screening. All distillers' dried grains are important factors in supplying the needed nutrition in mixed feed formulas for animals. The added protein content is particularly valuable.

Evaporation and Leakage Losses--See "Losses from Evaporation and Leakage."
Excise Tax—The excise tax, as it is generally used, refers to the tax levied by the Federal Government on distilled spirits, malt beverages and wines (alcoholic beverages). However, 26 of the State governments and the District of Columbia levy a state excise tax on distilled spirits. Excise taxes on wines and malt beverages are also levied by various States. The State distilled spirits excise taxes vary from 50¢ per wine gallon in the District of Columbia to $2.72 per wine gallon in South Carolina.) The Federal excise tax, which is only one of the many Federal taxes levied on alcoholic beverages, must be initially paid by the producer (or other owner), absorbed as part of the cost price by the wholesaler, in turn, absorbed by the retailer, and ultimately paid by the consumer. The current Federal excise rate of distilled spirits is 49¢ per tax gallon. (Other Federal taxes levied on distilled spirits include customs duty, rectification, strip stamp, taxes on stills and occupational and dealer's license taxes.) The current Federal excise tax on malt beverages is 38¢ per barrel of 31 gallons (26¢ per gallon) and on wines at various rates—i.e., on wines containing up to 14% of alcohol by volume, the Federal rate is 15¢ per gallon on wines containing 14 to 21% of alcohol by volume, the Federal rate is 60¢ per gallon and on wines containing from 21 to 24% of alcohol by volume, $2.00 per gallon. The Government also levies various occupational taxes on dealers in wine and malt beverages.

Gin—Gin is made from a base of neutral spirits. There are two methods of processing gin: (1) Distillation—The neutral
spirits are run through a gin still, in which there are trays containing herbs and other flavoring matter such as juniper, orange peel, coriander seed, etc. As the alcoholic vapor rises in the process of being distilled, the volatile agents in the flavoring material are also distilled off. (2) Compound Gin--obtained by mixing neutral spirits with flavoring materials (chiefly oil of juniper or juniper flavor) or gin essence or distilled gin.

Neutral Spirits--According to the regulatory definition, "Neutral spirits, or alcohol, are distilled spirits distilled from any material at or above 190 proof. During the period of the unlimited national emergency proclaimed by the President on May 27, 1941, the term neutral spirits also includes any spirits distilled at less than 190 proof which are so distilled or so treated in the process of distillation, or so refined by other processes after distillation, as to lack the taste, aroma and other characteristics of whiskey, brandy, rum or other potable beverage spirits." For the sake of convenience, the term neutral spirits has been used to include both spirits produced at industrial alcohol plants for beverage purposes and neutral spirits as above defined produced in registered distilleries for beverage purposes. These spirits are used for blending with straight whiskey, making gin and cordials or liqueurs. They may be produced from grain or molasses or from a redistillation of other beverages, such as brandy and rum. Neutral spirits are customarily made from the same raw materials as whiskey—mostly...
grain, yeast and water. Neutral spirits are frequently stored in wood barrels, although under Government regulations no age claim may be made in such cases. Thus, in effect, grain neutral spirits are an extremely light-bodied whiskey-type distillate.  

**Proof Gallons**—According to the definition of the Internal Revenue Code, a standard "Proof Gallon" is a "wine gallon of an alcoholic mixture containing 50% of ethyl alcohol by volume. In a wine gallon containing more or less than 50% of ethyl alcohol by volume, the number of proof gallons is proportionately greater or smaller than 1 proof gallon." Proof gallons are frequently confused with wine gallons. A wine gallon is a physical measurement of capacity—the standard wine gallon contains 231 cubic inches. A proof gallon is a gallon (231 cubic inches) containing 50% alcohol by volume. The data reported by the Department of Commerce relating to imports uses the term, "proof gallon" as defined in the Tariff Act of 1930. This law provides that "each and every gauge or wine gallon of measurement shall be counted as at least one proof gallon..." In order to avoid confusion caused by the use of a single term denoting two different things (under the provisions of the Internal Revenue Code and the Tariff Act of 1930), this handbook has changed the designation "proof" gallon to "wine" gallon in all Import for Consumption data.  

**Rectification**—The process by which distilled spirits are blended together, or otherwise processed by the addition of spirits or flavoring or coloring material. For example, straight whiskies are rectified by blending them with neutral
spirits; neutral spirits with the aid of flavoring essences and other materials are transformed into cordials or liqueurs, etc.

**Rum**—This spirit is distilled from the fermented juice of molasses or other cane products or by-products.

**Rye**—Under federal regulations, rye is a whiskey distilled from a fermented mash of grain containing at least 51½ rye grain; the balance can be any other grain, and is usually corn and malted barley. Such whiskey must be stored in charred new oak containers.

**Scotch Whiskey**—Always refers only to whiskey produced in Scotland and manufactured in compliance with the laws of Great Britain. Any similar product made outside of Great Britain must include the word "type" and read "Scotch Type Whiskey."

Scotch whiskey is made chiefly from barley; the production process is similar to that used in this country except that the malted barley (which converts the grain starches into sugar) is kiln-dried over a peat fire. The peat smoke impregnates the barley and ultimately gives the Scotch whiskey a smoky taste. Most Scotch whiskey is blended—a blend of malt and grain whiskies, the former a heavy-bodied whiskey produced from malted barley and the latter a lighter-bodied whiskey made usually of corn.

**Straight Whiskey**—The regulatory definition defines "straight whiskey" as an alcoholic distillate from a fermented mash of grain distilled at not exceeding 16 proof and aged for not less than 24 calendar months if bottled on or after July 1,
If different straight whiskies are blended together, the resultant product must be called a blend of straight whiskies. See also, "Whiskey."

**Tax Gallon**—This refers to the unit of spirits subject to the Federal excise tax (currently $9.00). A gallon of spirits of 100 proof would be subject to a tax of $9.00, while a gallon of spirits of 110 proof would be subject to a tax of $9.90 when withdrawn from bond. However, where spirits are less than 100 proof, the tax is based upon the wine (physical) gallonage rather than the proof content. For the most part tax gallons and proof gallons are synonymous.

**U. S. Government (Internal Revenue) Bonded Warehouse**—Distilled spirits (except for cordials and liqueurs and sometimes gin) are stored in U. S. Government bonded warehouses following production—usually for ageing. The excise tax is not payable until they are withdrawn, except for bottled-in-bond spirits. Distilled spirits are usually stored in barrels approximating 50 gallons capacity each, although neutral spirits may also be stored in tanks or steel drums. The warehouses are set up under the laws and regulations of the Bureau of Internal Revenue. Although the proprietor of a bonded warehouse is a private individual or firm, the operations as well as the warehouse itself are kept under the direct supervision of officers of the Bureau of Internal Revenue, who carry the keys to the warehouse, keep a Government record of all entries and withdrawals of spirits, etc. The warehouse owner may enter the premises only in the presence of a Government officer.
spirits may be withdrawn except with Government permission.

Whiskey—Defined by Federal regulation as an alcoholic distilled in such a manner that the distillate possesses the taste, aroma and characteristics generally attributed to whiskey. See also, "Straight Whiskey."

Wine Gallon—A wine gallon is a physical measure and has no relationship to the "proof" or alcoholic content of a particular beverage. Thus, a standard United States gallon contains 231 cubic inches. A standard U. S. gallon of 190-proof spirits is a wine gallon (but is 1.9 proof gallons), while a gallon of 80-proof spirits is also a wine gallon (but only 0.9 proof gallons).

Summarized from Beverage Distilling Industry Facts and Figures, 1934-1945.