1974

Competition in the Retail Package Liquor Industry in East-Central Illinois

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COMPETITION IN THE RETAIL PACKAGE LIQUOR

INDUSTRY IN EAST-CENTRAL ILLINOIS

(TITLE)

BY

Carl S. Osterlund

THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE DEGREE OF

Master of Arts in Economics

IN THE GRADUATE SCHOOL, EASTERN ILLINOIS UNIVERSITY

CHARLESTON, ILLINOIS

1974

YEAR

I HEREBY RECOMMEND THIS THESIS BE ACCEPTED AS FULFILLING

THIS PART OF THE GRADUATE DEGREE CITED ABOVE

May 9, 1974

DATE

May 9 1974

DATE

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INTRODUCTION

A discussion which seems to come up from time to time at parties or bars or while people are sitting around casually watching television or listening to stereo involves where the consumer can get the most for his money in the way of liquor. An economist can discuss the above question in terms of markets and competition, and he relies on the literature for answers as to the conditions that may lead to a more inexpensive liquor supply, but studies on this subject have not been done before. Per capita consumption of liquor in Illinois was 2.18 wine gallons in 1970, .20 above the national average.[1] Illinois is the third ranking state in the consumption of liquor in the United States with over twenty-four million wine gallons consumed in 1970.[2] The ratio of licenses to inhabitants is 1.90 per thousand, while the national average is 1.21 per thousand.[3] There is a need, then, for a study in Illinois of the competition in the liquor industry.

Because studies have not been done in the area, the economist must define competition or measurements of the

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[1] Ben F. Loeb, Jr., "Relationship of State Law to Per Capita Liquor Consumption," Popular Government, Vol. 38, November, 1971, Table I, p. 13.

[2] Ibid.

[3] Ibid., Table II, p. 15.

degree of competition. One of the first areas of competition the economist might consider is the area of price competition. Liquor comes in many different forms and sizes so a question arises as to which brand and size to choose. According to Julian Simon, the liquor industry uses a fifth of Seagram's Seven Crown Whiskey as a standard against which other liquor prices are set, so if the price of Seagram's Seven Crown is high other prices will generally be higher, if low, other prices will be lower.[4] The market price can be determined by merely averaging the different prices found in the market.

Another area of competition one might consider is in variety of stock offered. Through casual empiricism one might consider that the store that offers the widest variety of stock would have the greatest competition. It should be considered that variety of stock means variety of sizes as well as variety of brands and degree of alcoholic content and age.

Third and fourth areas of competition that can be measured are the number of special sales and special sale items offered in a newspaper in a market. Casual speculation might lead one to consider that those markets with more sales and sale items would have more competition and those with fewer would have less.

Now the economist has four ways to measure competi-

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[4]Julian L. Simon, "The Economic Effects of State Monopoly of Package-Liquor Retailing," The Journal of Political Economy, LXXIV, No. 2 (April, 1966), 189.

tion in a market, the price of Seagram's Seven Crown, the size of the variety of brands, sizes, alcoholic content, and age of liquors, and the number of special sales and special sales items offered in the market newspaper. The situation involves more than just measures of competition, however, it also involves the causes of competition. An economist might consider that more competition could be caused by a higher population, a higher median age, a greater percent of the population age being twenty-one and older, a higher income, a larger number of independently owned liquor stores, longer store hours, a lower cost of licenses, and a larger number of licenses.

We have shown, so far, why there needs to be a study done in the area of liquor competition, and hypothesized what forms competition takes in this area as well as the causes of that competition. The purpose of this thesis is to determine the degree to which competition in the retail package liquor industry exists in East Central Illinois and how that competition takes the form of lower prices, more special sales, more special sales items and a wider variety of stock to choose from. This thesis is also concerned with the role of the people in creating competition through higher population, higher median age, a greater percent of population being twenty-one and older, a higher income, a larger number of independently owned liquor stores, longer store hours, a lower cost of licenses and a larger number of licenses.

There are a large number of alternatives to the hypothesis of this paper. Any one of the forms of competition could be a direct function of any of the causes of competition or an inverse function of those causes or no function at all or any combination of the above. For example price could be a direct function of population and an inverse function of the number of independently owned stores.

METHODOLOGY

It is necessary to make some assumptions in order to do this study. The first assumption is that only hard liquor is considered. Assume also that each market is confined to the city limits. Thirdly, assume the only package liquor retailed is by a drug store, grocery store or liquor store not attached to a tavern. Finally, assume that all special sales and special sales items are advertised in newspapers of the market.

The time span covered in this study was one year, from July 1, 1972 to June 30, 1973. Information on special sales and special sales items was gathered from newspaper advertisements from this period. All markets studied had one daily newspaper per market except the Champaign-Urbana market which had three, two commercial papers and one university paper. Data on population, median age, percent of population 21 and older and income was taken from the Bureau of the Census <u>1970 Illinois General Characteristics of Population</u>. Facts on liquor store owners, legal hours, cost of licenses and the number of licenses was secured from the city clerk's office of each market. The prices of Seagram's Seven Crown, variety of stock, and store hours was obtained from interviews with liquor store owners and managers. Liquor store owners and managers were also asked what percentage of their special sales were distributor's sales (in other words they were asked in what percent of their special sales did they receive a reduction in the cost of the items, by the distributor, either in the form of a reduced wholesale price or extra bottles of liquor) and this percentage was reduced from the number of special sales and special sales items.

Because of the limited sample of markets (5) it was necessary to use rank correlation to calculate the different relationships involved in this study. The rank correlation formula used was:

$$P = 1 - \frac{6\Sigma(D^2)}{N\ (N^2-1)}$$

Where N is equal to the number of markets (in this case) and D is determined by subtracting the rank position of the dependent variable from the rank position of the independent variable, P is only significant if it is $\pm$ .9 or absolutely more. Below is a table of the results.

Table I

Relationships Between Independent and Dependent Variables

	Price	Variety	Sales	Sales Items
Population	.7	.3	.1	.9
Median Age	.7	1	.6	.5
% 21 and Older	-.7	-1	-.6	-.5
Number of Licenses Available	.25	0	.4	-.5
Number of Independent Stores	-.9	-.6	-.2	-.3
Cost of License	.7	-.6	-.2	.7
Hours as a % of those Allowed	.5	.4	0	-.3
Per Capita Income	0	.3	-.55	.6
Number of Stores	-.9	-.6	-.2	-.3

Table II is a table of the data used directly in the calculations.

DATA

Table II: Data Used in Calculations of the Results Found in Table I

	CHAMPAIGN-URBANA	CHARLESTON	EFFINGHAM	MATTOON	PARIS
Population[5]	89,332	16,421	9458	19,681	9971
Per Capita Income[6]	$3379	$2592	$2842	$3110	$2871
Median Age	23.3	22.7	30.5	30.8	35.1
Percent of Population 21 and Over	57.8	53.8	61.3	62.6	65.7
No. of Licenses Available per 5000 Pop.	1.01[9]	3.04[14]	1.06[19]	1.27[24]	2.01[29]
No. of Stores per 5000 Pop.	.895[10]	.61[15]	1.59[20]	1.52[25]	1.00[30]
No. of Independently Owned Stores per 5000 Pop.	.5[11]	.3[16]	1.59[21]	1.27[26]	1.00[31]
Ave. Cost of License	$1249.995[12]	$750[17]	$533.33[22]	$666.67[27]	$600[32]
Ave. Open Hours as % of those Allowed	77[13]	81.5[18]	73.2[23]	72.5[28]	79.2[33]
Average Price of Seagram's 7 Crown	$4.31	$4.29	$4.78	$4.40	$4.645
No. of Special Sales per Week per Store	.52	.71	.63	.65	.2
No. of Special Sales Items per Wk. per store	6.77	3.17	1.35	3.87	1.13
Average No. of Brands per Store	518.9	589	358	337.4	259.5

[5] Bureau of the Census, Illinois General Characteristics of Population; 1970 Census, Department of Commerce, Washington, D.C., 1970.

[6] Ibid. [7] Ibid. [8] Ibid.

[9] City Clerk's Office, Champaign, September, 1973, and Urbana, Illinois, January, 1974.

[10] Ibid. [11] Ibid. [12] Ibid. [13] Ibid.

[14] City Clerk's Office, Charleston, Ill., Sept., 1973.

[15] Ibid. [16] Ibid. [17] Ibid. [18] Ibid.

[19] City Clerk's Office, Effingham, Ill., Sept., 1973.

[20] Ibid. [21] Ibid. [22] Ibid. [23] Ibid.

[24] City Clerk's Office, Mattoon, Ill., Sept., 1973.

[25] Ibid. [26] Ibid. [27] Ibid. [28] Ibid.

[29] City Clerk's Office, Paris, Ill., Sept., 1973.

[30] Ibid. [31] Ibid. [32] Ibid. [33] Ibid.

Table III is a table of data that, while not used directly in the calculations, is noteworthy.

Table III: Other Noteworthy Data

	CHAMPAIGN-URBANA	CHARLESTON	EFFINGHAM	MATTOON	PARIS
No. of Licenses Available	18	10	2	5	4
No. of Licenses Taken	18	10	2	5	4
No. of Liquor Stores	16	2	3	6	2
No. of Independently Owned Stores	9	1	3	5	2
Range of License Cost	$1200-$1450	$750	$500-$600	$650-$750	$600
Open Hours Allowed, Weekly	127	119	127	127	108
Weekly Range of Open Hours	77.5-127	97	88-96	77.5-108	81-90
Price Range of Seagram's 7 Crown	$3.98-$4.79	$4.29	$4.75-$4.79	$4.29-$4.76	$4.39-$4.90
Total Number of Special Sales 7/1/72 - 6/30/73	537	74	98	236	21
Total Number of Special Sales Items 7/1/72 - 6/30/73	5936	330	322	1797	157
Range of Total Number of Special Sales	0-55	37	15-43	7-52	0-21
Range of Total Number of Special Sales Items 7/1/72 - 6/30/73	0-665	165	42-173	21-424	0-157
Range of No. of Brands per Store	147-815	589	250(est)-536	165-472	250(est-269

It should be noted that there is some discrepancy between the number of licenses taken and the number of liquor stores. This discrepancy is caused by the fact that there is no uniform liquor licensing practice in Illinois. This lack of uniformity also causes the difference in cost of the liquor license. For example: Mattoon may have a class A license for taverns costing $700 and a class B license for package liquor stores costing $600. Matoon allows those holding a class A license to operate a liquor store. If one wants to open up a liquor store, but there are no class B licenses available in Mattoon. If there is a class A license available and the city council is unwilling to make more class B licenses available then one will have to pay $100 more per year for a license if he wants to open up a package liquor store. Paris may have only one class for both taverns and liquor stores. Charleston may have a class A for taverns and a class B for liquor stores but may not allow class A license holders to use the license for a liquor store. All of the above situations exist among the five market areas studied. Because of this lack of uniformity it was necessary to figure out the cost of the license by means of a weighted average.

For the most part, among the market areas in this study, cooperation was granted willingly by the liquor store owners and managers and there was only one instance of hostility and one of fear, met during the interviews. Below is a list of questions asked during the interviews: (A list of liquor stores may be found in Appendix I.)

1. What price do you sell a fifth of Seagram's Seven for?

2. How many brands do you have in stock if each size is counted as a different brand?

3. What percent of your special sale items of the period July 1, 1972 to June 30, 1973 were distributor sales items?

4. What are your open hours?

RESULTS

Referring to Table I one finds first of all that price is a function of the number of owners, that is, the fewer the number of owners the lower the price. This seems to be a strange result if one accepts orthodox economic theory but it is not entirely unexplainable. If one considers that liquor store owners are trying to maintain a certain level of income, and since the reatil liquor industry relies on a volume of sales in order to profit,[34] so it seems logical that where there are fewer owners the volume would be larger. Some retailers may be able to sell for less because of volume purchases[35] from distributors. Those retailers that are a part of a chain store business may be more likely to make volume purchases than any other buyer due to centralized purchasing. One would expect then to see the lowest liquor prices at chain stores such as Foremost, Service Liquors and Walgreens, which one does, among other places. In the situation of the apparent monopolist, the closest market

[34] I discovered this while interviewing the owner of the Dorris Pharmacy in Paris, Illinois. In addition to answering my questions he told me of the woes and pains of the liquor business (as he saw them). He complained about the fact that there was such a low profit on the individual sale of liquor and that the only reason he kept the business was because of the volume of business. January, 1974.

[35] Almost all of the owners and managers questioned about discounts from distributors said that most discounts came from volume purchases.

outside his own was near enough that it might have encouraged him to hold down prices, and a much higher price might have abetted competition from tavern-package liquor stores.

One finds that price is also a function of the number of stores, the fewer the number of stores the lower the price. The reason for this correlation is much the same as the first one. Store managers try to maintain a certain income level, and--in order to make a profit compatible with that income level--the retail liquor business depends on the volume of sales. Some stores are able to sell for less because discounts from distributors come with volume purchases. In the situation with the fewest stores the closest market outside their own was near enough to encourage them to hold down prices and a much higher price might have encouraged competition from the tavern-package stores. The reasons for this correlation are the same, because there is also a correlation between the number of owners and the number of stores, where one finds few stores per unit of population one finds few owners, conversely where one finds more stores per unit of population one finds more owners.

Another correlation found is that the variety of brands is a function of median age and percent of the population age twenty-one and older. The lower the median age and the lower the percent of population age 21 and older, the greater the variety that occurs. One reason for this correlation could be that younger drinkers have not settled down to drink just one or two varieties but are experimenting with many different varieties. Another reason could be that younger drinkers have more renaissance tastes and like a wide variety of drinks. Finally those markets with the youngest population also had state universities in them (Champaign-Urbana and Charleston) where there were many people with varied backgrounds and so varied tastes was not that unusual a find.

Finally one also finds a correlation between population and the number of sale items, that is the greater the population the greater the number of sale items. The reason for this is probably that the greater the population the wider the variety of tastes so more sale items are needed to lure customers into the store.

IMPLICATIONS

There are some implications that can be drawn from this study. First, monopolists do not always seek a higher price. Second, there is only weak correlation between price and population, median age, percent of population twenty-one and older, number of liquor licenses available, cost of liquor licenses, open hours as a percent of those allowed, and per capita income of a market. There is also a weak correlation between variety and population, number of liquor licenses available, number of independent stores, cost of liquor licenses, open hours as a percent of those allowed, per capita income, and the number of stores. The number of sales per store per week has a weak correlation with all of the independent variables tested. Finally, the number of sales items per store per week only had a strong correlation with population and weak ones with all other independent variables tested. This study did not cover all possible variables. Other possible variables could show stronger correlations with the dependent variables in this study. Further study should be done to discover these variables.

RECOMMENDATIONS FOR FURTHER STUDY

Further study could be done in other markets of the region such as Danville, Decatur, Marshall and Shelbyville. Further study could also be done using other independent variables such as geographic size of the market, social-cultural background of the inhabitants, and the sex of the inhabitants. Finally, further study could also be done using other dependent variables such as other liquor prices, and the inclusion of beer and wine in the study.

SUMMARY

Competition as a function of population, median age, percent of population twenty-one and older, income, number of independently owned outlets, store hours, cost of licenses, and number of licenses available for five markets was tested using rank correlations. The only significant correlations found were between price and the number of stores and the number of store owners, variety and median age and percent of the population twenty-one and older, and the number of sales items and population. All of the other correlations were too weak to be significant.

APPENDIX I

LIST OF THE LIQUOR STORES INVOLVED IN THIS STUDY

A. Champaign

1.	Barnett's Liquor Store	
2.	Foremost	Neil St.
3.	Foremost	University St.
4.	Foremost	Bloomington Rd.
5.	Piccadilly	
6.	Service Liquor West	
7.	Walgreen's	Neil St.
8.	Walgreen's	Kirby St.
9.	Al's Liquor Drive-In	
10.	Ayr-Way IGA	
11.	Prospect IGA	
12.	Kirby St. IGA	

B. Charleston

1. Gateway Liquor Store
2. East Side Liquor Store

C. Effingham

1. Kroeger's Red Top Liquor Store
2. K-Party House Liquor Store
3. D-J. Party Supply

D. Mattoon

1. B & L Package Liquors
2. Bob's East Side Package Drive-In
3. Mattoon Liquor Drive-In
4. Tully's Package Store
5. Wade's Korner
6. Wade's West Side
7. Walgreen's

E. Paris

1. Bob and Dot's Liquor Store
2. Dorris Pharmacy

F. Urbana

1.	Foremost	Vine St.
2.	Service	
3.	Service East	
4.	Walgreen's	Sunnycrest

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