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APPLEBAUM AWARD

Competition in Beverage Distribution: The Role of State Regulation

by

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1. Introduction

The central theme of this paper is the necessity for policy makers to understand the vertical structure of an industry when framing legislation concerning it. Although such a recommendation may appear little more than common sense, experience has shown that policy makers tend to overemphasize the role of manufacturing at the expense of the product's distribution system. Nowhere is this more apparent than in the food and beverage sector, which is subject to a variety of regulations, where distribution is a critical factor in industry economics.

This paper examines the economic impact of state legislation on the malt beverage industry, and to a lesser extent, the carbonated soft drink industry. At the state level, the manufacturing and distribution of malt beverages (or beer) is subject to several types of regulations concerning taxation, labelling requirements, advertising, credit policies, container sizes and materials, alcoholic content, shipping requirements and the legal drinking age. In addition, there are three laws which are of major importance which are the main concern of this paper.

(1) Price Posting Laws - usually require brewers and distributors (or wholesalers) to post their prices with the State Liquor Commission and to maintain these prices for a specified period.

(2) Territorial Restrictions or Franchise Laws - may require agreements between brewers and wholesalers to designate geographic areas in which the wholesaler sells. Often, it is unlawful for the wholesaler to sell outside the designated territorial limits. Soft drink bottlers also have similar agreements.

(3) Container Deposit Laws - require a refundable deposit (generally 5¢) on all carbonated drinks sold, i.e. beer and soft drinks.

All three laws have major, widespread economic ramifications. This paper is primarily concerned with their impacts on competition. The term "competition" is used here in a narrower, more precise sense than is commonly understood. Competition is used here to refer to price competition, rather than general business rivalry which would connote all forms of competition between firms, including advertising, product

promotion and so on. Economic theory suggests that price competition among firms is socially beneficial, resulting in the efficient allocation of resources in the market without government intervention. This ideology is the foundation of U.S. antitrust laws which seek to prevent the accumulation and use of market power by corporations.

The objective of this paper is to analyze the impact of state legislation affecting the beer and soft drink industries in terms of its effects on competition, explicitly treating the role of distribution. The questions addressed here include: Do franchise agreements stabilize the industry or do they simply serve to eliminate price competition at the expense of consumers? Do deposit laws help or hurt small retailers and distributors? What problems can we expect to occur under deposit laws and how can they be prevented? Another concern here is the relationship or interaction between regulations with different objectives. Questions arise as to the compatibility of, say, price posting laws and franchise agreements--do they contradict or reinforce each other?

The questions raised here are of vital concern to industry, consumers and policy makers. The paper attempts to provide a number of factual observations on state legislation in this area. Unfortunately, data are extremely scarce and, as a result, many of the hypotheses explored are not empirically verified, although all are potentially testable.

This paper proceeds as follows. Section 2 presents a brief outline of the policy issues concerning competition at the national and regional levels in the beer industry, and a comparison with the soft drink industry. In Section 3, the economics of territorial restrictions in the beer and soft drink industries is examined, followed by a discussion of the impact of deposit laws on competition in Section 4. The links between deposit legislation and territorial restrictions is analyzed in Section 5. Finally, Section 6 provides a synthesis of the paper's major conclusions and offers some policy recommendations.

2. Competition in the Carbonated Beverage Industry

Concentration in the beer industry has grown rapidly and substantially since World War II. In 1947 there were 404 firms operating 465 plants. In 1974, there were only 58 independent firms with 108 breweries. Today, there are around 40 brewers operating in the United States. The decline in the number of firms occurred in spite of increases in consumption. At the same time, concentration in the industry rose. In 1962, the top five brewers accounted for 35.6 percent of domestic production. In 1972 this figure was 56.1 percent and in 1982, the top five accounted for an astonishing 82.8 percent of production [13]. Due to the presence of imports, the sales concentration figures are slightly lower but show the same pattern.

The federal government has been extremely concerned with concentration in the beer industry and its implications for prices. How does an industry become so concentrated even with rising product demand? First, concentration may occur through merger. The Federal Trade Commission has barred a number of mergers between brewers [14, 21] despite various evidence that mergers do not significantly reduce competition. Secondly, concentration may come about through the anticompetitive practices of the larger firms, such as pricing below cost to drive out smaller competitors. No evidence has been found to suggest that this has ever occurred. The third factor is economies of scale and most analysts [7, 12] agree that is the most significant. The minimum efficient sized brewery has become steadily larger, favoring larger firms. Advertising economies, especially national television, also favor large, national firms.

Despite the high concentration in the industry, the overall conclusion has been that pricing remains competitive. Profit rates have consistently been below those of all manufacturing and large changes in the market share of firms have been frequent (e.g.: Miller Brewing Co.) despite negligible entry into the industry [10].

Examining national concentration figures, however, does not tell the whole story. Keithan (1980) points out ". . . concentration in State or regional markets has always been high--due to the high transportation costs of shipping a product consisting of over 90 percent water . . . so that national concentration figures do not necessarily indicate anything about the amount of competition in the industry." State markets are also important because of state-specific beer legislation which may provide a shield from antitrust action. This is considered in Section 3.

The soft drink industry is also highly concentrated, the top four firms accounting for 70 percent of syrup sales [20]. In regional markets also, a small number of bottlers usually dominate the market. However, concentration has been high in the industry for a long period of time and has not grown very rapidly. Government actions have therefore centered on the territorial restrictions common to the industry. We now turn to the legal and economic issues concerning territorial restrictions in soft drinks and beer.

3. Territorial Restrictions in Beer and Soft Drinks

3.1. Legal status. Territorial restrictions, or non-price vertical restraints as they are also referred to, can take many different forms. The type of restrictions under scrutiny here are the exclusive franchise distribution agreements where the manufacturer of a product assigns a geographic area to a distributor, with the understanding that the distributor *not* sell the product to retailers located outside the designated territory. The manufacturer in turn, usually agrees not to grant any other distributor in the designated area the same privileges. Normally, the legality of such agreements is assessed under Section 1 of the Sherman Act (1890) which prohibits "Every contract, combination--or conspiracy in restriction of trade or commerce among the several states . . . ." In 1977 (Continental T.V. Inc. v GTE Sylvania Inc. 433 U.S. 36) the Supreme Court ruled that such agreements should be judged under a "rule of reason" approach, i.e. not declared illegal *per se*.

Territorial restrictions in both the beer and soft drink industries have a legal status which is considerably different from the rest of manufacturing industry. The enactment in July 1980 of the "Soft Drink Interbrand Competition Act" (15 U.S.C. 3501, PL 96-308, S. 598) essentially exempted the soft drink industry from the usual antitrust laws used to judge territorial restrictions. For beer, the 21st Amendment, Section 2 provides "The transportation or inportation into any State . . . for delivery or use therein of intoxicating liquors, in violation of the laws thereof, is hereby prohibited." The legality of territorial restrictions in the brewing industry is thus up to states. Currently, 21 states *require* the designation of territories *and* permit the enforcement of exclusive franchise agreements, i.e. prohibit sales by distributors outside of their designated territory. Other states have regulations which either require or permit territorial designations. Only one state, Indiana, has declared exclusive franchise agreements illegal, and many states have no explicit policy towards them. Currently the brewing industry is pressing for national exemption of franchise agreements from scrutiny under various antitrust statutes similar to the 1980 law for soft drinks, termed the "Malt Beverage Interbrand Competition Act" [17]. The state laws govern-

ing beer distribution have never been challenged in federal courts, even though many require actions by firms that certainly violate both the letter and spirit of the Sherman and Clayton Acts.

3.2. The economics of exclusive franchise agreements. Territorial restrictions in the soft drink industry date back to the turn of the century and their legal and economic ramifications have been analyzed extensively by Larner (1977), Katz (1978), Abrams (1981) and others. Much less is known about beer, although the economic pro's and con's are very similar. Why are territorial restrictions so common in the carbonated beverage industry? Basically, although they constrain the behavior of both the manufacturer and distributor, they raise profits.

In the soft drink industry exclusive territories have a long history, where they were originally used by syrup manufacturers such as Coca-Cola to induce the franchised bottlers to maintain product quality and make the capital and advertising expenditures necessary, without fear of competition from other firms. Today, quality and product safety are no longer relevant considerations. Product dating, efficient inspection and sampling should be sufficient to maintain quality without exclusive territories. It is certainly true that distributors may reduce product promotion if territorial agreements were eliminated because of the presence of "free riders," when other distributors in an area also benefit from one distributor's advertising expense. The probable result would be an increase in price competition, lowering prices.

Exclusive franchises exist because they raise profits, by permitting market separation and hence price discrimination. Price differentials (intra brand and inter brand) of up to 30 percent have been found between contiguous territories [20]. Further, territorial restrictions suppress intra brand competition raising profits for the manufacturer and distributor. Industry arguments that the profit factor is not the primary motivation for exclusive franchises remain unconvincing.

The economics of franchise agreements in beer distribution are almost identical. The key argument for exclusive franchises centers around the product promotion issue. It is worth noting that there is no real reason why the brewer cannot bear these advertising costs for the entire market. Again, such agreements reduce intra brand competition. With regional markets as concentrated as they are, it seems likely that firms recognize their mutual interdependence and hence inter brand competition is also reduced.

The price posting laws mentioned earlier also directly reduce price competition, although their purpose is to stabilize the industry and protect the consumer from misleading advertising. Consider for example, Oregon, where the Liquor Control Commission requires (Reg 10-210) price posting and does not permit price increases for 180 days following a price reduction. Thus, if prices are lowered, they must stay at that level for an extremely long period. As a result, distributors are extremely wary of cutting prices, but face no constraints in raising them. Currently, some 22 states have legislation comparable to Oregon's. In Illinois, the statute concerning price posting was declared unconstitutional some years ago. In conjunction with territorial restrictions, price posting laws cause a shift from price competition which is socially beneficial, to non price competition which many economists feel may be wasteful. Section 4 describes Beverage Container Deposit Laws, the newest form of regulation directly affecting the beverage industry.

4. Deposit Legislation

4.1. An overview. On October 1, 1972, Oregon became the first state to implement a deposit law on beverage containers. Since then, eight other

states (Vermont, Maine, Iowa, Michigan, Connecticut, Massachusetts, Delaware and New York) have passed comparable legislation. Deposit laws are essentially environmental laws, aimed at reducing litter and solid waste and conserving natural resources and energy. The costs of these laws are primarily in the handling of returned containers in terms of labor, transportation and space, i.e. of switching from a one-way delivery system to a two-way system. Further, there are concerns about possible by-products in terms of effects on prices, beverage sales and container industry jobs.

At present, there is considerable confusion concerning deposit laws. Proposed "bottle bills" have been defeated by voters in California, Colorado and a number of other states, while at the same time there are calls for a national law. The diversity of opinion is directly traceable to the fact that most laws are relatively new, having been in force less than four years. Given that industry and consumers take time to modify their behavior, very little reliable data are available [5]. Differences in legislation and socio-economic environment also imply that benefit-cost tradeoff varies considerably from state to state. So, it is likely that until the issue is settled, environmental concerns will push states and the federal government to consider similar laws. It would therefore be extremely useful to have some idea of what effects on competition and industry structure these laws generate.

We now turn to the basic framework of deposit laws. Mandatory deposit laws concern carbonated beverages (beer, soft drinks etc.) in bottles (glass and plastic) and cans. Non-returnable containers and non-biodegradable pull-tabs are generally banned. All containers carry a minimum deposit (usually 5¢ - 10¢) and there are different regulations concerning on-premise sales. In general, the first or primary distributor initiates the deposit, charging this to retailers or intermediate wholesalers on all containers sold. All customers are required to pay the deposit which is refundable when the container is returned. Both retailers and distributors must give cash refunds for any container of a brand they sell. Returned (non-refillable) containers are sold by distributors to recycling companies for scrap value. Refillable bottles are returned to the original bottler and then reenter the container cycle.

A major difference between beer and soft drinks concerns the originator of the deposit. The soft drink bottler is usually the first distributor and hence starts the deposit chain. Brewers generally do not initiate the deposit, except in the case of refillable containers. State laws differ on the issue of whether unredeemed deposits are retained by the initiator, most laws permitting this, mainly to offset costs borne by distributors.

4.2. Impacts on competition. Turning now to the question of competition, it is convenient to distinguish among three types of impact of deposit laws: effects working through changes in the level and pattern of sales, effects from changes in costs to the industry and lastly the indirect effects which are closely linked to franchise laws.

(i) Sales: At the retail level, the most immediate sales effect relates to interstate shipments. Unless the containers are marked for deposit, a retailer in a deposit law state cannot purchase beverages from wholesalers located in other states, even if they are priced much lower. Thus, interstate price competition is directly reduced raising prices for retailers and consumers. However, there are several reasons to believe this effect will be transitory. First, it is in the interest of brewers and soft drink bottlers located in non-deposit states to mark the containers for deposit so as to promote sales. The costs of doing so are essentially negligible. Further, large wholesalers in non-deposit states are likely

to want to carry deposit marked containers. Lastly, the effect is likely to be small for large states or states with deposit law neighbors. As previously mentioned, very little work has been done in this area and there is no empirical evidence suggesting a significant reduction in interstate shipments.

Another sales effect concerns the so called "border area effect" and has been stressed by many studies. In deposit states, retail stores in counties bordering on non-deposit states have reported significant sales declines following the implementation of the law. In general, beverage prices have risen moderately in deposit law states [5] and consumers seeking to avoid paying higher prices and the deposit may cross state lines to purchase beer and soda. Sjolander and Kakela [18] report that from 1977 to 1980, packaged beer sales in counties located along Michigan's southern border declined 9 percent more than sales in the rest of the state. Again, it is doubtful that this effect has significant impacts, for price differentials between deposit and non-deposit states are not significant over long periods. Sjolander and Kakela, for example, find that from 1982 on, Michigan supermarket beer prices were on par with national average price levels. In the short run, strong measures may be necessary however--Michigan in 1980 made it illegal to import more than one case into the state without authorization.

At the manufacturing level, some analysts have argued that deposit legislation causes changes in the pattern of sales which favor national brands over "private label" brands. Under this argument, retailers seeking to economize on backroom space taken up by empties are likely to eliminate those brands which are infrequently picked up, which tend to be the less well known brands, but to keep national brands with frequent delivery and pick-up. Potentially, this could substantially reduce inter-brand competition, especially in beer. However, there are some very valid objections to this argument. First, the larger retailers stock the greatest variety and may be unwilling to lose customers by dropping brands. Second, large chains may even wish to promote in house brands because of the benefits accruing from deposit initiation. Third, the volume of returns and return rate is likely to be higher for national brands rather than regional brands and imports, implying greater handling costs from stocking them.

In sum, the sales effects are ambiguous in terms of their impact on competition.

(ii) Costs: It seems quite likely that the costs of handling returned containers will vary for retailers and distributors. The key question is whether larger firms enjoy significant cost advantages. Large retail and wholesale operations may be able to take advantage of economies of scale to achieve lower unit costs. These "economies" may refer to specialization in the use of labor, better storing procedures such as the use of warehouses etc. However, this effect may be offset by the fact that large firms have a proportionately higher volume of returns. For example, customers may find it more convenient to return their empties in large supermarkets than in small convenience stores. The overall effect on profitability and costs is thus uncertain, although it is clear that operations in large cities will have higher unit costs.

The indirect effects are of a very much more subtle nature and are closely linked to the vertical restrictions issue. Accordingly, they are treated separately in Section 5.

5. Deposit Laws and Exclusive Franchise Distribution

The competitive effects of deposit laws are likely to depend heavily on the franchise system in use in the beverage industry.

In states where exclusive franchise agreements are not strictly enforced, irrespective of their legality, deposit legislation is likely to create a demand for such regulation. The key issue here is that of trans-shipment, where wholesalers in, say, western Massachusetts, sell beverages to retailers in Boston. Wholesalers in the Boston area must redeem deposits for all containers returned to them, even if this amount is more than they sold. In the absence of a deposit law, such "trans-shipment" is normal and is a procompetitive force leading to lower prices.

Under deposit legislation, however, the initial wholesaler has low costs because of his low returns whereas wholesalers in Boston bear relatively high costs. There is another issue here. Depending on the specific legislation, the initiator of the deposit can generally count all unredeemed deposits as profit. In this situation, the law actually favors extensive trans-shipment as a form of competition on a different plane from ordinary price competition.

Consider the following example, based on hypothetical figures. A case of beer costs a wholesaler $9. The wholesaler resells it for $10 in his local area. He charges a deposit of $1.20 to retailers, normally returning $1.02 of this (85 percent return rate). Faced with the option to sell to a retailer located so far away that he is sure all returns will be made to other wholesalers he may actually sell at close to cost. If, for example, he sells to my retailer at cost (plus transport and deposit) his expected profit is the $1.20 deposit. The retailer can redeem the returned containers to local wholesalers, who are usually obliged to accept them.

The effect of trans-shipment then is to introduce a new type of competition into the distribution sector. Unfortunately, this type of competition is not socially beneficial. Trans-shipping encourages long distance sales over local sales resulting in high transportation costs. Not every firm can engage in this type of activity--smaller independent beverage centers etc. do not have the transportation and marketing systems required.

This problem has been observed in New York and Massachusetts. Various attempts at reform are being proposed but there are obviously no simple solutions. Industry suggestions have concentrated on a renewed demand for exclusive territorial franchises, which would automatically solve the problem by making trans-shipment illegal. In other words, exclusive territories appear to be extremely compatible with deposit laws.

Territorial restrictions are compatible with deposit laws in other ways too. Most cost-benefit studies have shown that if industry switches from recyclable containers to refillable containers, major cost savings accrue to all parties concerned. Although refillable containers cost more, they can be reused often resulting in savings, whereas recyclable containers can only be used once. Territorial restrictions favor a switch in refillables, especially by soft drink bottlers. The Federal Trade Commission in 1978 (Coca-Cola Co. 91 F.T.C. 517) found territorial restrictions were more permissible for returnable containers than others when this argument was used in court.

In states without exclusive franchise distribution in beverages, deposit laws create a demand for such laws. Where territorial restrictions already exist, deposit laws make them doubly hard to remove. Competition is reduced in exactly the manner described in Section 3. Further, retailers and intermediate wholesalers become more dependent on franchised distributors. Infrequent deliveries and pick-ups result in large amounts of backroom space being used to store empty containers and force small retail stores to lower their inven-

tories below what they would normally stock. The increased economic leverage of distributors may be used to raise prices across the board, and retailers cannot switch to other distributors unless they also change brands. Price posting laws reduce the possibility that distributors will compete among themselves, i.e. interbrand competition. Deposit laws thus consolidate the existing restrictions and make them very much harder to remove.

6. Conclusions

Since the 1950s, the question of competition in the beer and soft drink industries has been a major concern for the federal government. Even so, many states have passed legislation, especially regarding beer distribution, that permit behavior by firms which the Federal Trade Commission or Department of Justice would almost certainly find objectionable in other industries. The social costs of territorial restrictions and price posting laws almost certainly outweigh their benefits. Although the recent concerns about the beer industry [2-4, 6] are not misplaced, the paper suggests that ignoring regional and state markets is a mistake. Serious thought should be given to the function and usefulness of territorial restrictions and price posting laws. It is noteworthy that when Indiana repealed exclusive territories in the beer industry, prices fell 20 percent [17]. Stern (1976) cited estimates of savings to consumers of at least $250 million due to price reductions if soft drink territorial restrictions were eliminated.

Beverage container deposit laws are the newest form of state legislation affecting the beer and soft drink industries. Although they have huge economic impacts, their effect on competition through changes in sales and costs appear to be ambiguous. The problems which do exist are easy to remedy. For states with non-deposit neighbors, restrictions on the interstate importation of beverages by individuals, as in Michigan, may be appropriate until price differentials narrow. A ceiling on the amount of containers which can be returned by an individual on a given day, varying by size of store, may prevent small retailers from facing an unfair cost burden.

The most serious problem, however, concerns the compatibility of deposit laws with territorial restrictions. In states without legal territorial restrictions, deposit laws are likely to generate demands for such restrictions as described in Section 5. Solutions to the problem of trans-shipment are not obvious. In Connecticut, unredeemed deposits are returned to the state, so that distributors have less incentives to reduce returns or to sell far beyond their local markets. However, as the costs of handling returned containers are substantial, it is an open question as to whether this modification would eliminate widespread intrastate shipping of beverages. Massachusetts's deposit law attempted to compensate distributors who had return rates substantially above average. Such a system, although complex and difficult to enforce seems to be the most promising approach.

In states with existing territorial restrictions, deposit laws increase the market power of large distributors and consolidate the political status of these agreements. Again, policy can be framed to protect retailers from infrequent pick-ups by distributors, and so on.

In the final analysis, the policy problems outlined here could be substantially reduced if policy makers fully understood the economic organization of the industry they are attempting to regulate.

References

[1] Abrams, R. M. "Antitrust Law in the Soft Drink Industry," Antitrust

Bulletin 26(4), Winter 1981, pp. 697-719.

[2] Business Week, 20 August, 1984, p. 59.

[3] ____________, 3 December, 1979, p. 91.

[4] ____________, 8 November, 1976, p. 62.

[5] DiMento, J. F. "Mandatory Deposit Laws: A Review of the Literature on Impacts," Program in Social Ecology, University of California, Irvine (1982).

[6] Elzinga, K. E., "The Restructuring of the U.S. Brewing Industry," Industrial Organization Review 1: 1973, pp. 104-114.

[7] Greer, D. F., "The Causes of Concentration in the U.S. Brewing Industry," Quarterly Review of Economics and Business 21, Winter 1981, pp. 87-106.

[8] Katz, B. G., "Territorial Exclusivity in the Soft Drink Industry," Journal of Industrial Economics 27, September 1978.

[9] Keithan, C. F., "The Brewing Industry," Staff Report of the Bureau of Economics, Federal Trade Commission, Washington, D.C. (1980).

[10] Kelton, C. M. and Kelton, W. D., "Advertising and Inter brand Shift in the U.S. Brewing Industry," Journal of Industrial Economics 30 (3), March 1982.

[11] Larner, R., "The Economics of Territorial Restrictions in the Soft Drink Industry," Antitrust Bulletin 22, Spring 1977.

[12] Lynk, W. J., "Interpreting Rising Concentration: Beer," Journal of Business 57 (part I), January 1982.

[13] Modern Brewery Age Blue Book, 43 ed. (1983).

[14] Ornstien, S. I., "Antitrust Policy and Market Forces as a Determinant of Industry Structure: Case Histories in Beer and Distilled Spirits," Antitrust Bulletin 26(2), Summer 1981.

[15] Posner, R. A., "The Next Step in the Antitrust Treatment of Restricted Distribution: Per se Legality," University of Chicago Law Review 48, Winter 1981.

[16] Porter, R. C., "A Social Benefit-Cost Analysis of Mandatory Deposits on Beverage Containers," Journal of Environmental Economics and Management 5(4), December 1978.

[17] Progressive Grocer, "Brewer's Territory Battle Comes to a Head," 61:23 July 1982.

[18] Sjolander, R. and Kakela, P., "Effects of Michigan's Mandatory Beverage Container Deposit Law," Department of Resource Development, Michigan State University, June 1984.

[19] Stern, L. Agodo, O. and Firat, F., "Territorial Restrictions in Distribution: A Case Analysis," Journal of Marketing, Vol. 40, April 1976, pp. 69-75.

[20] Stern, L., Zelek, E., Dunfee, T., "A Rule of Reason Analysis of Territorial Restrictions in the Soft Drink Industry," Antitrust Bulletin 27(2), Summer 1982, pp. 481-517.

[21] Wall Street Journal, 23 October 1981, "Schlitz Drops Plans to Merge into Heileman Day After U.S. Indicates Must Challenge."