Inter-War Changes in Gasoline Distribution: A U.S.– UK Comparison

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Producers might permit products to reach ultimate users by whatever routes happen to emerge and might be indifferent to the prices charged at various stages of the distributive process. However, the many disadvantages of such a strategy bring attempts to control both the distributive structure and the prices charged ultimate users. Different control mechanisms were chosen by oil companies in the UK and in the United States. The success of control efforts in each country can be traced in part to differences in political and legal environments, but the different control mechanisms in turn brought differences in distribution structures that had a profound impact on the nature of competition.

Gasoline Distribution in the United Kingdom

Early in the century, gasoline, also referred to as "petrol" or "motor spirit," was sold as a sideline by bicycle shops, blacksmiths, and machine shops that repaired automobiles, and grocers, druggists, and hardware dealers, already selling kerosene, who added gasoline to their product lines. Although kerosene was delivered from ocean terminals and inland depots in bulk, government regulation prohibited the bulk distribution of gasoline to retailers. Gasoline was filled into two-gallon cans, dispatched to depots by rail, and then delivered to retailers. Since retail stocks were limited, and several brands were sold, retailers stocked only one or two cans of any single brand. As competition developed, distribution costs became especially high because oil companies often found it necessary to deliver only one or two cans of gasoline to a retailer. This pattern of multi-brand sites carrying small stocks remained characteristic of the industry until after the Second World War.

At first, the UK gasoline market was dominated by Anglo-American Ltd., established by Standard Oil in 1888; in 1905 the Company claimed that "Fully 75 per cent of the motor spirit sold in tins is Pratt's Brand." Shell's initial attempt to enter the gasoline market was thwarted because Anglo-American had tied "every agent and distributor in Britain, holding up supplies until each of them had signed a contract undertaking to sell gasoline of no other brand but its own" [Henriques, 1960, p. 290]. However, Shell and Anglo-American apparently reached an agreement to share the market; a price war in 1910 was

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attributed to the breakdown of this agreement. Early in 1912 this "war" came to an end: "A decidedly healthy tone permeates the English markets for oil at the present time. The whole of the distributing companies are moving in unison, and in all classes of petroleum products substantial advances have recently been recorded" [*Petroleum Review*, Feb. 24, 1912, p. 97].

The outbreak of World War I had little immediate effect on gasoline distribution; only in 1916 was rationing introduced and a Petroleum Pool Board established to control petroleum distribution. Oil companies were allotted geographic areas so that each company's sales were proportionate to its pre-war market share. After the war, companies not only continued to dominate their allotted areas, but also jointly determined wholesale and retail prices, trading conditions and relations with retailers [Brunner, 1930, p. 22]. The three largest "National" oil companies, Anglo American, British Petroleum, and Shell, collectively referred to as the "Combine," had a combined market share of 85% [Fitzgerald, 1927, p. 158].

Gasoline continued to be sold at many types of shops and "mostly delivered in the familiar two-gallon sealed tin" until 1920, when filling stations began to emerge [*The Petroleum Industry*, 1920, p. 160]. The typical filling station consisted of one or two pumps, dispensing one company's gasoline. The very limited number of larger sites offered at least one "National" brand; other offerings included additional "National" brands and sometimes independent brands.

Control of Retail Sales and Price

The introduction of filling stations was accompanied by the bulk distribution of gasoline to retailers and the lower cost was reflected in retail prices; gasoline sold through pumps was two pence per gallon less than that sold in the two-gallon can [*Garage and Motor Agent*, November 13, 1926, p. 58]. Public statements emphasized the cost benefits of gasoline pumps: "Bulk spirit deliveries to motorists undoubtedly cuts into distribution costs" [*Petroleum Times*, January 29, 1921, p. 134]. However, rivalry among the oil companies centered on increasing the number of pumps dispensing their respective brands. This was achieved, in part, by encouraging retailers to install additional pumps at either existing or new sites. The resulting distribution system was characterized by a high rate of retail profit and relatively low sales from each pump. The full benefit of bulk distribution could not be realized because limited retail storage facilities meant that oil companies delivered small amounts of gasoline to retailers.

The gasoline pump also offered oil companies the opportunity for some measure of control over the retailer. Most retailers purchased pumps from one of the oil companies, with payments spread over three years. Since a pump supplied by an oil company could dispense only that company's gasoline until the loan was repaid, the retailer was tied to the company for the duration of the loan. Efforts to control retail sales did not extend to vertical integration into retailing:

> It is not normally desirable for a distributing company to do much of its own business, even with commercial vehicle owners, through its own stations, since the motor trade does not look favorably upon companies which are, in their opinion, poaching on the dealer's preserves... As a general principle, unless the company is prepared to do its whole business through its own service stations, it is preferable that it should do as little as possible in that way [Brunner, 1930, p. 93].

That is, the independent retailer had been able to "obtain recognition as practically the only channel of distribution between the oil company and the private motorist" [Brunner, 1930, p. 215].

Although the oil companies did not integrate into retailing, market control was achieved by agreements among the companies and between the companies and distributive trade associations. The Combine worked together with the Motor Trade Association and the Motor Agents Association to maintain wholesale and retail prices. The M.A.A. dealt with various aspects of the retail motor trade, but the sole purpose of the M.T.A. was to control retail prices. The sanction employed by the M.T.A. was that of the "Stop List," which denied a retailer access to supplies [*Restraint of Trade*, 1931, pp. 13-14]. The use of a stop list was lawful in the UK provided that the object of the association was "to protect or promote the legitimate business interest of the association and not merely to injure the person concerned" [Heathcote-Williams, Roberts, and Bernstein, 1956, pp. 73-74].

To obtain supplies from a Combine member, a retailer had to be *bona fide* and approved by the M.T.A. This gave some protection to those "who would otherwise have to meet much more competition than they now do from grocers, confectioners, tea rooms etc., which have nothing to do with the motor trade, but which could make a profitable side line of a gasoline pump on the street" [Brunner, 1930, p. 40]. The relationship among the M.A.A., M.T.A. and the Combine apparently was harmonious in the 1920s; the M.A.A. stated that: "The Gasoline Companies have most loyally supported us in our [price maintenance] efforts and their adherence to, and recognition of, our Stop List is one of our greatest advantages" [*The Garage and Motor Agent*, September 25, 1926, p. 926]. This co-operation between the Combine and the M.T.A. was very effective [Brunner, 1930, p. 41].

Changes in Market Structure

A gasoline price increase in 1920, which caused considerable protest, including a London taxi strike, led to a Government investigation. The resulting report was critical of the "excessive" prices, and the "understandings" among the principle oil companies, and advocated maximum and minimum retail prices set under the Profiteering Act of 1919 [*The Report on Motor Fuel*, 1920], but the Board of Trade took no action. Despite the apparently restrictive market structure, prices fell to very low levels in the late 1920s, apparently to

discourage new entrants. One contemporary observer commented: "The three groups have, it is true, an 'understanding' as to prices in the English market, but it is of a very loose character and it can hardly be said to interfere materially with economic laws" [Fitzgerald, 1927, p. 158].

Several new competitors entered the UK gasoline market in the 1920s. Two companies that became especially important were Russian Oil Products Ltd. (R.O.P.) and the Power Petroleum Company, both selling Russian oil. Other "Independents" included American companies, such as Cleveland (a subsidiary of the Standard Oil Company of Indiana), Dominion (a subsidiary of the Continental Oil Company), and the Texas Oil Company. One Independent, National Benzole, selling a "Mixture" of benzole and gasoline, cooperated with the Combine and did not disturb the market.

Rapid increases in demand more than offset the inroads of the Independents at first. However, in 1924 the Combine attempted to reduce the impact of the new entrants by introducing a system of price zones. Since price competition was most intense in and near London, where most imported products were discharged, the price was lowest in London and the Home Counties, and rose with the distance from London. However, the higher prices in the rest of England and Wales exceeded the differences in distribution cost. The trade press recognized the introduction of price zones as an attempt to limit the expansion of the Independents: "The large companies evidently view it as sound policy to keep down prices to their present level to the last moment. Meanwhile the newer concerns in the motor spirit trade are reported to be 'feeling a draught' in business" [*Petroleum Times*, March 7, 1925, p. 411].

The Combine also tried to strengthen its position by introducing a rebate to retailers who did not sell Independent products and by conducting a newspaper campaign against the importation of Russian oil products [*Garage and Motor Agent*, November 13, 1926, p. 58]. Although imports of Russian oil declined slightly in 1927, the retail price in London fell to 13.5 pence, compared with the highest recorded price of 55 pence in August 1920. A trade journal noted that 1927 "has been one of the worst years the petroleum industry has ever experienced" and "every branch of the petroleum industry is losing, it is only the consumer who benefits" [*Petroleum Times*, December 31, 1927, p. 1243]. But R.O.P. and Power continued to disrupt the market:

> During 1928 these two companies, and particularly the R.O.P., made considerable headway, especially after the gasoline tax of four pence a gallon, imposed in April 1928, had increased public interest in cheap gasoline. Both Power and R.O.P. were retailed at a lower price than the older brands and benefited accordingly. Competition became acute; meanwhile the price of gasoline rose in the world market, and it became unprofitable to sell it in Great Britain. Nobody, however, was willing to advance the price, in case the other companies failed to follow suit [Brunner, 1930, p. 24].

In 1928 the retail price in London and the Home Counties was reduced by one penny and by 1.5 pence in the rest of England. However, retail margins also were reduced; the wholesale price remained unchanged in London, and was reduced by only a half penny in the rest of England and Wales. This action was intended to discourage new independent sites: "At its recently prevailing level, the 'margin' was itself a temptation to outsiders to set up filling stations" [*Garage and Motor Agent*, April 7, 1928, p. 1008].

The Achnacarry Agreement

Price-cutting in the UK during the late 1920s stemmed in part from a controversy between Royal Dutch Shell and the Standard Oil Company of New York. In 1926 Shell stopped selling Russian products in India, and asked Standard to do the same. When Standard refused this request, Deterding, of Royal Dutch Shell, announced his intention to "fight to the last ditch" Standard's effort to market Russian oil in India. In September 1927 Shell reduced prices in India, and although Standard did not at first match all Shell reductions, a price war rapidly developed. In retaliation, Standard threatened to enter the gasoline and kerosene markets in the UK, but this threat was averted by an agreement between the companies [*Petroleum Times*, March 17, 1928, p. 487]. In 1928 the heads of the three largest international companies met to negotiate:

> While the whole of the daily press has been very silent regarding the conferences which have been taking place between Mr. Walter Teagle (Standard), Sir Henry W.A. Deterding (Royal Dutch Shell) and Sir John Cadman (Anglo-American) in connection with over-production of crude oil and other things, we are in a position to state that the decisions reached during the past few days have been of a most momentous character, ranking as important as anything which has yet happened in connection with the world's petroleum industry [*Petroleum Times*, September 15, 1928, p. 451].

The result of these negotiations was the Achnacarry Agreement of 1928. The three participants, who essentially controlled the world's oil reserves outside Russia and the United States, envisaged an agreement covering most exports of petroleum products. The U.S. was excluded from the agreement because of the U.S. anti-trust laws. To achieve their goal, these three companies had to restrict production and exports from the areas that they controlled, and limit competition from the U.S. and Russia. All three of these requirements soon were met.

The first requirement was met by seven principles stated in the Achnacarry Agreement: 1) Each company accepted its 1928 share of the market, and proportionate shares of future increases in consumption. 2) Existing facilities were made available to all producers. 3) New facilities were constructed only when necessary to meet increased demand. 4) Production in

any area maintained its existing advantages in meeting consumption in neighboring territories. 5) Supplies for any consuming area were drawn from the nearest producing area. 6) Surplus production was "shut in." 7) Non-price competition was discouraged [*The International Petroleum Cartel*, 1952, p. 200; *The Oil Trade*, 1947, p. 14]. The second requirement of the Achnacarry Agreement was met at the end of 1928 with the establishment of the American Oil Exporters' Association by the major U.S. oil companies. This association fixed the prices at which oil products were exported from the U.S. [*The Economist*, December 21, 1929, p. 1196]. The third requirement was met in 1929 with an agreement between the Soviet Government and the UK oil companies [*Oil and Gas Journal*, June 2, 1932, p. 20]. Since R.O.P. was then the fourth largest gasoline distributor in the UK, the agreement eliminated a serious "disturbance" in the market.

The Combine also secured the cooperation of the more "reputable" UK Independents: Cities Service, Sealand (selling Power and Dominion), Sinclair Union Petroleum Co., and United Oil Importers. These companies, referred to as the "Junior Combine," agreed to supply new sites only when approved by the M.T.A., and retailers selling Independent gasoline were allowed the same margin as Combine retailers. In return, the Combine agreed not to withhold its rebate from retailers who sold Independent brands. This rebate was substantial; in 1931 it was one-half the retail margin. Outside the agreement there were only a few small wholesalers, "for the most part genuinely 'Pirates,' content to skim the cream of the easy business, and to leave the less profitable to concerns whose object it is to render some public service in addition to taking profit" [Brunner, 1930, p. 41].

The various agreements seem to have been successful, for the price of gasoline rose in 1929. A trade journal noted that one of the things that made the increase possible was "the fairly recent agreement, under which several of the small companies entered into a reciprocal agreement with the Combine, plus some sort of a new agreement with R.O.P." [*Garage and Motor Agent*, March 9, 1929, p. 908]. This price increase brought forth a demand for an explanation by the Government; a Combine response explained that since the Soviet Union had supplied gasoline at less than the world price,

> The three Companies were compelled either to meet the situation, or to withdraw, partly or to a great extent, from the trade. In the nature of things this state of affairs could not continue indefinitely; but it was not until the end of February 1929 that arrangements were reached which terminated the "price war" that has existed in this country for almost two years [*Prices of Petroleum Products*, 1929, pp. 3-4].

Thus, by 1930 the Combine had succeeded in achieving all of the conditions necessary for the success of the Achnacarry Agreement. In the UK, these companies secured agreements not only with local competitors, but also with the Russian oil trust, fixing its market share, selling prices and the number of pump installations. In 1930 Deterding stated his belief that the world-wide

"oil war" was about at an end. When asked if his company would continue to compete with domestic companies in the U.S. he replied: "Competition is largely a matter of vanity don't you think" [*The Times*, April 10, 1930, p. 74]?

The UK gasoline market became even more concentrated in 1931; one Junior Combine member went out of business, and two were absorbed by Combine members. Also, Cities Service, the only Junior Combine survivor, ceased to operate as an Independent: "For some years, we, together with other independent companies, have consistently sold a high quality motor spirit...at a commercial price, which price has been considerably less than that charged by the older-established concerns... We have decided to take the lead in advancing our prices to a parity with those of the national companies' brands, in order to show our willingness to co-operate at this juncture" [*Petroleum Times*, October 17, 1931, p. 534].

Despite these mergers and "understandings," small distributors continued to challenge the Combine. Between 1929 and 1931 the Combine's market share fell from 85.7% to 80.9%; imports of Russian oil reached a peak in 1931, and R.O.P.'s market share rose to 5.3%. Standard of Indiana entered the UK market, selling at very low prices, but the Combine quickly solved this problem. In 1932 the new entrant was purchased by Anglo-American, and its gasoline was included in the Combine's exclusive buying rebate scheme. Gasoline prices were then increased. Prices fell the following spring to limit independent sales; a trade journal remarked that this was not due to a fall in world prices, and "There are, therefore, other reasons for the price reduction. These, in our opinion may be summed up in Shakespeare's well known words, 'the weakest goes to the wall'" [*Petroleum Times*, May 20, 1933, p. 513].

Price competition was especially severe both because the prices of the Independents were below those of the Combine, and because the price differential varied considerably since the Independents might or might not follow Combine price increases [*Petroleum Times*, October 26, 1935, p. 439]. This problem was solved in 1934 when some of the Independents reached a new agreement with the Combine that removed "a long-standing evil in the trade, that of the buyer's practice of playing off one company against another so as to get a cut-price quotation" [*Petroleum Times*, October 26, 1935, p. 439]. This agreement apparently was successful, for in December 1935 it was noted that "Distribution and price structure have remained free from any internal disturbances" during the year [*Petroleum Times*, December 21, 1935, p. 666]. In 1938 the Independents extended their agreement with the Combine by agreeing to a standard price to retailers and commercial consumers. By July 1938, this scheme was reported to be operating with good success in London and the Home Counties.

By 1938 the British market was well organized. The three largest companies controlled 80% of gasoline sales, and the Independents were securely tied to Combine policies. One indication of the lack of price competition was the abandonment of the price zone system that had been established to limit the expansion of the Independents. In 1938 all of England and Wales, and most of Scotland, was included in a single zone: "The 'National' companies

have thus been compelled to rely on meeting competition by a rigid attention to the reduction of distribution costs" [*Third World Power Conference*, 1938, p. 136].

Gasoline Distribution in the United States

U.S. oil companies expanded existing kerosene depots early in the century to handle the emerging demand for gasoline, and independent wholesalers arose to distribute the product of both established firms and many new entrants. Competition was significant in the U.S., even before the 1911 Court decision dismantling the Standard Oil Trust: "In the thirteen years preceding 1911, Standard Oil had had its lead cut materially. In a market characterized by a dwindling demand for kerosene and a rapidly expanding one for gasoline and industrial fuel oil, the changes were too quickly effected for the combination to keep pace with the industry" [Hidy and Hidy, 1935, p. 477]. By 1911 independents held over one third of the domestic gasoline market.

Initially, retail outlets were supplied from depots by tanks mounted on horse-drawn wagons, but these were quickly replaced by motor trucks. Gasoline was stored at retail sites in barrels or tanks and poured from open containers into customers' motor cars. This form of retail distribution was both cumbersome and dangerous. Hand-operated gasoline pumps began to appear in 1905 and by the end of the War curbside gasoline pumps were common.

After the War rapid increases in domestic crude oil production from newly opened oil fields in the Southwest and California led to vigorous competition. The heavy reliance of the existing distribution system on retailers who carried gasoline as a sideline limited the ability of oil companies to expand their sales. Some areas lacked suitable retail sites, retailers provided very little service because their primary interest was in other products, and retail prices often were very high. Some companies began building specialized retail outlets with gasoline pumps and underground tanks in 1910, but it was not until the 1920s that drive-in filling station became a major form of distribution. This action stemmed in part from the rapid expansion of retail gasoline sales. Cars being served, or waiting to be served, at the ubiquitous curbside pump caused traffic jams in many cities. The political response to this nuisance was widespread limitation or prohibition of such pumps. To maintain sales, oil companies found it necessary to acquire sites and build drive-in stations, and these stations were operated by salaried employees of the respective oil companies. By 1922, company-owned sites accounted for nearly one fifth of total gasoline sales [*High Cost of Gasoline*, 1923, p. 79].

Oil companies also competed vigorously for the business of independent retailers and wholesalers. Until the early 1920s independent wholesalers generally purchased gasoline in spot markets from independent oil companies, or from major oil companies that could not sell their entire production through their own retail sites. This gasoline then was sold under the wholesaler's or retailer's brand name. By the mid 1920s wholesalers began to sell gasoline under the brand name of the major companies from which the product was purchased. Gradually, independent wholesalers acquired retail sites, either by

purchase or lease, which they operated directly or sub-leased to retailers. By the end of the decade the basic structure of the U.S. gasoline distribution system had emerged. Retail sites might be owned by oil companies, by wholesalers selling branded products, or by wholesalers selling unbranded products, and these sites might be operated by their owners or leased to individual dealers. Moreover, many individual dealers owned their own sites, which might be supplied directly by oil companies, by branded wholesalers, or by unbranded wholesalers. Thus there was competition among various types of retail sites as well as among various distribution channels.

Exclusive Dealing in the United States

Some independent retailers in the United States sold several brands of gasoline. These "split" stations were unsatisfactory for the oil companies; limited storage led to high costs, retailers easily switched among suppliers, and prices could not be controlled. Consequently, oil companies began to loan or rent equipment to independent retailers to be used exclusively for its products. The Federal Trade Commission considered these agreements anti-competitive, but the Supreme Court held that the practice was lawful [*Federal Trade Commission v. Sinclair Refining Company*, n.d.].

Offerings to retailers continued to increase; as one company installed equipment, another would offer still greater inducements for the retailer to switch allegiance. As equipment loaning became no more than an accepted practice, its effect in maintaining exclusive retail sites was lost. Thus, new techniques of securing exclusive sites were developed, tying a retailer's entire property, rather than merely the dispensing equipment. One technique was to assist an independent retailer to construct a station by taking a note or mortgage on the station. Such a financial arrangement guaranteed the company a site for its product and such agreements were considered "airtight" [*National Petroleum News*, March 30, 1921, p. 41].

Standard of Indiana offered retailers who owned pumps and storage tanks a "Commission Agency Agreement" specifying that the equipment be used only for the sale of Standard's products and that the company would establish retail prices. A similar effect was achieved by a "Pump and Property Lease," under which the company leased a retailer's dispensing equipment, and the land on which it stood [Giddens, 1955, p. 307]. This "lease-and-agency" scheme was widely used, particularly in the eastern United States [Temporary National Economic Committee, 1939, p. 8681]. The Texas Company introduced a "lease-and-license" plan in 1927; a station was leased from a retailer who operated it under a license from the Company. A separate sales agreement stated the terms and conditions under which products were furnished [*Prices, Profits and Competition*, 1927, p. 256]. The Sun Oil Company's contracts with retailers, at sites owned or controlled by the company, provided for the exclusive sales of Sun products. The Company also entered into exclusive arrangements with retailers who owned their own sites; the retailer would lease the station to Sun, and the Company would then lease it back to

the operator. These arrangements "were utilized by Sun and its competitors solely for the purpose of controlling the outlets involved and preventing their being acquired by competition " [*U.S. v. Sun Oil Company*, n.d., p. 46].

Few of the lease-and-agency types of contract were true agency agreements, for outright sales of gasoline to retailers was the general rule. However, the right of the supplying company to establish the retail price was part of many of these contracts. [*Distribution Methods and Costs,* Part IV, p. 64] The concurrent lease arrangement, which gave the company control of the site for several years, provided continuity to the remaining portions of the contract. Thus, the oil company obtained the pricing advantages of vertical integration without the capital expense of station construction, or the salary and other expenses of station operation.

One company, Standard Oil Company (New Jersey), an exception to the general trend towards company-operated stations and exclusive retailers, suffered serious losses in market share, especially from the Texas Company's lease-and-license agreements. In 1924 Standard began to rapidly increase the number of company-owned and operated stations "as an antidote for the lease-and-license program of competition" [Gibb and Knowlton, 1956, p. 489]. Nevertheless, losses in market share continued, and in 1926 a so-called Commission Retail Plan was developed; an agent, appointed to operate the company's station, sold all products at prices designated by the Company.

Changes in U.S. Market Structure

In the U.S. the gasoline price structure was based on the retail price at stations operated by the dominant company in each region. During the late 1920s, however, this retail price became little more than a guide for discounts by independent retailers. Moreover, various premiums, such as glassware, china, silverware, razor blades and oddments, and trading stamps were employed. Some oil companies also sold gasoline through wholesalers, referred to as "left hand" or "second story" wholesalers, who received a greater margin than was customary. With this extra margin these wholesalers reduced prices to retailers, who then "raided" other retailer and commercial accounts. From 1925 through 1928 price cutting became severe in many areas, and was intensified during the depression years, especially 1932 and 1933, when gasoline demand declined.

Price cutting was accentuated by the over-extension of retail sites, which increased by 62% from 1919 to 1935, while domestic gasoline demand increased by 14%. Much of the over-extension, especially from 1926 to 1935, resulted from oil company efforts to gain and hold market share as large supplies of crude oil came into the market [McLean and Haigh, 1954, p. 268]. Companies trying to expand their business constructed new stations because ownership or control of retail sites by various contracts and understandings had narrowed the open market available for wholesale gasoline [American Institute of Mining, 1930, p. 423]. The President of the Standard Oil Company of Ohio stated that the momentum of the expansion in the 1920s had carried new

investment funds into the construction of stations throughout the late 1920s and early 1930s, when much construction was redundant [Temporary National Economic Committee, 1939, p. 8679]. A new type of retail outlet also stimulated price cutting. At "trackside" stations, located at points where railroads intersected major highways, gasoline was pumped from railroad tank cars directly into the customer's automobile. Trackside stations sold at very low prices not only because demurrage paid on the tank car was substantially less than the expense of installing pumps and storage tanks, but also because the purchase of tank car quantities brought large discounts from suppliers.

The combined effects of the Depression and intensified competition at all levels of the oil industry resulted in especially severe price cutting, which soon became the dominant feature of the U.S. gasoline market. Average retail gasoline prices, excluding taxes, fell from 14.6 cents in 1929 to 9.4 cents in 1933.

The Beginning of Dis-Integration

Company-operated stations could not engage in price competition with independent dealers. A price reduction at company-operated stations would reduce the price paid by independents, who purchased gasoline at a specific discount from retail prices established at company-operated stations. And no company could reduce the margin offered to independent retailers for fear of losing business to competitors. Moreover, setting competitive retail prices was complicated by the U.S. legal environment. Some oil companies felt that price reductions in part of a state, while higher prices were maintained elsewhere, would be unlawful. On the other hand, companies did not wish to suffer losses throughout a state to meet competition in local areas. Also, at a time when company-operated stations were under pressure to reduce costs to offset lower sales volumes and lower prices, new costs were imposed. Wage and Hour Laws, Federal and State Social Security Legislation, the Workmen's Compensation Laws, and the growth of union activity all tended to make the company-operation of stations more costly than operation by a private individual.

Three oil companies in California abandoned company operation and leased approximately 400 stations to independent operators in 1926; by the following year one of these companies was marketing largely through stations leased to dealers. This new policy proved successful:

> It has been found that the leased stations are being operated at a lower cost than when run by the large company. The original idea of the company-owned and operated station was to guarantee sale of the company's products, exclusively. The leasing method attains the same end, and the company is relieved of a large expense [*National Petroleum News*, May 4, 1927, p. 95].

Station leasing in California apparently brought a re-examination of existing policy by others; several oil companies experimented with lease operations in the late 1920s and early 1930s [*National Petroleum News*, July 4, 1927, p. 19].

The National Recovery Act of 1933 led to a new competitive disadvantage for company-operated station. Many independent retailers violated N.R.A. provisions controlling retail prices, taking business from company-operated stations [Learned and Ellsworth, 1959, p. 24]. J.H. Pew, President of the Sun Oil Company, placed great stress on this point: "This was the real reason for the demoralization that took place in marketing in the retail department of the industry in the section where we do business" [Temporary Economic Committee, 1939, Part XV, p. 7214]. Although the N.R.A. provisions remained in effect only until 1935, their impact remained in many market areas [Mimeographed Testimony, n.d., p. 5052]. A further impact of the N.R.A. was the loss of commercial sales at company-operated stations. Previously, commercial customers purchased gasoline from company-operated stations at discounts from established retail prices. These discounts were prohibited by the N.R.A., so commercial customers either purchased from independent stations that offered "under the canopy" discounts, or installed storage facilities and purchased gasoline at wholesale prices [McLean and Hague, 1954, p. 292]. Pew contended that the effects of the N.R.A. were the real reasons that Sun disposed of its company-operated stations. Profits from company-operated station were 10 to 15%, even during 1933 when other companies were dispensing with station operation. However, by 1934 profits were very low, and heavy losses occurred in 1935. Sun ceased direct retail operation in 1936 [Temporary National Economic Committee, 1939, Part XII, p. 7214].

The Influence of Chain Store Taxes

In many lines of business the number of retail sites belonging to chains increased rapidly during the 1920s. The public became concerned about the impact of this new form of retailing on traditional retailers, and the Depression intensified the feeling against chains. Legislation to curb chain growth included prohibitive taxation. Indiana, the first state to impose a chain store tax that included filling stations, based tax liability upon "control" rather than ownership of retail sites [Mimeographed Testimony, n.d., p. 4908]. Both the lease-and-agency and the lease-and-license plans subjected oil companies to chain store taxes, on the ground that the companies in effect operated and controlled these stations [*Gulf Refining Company v. Fox*, 1935]. When the Indiana tax was increased to $150 per station in 1934, Indiana Standard abandoned 800 low volume stations that had operated under agency agreements. The most punitive tax, imposed by Iowa in 1935, called for graduated amounts rising, according to the number of retail sites, to $155 per site, plus a 10% tax on gross receipts of $1,000,000 or more. Thus, most oil companies withdrew from direct retail distribution in Iowa and leased company-owned stations. This policy soon proved to be profitable and was extended to other states. Indiana Standard announced that the result of station had been "surprising:"

> The results (of leasing in Iowa) have been rather surprising. While it has been impossible to maintain uniformity of free

> service, and there has probably been some decline in the employment provided in the stations, the company's sales have not suffered. On the contrary, the quantities of products distributed to the same stations have measurably increased. On the basis of this experience, it has been decided to place the operation of company-owned stations as largely as possible in the hands of independent dealers [*National Petroleum News*, April 2, 1936, p. 18].

In 1934 Standard of Indiana operated four or five thousand stations; in 1937 no sales were made through company-operated stations [*Petroleum Investigation*, 1934, p. 485].

The enactment, or threatened passage, of chain store taxes in other states, and the apparent success of station leasing, caused the lessee plan to be extended rapidly throughout the nation. By the end of 1936 most company-operated stations in the mid-continent and the Atlantic Coast had been leased to retailers [*National Petroleum News*, July 1, 1936, p. 18]. In 1936 Sun Oil Company leases were redrawn to eliminate provisions preventing dealers from handling competitive products, and the use of lease and re-lease arrangements as control devices was abandoned [*Brief of Sun Oil Company*, n.d., pp. 51-57]. Although some companies, such as Standard of New York and Standard of New Jersey, continued to lease stations to so-called "commission agents" during the late 1930s, these "agents" were not required to charge prices specified by these companies [*National Petroleum News*, July 28, 1936, p. 16].

Price Cutting in the 1930s

Thus during the 1930s oil companies lost the control that they had exercised over retail sales and prices. First, company-owned stations were now generally operated by independent dealers, rather than salaried employees, and leasing agreements lacked control provisions. Second, and of greater importance, was the disappearance of the lease-and-agency, and similar techniques, which meant the loss of contractual control of independently owned stations. Oil companies now relied upon wholesale price adjustments and sales efforts to influence retail prices,

In the late 1930s price cutting continued to be a serious problem in many areas. Considerable secret discounting and open price reductions let to retaliatory price cutting that brought open price warfare. Sun Oil's President described the effect of the loss of control by the oil companies:

> The results have been disastrous; particularly disastrous to the independent service station operators. So long as the company stations were operating, it was customary to publish as regular market news the prices at which gasoline was being sold by refiners to retailers, and also the price at which retailers were selling to consumers... When the refiners quit retailing, their quotations of service station prices could no longer be published because they were making no such quotations. The element of

> leadership and balance that they had afforded was withdrawn. Every filling station operator was an independent fixing his own selling price and therefore his margin; suspicious of his competitors, and inclined to fight to protect his gallonage. Thus retail margins became uncertain, price wars common, and dealer margins reduced [Temporary National Economic Committee, 1939, Part XV, p. 7193].

As retail price cutting continued, the oil companies became directly involved. First, as retailers lost revenue because of price cutting, many were unable to pay the amounts required by their leases, so oil companies reduced, and sometimes "forgave" rental payments. If retailers leased stations from third parties, oil companies sometimes interceded to have payments reduced. When these attempts were unsuccessful, companies often made rental payments for dealers rather than lose retail sites. Eventually some companies reduced wholesale prices to prevent retailers from going out of business. This "protection" of retailers became especially common along the Atlantic coast [Mimeographed Testimony, n.d., p. 4660].

Resale Price Maintenance

Many local retailer associations were organized expressly to stabilize retail prices, often turning to state legislation for assistance. In Michigan and Pennsylvania, for example, retailers supported legislation prohibiting sales below cost, but these laws had no significant effect on price cutting, partly because of the difficult of defining "cost." However, a partial solution to retail price cutting was provided by state legislation permitting manufacturers of trademarked goods to control the prices of their products at remote stages of distribution channels. California was the first state to enact a so-called "Fair Trade" statute in 1931. An amendment in 1933 contained a "nonsigner's clause" providing that a resale price specified in a contract between a manufacturer and one reseller in a state bound all members of the relevant trade in that state, once they had been properly notified. Nearly all of the states in the U.S. rapidly adopted similar legislation.

"Fair Trade" was especially successful in New Jersey, where Standard Oil of New Jersey was the first to invoke the legislation. Other companies immediately followed Standard's action, and retail price cutting ceased almost at once [*National Petroleum News*, May 25, 1938, p. 17; *National Petroleum News*, June 8, 1938, p. 5]. Retail price cutting became so unusual that by the end of World War II the use of price as a competitive tool was almost completely forgotten by both oil company personnel and retailers in New Jersey. However, "Fair Trade" was not a panacea because increasing market share was more important to most oil companies than price stability. For example, several companies in California introduced "Fair Trade" contracts [*National Petroleum News*, June 23, 1937, p. 30; *National Petroleum News*, July 27, 1938, p. 18], and the Retail Petroleum Dealers Association initiated efforts to enforce price maintenance.

However, active enforcement of resale price maintenance by the oil companies was uncommon: "If any company would take action against a price cutting dealer, he would lose the account to an independent supplier not specifying a retail price" [*National Petroleum News*, June 1, 1938, p. 18].

The difficulty of maintaining prices with lessee dealers focused the attention of oil companies on the large numbers of company-operated stations that Standard Oil of California had maintained contrary to industry practice. Some industry executives had second thoughts about leasing stations, and anti-chain legislation had run its course by 1939, when only four states had taxes that applied to filling stations. The first movement away from lessee operation came in 1938 when some oil companies on the Pacific Coast resumed operation of high volume stations in metropolitan areas [*National Petroleum News*, June 22, 1938, p. 28; *National Petroleum News*, June 28, 1939, p. 25]. By 1939, it was reported that "Many stations already have quietly returned to company management" [*Business Week*, August 12, 1939, p. 27].

Conclusion

The major difference between the UK and U.S. distribution systems lies in the fluidity of the latter that enabled the oil companies to adjust to changing political and economic environments. The need for adjustment arose in part from U.S. antitrust legislation that prevented the type of anticompetitive agreements that were common in the UK An important result of competition is innovation, which in the U.S. led to new methods of distribution. These new methods of distribution in turn offered a wide scope for "intertype" competition, that is competition among different methods of distribution. [Palamountain, 1955, p. 38]. In the U.S., competition arose among individual oil companies, among individual retailers of many different types, among different types of distributive intermediaries, and among different types of distribution channels.

The early development of bulk distribution and drive-in filling stations in the United States, together with the struggle for market share, led to vertical integration into retailing and exclusive arrangements with retailers. The large number of retail sites owned and operated by oil companies provided a power base in the retail market, but competitive pressures often prevented the exercise of this power. The interdependence of independent exclusive sites and the oil companies was strong. A company committed financial resources to achieve exclusive sites, and sales at that site represented the return to this commitment. Strong interdependence between oil companies and exclusive sites meant that price competition initiated by retailers often led to price competition among suppliers.

Intra-brand retail competition was encouraged by the very nature of the distributive structure. The gross margins of retailers selling a particular brand differed according to the distribution channel, and the cost structures of filling stations differed according to the type of station. Inter-brand retail competition also was encouraged because retailers selling any one brand also were in

competition with all types of retailers selling other brands who obtained gasoline from various types of suppliers at different gross margins.

In contrast to the changing distributive structure in the United States, the main characteristics of the UK distribution structure remained essentially unchanged until after World War II. Oil companies sold to independent multi-brand retailers. Retail price competition was prevented by the actions of the M.T.A, which operated the most elaborate system of enforcing resale price maintenance in the UK [Pickering, 1966, p. 17]. Periodic price cutting occurred among oil companies in response to new entry but competition often was limited by collusive agreements that were virtually unhindered by the legal system. Thus the prices paid by motorists were determined by the oil companies. The retailer association and the oil company Combine had a common interest in avoiding retail price competition. Limited competition, in turn, limited innovation so those trade customs that developed early in the century were continually reinforced.

Events during the Depression of the 1930s highlight the differences between the UK and U.S. distribution systems. Efforts to control the UK market were intensified and ultimately were very successful because the prices established by the oil companies were not disturbed by retail price competition. In the United States, where retail price competition could cause price competition among the oil companies, economic and political forces led to significant changes in the distributive structure that limited retail price control. Even when resale price maintenance became lawful in many states competition among the oil companies and the complex distribution system made enforcement difficult. In brief, in the U.S., retail price competition was inherent in the distribution system and the oil companies often were drawn into price competition because of their investment in retailing. The inherent contradiction was that vertical integration, originally undertaken to gain control of retail sales, ultimately increased price competition by increasing the power of retailers whose objectives were not congruent with oil company objectives. In contrast, in the UK retail power was exercised by retail trade associations whose objective of limiting competition was identical to that of the oil companies.

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