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THE ARAB OIL BOYCOTT: A BLESSING IN DISGUISE?

The Arab oil boycott has done the United States a useful service in raising questions that were inevitable and that could only have become insoluble. For a variety of geological and economic reasons the United States' general addiction to energy was rapidly becoming a particular addiction on oil supply from the Arab Middle East and North Africa. The vulnerability of our economy to shut-downs in that unreliable supply is enough to set even the most dedicated believer in free-trade to pondering. Indeed, oil cut-offs could cause, deliberately or through miscalculation, world-wide depression.

We envisage, in due course, an end to the Arab embargo. But in our interests, and perhaps in the interests of the already too vulnerable industrialized world, America should not become more dependent on foreign oil; we should instead move toward a greater degree of self-sufficiency.

The development of the new energy sources that will make this possible is, in any case, an obligation which this richest country owes the world; they will be needed around the world in due course.

We mean by self-sufficiency freedom from dependence on unreliable sources. This could take various forms. It could mean keeping our imports of oil at the lowest possible percentage of oil use through an import quota. Alternatively reliance might be placed upon a tariff financing a system of storage facilities and/or standby reserve capacity in the ground, including pipelines or wells. This capacity for self-reliance is necessary to induce the enormous capital

construction costs associated with producing high cost, and/or synthetic, oil. These new industries need the assurance that they will not eventually be under-sold by the Arabs in a gigantic price war.

Furthermore, in general, buyers of scarce resources should encourage sellers to be reliable sources of supply. Thus whatever quotas or tariffs may come into being should give preference to those with a record of reliable supply. For our part, we should be prepared to have a similar rule applied against ourselves with regard to the sale of scarce wheat or soybeans.

Although we support this measure of protection against outside sources of supply, the time to end the many subsidies throughout the domestic energy industry has come. The price of energy should rise to reflect the true costs. The entire population is unknowingly paying through its taxes for a policy of unwarrantedly cheap energy.

We depend upon the price system to make our entire economy work—to signal individual consumers and industrial users that which should be used sparingly and that which can be used freely; to signal energy industry decision-makers when to explore and what to develop; and so on. We simply cannot afford to get into those contortions that have so confounded controlled economies. —Continued on Page 2

Approved by the Federation Executive Committee, the above statement was prepared or reviewed by: Allen V. Kneese, James MacKenzie, Laurence I. Moss, Philip Morrison.

OIL EMPIRE: EXPANSION—AND DECAY?

Oil is the world's biggest industry, and America is the biggest participant in that industry. The United States produces about 12 million barrels of oil per day, more than any other country. But it consumes about 17 million barrels of oil per day and, increasingly, has become a major importer.

Production of oil outside the United States is also dominated by American companies. Of the seven "international majors" which produce 80% of all oil outside North America and the communist world, five are dominated by Americans and headquartered here: Standard Oil of New Jersey (Humble); Standard Oil of New York (Mobiloil); Standard Oil of California (Chevron); Gulf Oil; and Texaco. The non-American companies are Royal

Dutch/Shell and British Petroleum.

As is the case with the export of wheat, the export of oil involves only a handful of surplus states. Also, sales are made largely to the industrialized world, a world possessing both the necessary demand and the necessary foreign exchange. The exporters, in 1970, produced the following quantities in million barrels per day:

Production of Leading Producing Countries

Venezuela	3.8	Kuwait	3.0	Nigeria	1.1
Saudi Arabia	3.8	Iraq	1.6	Algeria	1.0
Iran	3.8	United Arab		Indonesia	.9
Libya	3.3	Emirates	1.3	Qatar	.4

—See OIL EMPIRE, Page 3

ARAB OIL BOYCOTT—Continued from Page 1

Specifically, we should end letting the oil companies, in an "oil-depletion" allowance, subtract from their tax-return much more than they invested in the well itself; and letting the oil producers subtract as immediate expenses (and without capitalization) the famous "intangible drilling costs". When the price of crude oil is high around the world, these incentives to exploration are not necessary. The oil companies are now making very high profits. Why subsidize low prices for energy when we want to conserve its use?

A further most important subsidy now deserves review. This is the foreign tax credit which permits the oil companies to subtract from their U.S. taxes each dollar paid to the oil producing states. The Secretary of State recently proposed joint consultations on energy among the consuming nations. Early among these consultations should be consideration of this and related provisions in consuming country tax codes. Why should the consuming nations permit the producing nations to collect consuming nation taxes while, simultaneously, pushing prices as high as the consumer market can bear? Collecting and keeping our own taxes will cost us nothing in such a context while providing us with the tax.

Needless to say, the rise in energy prices will hurt everyone's budget. And in absolute terms, it will certainly be another drain on the budgets of the underprivileged. But we think the time has come to make a direct attack on the problems of poverty rather than to let it be approached inadequately and tangentially with methods that simultaneously distort the economic machinery, in myriad important ways, to no one's advantage.

If taxes are to be placed upon energy use to bring supply and demand into better balance or to slow consumption, then these might be earmarked for income redistribution. And if the taxes were based on energy content (BTU's) they might avoid distorting the balance of fuel prices.

While we believe that consumers should pay, as directly as possible, the full costs of the energy they consume, there is nevertheless room for Government activity in two important regards.

First, Government financing of research and development activities ought to be encouraged—for greater exploitation of the 70% of oil that normally stays in the ground as well as for new sources of fuel. These expenditures are too important to be left to a schedule determined by private investment with its emphasis on private and short-term—rather than public and long-term—rate of return. And the private economic incentive to develop new energy sources is further undermined by the difficulty of maintaining monopoly control of new processes.

Second, methods of protecting our economy against uneven surges of foreign oil availability are a Gov-

ernment responsibility. Thus Government financing of storage facilities or oil reserves is appropriate and might also be paid for out of import quota allotments or energy taxes.

Finally, we believe that the importance of the oil industry to the national well-being, and the degree to which it has been subsidized thus far, fully justify a public insistence on more information about its activities. Should the Government itself have to depend upon unverifiable oil company figures on potential reserves? These companies, separately and together, often have reasons for distorting the figures. Indeed, as multinationals, they have interests that go beyond those of our Nation! And in connection with the preparation of this report, it has been only too evident how little information is available on the impact of the U.S. subsidy on oil company profits. One need not argue for nationalization of the industry to argue for much fuller disclosure. Oil is too important and too integrated to be treated as totally private enterprise. □

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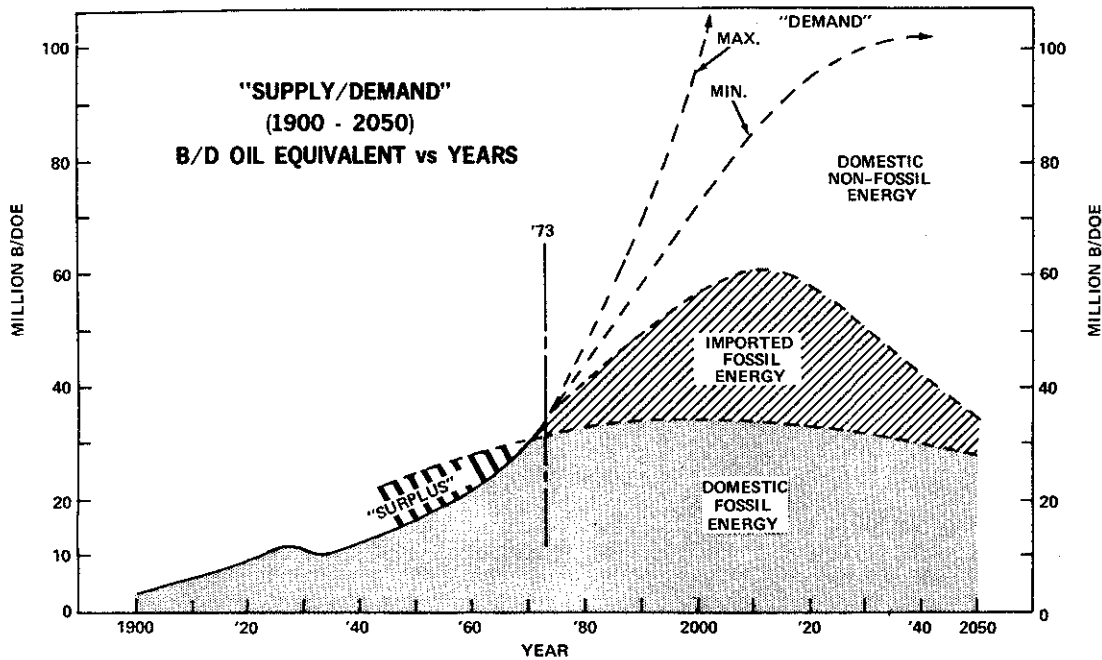
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OIL EMPIRE, from Page 1

U.S. imports in the 2nd quarter of 1973 reflected the fact that Arab oil goes mainly to Japan and Western Europe:

U.S. Imports (Millions of Barrels per Day)

Canada	1.4	Other	West Africa	.5
Venezuela	.9	Caribbean	Iran	.2
North Africa & Mideast	.9	Other Western Hemis.	Indonesia	.2
			Europe	.2

Forty Years of Rising Arab Claims And Rising American Influence

American companies were already secretly haggling with the British and French in the late twenties over spheres of influence in Iraq. By the early thirties, they had beaten out the British for a concession in Saudi Arabia (now run by Aramco). Competition among oil companies was limited however by their common interest in exploiting the oil. In 1932 a hard-bargaining sheik in Kuwait discovered that an American Company (GULF) and a British Company (Anglo-Persian) quickly tired of bidding against each other. They formed a joint operation and beat his price down below that which Saudi Arabia had just received.

By the late forties, oil companies were making large profits and concessions were selling for much more than before. The Saudi Arabians, whose capacity for luxurious waste perennially outran growing royalties, saw both need and justification for demanding a new contract. Aramco told the Saudis how much it was paying in income taxes to the United States Government and apparently arranged to have a U.S. treasury official pass through and explain how these taxes could be diverted to Saudi Arabia. It need only stop asking for "royalties per barrel" and pass a taxation scheme. The companies could then subtract the payments made to the producing companies, not just as business expenses but as dollar-for-dollar tax credits. The idea spread to other producing countries.

The oil companies and Arabs generally agreed to a 50-50 split in profits. Since the corporations pay 48% of their profits to the U.S. Government, the 50% paid to the Arab states covers their tax liability requiring, on this count alone, no further payments. In fact, however, the oil companies can use percentage depletion allowances to lower still further the amount owed the U.S. Government, thus emerging with a net tax credit. [See box, an example adapted from *Competition LTD.: The Marketing of Gasoline*, by Fred C. Allvine and James M. Patterson, Indiana University Press. It shows that the 50-50 split is enormously preferable to a simple increase in royalty by oil companies.]

The tax code permits the oil companies with these tax credits to use them to offset taxes owed on profits made anywhere else (at home or abroad) so long as these profits arise from foreign oil—its transportation, refining, marketing or whatever. Almost one half of all the foreign tax credits claimed by corporations subject to U.S. taxation arise from international oil companies.

The net result was that the five international major oil companies paid only 4.7% in taxes on their profits during the years 1962-68. The twenty largest integrated companies paid at a rate of only 7.7%.

Arab Solidarity Mobilized by Events

While 1950 provided the notion of "taxation", 1960 produced an Arab cartel. Taxation had required that the Arab countries be paid according to profits and this, in turn, required that they know what those profits were. Rather than open up company books, the oil companies offered to "post" a price at which they would promise to sell their crude oil to all comers, from which expenses could be subtracted, and to which taxes could then be applied.

In 1960, the companies had the temerity to cut the posted price by 14¢ a barrel. The resultant Arab outcry produced the Arab cartel—OPEC, Organization of Petro-

leum Exporting Countries. It now consists of Saudi Arabia, the Persian Gulf states, Iraq, Iran, Kuwait, Algeria, Nigeria, Indonesia, Venezuela and Libya.

Finally, the Arab-Israeli war of 1973 produced an Arab boycott. This had been attempted in 1967 during the six-day war. The Arabs had seized the oil wells and declared a boycott of imperialists but it failed simply because the Arab states did not have the financial resources to stop from selling their oil—and the non-Arab states stepped in. Not so today.

In the last three years, the posted price for oil has risen in the Persian Gulf from \$1.80 to the December 23, 1973 announcement of \$11.65 a barrel. Market prices, generally about two-thirds of the somewhat artificial posted prices, are expected to be \$8 or \$9 a barrel.

The ministers of oil producing states plan to meet on January 7 to discuss "long-term pricing policy". The Shah of Iran suggested that the price of alternative sources of fuel should be the basis for pricing oil—the "minimum that you would have to pay to get shale, for example or the liquefaction of coal". Indeed these newest prices would seem to do just that, to undercut other sources while providing maximum return. It is precisely such a policy of Arab pricing which the statement on page 1 anticipated and addresses.

Where Do We Stand?

On page 3, we show a chart that sums up the problem—at least in one projection. It shows a rise in potential demand for imported energy that rises rapidly for the next forty years. It shows an even more rapid growing gap between maximum demand for energy (low cost used wastefully) and more disciplined demand. And it reflects the fact that nuclear energy will not really come into its own as a rapidly rising and substantial percentage of energy use until 2010.

In short, the transition from the era of fossil fuels to the era of nuclear power seems likely to be fraught with birth pains and some hazards for our economy. Without imports or synthetic fuels, U.S. petroleum reserves will last for a few tens of years only. Our own oil, even at best, would be running out just when nuclear power was really getting started. Our natural gas is likely to be depleted in the next fifteen to twenty-five years. Only the coal is in large supply, but preparing to turn it into gas or liquid form in large quantities could take decades.

The energy problem has always been characterized by ever changing trade-offs between forms of energy, their costs of production, and changing needs. Today it has become, if anything, considerably more complex. There is serious doubt that Government regulation and control can act with sufficient speed and foresight to maintain a coherent energy policy based on ever changing tax legislation and regulatory decisions. Not much more than a decade ago, Government regulation was encouraging the use of gas and forcing inappropriately low prices. This has wasted a good deal of natural gas that can not be recaptured and has forced awkward transitions from the use of gas to other sources.

Oil legislation has been no less distorting. Permitting

DIFFERENCE IN PROFIT-SHARING ARRANGEMENTS AND ROYALTY PAYMENTS* TO THE DOMESTICALLY BASED INTERNATIONAL OIL COMPANIES

	Before 1948	50-50 Profit Split	Increase in Royalty
Price per barrel of oil	\$1.60	\$1.60	\$1.60
Operating costs	\$.20	\$.20	\$.20
12.5% royalty	.20	.20	.20
Additional royalty	—	—	.60
Total costs	— .40	— .40	— 1.00
Net income before tax	\$1.20	\$1.20	\$.60
*Depletion (27.5%)	.44	.44	.30 ¹
Income after depletion	\$.76	\$.76	\$.30
U.S. tax (50%)	.38	—	.15
Foreign tax (profit sharing)	—	.60	—
Net profit after tax	\$.38	\$.16	\$.15
Cash earnings:			
Depletion	\$.44	\$.44	\$.30
Earnings after tax	.38	.16	.15
Subtotal	.82	.60	.45
Applied residual foreign tax credit ²	—	.22	—
Total	\$.82	\$.82	\$.45

1. Cannot claim full 27.5% depletion allowance because of 50 percent of net income limitation.

2. Sixty cents foreign tax, less \$.38 offset against U.S. tax liability on oil, leaves a \$.22 excess tax credit to be applied against other U.S. tax liabilities of companies from foreign operations.

* Depletion allowance is now 22% only.

the oil companies to deduct 22.5% of profits as expenses in an oil depletion allowance has encouraged them to shift their profits from marketing and refining upstream to production of crude oil. This is because they can subtract 22¢ from each dollar of additional profit on crude oil before paying 48% tax on the remainder. Thus they pay effectively only 37¢ on this dollar of profit. By contrast, if the price of crude oil were shaved a dollar, so that this profit were transferred to the books of a refinery, 48¢ would have had to be paid on it.

This same depletion allowance was justified to encourage domestic exploration so as to protect us from dependence upon foreign countries.

But backed by an oil import quota, it tended to run down domestic supply. Then, under the banner of "tax neutrality"—neutrality between doing business at home and abroad—we extended "depletion allowance" to production in the Arab countries themselves. Whose security of supply are we worried about?

Tax neutrality is not, however, applied to the most critical question involving payments to foreign governments: are they expenses or taxes? The Arab Governments own the subsoil rights to their oil and have joined in production with the American companies to exploit that oil. In strict analogy to similar situations at home, payments to such partners would be deductible from profits but they would not be dollar-for-dollar tax credits. Nor could depletion allowances be taken on payments made to the non-participating partner.

The political problems of resolving such tax problems in a piecemeal way are obvious. How then can we keep the different forms of energy priced in a way that will reflect—and will continue to reflect—their real scarcity and their desirability for various uses? If we fail to

maintain such prices, will we not run out of these sources of energy even more rapidly—as exploration, development, refining capacity, or some other link in the marketing chain, fails for lack of sufficient financial incentive?

Over and above this problem of “balanced” prices, there is the problem of sufficiently high prices. High prices are necessary to cut consumption. No amount of exhortation will substitute.

Inside the country, there seems no other solution to this problem except removal of tax subsidies and substantial removal of controls—letting the chips fall where they may but taxing transitional windfall profits. It is instructive to note that the oil industry, despite these enormous and questionable tax breaks, has not normally been making large profits. It does less well than 15 other industry groups. Instead the benefits of those tax breaks have been passed along to the consumer of energy. In effect, the entire tax base has been paying to subsidize the oil industry. It has accepted the subsidies but, responding to market pressures, has kept the price of oil energy low.

Do We Want Low Energy Prices?

If supplies of energy are abundant, subsidizing their discovery and production has many advantages. It holds down the cost of production of the many goods embodying substantial amounts of energy, encourages consumption and hence growth. So long as the uses of this energy do not pollute or otherwise disturb the environment, this stimulation is desirable.

But subsidizing the discovery and distribution of energy sources that are in short supply is wasteful. And by holding down the prices of existing energy sources, one would also be forestalling the development of new energy sources; this would be suicidal, leading to a total gap in supply when one source ran out without another ready to come on line.

Ending the subsidy of energy therefore tends to kill several birds with one stone. It brings the prices of energy into line with their true costs, therefore providing a balanced set of prices that reflects supply and demand. Second, it provides for generally higher prices at a time when we do need to encourage conservation. Third, these same higher prices encourage the development of new forms of energy that are not yet economically competitive. Thus it provides for the future. After all, tax subsidies are basically only a poor substitute for adequate prices in generating an appropriate climate for investment.

Because the oil industry does not disclose much about its profits, there is surprisingly little information about the effect of the subsidies in question. In a paper presented December 29, 1973, Professor Steven MacDonald of the University of Texas at Austin suggests that the oil depletion allowance of 22½%, when combined with existing tax code qualifications, is effectively a net depletion benefit of 16% on gross income after royalties. The ability to take intangibles as expenses is assessed at 4.5%. Thus the elimination of the subsidies, if compensated for in a

rise in the price of crude, would require about a 20% increase. Testimony before the Ways and Means Committee on February 26, 1973 by Robert M. Spann of Virginia Polytechnic Institute provided a somewhat more complicated model, suggesting that elimination of percentage depletion and intangibles would raise crude oil prices 24.5%. (However this analysis considers intangible expensing to be a more desirable subsidy than depletion allowance which reveals how little is really known.)

In any case, the resulting rise in consumer prices would be much less than 20 or 25%. The barrel of crude (consisting of 42 gallons) sells for about four times as much as a finished product. Hence gasoline prices, for example, might rise by a few cents a gallon if per barrel costs went from \$5 to \$6 a barrel.

The results of eliminating the foreign tax credit are more difficult to estimate. Most of the foreign oil is sold abroad but it affects the profits of the companies subsidized, and affects also the competitive ability of the American companies vis-a-vis other foreign companies.

However, in 1970, U.S. corporations earned \$1,005,000,000 in mining and oil operations abroad and paid nothing in U.S. taxes on the income. Thus the foreign tax credit cost the U.S. treasury about \$500 million dollars.

It is not easy to tell how much demand would be reduced by any particular rise in price. This is because the rise in energy use has historically been highly correlated with rising income and lowered real cost. But the elimination of subsidies does not preclude still higher prices arranged through taxation. And these taxes, while further reducing consumption, could be specifically earmarked to help lower income groups.

What About Arab Oil?

It would be a mistake to let ourselves become addicted to Arab oil. The unreliability of supply problem is perhaps not the most important reason for this. Conceivably, the Arab-Israeli problem would be solved within the next few years and, plausibly, the question of embargoes might then disappear.

More serious is the fact that reliance on this cheaper source of energy might postpone the inevitable starting on other sources. The lead time required to get a new source of energy available in large quantities is not much less than half a century. Nuclear power, for example, was shown to be feasible at least by 1950. But it will not represent a significant fraction of our energy sources until the year 2,000 or beyond. Yet, a half century of world exploitation of cheap Arabian oil could exhaust that supply. Therefore, someone must begin work in earnest on new sources.

Who if not America? Our R&D resources are the world's best. Our ability to function with high energy prices is clearly the world's greatest. Our desire to remain independent of oil pressures is substantial. We are therefore well-positioned to serve—in our own interest, and in the world's interest—as a developer of energy alternatives.

As far as the Arab problem is concerned, however, it seems particularly foolish to continue to subsidize oil company exploration and production in Arab countries. This oil is not generally sold to us but ends up mainly in Western Europe. Whatever benefits exist in producing "cheap" Mideast oil are going to be siphoned off by the Arab countries.

Indeed, if we remove the subsidy, the Arab countries will be forced to hold down their demands to keep Arab oil competitive with other energy sources. Foreign oil is already twice as expensive as domestic oil. If we maintain the subsidies, the Arabs will simply make larger profits. We get little benefit. As M. A. Adelman has noted, the international oil companies are "tax collectors" for the Arab countries and it is U.S. taxes they collect. Thus American exploration in the Middle East does not serve our interest. And exploration and production in other parts of the world would help diversify production, and possibly find sources of oil that were not part of the OPEC cartel.

We are entering a world of economic struggle. The problem of embargoes, economic blackmail, and reliable sources of supply should be treated in a fashion that goes beyond the present emergency. And it should be handled in a way that we would not mind having applied to ourselves as well. Within this context, there seems nothing wrong with urging discrimination against unreliable sources of supply. We need not treat all foreign governments alike in deciding where U.S. corporations can get a U.S. tax break. Indeed, when these tax advantages have sprung—as oil depletion has—from security notions, we ought not apply the advantages where they are not consistent with our original motivation.

It is possible that differential treatment of OPEC countries would lead to nationalization of our oil companies there. This does not seem very serious and might be desirable. As noted below, the oil companies would then be freer to compete effectively for the purchase of crude oil at a lower price and would turn their full efforts to exploration elsewhere.

What Will The Future Hold?

The future for the price of oil will be determined by two opposing strong forces. On the one hand is the stark economic fact that many of the OPEC countries are selling oil far above the cost of production, that many of them do *not* have more money than they know what to do with, and that pressures to expand output at the expense of solidarity are strong.

On the other hand, the OPEC countries are learning rapidly that they are powerful and that solidarity has its rewards. The non-Arab countries that include 40% of OPEC production also have their grievances and their interest in rising prices.

Much depends upon the skill of OPEC leadership. Its mover and shaker, the Saudi Arabian Minister of

Petroleum and Mineral Resources, Ahmed Zaki Yamani, is very much against nationalizing the oil companies. He shares the perception of leading observers of the industry, that such a policy would be disastrous for the Arabs. Not only would the Arabs be forced to run the fields or find willing contractors. Worse, the oil companies would no longer have the existing interest in exaggerating profits in the production stage. Perhaps still worse, they would no longer have to follow the policy of "posting" their profits; this would open the way to secret competition for lower crude oil prices, which the OPEC cartel would find much harder to monitor and control.

Sheik Yamani would like to take over the oil companies gently, squeezing them, but not destroying them and gradually moving Arab interests downstream into the transportation, refining and marketing stages. This would expand Arab control over both the process, and the prices, in just such proportion as the oil companies lost motivation to act in the Arabs' interest.

The Arabs May Go Too Far

On the other hand, the rate of Arab progress in seizing oil power, the demands of Arab militants, and the follow-the-leader way in which the Arabs have progressed in securing new demands, might just lead all of them to ape the success of some first complete nationalization.

Still another danger to Arab interests lies in pushing the world too far: undermining the confidence in the reliability of Arab oil, or pushing its price too high and starting an irreversible trend away from oil to new sources.

The capital investment required for synthetic fuels (oil from shale, tar sands or coal) is enormous. Once started, the consuming country will protect its investment in such enterprises. Thus prices, once raised, might be more difficult to lower than one might think. Indeed, these processes are thought to be economically competitive at price levels as low as perhaps \$8 a barrel. Current prices of \$6 are not that far off and, most recently, oil has sold for \$16 a barrel.

There are two different approaches to protecting against dependence upon Arab oil. One approach, similar to the oil import quota which we had for 15 years, would restrict oil imports—perhaps to a fixed percentage of our use. This tends to use up our own supply of oil but keeps us relatively self-sufficient. (Thus it is estimated that, without the import quota, U.S. production might have fallen $\frac{1}{3}$ to $\frac{1}{2}$. Thus during about 15 years of quota we might have wasted, all told, a few years production at current levels. On the other hand, we were not too easily blackmailed as we would otherwise have been. Our degree of dependence was 6% rather than say 40%.)

Another approach would have us keep oil in storage either by setting aside newly discovered oil deposits or by building storage tanks or both. The extent of reserve would be determined by the degree of dependence. □

OIL COMPANIES AT HOME

The Federal Trade Commission (FTC) and the Department of the Treasury are arguing over whether the domestic oil industry is acting in restraint of trade. FTC has been engaged in a study of the situation since 1971—preliminary results of which were pried loose by the Jackson Subcommittee on Permanent Investigations last July.

The FTC report is, for the first time, emphasizing the general problem of "vertical integration and limited competition". Heretofore, it had simply concerned itself with specific and extreme forms of this problem: selective wholesale price cuts leading to price wars in which the independent suffered; vertical price fixing in which vertical integration was used to impose relations between wholesale price and retail price; and tie-ins in which major oil companies forced retailers to purchase accessories (tires, batteries, etc.). These specific complaints have not been wholly successful. FTC complains that "subtle changes in policy or practices" by the petroleum industry have, over the last fifty years, managed to circumvent regulation.

The oil industry at home has always been dominated by vertically integrated oil companies, engaged not only in production of crude oil but also in refining, transportation and marketing. As far as production is concerned, the first four, eight and twenty oil producing companies accounted, in 1969, for 31, 51 and 70 percent of the average daily barrels of crude and they owned, in 1970, 37, 64 and 94 percent respectively of domestic crude proven reserves.

The first four, eight and twenty leading companies in refining capacity are virtually the same as the first four, eight and twenty leading firms in production. In 1972, they controlled respectively 33, 58 and 86 percent of the refining capacity.

Almost half of what is refined is used as gasoline. In gasoline marketing, the same domination exists. Almost the same leading four, eight and twenty firms have 30, 55 and 79 percent of the market.

Most of the crude oil, and some of the refined products are transported by pipelines; these are also owned by the major companies.

Vertical integration provides important advantages. It means that one need not fear disruptions of supply at the refining, transportation (usually pipelines), or marketing stages. One can market what one has transported, refined and produced himself. Second, such companies can shift rates in such a way as to move their profits from one level of operation to another depending upon available tax advantages, and the demands of competition.

The competitive disadvantage of independent firms is the other side of this coin. Without owning refineries, independent producers must hope that there is room for their crude in the refineries of others. They must hope that there is room in pipelines owned by major companies for their transportation. And if they are independent re-

THE FTC COMPLAINT

"The industry operates much like a cartel with 15 to 20 integrated firms being the beneficiaries of much federal and state policy. Thus, the federal and state governments with the force of law do for the major companies that which would be illegal for the companies to do themselves. Further the tax laws induce the major companies to seek high crude prices, which tend to increase crude profits and squeeze refinery profits to the detriment of and exclusion of independent refiners. . . ."

The major firms seek to consolidate market power by various exclusionary tactics. These firms basically attempt to sharply limit the supply of crude available to independent refiners and refined product available to independent wholesalers and retailers. This is accomplished by minimizing use of formal market sales and thus avoiding flows of product from within the majors' vertically integrated structure to the market. It is also accomplished through control of pipe lines, exchange agreements, processing agreements, and price protection coupled with price wars. An elaborate network of devices to deny independents access to produce has been erected. The resulting system endangers existing independents, makes new entry difficult or impossible, and yields serious economic losses to American consumers."

—Preliminary Federal Trade Commission Staff Report On Its Investigation of the Petroleum Industry, July, 1973

fineries or gasoline stations, they must hope that shortages have not reached a level where their supply is cut off by major firms servicing their own subsidiaries first.

Historically, the vertically integrated firm has exercised its sway first at one level of integration and then at another. About 1900, Rockefeller's original Standard Oil Trust controlled 85% of refining capacity and thus controlled the industry entirely. From 1920 to 1940, the twenty largest integrated oil companies relied upon pipeline monopolies for enormous profits while reducing their profits elsewhere, ultimately leading to an anti-trust suit and a 1942 consent decree.

Since that time, the oil companies have used the tax advantages that exist for production to shift their profit margins and control in that direction.

Thus history supports the FTC in charging that the possibility of oligopolistic control always exists in the integrated oil industry. And history suggests also that profits are shifted up and down to take advantage of one bottleneck or another and of tax advantages.

Furthermore, the FTC can document the present day possibility of control. Thus, from the perspective of a vertically integrated major domestic oil company, the dilemma of the independents might look somewhat like this. The independent *producers* of crude oil sell half of

their output to the eight largest majors—majors which have invested in gathering lines used to transport it, investments that preclude much competition. The independent refineries get half of their crude from the major oil companies and hence are also dependent upon them. Moreover, the major oil companies are not dependent in turn upon the output of the independent refineries since these refineries sell almost entirely to independent marketing outlets.

Therefore, in times of shortages, the largest majors would buy freely from the independent producers, use the capacity of independent refineries to the extent it was convenient and, finally, restrict final output for its own use, thereby squeezing out the independent marketer—who represents the last 20% of the gasoline market. Price wars are unnecessary.

FTC therefore filed a complaint against the eight largest oil companies in July. (The sales of these companies together exceeded \$63-billion in 1972 or about 6% of the entire GNP!) It charged them with "maintaining and reinforcing" a noncompetitive market structure and pursuing various "common courses of action" to keep prices high and to exploit their vertical integration.

The Treasury Department responds that the companies have "merely been responding to Government laws and policies, and these laws and policies have been the real culprits". It urges a change in the law rather than divestiture which it believes would aggravate the U.S. shortages and, in some ways, hurt the independents.

The Treasury notes that the integrated oil companies' rate of return, overall, as a percentage of stockholder equity over the last 22 years, was 10.4% in 1972 as against 10.6% for all manufacturing corporations for 1972. (In general, over the last 22 years, the average oil companies return was within 1% of the return for manufacturing corporations each year). It notes that this is not a large rate of return for a capital intensive industry. (Other examples: Lumber and wood—15.9%; Motor vehicles—14.6%; about 15 other industry groups had higher returns than the integrated oil companies.)

Nevertheless, concern remains. The five biggest oil companies' average profits jumped 26% from the first quarter of 1972 to the first quarter of 1973. Their failure to build refineries was a major factor in the recent squeezing out of business of many independent marketers. Was it deliberate? Meanwhile the majors seem to be preparing to compete more vigorously on the marketing level which could lead to greater use of oligopoly power.

Remembering the history of periodic oil industry shifts of the center of gravity of their profits, and noting the Middle East problems, a letter from Senator Henry Jackson to the FTC warns that recent oil industry actions "may represent a conscious, knowing decision to shift traditional profit centers from 'production' in historically, low cost, profitable Mid-east sources to downstream sources of 'refining' and 'marketing' both in the United States and Europe". □

SOME RECOMMENDED READING

Fiscal Policy and the Energy Crisis; Committee on Finance, United States Senate, November 20, 1973. (GPO \$1.30) *The basic facts.*

The World Petroleum Market; M. A. Adelman, Resources for the Future, 1972 \$5.95 in paper. *Highly technical, well documented source book developing an original point of view.*

Competition, Ltd.: the Marketing of Gasoline; Fred C. Allvine and James M. Patterson, Indiana University Press 1972, \$12.00. *Scholarly.*

Power Play: Oil in the Middle East; Leonard Moseley, Random House 1973, \$10.00. *Full of drama and color.*

Oil and World Power; Peter R. Odell, Taplinger 1971, \$6.95. *History and Analysis.*

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