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Perspective

Libya: Little Impact of US Sanctions

US economic sanctions against Libya have had only a limited impact on Tripoli's ability to acquire US goods or substitute technological goods, and no significant impact on its oil production or ability to use international banking mechanisms. The rapid deterioration of the Libyan economy in the last year is attributable to the low level of oil prices, the \$10-million-a-day war in Chad, and, we believe, Qadhafi's view that high consumption—at least by the majority of the population—conflicts with his revolution. Under the sanctions, all direct trade, travel, financial, and business transactions by US firms and individuals are prohibited. All Libyan assets, including bank accounts, under the control of US citizens here or abroad are frozen. Because only "direct" transactions are prohibited, however, foreign companies are not compelled to cooperate; nor are foreign subsidiaries of US corporations.

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According to economic press reports, more than 200 US corporations trade with Libya via foreign subsidiaries and/or affiliates.

Moreover, substitutes for US goods can often be found. Faced with declining sales in a depressed oil market, many oil equipment and service sellers are seeking business with Libya. Further, some procurers purchase goods and send them to third countries for re-export to Libya. Violation or evasion of the sanctions occurs when end user reports are falsified. Sanctions, however, have had the impact of making some goods more expensive because procurers are selling to Libya at inflated prices and adding risk premiums to many invoices.

Direct US-Libyan trade had already been severely reduced by three earlier rounds of US export restrictions. Official US figures put the value of direct trade at about \$250 million between July 1985 and June 1986. The economic press reports the value of direct and indirect trade was about \$1 billion between July 1985 and June 1986. The reports predict the new sanctions will reduce the value to \$265 million in the year ending in June 1987. The value will not fall much beyond that because Libya will still have a demand for some US goods and will be able to find suppliers of parts abroad.

The volume of Libya's oil exports has remained essentially unchanged. There have, of course, been seasonal variations, and the new OPEC agreement has reduced Libya's production quota. We believe that Tripoli already has contracts to sell all of its quota for at least the first half of 1987. As long as Libyan oil remains competitively priced, it will remain in demand because of its high quality and location close to Europe.

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The asset freeze did cause Tripoli to find new banks. Libya now tends to deal with Arab-owned banks that are less likely than Western-owned banks to impose freezes. Locating new banks and shifting funds imposed some inconvenience, but have had no significant effect on Libya's use of financial markets.

Sanctions will probably have even less impact in the next year unless wider support is gained—which we believe is unlikely. Historically, economic sanctions have been most effective in the first six to 12 months. After that, alternative suppliers are usually found. Nonetheless, the economy will remain in bad shape—despite the current higher level of oil prices—as long as the war continues and Qadhafi retains his view of domestic consumption. While lifting the sanctions would provide little economic benefit, we believe that Qadhafi would portray a removal as a major defeat for US policy. He would claim removal demonstrated that Libya's commitment to its policies was stronger than US determination to punish his country.



Libya: Oil Industry Weathering Sanctions

The Libyan oil industry has been able to cope so far with US economic sanctions, the withdrawal of US companies, and US diplomatic pressure on West European governments to reduce petroleum trade with Libya. The volume of Libyan petroleum exports in 1986-about 1 million b/d-was essentially unchanged from 1985. Although oil revenues plunged primarily because of the collapse of oil prices, US pressure contributed to the slide by forcing the Libyans to discount some oil sales. We estimate that US efforts cost Tripoli \$150-200 million in sales last year. West European and Asian companies, including numerous foreign subsidiaries of US companies, continue to provide oilfield equipment and services. Despite increased difficulty and the cost of obtaining some advanced technology and US-made computer parts, procurement difficulties have not caused major production problems. In the absence of much stronger West European support for US policies, the Libyan oil industry should be able to maintain exports at current levels for the foreseeable future.

Coping With Sanctions

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Despite some problems, a surplus of productive capacity has helped enable Libya to meet its production goals—recently cut to 948,000 b/d under the OPEC quota agreement.

Libya could probably sustain maximum production of nearly 1.6 million b/d despite some deterioration in capacity over the last year.

The effectiveness of US sanctions has been severely undercut by the widespread availability of essential petroleum equipment. Oilfield equipment prices are at a rock-bottom level because of the depression in the oil industry, and the Libyans generally do not have major problems obtaining most equipment. In fact, many foreign firms regard the US sanctions as a windfall and have filled in readily for departing US firms. In most cases, Libya can procure comparable equipment and

The Libyan Crude Oil System: Production and Capacity

Thousand b/d

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System	Current Production	Maximum Sustainable Production
Total	945	1,600
WAHA (old Oasis)	335	650
AGOCO	290	400
ZUEITINA * (old Occidental) 90	150
Including AGIP	110	190
SIRTE (old Esso)	60	120
NOC (old Mobil) and VEBA/WINTERSHALL	60	90

* Including OMV of Austria.

b AGIP is developing the offshore BORI field scheduled to begin producing about 50,000 b/d later this year. Maximum production of 150,000 b/d is scheduled to be reached in the early 1990s.

services from suppliers—including US subsidiaries—in Western Europe, and a number of newly industrialized countries including Brazil, South Korea, and Singapore.

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The Libyans have taken other steps to reduce the impact of sanctions:

- stockpiling critical spare parts for a number of years as a precautionary move.
- Tripoli also has set up foreign trading companies to procure oil industry equipment.

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Impact on Oilfield Operations .

Libya has experienced some operational difficulties resulting from the US pullout and sanctions and a reduction in investment caused by Libya's financial troubles. There have been reported shortages of drilling and production equipment and replacement parts for computers and electronic control equipment. In addition, some specialized service contractors reportedly have pulled out or are reluctant to work in Libya because of chronic payment problems. As a result, there is some shortage of qualified drilling personnel. The US embargo apparently has also forced Libya to pay a premium for equipment and spare parts.

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Libyans must pay double the market price for equip-

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Overall, we roughly estimate the US equipment embargo probably added \$25-50 million to the estimated \$200 million per year the Libyans spend on oilfield equipment spare parts.

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> Intermediaries are used to procure some parts and services.

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Foreign Work Force

A small cadre of well-trained Libyan nationals control the top managerial positions, but the oil industry remains heavily dependent on foreign technicians. North Americans and West Europeans provide most of the technical and supervisory expertise and Asians perform a large part of the manual labor. Many foreign workers remain because of the high pay and the limited opportunities for employment elsewhere.

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Libya: Squeezing Living Standards

Although the average Libyan has had to endure severe economic disruptions since oil prices collapsed last year, current conditions are the worst to date. Domestic economic difficulties are being exacerbated by the cost of the conflict in Chad—perhaps as much as \$10 million a day. Nonetheless, Qadhafi appears unwilling to draw on the country's \$7.3 billion in reserves. As a result, the burden is apparently being borne by the Libyan population.

food shortages in Libya, always chronic, have become very serious.

commodities such as cigarettes, spare parts, gasoline, and natural gas also are in short supply. Moreover, what is available is of inferior quality. As a result, the black market is rapidly becoming the principal source of most goods.

stringencies are hurting the Libyan populace in other ways:

- Potable water is in short supply in the cities, while waste removal is sporadic and sanitary conditions are extremely poor.
- Electricity in affluent sections of Tripoli is off for several hours a week, while in the poorer neighborhoods it is often off for several days at a time.
- Housing is becoming increasingly scarce because financing for new construction is extremely hard to find.
- Education, the hallmark of Qadhafi's revolution, is suffering under budgetary cutbacks.
- Civil service salaries reportedly have not been paid since November 1986 while military paychecks have not been distributed since October.

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Libya: Estimated Petroleum Exports, 1985-86

	Thousand b/d		Growth of 1986 Exports	
	1985	1986	(Percent)	
January	971	1,033	6.4	
February	926	798	-13.8	
March	861	864	0.3	
April	905	1,134	25.3	
Мау	992	1,162	17.1	
June	960 -	1,327	38.2	
July	1,036	1,347	30.0	
August	1,075	1,259	17.1	
September	1,087	978	-10.0	
October	1,058	926	-12.5	
November	1,075	935	-13.0	
December	1,169	900	-23.0	

Libyan domestic consumption of petroleum is estimated at about 100,000 b/d. If so, total production would roughly equal exports plus domestic consumption.

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substantial numbers of Pakistanis, South Koreans, Filipinos, and Bangladeshis in Libya. Technicians and workers from Communist countries reportedly do not play a major role in the Libyan oil industry.

Petroleum Exports

Libyan exports averaged about 1 million b/d, including about 150,000 b/d of products in 1986—about the same level as the previous year—despite some swings in sales during the year. Nonetheless, Libyan oil revenues plunged from about \$9 billion in 1985 to under \$5 billion in 1986 because of the collapse in world oil prices. Exports reached a high of more than 1.3 million b/d last summer before dropping to about 900,000 b/d to conform with Libya's OPEC production ceiling. Libyan exports rebounded in January 1987 above the 1 million b/d level in response to the cold snap in Europe.

In spite of US diplomatic pressure, West European countries accounted for about 85 percent of Libyan petroleum exports—similar to previous years:

 Italian imports increased to more than 300,000 b/d in 1986, driven by attractive prices and strong refinery demand for Libyan oil. Most was processed at refineries in Sicily and Sardinia specially equipped to handle waxy Libyan crudes.

 Spanish imports from Libya jumped dramatically during the summer as Spanish refiners maximized gasoline output for re-export. Libyan imports subsequently fell to traditional levels as Spanish refiners switched to heavier crudes for the winter heating season.

Belgium became a significant new importer of Libyan crude as a result of the South Korean firm Daewoo's purchase of a Beligan refinery to process Libyan crude received in payment for construction work. French imports from Libya dropped in 1986 as French Government—controlled oil companies ceased buying Libyan oil.

The Soviet Union increased its liftings of Libyan oil in 1986 to more than 80,000 b/d (15,000 b/d consumed internally), although most was resold to refiners in Eastern and Western Europe. Sales to Bulgaria and Romania also rose, and Libya delivered crude and product to a greater variety of Third World countries including Ethiopia, Sudan, and North Yemen—mostly for political reasons—but volumes were relatively small.

Marketing Tactics

Libya's sales organization, Brega International, successfully used special pricing discounts and netback deals to offset the loss of the US companies' previous role in marketing Libyan oil. These schemes enabled



F(b)(1) F(b)(3) (C) Libya to limit selling on the spot market, where prices for Libyan crudes consistently lagged prices of competing crudes by \$1 or more throughout much of 1986, in large part because of US pressure on major US oil companies and West European governments to avoid purchasing Libyan oil. Barter and countertrade deals—primarily with the USSR, Italy, and South Korea—and liftings by foreign equity crude producers also accounted for large shares of Libyan crude oil. Despite Libya's marketing success, we estimate US efforts to limit Libyan oil sales probably cost Tripoli \$150-200 million last year, adding marginally to Libya's already pressing economic difficulties.

Looking Ahead

West European governments continue to show little inclination to join the US ban on petroleum imports. Barring further evidence of Libyan terrorist activity, Europeans will continue to buy Libyan crude and products as long as the Libyans are responsive to market price conditions. If prices remain firm this year and exports average about 900,000 b/d, the dollar value of Libyan oil sales will rise to about \$6 billion. Libyan oil is valued by refiners because of its attractive refining characteristics and its proximity. In addition, equity crude offtake and debt repayment are powerful incentives to continue lifting Libyan crude. Customers had to be turned away during the fourth quarter.

Despite some recovery in oil prices from 1986 levels, the most significant problem the Libyan petroleum industry faces continues to be the low level of world oil prices. Lower oil revenues have forced a sharp cutback in capital investment, reduced maintenance work, and led to increased indebtedness to foreign contractors. Underinvestment in the petroleum sector could seriously restrict Libya's productive capacity by the end of the decade.