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Western Europe: Vulnerabilities to a Persian Gulf Oil Cutoff

Western Europe remains dependent on Persian Gulf oil, but is less vulnerable to a short-term cutoff than it was during the 1979 oil crisis. Some West European countries still rely heavily on Gulf production, and the region as a whole still imports 25 percent of its oil from the Gulf, compared with 50 percent in 1979. Moreover, West European oil stocks are insufficient to cover requirements in the event of a lengthy disruption. Excess production capacity in countries outside the Persian Gulf, however, currently amounts to almost 3 million b/d and could help cover a supply shortfall.

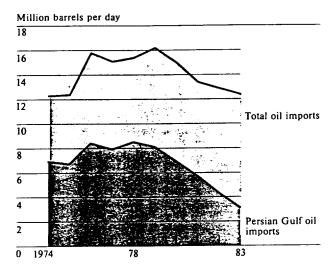
The West Europeans believe that the United States would intervene to keep Persian Gulf oil flowing and therefore that any interruption would be brief. Although several of the International Energy Agency (IEA) countries are now willing to consider the early use of oil stocks in an emergency, we believe that many would react to a short-term disruption by imposing demand-restraint measures.

A complete and prolonged shutoff of the Persian Gulf would result in serious problems for Western Europe because of the impact on world oil prices. We estimate that, if oil exports from the Gulf were cut off for a year or more, world oil prices would rise to \$65 to \$70 a barrel. Assuming no accommodating shifts in government policies, West European economic growth would be cut by about 2 percentage points, and unemployment would increase by 800,000, thus threatening the region's tentative economic recovery.

Declining Oil Dependence on the Gulf

Western Europe has sharply reduced its dependence on Persian Gulf oil in recent years. In 1979, Western Europe imported roughly 8 million b/d, or

Western Europe: Oil Imports, 1974-83



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50 percent of its oil, from the Gulf states. By 1983, the West Europeans had cut these imports by more than half, to about 3.1 million b/d—25 percent of total West European oil imports. The Gulf countries' share of total West European energy supplies plunged from 31 percent in 1979 to about 13 percent last year.

Although the recession and energy-conservation efforts cut West European oil consumption 20 percent over the period of 1979-83, imports from the Gulf states also dropped because:

- Domestic oil production increased.
- Oil supplies were diversified.
- Other forms of energy were substituted for oil.

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Western Europe: Dependence on Persian Gulf Oil Imports, 1983

Percent

	Persian Gulf as a Share of			
	Oil Imports	Oil Consumption		
Western Europe	25	27		
Turkey	74	70		
Portugal	51	55		
Greece	41	58		
Italy	40	43		
Spain	37	39		
France	31	32		
United Kingdom	21	12		
Netherlands	18	47		
Austria	15	13.		
West Germany	13	13		
Denmark	13	14		
Belgium/Luxembourg	12	22		
Finland	9	11		
Norway	6	3		
Switzerland	6	6		
Sweden	4	5		

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Indigenous West European crude oil production rose more than 50 percent over the period. The United Kingdom, which accounts for 70 percent of West European production, boosted output from 1.5 million b/d in 1979 to 2.3 million b/d last year. Norwegian production increased 52 percent. At the same time, imports from Mexico soared from 11,000 b/d in 1979 to more than 400,000 b/d in 1983, while imports from the Soviet Union increased 31 percent. Moreover, oil is playing a slightly smaller role in European energy supplies. In particular, the share of nuclear power has risen from about 3 percent of total energy consumption in 1979 to about 7 percent.

Several individual countries, however, remain heavily dependent upon the Persian Gulf region. Turkey, Italy, Greece, and Portugal each receive between 40 percent and 74 percent of their oil imports from the Gulf states. By comparison, imports from the Persian Gulf represent only 2 percent of US oil requirements.

Availability of Alternative Oil Supplies

West European vulnerability is also reduced because alternative supplies are available on short notice. Excess capacity in countries outside the Persian Gulf amounts to 3 million b/d. In addition, about 15 percent of the 10 million b/d exported by the Persian Gulf countries moves via pipeline to the Mediterranean and Red Seas. If shipping on the Gulf were disrupted, the pipelines could transport another 1 million b/d, and we believe Saudi Arabia would step up pipeline deliveries.

In addition, oil stocks provide a short-term cushion for Western Europe. Existing land-based stocks of 1.1 billion barrels are equivalent to 100 days of forward consumption, according to the IEA. Due to technical factors, however, roughly half of these stocks would be unavailable for use in a disruption. Tankers in transit, although not as readily accessible as land-based stocks, would provide supplies for another 30 to 40 days. Saudi Arabia has also built up stocks in tankers outside the Persian Gulf that probably would be released in the event of a Gulf disruption. We estimate this Saudi reserve at about 60-65 million barrels, about a week's net oil flow from the Gulf.

Economic Impact of a Gulf Oil Cutoff

A short-term disruption in Persian Gulf oil exports would probably have little effect on West European economies, but if the cutoff were complete and long lasting, the impact would be severe. Simulations with our Linked Policy Impact Model indicate that such a cutoff would quickly drive the world price of

Estimating the Impact of a Cutoff in Persian Gulf Oil Imports

We used our Linked Policy Impact Model to measure the economic impact on Western Europe of a jump in prices due to a prolonged interruption in Persian Gulf oil supplies. For our simulation we assume a net loss for a year of 5 million b/d—the amount of oil currently exported by the Persian Gulf countries less the total of excess capacity that does not flow through the Strait of Hormuz. To balance supply and demand, oil prices go up 130 percent, from \$29 per barrel to \$67 per barrel. (C NF)

Our conclusions depend on key parameters estimated econometrically—such as energy prices and income elasticities in each country—as well as on assumptions about policy responses to an oil shock and how quickly oil exporters use large earnings increases to boost purchases from Western Europe and elsewhere. In our scenario we assume:

- Government expenditures on consumption and investment remain constant in nominal terms.
- The money supply in each country and real interest rates remain constant while nominal interest rates increase.
- OPEC countries spend nearly 60 percent of their estimated additional oil-export revenues—\$80 billion—on additional imports in the first year of higher oil prices.
- Oil inventories of non-Communist countries are drawn down at an average rate of 500,000 b/d over the course of the cutoff.

oil up to around \$65 to \$70 a barrel, even assuming a fairly substantial drawdown in inventories. If the cutoff and the high oil prices lasted for a year, West European real GDP would fall about 2 percentage points in comparison with our baseline forecast. Real GDP is now expected to increase by about 2.2 percent this year and 2.4 percent in 1985; a lengthy interruption thus would threaten the West European economic recovery. It would also boost unemployment, the most serious single economic problem in Western Europe. Under our

scenario, unemployment—already at record levels—would rise by 800,000, or about 0.6 percentage point, to roughly 12 percent. A substantial hike in oil prices would also boost inflation and worsen the combined current account. We estimate inflation would be 4.4 percentage points higher than our baseline case, and that the current account balance for all of Western Europe would deteriorate by nearly \$5 billion.

Policy Response

For the moment, Western Europe is not particularly concerned about an interruption in Persian Gulf oil imports. The prevailing consensus in Western Europe is that the United States would take action to keep Persian Gulf oil flowing, and hence any shortfall in oil supplies would be temporary. A small oil price increase resulting from a brief disruption in oil imports would probably have little impact on either economic trends or policies. Although several IEA countries are now willing to consider the early use of stocks, many West European countries probably would respond by imposing demand-restraint measures and stepping up imports from other sources. France, in particular, believes drawing on emergency oil stocks is a measure of last resort.

To cope with a long-term disruption in Persian Gulf supplies, Western Europe would probably adopt policies similar to those used during previous oil crises. Within the European Community (EC), export licenses probably would be required to ship oil across national boundaries. The EC commission would use this system to prevent one country that allowed oil prices to rise from siphoning oil from other member states that were applying price controls. In addition, consultations would be held regularly to coordinate demand-management measures.

Although the IEA recently agreed to use stocks to inhibit excessive oil price increases in the event of a major supply disruption, most West European



Western Europe: Impact of a One-Year Cutoff in Persian Gulf Oil Exports ^a

Percentage points (except where noted)

•	Change in Real GDP Growth	Change in Current Account Balance (billion US \$)		Change in Number of Unemployed (thousands)	Change in Unem- ployment Rate
Western Europe	-2.1	-4.9	4.4	826	0.6
France	-3.6	-5.2	4.6	245	1.0
				107	^ 7
italy	-4.7	-9.6	4.5	128	0.6
Other	-1.4	-3.1	5.0	215	0.3

[•] World oil price rises to \$67 a barrel in this scenario.

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countries do not have adequate stocks to participate meaningfully in a coordinated stock drawdown. Under the terms of the IEA agreement, these countries would have to take actions, including demand restraint, to help share the burden of a disruption. Countries such as Italy that are heavily dependent on Persian Gulf oil probably would press for quick implementation of the IEA emergency allocation system to more evenly distribute the shortfall among the 21-member countries, including the United States.

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