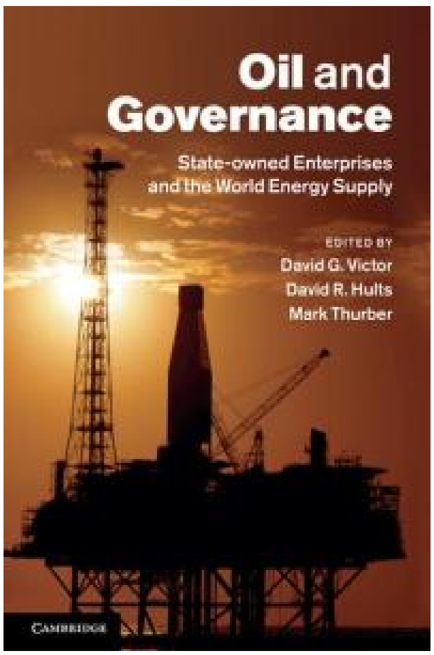
Book examines state-owned oil firms, prices and pollution

February 15 2012



According to a new book, "Oil and Governance," state-owned oil companies dominate the world's oil supplies, and the meddling of politicians often results in excessive pollution, poor company performance and more volatile oil prices. Credit: Cambridge University Press

To maintain power, oil-rich governments often lean on their national oil companies in ways that hurt the environment, damage their companies' efficiency and raise prices for the rest of the world, according to Stanford University researcher Mark Thurber.

The state-owned oil companies, like Saudi Aramco, Petróleos de Venezuela and China National Petroleum Corp., control 73 percent of the world's oil reserves, dwarfing the ExxonMobils of the world.

Beyond just producing profits for their central governments, the national oil companies (known as NOCs) are often saddled with tasks such as heavily subsidizing domestic energy consumption and employing thousands of unneeded workers with good political connections.

"You might think that the NOCs would be good for the environment because they are partly the cause of today's high oil prices, and high prices should lead to less consumption and less pollution, but that isn't the case," said Thurber, co-editor of, and contributor to, the new book, "Oil and Governance: State-Owned Enterprises and the World Energy Supply" (Cambridge University Press, 2012).

Subsidized gasoline and natural gas

Large subsidies from NOCs for fuel use at home lead to massive overconsumption. Gasoline is almost free in Venezuela. Within Russia, Gazprom sells natural gas for a fraction of the price it charges Western Europe, according to "Oil and Governance." The International Energy Agency estimates that elimination of such subsidies alone would get the world almost half way to targeted reductions in greenhouse gas emissions by 2020, Thurber noted last week when speaking at Stanford's weekly Energy Seminar.

Another adverse effect for the environment: State-owned companies contribute to fuel price volatility. The roller-coaster between high and low oil prices may discourage large investments in competing energy sources like biofuels.

Price volatility can derive from the following dynamic. In high price periods, governments tend to use their NOCs to dispense privileges to influential elites or subsidize development programs that curry favor with the broader population. But by leaning on NOCs for these functions in times of high prices, governments depress investment in new oil fields just when additional output is needed most, according to the book. Only in lower price periods do governments place greater value on the efficiencies achieved by private players in oil production, which expands supply when it is not needed as much.

Overdependence on NOCs to further regime survival robs them of autonomy, focus and investment capital. One of the new book's most striking findings is the clear correlation between companies' performance as oil enterprises and the non-energy related burdens host governments put on them, like providing social programs, political patronage and private security for elites.

Low performers in Iran and Venezuela

Low-performing NOCs have high non-energy burdens. Two of the lower performers, the oil companies of Iran and Venezuela, have seen their ability to find oil and produce it efficiently decline markedly under the meddling of presidents Mahmoud Ahmadinejad and Hugo Chávez, the book finds. In both cases, reasonably proficient managers have been replaced with political cronies.

Companies with fewer non-energy burdens, on the other hand, can do quite well. Two companies in the latter group – Norway's Statoil and Brazil's Petrobras – are as capable in their areas of expertise as any private oil company, according to the 1,000-page volume, which was commissioned by Stanford's Program on Energy and Sustainable Development, where Thurber is associate director of research. The book comprises case studies of 15 NOCs, as well as several chapters analyzing why some of the companies perform so much better than others.

Defying conventional wisdom, the book finds little evidence that NOCs are effective geopolitical tools for their host governments. In fact, managers at the companies often try to keep politicians as far removed as possible from oil operations. NOC expansion abroad typically has as much to do with the NOC's desire for autonomy as it does with the global designs of politicians. And even where politicians desire to use NOCs as geopolitical instruments, they find themselves limited by the realities of what it takes to find, extract and deliver hydrocarbons.

"The largest political impact of host governments on their NOCs is not in using them as tools for foreign policy. Rather, it is the adverse impact on these companies' ability to find and produce oil," the editors of "Oil and Governance" conclude.

Due to NOCs' frequently subpar performance, privately owned oil companies likely will continue to have a major role despite concerns about "the rise of state capitalism." The book identifies the ability to manage risk as a characteristic factor that differentiates private oil companies from their NOC brethren. Lacking the NOCs' privileged position at home, private companies are forced to compete around the world for capital and opportunities. They have strong incentives to refine the geological knowledge that makes their bets pay off more often than not. Their global reach lets them diversify risk and more reliably connect resources to customers.

As a result, most indications point to more opportunities for international oil companies, according to the authors. They will especially thrive at the high-risk frontiers of the oil and gas industry – frontiers that today include shale gas, oil sands and the remote Arctic. At the same time, NOCs will maintain their dominant control of low-cost resources around the world.

Provided by Stanford University