

Nationalization and Privatization in the Energy Industry

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Overview

Perhaps due to the ideological ballast associated there is not much economic analysis up to now on the causes of nationalization in the energy industry. This deficit stands in contrast to the strength of the present nationalization trend in energy industries in many countries and regions of the world. Today, around 85 percent of oil and gas reserves are held by state owned companies. The global change compared to the 1980ies is so important that a recent study of the James A. Baker III Institute for Public Policy of the Rice University poses the question whether or not the US government should have an own national oil company (JAFJE 2007).

Economists assume that nationalized companies are usually less efficient than private companies, which is recently confirmed by HARTLEY (2007) for the upstream oil industry. Why then we see today more and more governments struggling for overtaking the control of oil, gas, uranium and power industries, by restricting energy business rights in the company to national companies or by controlling the businesses of private companies by a significantly more restrictive regulation? And why 20 years ago many governments did just the opposite when privatizing state energy companies? The paper presents a model to explain these observations.

Methods

The foundation of the model is the positive theory of nationalization which emphasises on “the basic business of politics, the transfer motive” (ROSA 1993: 320). For many reasons energy companies can earn excess profits: the Hotelling-model explains one, the convex form of the aggregate marginal cost function explains another, monopolistic market power (natural monopoly in the electricity industry) is a third, etc. In 2007 the excess profits of the upstream oil and gas industry will probably exceed 1300 billion USD or 2.5 percent of world GDP.

Governments can appropriate the excess profits by imposing licensing fees and other profit taxes (windfall profit tax, auctioning of greenhouse gas emission certificates) or by gaining the control over the company through nationalization or through regulation. Governments tend to choose the control of ownership, if the result – the net assets that become available for transfer purposes – is higher and more stable than the tax solution. In a static environment there are many factors that affect the government choice. They are discussed in the paper and included in the model. But the business environment is not static. Thus, the government’s optimal choice may change over time. Nationalization and privatization cycles are the result which can be explained by the model.

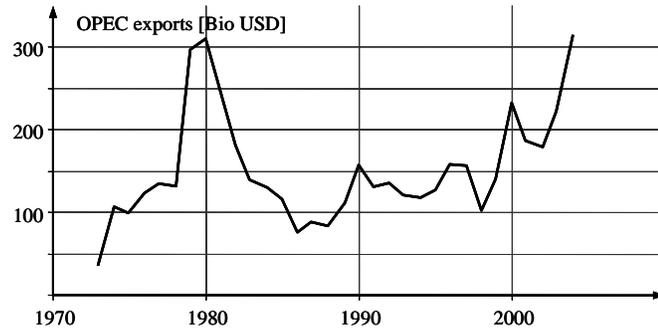
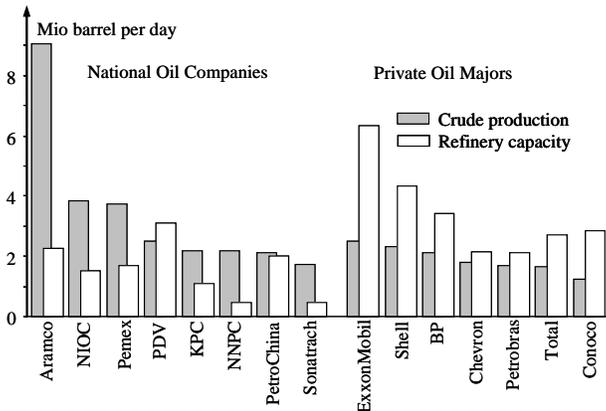
Results

Besides political factors there are several economic drivers that are significant in a positive theory of nationalization and privatization, respectively. The paper discusses

- opportunistic behaviour of private companies vis-à-vis hosting governments,
- social costs of taxation and tax evasion,
- different access rates to advanced technical know-how,
- different productivity trends,
- different opportunities in the M&A market.

As expected, the most significant factor seems to be industry profitability. On a time scale, nationalization phases in the oil industry correspond to periods of high crude prices and high revenues (figure to the right). The left figure shows a higher degree of nationalization in extraction than in refining, which corresponds to the profitability differences along the value chain.

There is the question of causality: high energy prices may motivate governments to strengthen state control on the industry. On the other hand, state control of the industry may lead to higher prices (HENSING, PFAFFENBERGER, STRÖBELE 1998), at least for some time being. In a dynamic contest this debate leads to self-reinforcing nationalization and privatization trends, respectively.



The self-reinforcing trend towards nationalization comes to an end through innovations and technical change. Privately owned companies have usually a much higher implementation rate of innovations and technical change than state controlled companies. Accordingly their technical skills and profitability decreases over time compared to private companies. There is strong evidence that this is a key driver for ending a self reinforcing trend towards nationalization. The main factor for ending the self-reinforcing privatization trend is excess profit rates in the industry.

Conclusions

Our analysis implies that the appetite of governments to nationalize or regulate energy industries increases with the profit rate. Other factors play a role in determining the likelihood for nationalization and privatization.

This analysis has a lot of applications. A first is forecasting the development of energy industry structures. By extrapolating the determinants for nationalization and privatization, we can predict the associated trends for different energy sectors and the associated productivity developments. Even more important is the identification of conditions under which trend changes are likely.

A second application is the development of business strategies. In order to become more efficient, many energy companies applied outsourcing strategies in the past, for example by selling the research and development departments which are assumed to contribute insufficiently to the company's profits. This was obviously a wrong approach as nationalized companies have now a much easier access to the most advanced technical know-how. Today the competitive environment for private companies makes defending their role in upstream energy markets more challenging. These types of strategic mistakes should be avoided in the future by thinking more seriously about what should be the core competences that must be taken under the company's control.

A third application is government consulting about how to sustainably appropriate the excess profits of energy companies and how to avoid the risk of losing the rather favourable competitive position for their national energy companies.

References

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