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OPEC as a political and economical entity

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ABSTRACT

This paper assumes that the decision makers of OPEC (or at least of its core members) are interested in both profits and political payoffs (support, popularity, being a hero of the Arab or Islamic street, etc.). The oil weapon, i.e. a reduction of output is the most powerful instrument to obtain political payoffs from harming the West, which can be also profitable in the short run due to the high prices implied by sluggish demand for OPEC oil. The analysis shows that this political objective reduces longrun supply and includes the possibility that it is optimal to 'kill the goose that lays the golden eggs' if initial demand is below a threshold (and multiple steady states exist).

1. Introduction

Traditional, neoclassical economists, but of course not Public Choice scholars belittle politics in general and in particular in academic economic papers about the oil market (including this author). Therefore it is not surprising that political arguments are rarely found in the corresponding economics literature and only Adelman (1990) mentions the political incentives that OPEC (Organization of Petroleum Exporting Countries) decision makers face, "Not as Arabs or Muslims or some other irrelevancy, but as rational economic actors, the OPEC countries must take the money and run", but does not provide a corresponding modeling framework. Marshalla and Nesbitt (1986) defend the economists' assumption of profit maximization even if political organizations are involved. Gately (2006) is a recent study that discusses OPEC strategies in terms of their profitability and robustness.

In contrast to the above quoted economic literature, political arguments play a big role in the discussions about the oil market. For example, the chart of the oil price evolution in the BP (2008) *Statistical Review of World Energy* links oil prices jumps to political events, in particular to the Yom-Kippur war in 1973, the Iranian revolution and its aftermath 1979/80, the Iraq–Iran war, the liberation of Kuwait, and finally the Iraq war (see also the triggers in Noreng (2006, Table 1) and the United States Energy Information Administration (2008) detailed list of events affecting oil prices). Furthermore numerous books on oil and politics have been published (e.g., Yergin (1991) and more recently Parra (2004) as an OPEC insider, Falola and Genova (2005), and Noreng (2006)) and many books and articles on geopolitics (including newspapers and magazines) have linked both the American liberation of Kuwait and the toppling of Saddam Hussein to oil (including Noreng (2006)).

A first and crucial observation is that politicians everywhere and not just in the Gulf care much less about profits than businessmen. The reason is that short run political markets can reward decisions that harm the economy in the long run. Trade barriers and in particular voluntary export restraints (e.g., Japanese cars, Berry, Levinsohn and Pakes (1999) and recently Chinese textile exports to the European Union) document that political objectives dominate economic efficiency arguments, because even assuming (wrongly) that trade barriers are beneficial, import tariffs should then be preferred. Therefore, economics in the narrow

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sense (profits, economic efficiency, etc. sometimes short 'economic') is not the all overriding principle but only a constraint for political decisions. Indeed, the central planned economies proved that economic forces can be ignored for quite a long time, but not forever. And politically influenced decisions, like short term embargoes (or a threat only as some claim, Adelman (1990)), are peanuts compared to the abuse of economic laws in the central planned economies for decades, e.g., to restrict trade to barter deals in particular for Russian energy exports. Of course, decisions are still economical once political benefits and costs are accounted for in the decision makers' preferences.

What are the interests and objectives of the politicians in oil producing countries? Do they follow the rather idealistic view of Max Weber of 'drilling hard shelves', e.g. by fighting prejudices or do they exploit prejudices and sentiments in the population for their own purpose as Vilfredo Pareto suggested? Pareto's recommendation does not depend on formal elections since even dictators cannot survive without some popular support. Furthermore, popularity, e.g. to become the hero of the Arab souks by standing up against the West or against the Yankee (e.g., Chavez), provides benefits that can transgress life, e.g. the long living admiration that Gamal Abdel Nasser still enjoys in the Arab world. Another particular confirmation that dictators seek popular support by appealing to the emotions in the population was Saddam Hussein when he embraced the Islamic religion and proclaimed Jihad against the infidels during the US invasion in 2003 although he ran a society by and large organized according to socialist and laical principles (even allowing alcoholic beverages). A recent poll in six Arab countries (published in The Economist, April 19th 2008) finds that over 60% have a very unfavorable attitude towards the United States and 67% think that Iran has every right to pursue its nuclear activities. Therefore, non-economic considerations – other 'irrelevancies' like the fiction of an Arab unity and the myth of an Islamic community (Umma), the hate of the West and in particular of the United States – are potentially important for the oil market.

Assuming that politicians follow Pareto's advice and that Anti-Western sentiments persist for some time (and they can erupt for something negligible like caricatures in a local Danish paper), what are potential and politically feasible instruments? The definitely most powerful instrument available to OPEC decision makers is the oil weapon, i.e., a reduction of oil supplies (temporarily). This does not require extensive bargaining over agreements among the OPEC members. It is sufficient that crucial members agree, i.e., those in the Gulf (here in particular Saudi Arabia, Kuwait, U.A.E., Iraq and Iran) with other Arab members like Libya and Algeria being at least sympathetic whether the trigger is religious or political, and Venezuela (Chavez) supporting, because this is an opportunity to exploit anti-Yankee sentiments; the remaining oil producers including other OPEC members cannot compensate for such a shortfall. On top of the direct political gain from humiliating the West, such an output cut earns huge revenues in the short run due to the price rise induced by sluggish demand at least if other suppliers have little slack capacity although it will harm the future marketing prospects. As a consequence, some crucial OPEC leaders in the need of popular support or wishing to become a hero of the Arab or Latin American 'street' are tempted to use this weapon given the right political circumstances. For this reason, OPEC decision makers value both profits and domestic, regional political or religious support, which can be accrued by harming the West, most efficiently through the oil weapon (and the gas weapon in the case of Russia).

The objective of this paper is to provide a first attempt that integrates economic and political objectives of OPEC decision makers assuming a stable cartel. This is in line with the bulk of the relevant literature[1], and thus no attempt is made to model the stability of the OPEC cartel to which political benefits may even serve as a catalyst or as a jump start. The major implication is that political benefits from output reductions lower the stationary output and thus increase prices. If this political benefit from output reductions depends negatively on the level of demand then multiple and history dependent long run outcomes are possible such that long run supply is driven to zero due to the political objective if the initial demand is low; otherwise (sufficiently high initial demand) the market will be supplied in the long run. A further result is that the inclusion of such political objectives can ensure the existence of the optimal policy that is missing in the profit maximization framework with a convex equilibrium demand and conversely can eliminate it for concave demand. The paper is organized as follows. Section 2 introduces the model. Section 3 derives the characteristics of the optimal policies, first in general and then for a few specifications. Section 4 considers and proposes a few extensions. Final remarks complete this investigation.

2. Model

2.1. Dynamic demand

A few fundamental characteristics of the oil market are crucial for the following. Oil demand is met from competitive fringe suppliers producing (more or less) at capacity and from residual suppliers, which form an implicit cartel since their choice of either price (directly) or quantity (indirectly) determines the market clearing price. OPEC members (not necessarily all individually) fall into this crucial second group. For example, Saudi Arabia's production maximum during the last 35 years is above 10 million barrels per day (mb/d), 1980–1981and 2003–2006, and its minimum is 3.6 mb/d in 1985. This variability stresses Saudi Arabia's flexibility unmatched by any other supplier and this despite its strong economic dependence on the oil revenues. The distribution of reserves with roughly three quarters in OPEC countries and more than one fifth in Saudi Arabia, BP (2008) adds to the importance of OPEC that is by far underestimated by the share in world oil supply (around 40% for OPEC, BP (2008)).

[1] Interesting in this respect is Rauscher (1992) that models OPEC as an endogenous mixture of cartel and (perfect) competition obtaining an S-shaped supply relation similar to Cremer and Isfahani (1991). However, there are a few empirical investigations: Griffin (1985) and Griffin and Xiong (1997) show the gains from cartelization as well as the incentives for OPEC members to cheat. Mason and Polasky (2005) extend this by using political variables but of low power.