

# Accepted Manuscript

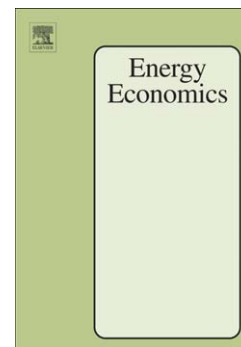
Imperfect cartelization in OPEC

Samuel J. Okullo, Frédéric Reynès

PII: S0140-9883(16)30291-2  
DOI: doi:[10.1016/j.eneco.2016.10.010](https://doi.org/10.1016/j.eneco.2016.10.010)  
Reference: ENEECO 3467

To appear in: *Energy Economics*

Received date: 3 December 2013  
Revised date: 9 October 2016  
Accepted date: 15 October 2016



Please cite this article as: Okullo, Samuel J., Reynès, Frédéric, Imperfect cartelization in OPEC, *Energy Economics* (2016), doi:[10.1016/j.eneco.2016.10.010](https://doi.org/10.1016/j.eneco.2016.10.010)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

## Imperfect cartelization in OPEC

Samuel J. Okullo<sup>a</sup>, Frédéric Reynès<sup>b,c</sup><sup>a</sup>*CentER, Department of Economics and Tilburg Sustainability Center, Tilburg University, P.O. Box 90153, 5000 LE Tilburg, The Netherlands*<sup>b</sup>*OFCE Sciences Po's Economic Research Centre, 69 quai d'Orsay, 75007 Paris, France*<sup>c</sup>*The Netherlands Organization for Applied Scientific Research (TNO), Strategic Business Analysis Economics, Post bus 49, 2600 AA, Delft, The Netherlands*

---

**Abstract**

A model of global oil production is applied to study cartelization by OPEC countries. We define a measure for the degree of cooperation, analogous to the market conduct parameter of Cyert et al. (1973), Geroski et al. (1987), Lofaro (1999), and Symeonidis (2000). This parameter is used to assess the incentives of different OPEC members to collude. We find that heterogeneity in OPEC and the supplies of the non-OPEC fringe create strong incentives against collusion. More specifically, OPEC's supply strategy, although observed to be substantially more restrictive than that of a Cournot-Nash oligopoly, is found to still be more accommodative than that of a perfect cartel. The strategy involves allocating larger than proportionate quotas to smaller and relatively costlier producers, as if to bribe their participation in the cartel. This is in contrast to predictions of the standard cartel model that such producers should be allocated relatively more stringent quotas. Furthermore, we find that cartel collusion is more likely to be sustained for elastic than for inelastic demand. Since global oil demand is well known to be inelastic, this observation provides another structural explanation for why OPEC behavior is inconsistent with that of a perfect cartel. Our study points to multiple headwinds that limit OPEC's ability to mark up the oil price.

**JEL:** C61, C7, L13, L22, L71, Q31**Keywords:** Imperfect cartels, Oil, OPEC, Nash bargaining, Collusion strategies

---

**1. Introduction**

OPEC's longevity, given predictions of its demise by experts and the textbook cartelization model has come as a surprise to many. A growing body of literature (see e.g., Smith, 2005; Kaufmann et al., 2008) now suggests that OPEC is not and should not be regarded

---

\*Corresponding author. CentER, Department of Economics and Tilburg Sustainability Center, Tilburg University, P.O. Box 90153, 5000 LE Tilburg, The Netherlands, s.j.okullo@uvt.nl, Tel. +31(13) 46 64148.

*Email address:* s.j.okullo@uvt.nl (Samuel J. Okullo), frederic.reynes@tno.nl (Frédéric Reynès)

Download English Version:

<https://daneshyari.com/en/article/5063905>

Download Persian Version:

<https://daneshyari.com/article/5063905>

[Daneshyari.com](https://daneshyari.com)