**WHO REFINES OIL AND WHY: DISENTANGLING INVESTMENT DECISIONS FROM COUNTRIES AND COMPANIES**

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## Overview

## Oil still represents a third of gross energy consumption worldwide. Crude oil is one of the most scrutinized commodity, contrary to the ptoducts from its downstream industry. In the academic field, little is known on the economics of oil refining. A first approach of the field comes from the energy economics literature (Ghodussi & Wirl, 2021). Oil refining can be seen has a risk-hedging strategy. Indeed, while crude oil offers much stronger returns, oil products show much less volatity in internation markets. Second, the development economics literature has investigated the role of resource-based industries as a robust industrialization strategy (Owens & Woods, 1997). We contribute to both streams of literature by investigating the determinants of investments in expansion in capacity of oil refining. We aim at answering at the following questions. What drive investments at the country-scale : lowering imports, increasing exports, stimulating local consumption? At the company level, we aim at understanding the difference of strategies between firms. For instance, do government-owned firms invest more than private ones?

## Methods

We combine several data sets from several sources. First we use the data from the *Oil & Gas Journal* which provides plant-level data on refineries. These include location (city level), total capacity of the refinery. Second, we use data from the IEA for aggregate data at the country scale on imports, exports, consumption and production of refined oil products and crude oil. Third, we include data from the EIA on oil reserves estimations. Fourth, we include socio-economic data from the World Bank. Fifth, we add bilateral trade data on oil products and crude oil from CEPII. Our final panel data contains around 2000 country-year observations, from 1991 to 2019 over 80 countries. Our empirical approaches involves simple fixed effects models.

## Results

Preliminary results are the following. Increased capacity in oil refining have a significant effect on economic on exports. However, and surprisingly, we do not find any effect of increased capacity on imports levels. Such result would indicate that in average, newly installed capacities are aiming to serve international markets rather than reducing imports to improve energy security.

## Conclusions

## This paper aimed at understanding the determinants of investment , in term of industrial strategy from countries on the one hand, and on firm strategies on the other hand. Future works will involve using bilateral trade data to investigate finer effects of increased refining capacities on imports and exports.

## References

Ghoddusi, H., & Wirl, F. (2021). A Risk-Hedging View to Refinery Capacity Investment in OPEC Countries. *The Energy Journal*, *42*(1).

Owens, T., & Wood, A. (1997). Export-oriented industrialization through primary processing?. *World development*, *25*(9), 1453-1470.