

VERTICAL INTEGRATION BY THE PETROLEUM PRODUCING COUNTRIES: CHALLENGES FOR THE NEXT DECADE

¹ IFP, Département Économie, France, +33147528170, laetitia.de-navacelle@ifp.fr

² Université de Montpellier 1, CREDEN, France

OVERVIEW

In the past years several ‘mega-projects’ in refining and basic petrochemicals have been announced by petroleum producing countries, such as Saudi Arabia and Kuwait. These projects when and if completed will add some 1,400 thousand barrels per day of refining capacity by 2015 in an already surplus world market of 88,627 thousand barrels per day in 2008 (BP stat). The location and ownership of the refining industry has migrated throughout the XXth century dictated first by physical and technical constraints [4], then political and security issues [8], [9], and finally by economical and social considerations [2], [8]. Since the 1970s the question is repeatedly asked and many authors throughout the decades have presented elements in favour or against its implementation, updated to the then current economical and political context. Due to the evolving petroleum market, some reasons have become outdated and new have arisen. On the whole, the refining industry in North America and Europe was reduced as new consuming countries, like producing countries, are developing their industry. This article is an update of the different incentives and limits to vertical integration by the producing countries, given the current evolutions and future prospects for supply, location of demand and increasing environmental regulation.

METHODS

The geographical balances of oil depends of the evolution of supply, namely types and corresponding quantities of crude available, and of demand that has migrated towards lighter and cleaner products, and to new destinations. The historically listed motives were reviewed, commented and updated to the nowadays situation. Frequently listed arguments include analysis of rent seeking through new trade theory (comparative advantages and returns to scale) [11], political will to develop the local economy [2], geopolitics [5] and industrial organization (transaction costs, gain of market power) [1]. Although environmental and security considerations have been cited for a long time, only recently have environmental economics been formally used. Amongst these theoretical justifications many help understand current developments, but some actual projects cannot as easily be explained by the above.

RESULTS

The relevance of each motivation has been discussed according to the nowadays situation. For instance, a natural criterion motivating a producing country to vertically integrate is rent seeking by internalizing the value added of the refining step. Such an incentive is validated when refinery margins are high and stable on a long period of time. The announced projects are motivated by the several past years of strong refinery margins until mid-2008. The question is whether margins will be maintained with certainty at a level justifying the investment in a highly technical industry in which they have an uneven experience. If not, rent-seeking cannot be the main incentive; others need to be considered. Trade theory suggests that some producing countries in the Gulf area have a privileged location for the supply of the nascent and developing markets in Asia, and may seek market power [5]. In addition, the lowering of demand and the development of regulations on CO₂ in the OECD

countries modifies the previous positions of each player and may advantage producing countries [9]. For others, geopolitics, and especially the strong hegemonic political will over a region or against another country, may encourage investments otherwise done by others [11]. Most frequently investments in the refining industry may appear as highly unprofitable but specific characteristics, such as crude oil quality, possible externalities, long term contracts or political motivation, may justify projects that would have been cancelled otherwise [7].

CONCLUSIONS

The study of the evolutions of the refining industry and the role of the producing countries in its development leads to the identification of several theoretical arguments justifying downstream integration. These are used to explain three vertical integration strategies that appear to be possible: local industrial development, industrial development abroad involving partnership contracts (supply, technical assistance...) or pure foreign financial investment. However there seems to exist new explanations and fields of research that may add or improve the current understanding of the incentives of NOCs (National Oil Companies) to vertically integrate. Finally as the world context is ever-changing, some effects, such as the extent of the effect of GHG (Green House Gases) regulations on investment, remain undetermined.

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