

The third oil price surge – What's different this time?

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ABSTRACT

The period from 2003 to 2008 was marked by an oil price increase comparable to the two oil price crises in the 1970s. This paper looks in detail at the situation of the oil price crises 30 years ago and compares them along various aspects on the demand and supply side with the recent price increase to identify similarities and differences. While both oil price crises in 1973 and 1979/1980 were ultimately caused by supply actions of members of the Organisation of Petroleum Exporting Countries (OPEC), all three oil price crises were preceded by high demand growth. Other aspects that favoured a high oil price in all three cases were low investments in new oil fields, as a consequence low spare capacity, and a weak US dollar. In addition, the recent oil price surge has been characterised by a high global refinery utilisation and refineries that did not adapt fast enough to the rising demand for lighter oil products. Moreover, broader geopolitical uncertainties, combined with risks associated with the oil trade helped push the oil price into a triple-digit zone. Speculation played only a limited and temporary role in accelerating price movements during the recent price increase.

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1. Introduction

From September 2003, the oil price rose from US-\$₂₀₀₈ 31 to US-\$₂₀₀₈ 145 in July 2008 (see Fig. 1). This almost five-fold increase within 5 years exceeded even the tripling of the oil price after the OPEC oil embargo in 1973, and the tripling of the oil price in 1979/1980 triggered by the Iranian revolution. Whereas, the price increase during the first and second oil price shocks were limited to 1 year and 2 years, respectively, the recent oil price surge was more gradual over 5 years. About one-half of the 1973 oil shock proved enduring and the price increase from 1979 to 1981 was eventually completely reversed. Despite the significant fall of the oil price in the second-half of 2008, so far it is not yet clear how much of the recent oil price increase will persist.

The objective of this paper is to qualitatively analyse what can be learned from history with respect to typical features indicating significant price surges of the world oil price. The principal starting point addresses whether the surge in oil prices experienced in the 1970s with a peak in the oil price in 1980 is comparable with the 2003–2008 increase. Consequently, this paper does not only study in detail the recent oil price crisis, but also compares it with the two previous ones, to see what they have in common and how they differed. In this respect, various factors and their impact on the oil price are taken into account. Although it is acknowledged that the oil price itself influences

many of these factors, such as oil supply and inflation in the long-run, this causal relationship is not considered in this paper.

After a review of the existing literature on factors influencing the oil price in general and more specifically during the last oil price increase in Section 2 and a historical retrospect in Section 3, the factors that led to the recent oil price surge are studied and compared with the situation in the 1970s in Section 4. Therefore, Section 4 first analyses the demand situation in the 1970s and at the start of the 21st century. Subsequently, the supply side, starting with the upstream sector and the refinery situation is looked at. This section continues with the geopolitical situation, in particular highlighting the various political constraints. Finally, the effects of speculation, the US dollar exchange rate and inflation on the oil price are evaluated. Section 5 concludes the paper.

2. Literature review

For at least the last 40 years, the oil price has played a pivotal role in the global economy. Consequently, there has been a considerable interest in developing an understanding of the causes underlying oil price movements. A significant amount of work on the oil price crises in the 1970s and their causes has been published. These studies focused on the supply–demand imbalance, in particular the price policy of OPEC and the nationalisation policy at that time (see e.g. Adelman, 1995).

For the more recent oil price surge, Kaufmann and Ullman (2009) looked more specifically at the influence of speculation in

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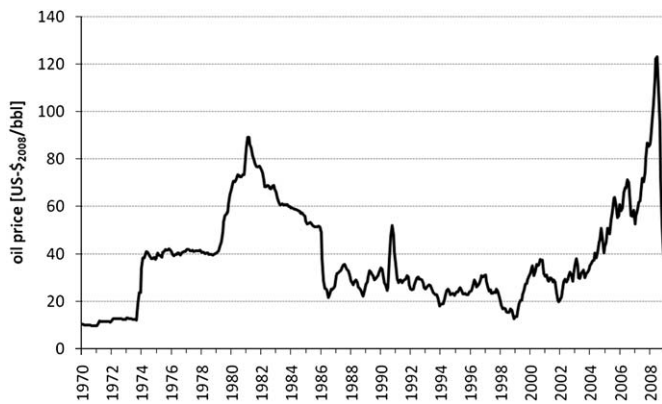


Fig. 1. Monthly inflation-adjusted oil price (Energy Information Administration, 2009).

relation to market fundamentals and reached the conclusion that speculators exacerbated the price increase, which was initiated by market fundamentals. Aguilera et al. (2009) studied the influence of oil supply and found that depletion of oil resources are not behind the high price level observed in 2008. Kaufmann et al. (2008) used a model and decomposed the oil price rise from 2004 to 2006 into fractions associated with OPEC surplus capacity, refinery utilisation, the futures market and OECD stocks of crude oil. Interestingly, the study showed that most of the price increase could be explained by shifts in the futures market and that higher refinery utilisation rates reduce crude oil prices. Kilian (2009) highlighted the importance of demand growth for the oil price shocks. The results of the author's structural VAR model point out that the oil price increase in 1979/1980 and after 2003 was driven by positive global demand shocks and that disruptions of crude oil production played a less important role. More comprehensive studies of the third oil price crisis include reports by the Interagency Task Force on Commodity Markets (2008), the UK Cabinet Office (2008) and HM Treasury (2008), which stressed the increase in the demand for oil as a cause for the price surge. Hamilton (2009) concluded that scarcity rent was an important permanent factor during the price increase up to 2008.

In contrast to these studies, there have been only few attempts to compare the three oil price increases (International Monetary Fund, 2008b; Stevens, 2008; Radetzki, 2006). Stevens (2008) noted important similarities such as demand subsidies and the important role of high demand and differences such as the more limited substitution potential for crude oil in the 21st century compared with the 1970s. Radetzki (2006) studied the interrelations between the oil price, worldwide economic growth and inflation during the first oil price crises and the price increase since 2003. He noted that the growth of GDP accelerated strongly in the periods just preceding the beginning of the commodity booms, but that there is little support for any assertion of inflation as a trigger to booming commodity prices.

3. Historical context of the first two oil price crises

The first oil price crisis began on October 17, 1973, and was a result of the ongoing Yom Kippur War. Arab OPEC members plus Egypt and Syria announced a monthly 5% reduction of oil production and an oil ban on nations that supported Israel during the conflict. This embargo, which affected America, Japan and parts of Europe, was lifted 5 months after its implementation.

The effect on the oil price was immediately visible. From September 1973 to January 1974, the oil price quadrupled in nominal terms from US-\$ 2.59 to 11.65 per barrel. As a

consequence, the world economy passed through the hitherto worst recession in post-war history. Furthermore, strategic reserves were established in OECD-countries, while energy efficiency and alternative energy sources, including nuclear power, moved into the focus of public interest.

The second oil price crisis emerged in Iran. Beginning in 1978, the Iranian Revolution forced the Shah to leave the country and transformed Iran into an Islamic republic. Amid countrywide protests and strikes, Iranian oil production dropped from about 6 million barrels per day (mb/d) at the end of 1978, representing 10% of world crude oil production, to less than 1 mb/d by October 1980. Thus, about 5 mb/d were withdrawn from the market. As a response to the drop in Iranian production Saudi Arabia, Iraq, Nigeria and Kuwait increased their production, thereby mitigating the full effect of the production halt. Similar to other OPEC countries, Iranian oil production never recovered to levels seen in the 1970s.

In total, world oil production decreased by 4%, due to the situation in Iran and the following Iraq–Iran war, causing the oil price to almost triple by the beginning of 1981. This demonstrates the very low elasticity of oil demand in the short-run of between -0.02 and -0.09 for OECD-countries (Cooper, 2003).

4. Oil price influencing factors

This section takes a closer look at the circumstances surrounding the three oil price surges. Starting with the fundamentals of demand and supply it then turns to the subjects of infrastructure, geopolitics and the financial side of oil trading.

4.1. Demand

All three oil price surges were preceded by a high annual global economic growth of 4% or more (Fig. 2). In the same manner, the first two crises were followed by a global recession and the latest oil price crisis has led to an even deeper global recession, highlighting the strong influence of oil price developments on the whole economy (Hamilton, 1983). However, the recent global recession was not only caused by the oil price increase, but is also a consequence of the crisis on the housing market and the evolving financial crisis.

Prior to the first and second oil crises, high economic growth rates translated into a very strong annual oil demand growth of 8% and 4%, respectively. The interaction between world gross domestic product (GDP) development and the oil market could also be observed in the recent economic slowdown and the resulting fall of oil prices. In 2008, the weakening economic activity led to a slightly declining world oil demand of 85.8 mb/d

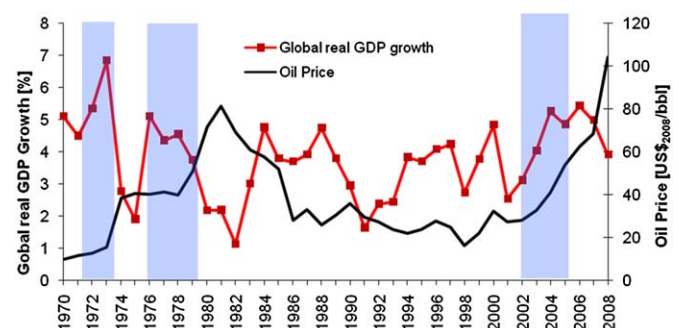


Fig. 2. Annual world gross domestic product (GDP) growth compared with annual real oil price (Energy Information Administration, 2009; International Monetary Fund, 2000, 2008c).

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