Past oil price shocks:

Political background and economic impact

Evidence from three cases

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Key considerations

- The last two oil price shocks in 1974 and 1979, as well as the sharp price increase at the beginning of the 1990s, were not really rooted in a narrow economic sense of supply and demand, but to a larger extent in security-related political developments.
- The first oil crisis was triggered by the Yom-Kippur War, the second by the revolution in Iran and the war with neighboring Iraq, and the third oil price peak examined was triggered by the annexation of Kuwait and the Gulf War.
- These led to pressure on supply, market mechanisms, and to a certain extent psychological factors that influenced oil price developments.
- The outcome was similar, depending on the size of the price increase and its duration: declining GDP, increasing inflation and rising unemployment, not to mention budgetary effects.
- Oil price developments since 2003 have spurred a discussion about a "new oil crisis", which would be different from previous crises, because it would not be supply-driven, but mainly demand-driven, especially by China and India.
- This rising demand has in turn impacted upon supply and market mechanisms, with rising prices as one of the results.
- Demand from these two countries has indeed significantly increased and has largely contributed to the high prices. Psychological factors have also played a key role.
- Political developments over the last three years, for example the situation in Iraq and terrorist attacks in Saudi Arabia, have also influenced the increase in prices.
- Other issues include the tensions in Nigeria, which is the largest oil producer in Africa, and tensions between the USA and Venezuela, which provides about 15 % of US oil imports.
- The ongoing political crisis with Iran, which has very openly threatened to use the "oil weapon", drawing parallels with the first and second oil price shocks, will remain of high concern.
- In the medium- and long-term it is likely that political developments in the strategically-important Middle East could trigger a new oil crisis. German and European foreign and economic policy-makers would be wisely advised to take action in order to prepare themselves for this scenario.

1. Introduction and basic assumptions

1.1 Purpose of this research paper

The topic of this paper is to examine the basic relationship between oil price developments and economic crises. The research will be conducted on the basis of three significant past events which had deep economic impact: the OPEC oil embargo (also known as the "first oil price shock"), the Islamic revolution in Iran ("second oil price shock") and the oil price developments before and after the Gulf War of 1991.

Several central questions will be addressed in this research paper:

- How were the three crises characterized?
- What were the economic repercussions?
- Do the results matter for future developments?

The first part of the paper will provide a basic introduction to the issue. It contains an outline and the theoretical framework of this paper. Furthermore, general implications about the importance of the oil price as a determining factor for macroeconomic developments will be given here. An overview of the "big picture" in terms of past oil demand, supply and prices as well as global economic developments in the long term conclude this chapter.

The second part deals with the impact of the OPEC oil embargo of 1973, which resulted in a severe economic crisis also known as the "first oil price shock". The global economic environment in which this crisis occurred will be examined, as well as the political background which triggered this development. The consequences for both oil price and demand and supply, as well as the economic impact on worldwide growth and other measurable factors will be examined.

The third part provides an analysis of the impact of the Islamic Revolution of 1979 in Iran, which, as a political trigger, led to skyrocketing oil prices with tremendous consequences. The overall political and economic development in which this critical event took place as well as the impact on the world economy are the main points of this chapter.

The fourth part offers an investigation of the impact of the Gulf War of 1991 on the worldwide economy. As before, the overall environment prior to the event will be examined as well as the developments during and after the event.

The fifth part provides a conclusion and answers the question as to what all three cases have in common, what differences exist and what future scenarios could be.

1.2 Theoretical framework and the importance of oil for the economy

Rising oil prices influence economic developments in many ways. Usually, for industrialized and oil-importing countries, they bring with them slower economic growth due to higher corporate energy costs, which results in sinking revenues and shrinking profit margins. Decreasing tax revenues are one of the outcomes. This is again, in some cases, compensated by new government loans that in turn increase the budget deficit.

But one of the main influencing factors is increasing inflation, which again can hinder economic growth. Strong inflation puts pressure on real wages to increase, which, in combination with reduced demand and sinking consumer and business confidence, can lead to higher unemployment in the short term. Due to high oil prices, non-oil demand decreases. By nature, the trade balance between countries is also affected when prices rise. Non-industrialized countries are probably more affected by price increases than industrialized economies.

Research suggests that the size of the described impact depends on the size of the price increase:

"These effects are greater the more sudden and the more pronounced the price increase and are magnified by the impact of higher prices on consumer and business confidence".¹

Very often, the economic outcome depends on government policy responses on how to deal with the issue. Sound policy cannot eliminate the impact, but can at least minimize it. The overall mechanisms of how oil prices drive economic developments are commonly agreed upon. What is still unclear is the magnitude of these effects:

"Quantitative estimates of the overall macroeconomic damage caused by past oil price shocks and the gains from the 1986 price collapse to the oil-importing countries vary substantially. This is partly due to the differences in the models used to examine the issue."²

Among researchers, there is also some discussion about the overall relationship between oil prices and economic growth. Some authors have suggested that the relation between oil price and growth is non-linear.³

When examining the economic impact of previous oil crisis, the terms have to be defined first. In this paper, an oil crisis is defined as a sudden and significant rise in oil prices that can be caused by a disruption in oil supply or a strong increase in demand. An economic crisis is defined as a significant decrease in economic growth, which often comes with rising inflation and rising budget deficits as well as debt burden and rising

¹ IEA: Analysis of the Impact of High Oil Prices on the Global Economy, May 2004, www.iea.org

² Ebd.

³ "Nevertheless, the suggestion that oil price shocks contribute directly to economic downturns remains controversial, in part because the correlation between oil prices and economic activity appears to be much weaker in data obtained since 1985 (see Hooker, 1996)." In: Hamilton, James D.: What is an Oil Shock?, In: Journal of Econometrics, No. 113 (2003)

unemployment. The short-term timeframe is defined as a period of up to three years, the medium-term up to ten years and the long-term exceeding ten years.

1.3 The big picture: supply, demand and prices in the long term

When examining the effects of previous oil crises on the economy, it is essential to take a closer look at the long-term developments of worldwide oil supply, demand and prices. The supply of oil is one of the determining factors in this issue. Firstly, because oil is a resource which is only available in limited amounts, secondly because of its geographical distribution.

Roughly 63 % of all worldwide oil reserves are concentrated in the Middle East. Therefore, this region is of essential strategic importance for the oil supply of industrialized western countries.

The biggest oil reserves:

- Saudi Arabia 22.3 % •
- 11.2 % Iran •
- Iraq 9.8 % •
- Kuwait 8.6 %
- United Arab Emirates 8.3 %

Further important reserves are held by Venezuela (6.6 %) and Russia (5.9 %). In Libya (3.3 %) and Nigeria (3 %) there are also significant oil reserves. Different calculations regarding the statistical range of these resources reach from 9 to 88 years, depending on the region. While the demand for energy will rise further, the available reserves are limited. Despite new explorations in the oil sector, the discovery of new oil fields and significant technical improvements, there is a decrease in these resources.

The demand for oil has been rising significantly in recent years. According to information from the German Federal Ministry for Economics and Technology, demand for primary energy resources rose by 22.6 % between 1990 and 2003. In some regions there were stronger increases than in others. Demand in Asia rose by 64.6 %, in North America by 19.4 % and in Europe by 13.4 %.

Worldwide energy demand by region in 2003:⁴

- Asia (including Middle East): 37.32 %
- North America: 25.53 %
- Europe: 18.37 % 9.09 % Former Soviet Union:
- Africa: 5.28 %
- South America: 4.38 %

The biggest consumer countries in 2003 were the United States (95.5 Exajoule, EJ) and China (59.7 EJ), followed far behind by the States of the former Soviet Union (40.3 EJ), India (23.2 EJ) and Japan (21.7 EJ).⁵

⁴ Bundesministerium für Wirtschaft und Technologie: Energiedaten - Nationale und internationale Entwicklung, 16.12.2005

⁵ Ebd.

Refinery acquisition costs for US-imported crude oil (measured in current US dollars) have increased significantly since the very early 1970s from \$3 to around \$70 in May 2006. Taking a closer look at the price development, it is very obvious that this was not a linear, but a phase-based development.

In nominal terms, the price per barrel was below \$5 until October 1973. After the "first oil shock" in 1973/74, the price rose to \$12-\$15. The next peak of \$39 was reached after the "second oil shock" in 1981. After a return to lower levels ranging from \$12 to \$18, the price again doubled to \$33 for a short period of time before the 1991 Gulf War.

In the 1990s, the price fluctuated below \$20 and reached its lowest point of \$10 in 1999 as a result of the financial crises in Asia. After this phase, the price strongly increased again and, after an interruption in 2001, reached a level of \$70 in June 2006.

The potential impact can be calculated when looking at the price development in constant US dollars. Following this approach, the oil price peaked at around \$80 at the end of the 70s and beginning of the 80s. After a sharp decline in between and a period of extremely cheap oil, the price climbed seven times higher and reached an "all-time-high" – even higher than the level of the second oil price shock measured in real terms. These price developments over the last 30 years had deep impacts on economic growth, which will be examined in the next chapters.

2. The OPEC Oil Embargo of 1973

2.1 The economic and political environment in the early 70s

The economic situation at the beginning 1970s was characterized by different factors. The world economy grew by around 5 % on average from the end of the 60s to the beginning of the 70s. Growth rates rose from 3.7 % (1966) to 6.9 % in 1972. World trade measured in worldwide exports of merchandise increased by approximately 10 % per year and fluctuated from 5.7 % (1967) to 12.1 % (1973).⁶

In the United States, the situation was similar. After weak growth in 1970, US GDP grew by more than 5 % in 1972 and 1973, with an inflation rate at a similar level.

One factor of major importance in this context is the fact that the US had very weak GDP growth in 1970 while at the same time prices were rising significantly. Politically, the early 70s were characterized by several significant developments. The Cold War between the East and the West was the major political factor shaping the environment. The increasing dominance of communist regimes in parts of the world resulted in tensions between the two power blocks, which again led the US to become strongly engaged in several regions in the world, especially in Asia. At that period of time, the USA was still engaged in the war in Vietnam, which ended in 1973 after more than 10 years.

⁶ WTO World Trade Report 2005, www.wto.org

Another unstable region was the Middle East. Aside from social and unstable political conditions in many countries, the Arab-Israeli conflict had deep political impact on the development of the whole region.

After the formation of the state of Israel, following a UN Resolution after the Second World War on the territory of the British colony Palestine, the Palestinians and neighboring countries responded with political and violent resistance. Many of the neighbors demanded the destruction of the Israeli state, with Israel facing a real threat to its existence. Since its founding in 1948, the State of Israel has encountered several violent conflicts with its neighbors.⁷ The fourth war in this context, which not only had an impact on the region but also economic impact worldwide, started in October 1973, when Egypt and Syria attacked Israel on the most important day of Jewish celebrations, Yom Kippur.

Both wanted to get back the territory that they had lost in the Six-Day War in 1967. The war started on October 6 with a surprise attack and had not been anticipated. While the aggressors had the upper hand in the first 48 hours, the Israeli Armed Forces were able to stop the attack. On October 22, in Resolution 338, the UN Security Council called all parties for an end to hostile activities. When the cease-fire came into force, the Syrian Armed forces on the North front were already defeated and the 3rd Egypt Army was almost completely destroyed.

Apart from Israel, Egypt and Syria, other countries also participated in the war, either actively or passively. These countries included Iraq, Saudi-Arabia, Kuwait, Algeria, Tunisia, Sudan, Morocco, Lebanon, Jordan and Libya.

2.2 The OPEC oil embargo and its impacts on the oil price

The Yom Kippur War was the trigger for the OPEC Oil Embargo in 1973. OPEC countries decided to cut off the oil supply as long as the territory occupied by Israel was not "free" and the rights of the Palestinian people were not "re-established". Ten days after the outbreak of the war, the "Gulf Six" (Iran, Iraq, Abu Dhabi, Kuwait, SAU and Qatar) lifted the price for the Saudi Light Blend by 17 % from \$3.12 to \$3.65 per barrel and also announced cuts in production.

One day later, OPEC ministers agreed to use the dependency of industrialized Western countries from oil supply as a "weapon" and to exert pressure against "unfriendly states" by raising prices, cutting off exports and imposing embargoes.

The first country that was embargoed by Saudi Arabia, Libya and other Arab countries, was the United States on October 19 because of its political and military support for Israel (especially through the delivery of military equipment and arms, which played a key role in Israel's wars against neighboring countries). The second country to be

⁷ After the Independence War in 1948, where Israel was attacked by Egypt, Syria, Lebanon, Jordan, Saudi Arabia and Iraq, which rejected the plans of the United Nations for the establishment of a new Israeli state in the Region, the second armed conflict was against Egypt in the Suez Crisis in 1956. The third conflict was the Six-Day War in 1967 between Israel and its Neighbors Egypt, Jordan and Syria, which started with an Israeli "pre-emptive strike" after war preparations by its enemies and ended with a victory for Israel and with the occupation of the Gaza Strip, the Sinai Peninsula, the Golan Heights and Western Jordan.

embargoed was the Netherlands for its support of the US by providing facilities for the air force for supply flights to Israel.

On November 5, Arab Oil Ministers announced a cut in production of 25 % below the September level. The embargo was also extended to Portugal, Rhodesia and South Africa. The next significant price increase in this oil crisis occurred after a meeting of the OPEC Gulf Six in December 1973, where they decided to raise the price from \$5.12 per barrel to \$11.65.

In spite of the rising prices, and since the USA not only imported oil but also had its own significant reserves, US President Nixon signed the "Emergency Petroleum Allocation Act" as a countermeasure, which allowed the Government to control petroleum production, price, allocation and marketing.

In order to cope with the enormous oil price increases and their economic impact, the United States held an energy conference in Washington in February 1974, which was attended by 13 industrial and oil-producing countries. After a common agreement, the Arab oil ministers in March announced the end of the embargo against the United States (excluding Libya) and in June and July the embargoes against all the other states were lifted. There are indications that the United States would have considered military action if this oil embargo had persisted.

The cuts in overall oil production amounted to about 7 % during this first oil price shock. The former level was reached in May 1974. The cuts in Arab oil-exporting countries were much higher and reached up to 25 % in November 1973. Considering the important role of this particular region as an oil supplier, the impact on the price was tremendous.

The price of oil (measured in US refinery acquisition costs) rose significantly during this first oil price shock from \$2.59 in 1973 to \$13.06 in June 1974. This was an increase of more than 500 % within 7 months. This price remained stable at a level ranging from 13 to 15 US dollars until 1979. Measured in constant dollars, the increase in the oil price was only slightly smaller (from \$8.80 in October 1973 to \$41.60 in June 1974, an increase of more than 470 %).

2.3 Short and long-term impact on the world economy?

When looking at the development of the world economy, this critical event had a serious impact on the development of worldwide growth rates, international trade and foreign direct investment in particular.

Worldwide growth suffered a severe blow during this first oil price shock. While the world economy still grew by 6.9 % in 1973, the growth rate fell to 2.1 % in 1974 and to 1.4 % in 1975. It was only in the third year after the oil embargo that the world economy returned to its normal rate of growth.

Worldwide trade also suffered significantly. After growth rates of 12 % in 1973, growth was negative in the following two years at -5.4 % (1974) and -7.3 % (1975). Another important factor which changed significantly after the crisis was the flow of foreign direct investments (FDI). Worldwide FDI has grown steadily over the last 40 years, only with few interruptions. One interruption was the oil crisis where the annual flow was negative compared to the previous year. While the annual FDI growth reached

40 % in 1973, the rate fell nearly by half in 1974. In 1976, there was a major slump of - 21 % compared to the previous year.

Summing up, the economic effects on the overall world economy were marked by shrinking growth rates, decreasing international trade and falling foreign direct investment.

While this is an aggregated analysis of the world economy, it is important to take a closer look at developments in individual countries. The impact on the US economy was tremendous. US GDP growth fell from more than 5.7 % in 1973 to -0.5 % and -0.19 % in 1974 and 1975. In the following year, 1976, the economy returned to its previous growth level. This development impacted upon the unemployment rate, which rose from 4.9 % in 1973, peaking at approx. 8.5 % in 1975. In terms of the number of unemployed people, this was an increase of more than 80 %.

Another significant development was inflation, which more than tripled from 1972 to 1974 from 3.3 % to11.1 % (and actually nearly doubled from 1973 to 1974). Inflation only dropped in 1976.

This oil crisis was rooted mainly in a supply cut and was followed by skyrocketing prices. The economic impact seems to have been short-term – at least in terms of GDP growth and inflation, which returned to previous levels in 1976/77. Nevertheless, unemployment remained high. Long-term effects were also caused by increasing budget deficits and the higher debt burden of the affected countries.

3. The Islamic Revolution in Iran 1979

3.1 The economic and political environment in the late 70s

The overall economic situation in the mid-seventies was still clearly determined by the aftershocks of the first oil price shock. The world economy and international trade had just recovered from the slump and grew both by roughly 4.7 % in 1978. The US economy also seemed to have recovered and increased by about 5 % p.a. from 1976 to 1978. The unemployment rate was at 6 % after having been at more than 8 %, and US consumer prices were at 7.6 % after 11.1 % during the first oil price shock.

The political environment was still characterized by continuing tensions in the Middle East. In Iran, which holds one of the most important energy reserves in the world, the political situation began to deteriorate particularly significantly.

Overall, the political environment of this "second oil crisis" was determined by three major factors: the fall of the Shah Regime in Iran and the Islamic Revolution in 1979, which led to the formation of an Islamic state under revolution leader Ayatollah Khomenei. The second factor was the Iranian hostage crises from 1979 until 1981 and the third was the war between Iran and Iraq from 1980 to 1988.

Political opposition in Iran, which was ruled by a monarchy under Shah Reza Pahlavi, gained more and more ground among the population in the 1970s, especially due to the difficult social conditions and the repressive system. One of the main opposition leaders, Khomenei, was in exile in Paris at that time. In spite of great dissatisfaction and

the threat of social crises, the opposition demanded the end of the Shah Regime and the establishment of an Islamic state.

This lead to demonstrations in Iran followed by heavy riots and labor strikes in the oil sector, which was of high importance for the economy of the country. Martial law was imposed in 1978. Due to the increasing pressure, the regime was forced to make concessions to the Islamic opposition party. At that time, the existing system had already collapsed. On January 16, 1979, the Shah left the country in exile and died one year later. Ayatollah Khomenei became "Supreme leader" of Iran.

3.2 The consequences of the revolution for oil supply, demand and price

The oil price dropped below \$15 in December 1978, shortly before the Shah was deposed. After the Islamic Revolution in January 1979, the price skyrocketed to \$30 within 1 year, which was an increase of 100 % within 12 months. One major reason was a disruption in supply. Due to labor strikes and the overall political situation, the oil supply from Iran nearly came to a halt at the end of 1978. The aggregated production of Arab oil-exporting countries fell by 15 % from September 1978 to January 1979. World oil production suffered a cut of about 5 %.

Not only the revolution itself and the fear that this could affect oil supply influenced the price on the world markets; further political developments also had an impact. In November 1979, revolution leader Khomenei called the people to demonstrate against the USA. During this demonstration, 500 revolutionists seized the US embassy in Teheran. The embassy staff was captured and 66 Americans were held as hostages.⁸ Iran demanded several measures for the release of the hostages, e.g. the extradition of the Shah from the USA to Iran and an apology from the USA for its policy towards the country. A secret USA military mission in April 1980 to evacuate the hostages failed. The hostage crisis ended with the release of all hostages in January 1981.

Meanwhile, in September 1980, neighboring Iraq attacked the country. The main reason was the struggle for dominance in the region between the two oil-rich countries. Khomenei threatened to expand the idea of pan-Islamism across the Middle East; on the other side Saddam Hussein wanted to gain influence in the region. One major point in the war was the use of the river Shatt el Arab, which had strategic importance as a waterway for the oil exports of Iran and Iraq.

The war had an impact on the oil supply of both countries - the aggregated oil supply of the Arab oil-exporting countries fell in September 1980 by 35 % compared to the previous year. World oil production shrank by 12 % over the same period. During these developments, the oil price reached its peak of \$39 per barrel in February 1981. This was 160 % above the level prior to the revolution in Iran. It took until May 1983 for the price to fall significantly under \$30 per barrel.

While the price increase in current US dollars was already significant, calculated in constant US dollars, the peak of \$39 in February 1981 is equivalent to the amount of \$73.98 constant US dollars in 2005. Given current price developments, this means that the price level of the second oil price shock has already been exceeded.

⁸ In spite of the new Iran's anti-US policy, two days before, the US stopped its oil imports from Iran, expelled several Iranian citizens from the USA and froze some 8 billion \$US of Iranian assets in the USA..

3.3 Short and long term impact on the world economy?

The impact on the world economy was different. Worldwide economic growth slightly decreased from 4.7 % in 1978 to 4 % in 1979 and reached its lowest point in 1982 at 0.8 %. It was only two years later that GDP growth reached 4.6 % again. International trade showed greater fluctuation, falling from 5.2 % to -3.1 % in 1982 and jumping to 8.1 % in 1984. Worldwide FDI flows, which grew by more than 25 % in the mid-seventies and until 1980, fell by 15 % in 1981 and 13.5 % in 1982.

The developments had a strong impact on the United States' GDP. GDP growth fell by 0.23 % in 1980 after having been at 3.1 % and 5.5 % in the previous years. A similar development could be observed in US private consumption, as a major pillar of the US economy. Private consumption dropped by 0.28 % in 1980 after growth rates of between 2 % and 4 % previously. Unemployment in the US rose from 5.8 % in 1979 to 7.6 % in 1981 and reached its peak at 9.7 % in 1982. Inflation skyrocketed from 7.6 % in 1978 to 13.5 % in 1980.

Although the impact was significant in terms of worldwide and US economic developments, this supply- and price-driven oil shock had only short term repercussions, at least when looking at growth rates after 1982, which skyrocketed from -2 % to 4.5 % and 7 % in the following years. At the same time, inflation could be reduced to 3.5 % - 4 %. Nevertheless, unemployment in the USA remained on a high level.

4. The Gulf War of 1991

4.1 The economic and political environment before the Gulf War

In the late 1980s, the worldwide economic environment was shaped by economic growth rates of around 4 % per year and international trade of roughly 6.4 % in terms of volume in 1989. Worldwide FDI increased steadily in this period.

The economic conditions in the United States were no different. While in 1988 and 1989 the economic growth rate reached 3.5 % - 4 %, consumer prices rose to 4.8 % in 1989. Unemployment, which was at a high level of more than 9.6 % in 1983, dropped to a level of 5.2 % in 1989.

The political conditions in this period and at the beginning of the 90s were clearly characterized by three essential factors: the fall of the Berlin Wall in 1989, which led to the end of the Cold War between the East and the West, the transformation process of numerous socialist states in Central Europe to democracies, and the disintegration of the former Soviet Union. These developments had deep political and economic implications. Another main factor at the beginning of the 1990s was the Iraqi invasion in Kuwait in August 1990. This violent occupation had several causes. While Saddam Hussein claimed that Kuwait had always been a part of Iraq and one of the country's provinces, the real reasons were manifold.

- Oil stocks in the Kuwaiti-Iraqi border region, claimed by both nations (Iraq accused Kuwait of oil "theft").
- Weak economic conditions in Iraq, which suffered from a high financial burden following the long and costly war with neighboring Iran
- Strategic reasons⁹.

The invasion and the ensuing war had a major impact on price developments, which are to be examined in the next chapter.

4.2 Developments in oil supply, demand and price

When Iraq invaded Kuwait on August 2, 1990, the markets reacted with panic, fearing that the oil supply from Iraq or Kuwait could be threatened and that there would be an oil shortage. Furthermore, with the USA announcing that it would not tolerate this act, the fear of a war in the Gulf region impacted upon prices. And finally, given that more than 60 % of the world oil reserves are concentrated in this region, the fear of a major armed conflict affecting Iraq's neighbor Saudi Arabia, which alone holds more than 20 % reserves, had its effect.

The oil price thus skyrocketed from \$16.54 per barrel in July 1990 to \$32.88 in October, an increase of 100 % within just two months. Oil speculations on the markets also had their effect.

While the annexation of Kuwait and the Gulf War led to a short-time price peak, the oil supply was also affected. In August 1990, the oil supply from Arab countries fell by 25 %, mainly driven by the dropout of Kuwait as a supplier, and possibly also due to the trade embargo that was imposed against Iraq. While world production levels were able to offset this by November 1990, oil production of the Arab countries recovered to a level that was slightly under the July 1990 mark.

While monthly petroleum consumption in the US during this period seemed to be unaffected, petroleum consumption in the European OECD countries dropped only slightly until September. Seasonal factors have to be taken into consideration here.

Meanwhile, a UN coalition, led by the United States, prepared a major military operation to free Kuwait and to restore the situation. Aside from the first cause mentioned, strategic implications and the fear of a loss of the power equilibrium in the Gulf region were also factors which influenced developments.

Operation "Desert Storm" began in January 1991. With overwhelming firepower and technological superiority, the US-led coalition forces were able to restore the situation and defeat Iraqi military forces. The war ended on February 28, 1991. The price returned to the pre-war level as fast as it had risen. In April 1991, the price reached \$18.32, only slightly higher than before the war.

⁹ Iraq did not have sufficient access to its own deepwater shipping ports to export its own oil. Harbors in the Iraqi coastal region were mostly unsuitable for oil tankers. The only possibility was to pump the oil through neighboring countries by pipelines, which was in turn costly. Access to Kuwaiti infrastructure might therefore also have played a role in the decision to invade Kuwait.

4.3 Short and long-term impact on the world economy?

Worldwide GDP growth dropped in the year of the war from 2.5 % to 0.8 % in 1991. It remained low and only recovered to 2.2 % in 1994. Worldwide merchandise exports remained stable at an annual growth rate of around 4 %.

In the United States, GDP in 1991 shrank by 0.17 % after a 1.9 % increase in 1990. One year later, the US economy returned to growth rates of around 3 %. Private consumption in the US showed a similar development. At the same time, the inflation rate, which was at 5.4 % before the war, shrank slightly to 3 % until 1992. The unemployment rate rose from 5.6 % in 1990 to 7.5 % in 1992. FDI inflows were negative from 1990 to 1992.

The effects can be assessed in the short term. The US had a slightly lower growth level than before. Unemployment remained a concern.

5. Conclusions: another oil price shock ahead?

When looking at the three past crises and their consequences, and assessing their causes, several parallel points can be observed.

• What all three crises have in common is that they are not really rooted in economics in a narrow sense of supply and demand, but to a larger extent in politics. The first oil crisis was triggered by the Yom-Kippur War, the second by the revolution in Iran and the war with neighboring Iraq, and the third oil price peak examined was triggered by the annexation of Kuwait and the Gulf War.

These led to pressure on supply, market mechanisms and to a certain extent psychological factors that influenced the oil price.

The outcome was also similar, depending on the size of the price increase and its duration: declining GDP, increasing inflation and rising unemployment, not to mention budgetary effects. These effects are complex but apparently of short duration, at least in most cases. It has to be mentioned that this does not necessarily imply an assessment about the magnitude of the effects (especially when it comes to budgetary effects, which can have mid- to long-term implications).

Oil price developments since 2003 have spurred a discussion about a "new oil crisis", which would be different from previous crises, because it would not be supply-driven, but mainly demand-driven, especially by China and India. Demand from these two countries has indeed significantly increased and has largely contributed to the high prices. When taking a closer look at the oil-price developments since 2003, however, it becomes obvious that other factors also led to this strong price increase.

Since the price of oil is not only driven by supply and demand, but to a large extent by psychological factors, it is clear that good or bad news about the 'hot spots' mentioned below influenced the market.¹⁰

Political developments which also had major impact on the price over the last three years were for example the 2003 war in Iraq, which was followed by instability, increasing terrorism and attacks on oil infrastructure as well as terror activities in Saudi Arabia (Khobar) which targeted the oil industry of the world's biggest oil supplier. In a region where the world's main oil reserves are concentrated, and in conjunction with the declared strategy of the terror organization Al-Qaida to target oil infrastructure in the global jihad, these developments also undoubtedly impacted upon the market. Other issues included the tensions in Nigeria, at present the largest oil producer in Africa and which suffered from attacks on its oil installations by rebel groups, as well as tensions between the USA and Venezuela, which provides about 15 % of US oil imports and was threatening to cut them off.

The latest issue is the crisis with Iran about its nuclear program. It is unclear how this complex issue will be solved. Iranian leaders have very openly threatened to use the "oil weapon" in the event of any action against the country, drawing parallels with the first and second oil price shocks.

In light of the above-mentioned factors, in the medium to long term, it is more likely than not that political developments in or in connection with one or more oil supplier countries, especially in the strategically-important Middle East, could lead to a new politically-triggered oil crisis.



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¹⁰ Some financial analysts warn that the current oil price of \$70 is overvalued. A decline in worldwide economic growth (which is likely for many reasons) would lead to lower demand and in turn to a significantly lower oil price than today. This seems possible in the short term. In the long run, however, the price will rise because resources are limited and demand will increase, despite improving technology for more efficient exploration and use of energy.

diagram 1: oil price in terms of US refiner acquisition costs, 1970-2006



US refiner acquisition costs of imported crude oil





Data: WTO World Trade Report 2005

diagram 3: foreign direct investment worldwide 1970 - 2004



Data: United Nations Conference on Trade and Development, UNCTAD

Diagram 4: US GDP and inflation 1971 - 2005



US GDP and Inflation 1971 - 2005

Data: US Bureau of Economic Analysis, Econstats





US Private Consumption and Unemployment

Data: US Bureau of Economic Analysis, Econstats