INTERNATIONAL ENERGY FORUM

TWENTY YEARS OF PRODUCER – CONSUMER DIALOGUE IN A CHANGING WORLD

Bassam Fattouh and Coby van der Linde

The International Energy Forum

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From its humble beginnings in Paris in 1991 the global producer – consumer dialogue on energy has developed through the International Energy Forum (IEF) so that it is now the world's largest gathering of Energy Ministers. IEF Countries account for more than 90% of global oil and gas supply and demand. In addition to IEA and OPEC countries, transit states and key energy players, including Brazil, China, India, Mexico, Russia and South Africa, participate in the Forum.

The magnitude and diversity of this engagement is a testament to the IEF's position as a neutral facilitator. Through the Forum and its associated events, IEF Ministers, their officials, energy industry executives, and other experts engage in a dialogue of increasing importance to global energy security. The twists, turns and developments of the 20 year history of the dialogue are documented here in this commemorative publication co-authored by Bassam Fattouh and Coby van der Linde.

The content of this book is the full responsibility of the authors. They do not necessarily reflect the views of the International Energy Forum, the Oxford Institute for Energy Studies, the Clingendael International Energy Programme or any of their members.

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CHRONOLOGY

YEAR	EVENT	HOST	CO-HOST
2012	**IEF13** - 13th International Energy Forum & 5th International Energy Business Forum	Kuwait	Algeria & Netherlands
2010	**IEF12** - 12th International Energy Forum & 4th International Energy Business Forum	Mexico	Germany & Kuwait
2008	**IEF11** - 11th International Energy Forum & 3rd International Energy Business Forum	Italy	India & Mexico
2006	**IEF10** - 10th International Energy Forum & 2nd International Energy Business Forum	Qatar	China & Italy
2004	**IEF9** - 9th International Energy Forum & 1st International Energy Business Forum	Netherlands	Iran & Norway
2002	**IEF8** - 8th International Energy Forum	Japan	Italy & UAE
2000	**IEF7** - 7th International Energy Forum	Saudi Arabia	Japan & Netherlands
1998	**IEF6** - 6th International Energy Conference	South Africa	Qatar & UK
1996	**IEF5** - 5th International Energy Conference	India	Brazil & Norway
1995	**IEF4** - 4th International Energy Conference	Venezuela	EC & Russia
1994	**IEF3** - 3rd International Energy Conference	Spain	Algeria & Mexico
1992	**IEF2** - Ministerial Workshop	Norway	Egypt & Italy
1991	**IEF1** - Ministerial Seminar	France	Venezuela

Chapter 1: The Framework of the Producer-Consumer Dialogue

Introduction

The story of oil is many-faceted: from the political to the socio-economic and the cultural. Oil has been an essential element of post-World War II global economic expansion. The growth of trade and the wider distribution of welfare among nations, as well as the growth of international companies in terms of turnover and number of countries in which they have been active, are rooted in the oil trade. Oil creates large economic rents, which are contested between producing and consuming countries, and among the various other players active in parts of the value chain, each wanting to capture a share. The sizable economic rents have been a prize deemed worth fighting for, far beyond the normal competition among market players. They have guaranteed persistent involvement by governments everywhere, either as producers or tax collectors. As such, they have made political power formation a steady feature of the international oil business. The mixture of international economics and politics is what makes the oil story such an interesting one. It requires market players and governments to manage various dynamic processes taking place at the same time. Although at times there is conflict, various forms of cooperation have characterised the oil industry from its early beginnings.

During the period from 2002 to 2008, the oil market underwent its longest period to date of sustained price increases, reaching peaks not seen before. This boom, which ended with a spectacular collapse of the oil price towards the end of 2008, captured public and political attention and raised concerns within both major consuming and producing countries about the adverse economic, political and social consequences of such violent price shifts. It has also revived the interest in the producer-consumer dialogue as one of the channels to mitigate the adverse consequences and costs of oil price instability.

The idea of a systematic producer-consumer dialogue is not new, however. It emerged in the 1970s as part of a general reorganisation in the global political and economic order and energy markets, transforming the political and economic structure within individual countries as well as power balances and relations between countries. The dialogue emerged again in the wake of the first Gulf War in the early 1990s, when consumers and producers recognised their joint interest in the stability of the oil market and gained greater awareness of - and sensitivity towards - each others' interests. Since then the dialogue between consumers and producers has evolved to be more all-encompassing and more institutionalised than in its beginnings.

The arrival of new consumers from developing and emerging economies, mainly from Asia, has unleashed new dynamics which have had profound implications for oil market dynamics,

trade flows, energy policies and consumer-consumer, consumer-producer and producer-producer relations. Rapid urbanisation and dramatic improvements in income levels in these countries have resulted in large sections of their populations climbing up the energy ladder and increasing their consumption of modern fuels. The rise of national oil companies (NOCs) within both producing and consuming countries, and particularly their investment policies and asset acquisition strategies, has added a new dimension to producer-consumer relations.

The existing international organisations such as the Organization of Petroleum Exporting Countries (OPEC) and the International Energy Agency (IEA), whose roots can be traced to developments and events in the 1960s and '70s, have not been able to accommodate the increasing importance of the energy interests of these newcomers. For the latter, the producer-consumer dialogue, now known as the International Energy Forum (IEF), has become the main place to address international energy issues.

In this introductory chapter we wish to place the producer-consumer dialogue in a general framework in relation to the energy problem. This framework helps us to explain why, despite the vast changes that have taken place in the way the energy industry is organised, cooperation between countries remains an important feature of modern international energy markets.

The Conditions for the Producer-Consumer Dialogue

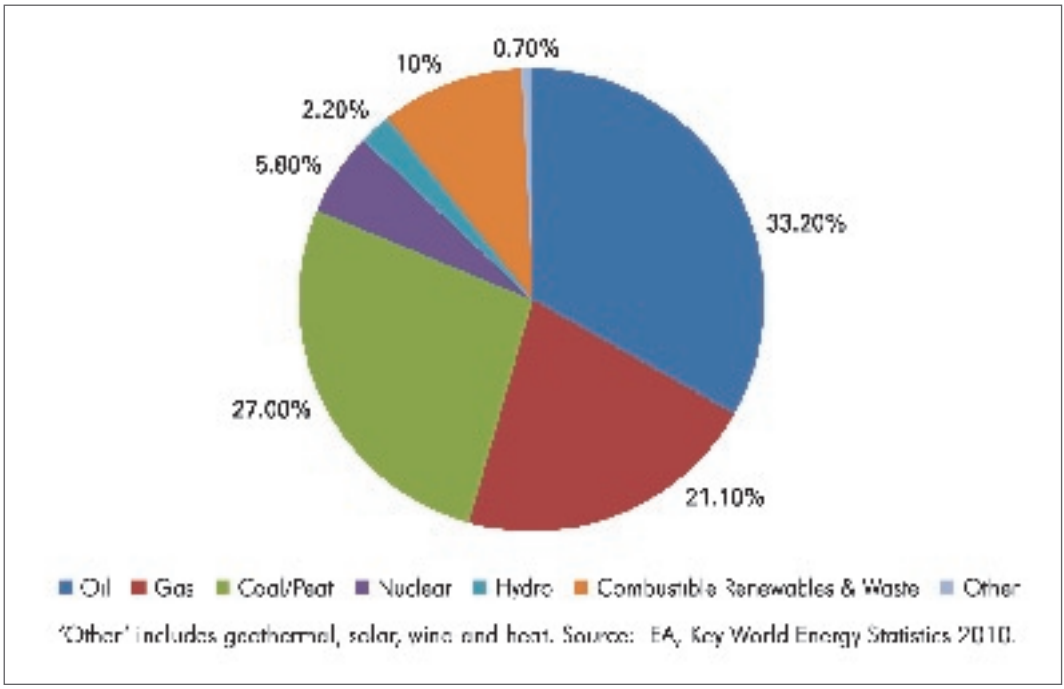
The underlying basis for any dialogue between producers and consumers rests on the following conditions. First, the commodity in question must be of a 'strategic' nature, with both producers and consumers being dependent on it, though the degree of dependency does not always have to be symmetrical. Second, both producers and consumers must recognise that an energy problem exists and that the problem affects both parties, if not in the same way. Third, all parties need to recognise that the energy problem is caused by their own actions and policies as well as those of the other party and that none of the parties can solve the energy problem on its own. In other words, any solution to the energy problem must emphasise the important element of interdependency. Fourth, the belief must exist that because market forces cannot always solve the energy problem and/or deal with all of its consequences in an effective manner, market forces should be supplemented by non-market mechanisms. These should reflect both producer and consumer interests and should therefore be discussed and, if possible, implemented jointly or in coordination. These mechanisms can improve market outcomes and yield benefits to both parties.

If the above conditions are satisfied, both parties may have the incentive to seek cooperation. This cooperation may take one of many forms, ranging from formal and binding multilateral agreements to softer forms of cooperation. The producer-consumer dialogue falls under the latter category. The dialogue is not static but tends to evolve over time depending on many factors, including the perceptions of the severity of the energy problem, the market conditions at the time and the parties' success in building trust and enhancing their understanding of the other party's position throughout the process of the dialogue.

Asymmetries in Dependency on a Strategic Commodity

Despite its relative retreat in the energy mix in the past decade, oil remains the world's main source of primary energy supplies, followed by coal and natural gas (Figure 1.1). This pre-eminent position follows from crude oil's physical characteristics.[1] As a liquid fuel, oil attracts large technical economies of scale in the various stages of production, transport and marketing. In terms of weight and/or volume, oil has the highest energy content of all fuels, including gas and coal. Crude oil is also a global commodity *par excellence*. Crude oil and refined products are the most widely traded physical commodities, in terms of both volume and value.[2] The transport and aviation sectors, the lifelines of any modern economy, are still almost totally reliant on refined products from crude oil; no other fuels have been able to make any significant progress.

Figure 1.1: Fuel Shares of the World's Total Primary Energy Supply (2008)



Given its dominant position in the global economy, consumers consider oil to be a strategic commodity. This is clearly reflected in the various policies and initiatives implemented around the world. Consuming countries aim to secure oil supplies at affordable prices while at the same time reducing their oil dependency through energy conservation measures, the promotion of renewable sources of energy and alternative fuels, and the building of strategic stocks to counteract supply disruptions. From a producers' perspective, the oil sector is at the heart of domestic economic, political and social developments, as well as of international

[1] Frankel, P. (1946). The Essentials of Petroleum. Chapman & Hall, London.

[2] Stevens, P. (2005). "Oil Markets". *Oxford Review of Economic Policy*, Vol. 21, No. 1, pp. 19-42.

economic and political relations. Despite efforts to diversify their economies away from hydrocarbons, the oil sector remains the engine of economic growth and development in most producing countries. Oil exports generate the bulk of the foreign revenue needed to meet producers' import requirements. They also generate the bulk of the government revenues needed to implement key developmental and social projects and to diversify and industrialise their economies to achieve sustainable and stable economic growth and to create employment opportunities for the hundreds of thousands of workers entering their labour markets each year. Given the dominance of the oil sector in their economies, producers are much more vulnerable to episodes of oil price instability and to protracted declines in oil prices, especially as compared with the more diversified economies in the OECD.

The Energy Problem

The starting point for any dialogue is the recognition that energy relations between producers and consumers and/or unregulated competitive energy markets may raise certain concerns and issues that affect and are of interest to both parties. While these energy issues have many facets, the historical and current evolution of the producer-consumer dialogue has been driven in large part by events in the oil market such as supply disruptions, and price shocks and counter-shocks. Thus, to a large extent, the energy issues that have pushed producers and consumers to pursue cooperation are, in essence, 'oil issues' or 'oil problems', although lately, natural gas has been added to the agenda. So the question then becomes: What are the nature and the main features of the oil problem? Alternatively, what type of challenges do energy relations and the current functioning of the oil market pose for both producers and consumers?

Oil creates large economic rents. The distribution of rents between producers and consumers is a source of tension, as each of the parties tries to maximise its share of the rents through adjusting crude oil prices and taxes on petroleum products or capturing rents in a certain part of the value chain through regulation. Seen from that perspective, the problem of rent distribution becomes a zero-sum game, which leaves little room for cooperation or dialogue between oil producers and consumers.

However, both parties recognise that the dialogue should not be about bargaining about price levels and who should get what from an oil barrel. There is an implicit agreement that these contentious issues are best addressed by the oil market through the usual forces of supply and demand and the market pricing mechanism. Thus, the producer-consumer dialogue is not centred on setting an oil price which is fair and appropriate for both parties or on devising institutional mechanisms to manage the oil price within a narrow band. Instead, the focus of the dialogue has been on exploring ways and mechanisms to enhance and ensure a smooth operation of the oil market through a variety of means. These include improving oil supply and demand responses, ensuring smooth investment flows into the sector, reducing uncertainty by enhancing transparency both in consuming countries' and producers' policies, by enhancing data transparency, and by exchanging information on a regular basis and making sure that through appropriate regulations the oil market is not destabilised through manipulation or speculative financial flows. As discussed below, the oil market has special features which do not always ensure a smooth adjustment process in response to shocks which may impose real costs on both producers and consumers. Since the dialogue

is not centred on bargaining about price levels and rent distribution, producer-consumer cooperation should not be viewed as a zero-sum game but a game in which both parties can achieve potential benefits through cooperation, and in some instances through joint and coordinated initiatives.

Producers and consumers' oil concerns have many inter-related dimensions and have been shaped by some spectacular events in the oil market such as the 1973 and 1979 oil price shocks, the 1986 counter-price shocks, the Gulf crisis of 1990-1991, the collapse of the oil price in 1998-1999 in the aftermath of the Asian financial crisis and, most recently, the 2002-2009 price cycle. While each of these events has its underlying causes and characteristics, it is possible to identify the oil problem or challenge in terms of the following features: supply disruptions and security of supply, the cyclicality of investment and security of demand, episodes of price instability, end-consumer subsidies and the taxation of petroleum products. The climate change challenge adds a further dimension to the oil problem.

Supply Disruptions and Supply Security Concerns

One dimension of the oil problem relates to consuming countries' concerns about the security of oil supplies. At the root of security concerns is the concept of 'oil dependency'. Crude oil reserves are found and extracted in regions other than those in which they are primarily consumed. A small group of countries, predominately in the Middle East and North Africa, are endowed with the bulk of the world's proven conventional oil reserves and are responsible for a large share of global production and international trade in oil. Yet oil consumption is dominated by just a few countries/regions: in 2009 the United States (US), the European Union (EU), Japan, India and China were responsible for around 60% of the world's total oil consumption, with the US alone accounting for 22% of global oil consumption. Although some consuming countries such as the US are also important oil producers, domestic production accounts for part of their consumption and, consequently, these countries have to rely on oil imports to fill the gap. The uneven distribution of crude oil reserves and the fact that delivering refined products to end consumers involves a long supply chain give rise to an industrial structure and infrastructure which extends across the globe and to strong interdependency in energy trade.

Oil dependency, however, is not a sufficient condition as to elicit energy security concerns, particularly not in a world that strives for free trade. Relying on oil imports would not constitute a source of concern if oil were to be guaranteed to flow smoothly from surplus to deficit areas. Thus, in addition to oil dependency, an underlying concern is that oil flows from exporting to importing nations may be subject to disruptions. Such disruptions and dislocations can occur at any segment of the very long oil supply chain, which includes refining, international and local transport, storage and delivery facilities. Disruptions can also be caused by a large number of factors, including technical failures, weather-related events such as hurricanes and storms, labour strikes, terrorist attacks on oil facilities, civil strife in producing countries, wars involving oil exporters, international conflicts between producers and consumers, revolutions and regime changes that restrict the export capability of some producers, and a deliberate action by one or a group of exporters to restrict their oil supplies to certain consuming countries. Disruptions can also arise if lack of investment in certain segments of the oil supply chain results in global oil supply falling short of oil demand.

Although disruptions tend to receive wide media coverage, the impact of disruptions on prices and short- and long-term productive capacity is not uniform. Some disruptions, such as those caused by technical failures, occur often but have limited impact on global oil supplies and on long-term productive capacity. Disruptions such as those caused by natural disasters occur infrequently, but their impact on oil supplies and prices can be significant in the short- to medium term. Some disruptions caused by events such as civil unrest in producing countries or international conflict occur less regularly, but they may have both short-term and long-term effects through their immediate impact on oil supplies and hence on oil prices and productive capacity. It is these latter forms of disruption that raise major security concerns in consuming countries and constitute the main driver behind some of their energy policies.

The Investment Problem and Security of Demand

The dynamics of supply and demand in the oil market may also result in market dislocations, with considerable impact on oil supplies and prices. In the worst possible scenario, global oil supply may fall short of global oil demand due to insufficient investment in new productive capacity. Given the long gestation lags in investments in the oil sector, most of the adjustment occurs through price increases. New oil supplies, the entry of competing fuels, and/or the development of efficiency measures cannot act as immediate adjustment mechanisms.

Adjustment through sharp price changes, however, can impose high costs on both producers and consumers. Declines in oil demand associated with economic slowdowns can resolve investment bottlenecks and may even create spare capacity in the system. Spare capacity and an environment of low oil prices can, in turn, discourage investment in the oil sector. The disincentive to invest then creates the roots of the next oil price shock once oil demand recovers. In other words, the adjustment mechanism in the oil market is far from smooth: the oil market can witness long periods of surplus capacity followed by periods of shortages of capacity relative to demand. Furthermore, these alternating states of the oil market affect investment decisions and, hence, future supply availability and long-term productive capacity.

This feature of cyclicality is common to other industries as well, but there are three special features that distinguish the oil industry from other industries. First, the fact that reserves are unevenly distributed creates an important asymmetry in the oil market. In countries that contain the bulk of proven oil reserves, the decision to extract and develop reserves is in the hands of governments or state actors. This has important implications, as decisions about whether and how much to invest are affected by economic and political factors and by events both inside and outside the oil market. The oil price is one of the various determinants of investment. Others include uncertainty about trends in long-term oil demand, political impediments such as sanctions, civil strife or internal conflicts, the relationship between the owner of the resource and the national oil company responsible for exploiting these reserves, the technical and managerial capability of the national oil company, the degree of access to reserves to foreign investors, and the petroleum regime and the fiscal system that govern the relationship between national and international oil companies. Of these factors, uncertainty about long-term oil demand receives special importance in the producer-consumer dialogue. It is often argued that the policies of consuming governments, both implemented and announced, and either driven by energy security concerns or the climate change agenda, play an important role in inducing uncertainty about long-term trends in oil demand. Thus, in the

face of calls for 'security of supply', producers have coined the concept of 'security of demand'. From a consumers' perspective, the issues of access to reserves and the capability of NOCs in producing countries to efficiently develop their reserves, and to do so in a timely manner to meet future demand, remain paramount.

In recent years, many oil importers, such as China, Korea and India, have also been keen to develop their own NOCs. These NOCs are eager to increase their international investment and acquire overseas assets to secure new sources of oil supply, although a similar attempt by Japan in earlier decades was not so successful. Since they are not driven only by the objective of maximising shareholders' value, as private international oil companies (IOCs) are, they are likely to be flexible in negotiating contracts with NOCs in oil-exporting countries and their governments. Furthermore, these NOCs may benefit from interstate connections and thus gain better access on the basis of a more general agreement between the two states. For instance, it is often argued that the Chinese government's resource diplomacy enabled the country's NOCs to acquire assets all over the globe, particularly in Africa. Part of its success in acquiring assets abroad has been the willingness of Chinese NOCs to undertake large-scale infrastructure projects such as roads, schools and hospitals to facilitate foreign involvement and energy investments. The entry of consumer NOCs adds a new dimension to energy relations, not only between these NOCs and their counterparts in producing countries, but also between consuming countries.

Second, oil projects have long gestation periods and can be subject to delays. These delays do not only occur because of the size of the projects and the large capital outlays involved but can also be due to issues such as access to reserves and the complexity of the negotiations between international oil companies, national oil companies and the owner of reserves in both the pre- and post-investment stages. The relationship between the investor and the owner of the reserves is affected by oil price developments, but equally importantly, it affects oil price behaviour through the investment channel.

Finally, producers' investment decisions affect the market structure in a fundamental way. High oil prices don't necessarily induce governments of producing countries to increase investment and productive capacity, as there are other factors that enter into their investment decisions. In contrast, a combination of high oil prices and limited access to reserves has pushed many oil companies in consuming countries to explore new frontiers, such as the exploitation of oil reserves in deep and ultra-deep waters, as well as options for the large-scale development of unconventional resources such as oil sands, bitumen, shale oil, Coal to Liquid (CTL) and Gas to Liquid (GTL), extra heavy oil and bio-fuels. The effect of such investment decisions is that in the oil market, the cheapest oil reserves are not necessarily developed first, allowing for the co-existence of both high-cost and low-cost producers, with important consequences for the process of oil price formation.

Price Instability

Another related dimension of the energy problem is price instability. With this, it is important to distinguish between various types of price movements. Producers and consumers are not usually concerned with inter-day or intra-day volatility *per se* but rather with sharp oil price swings. The two concepts are different. For instance, the oil price can oscillate within a narrow

range, but within that range the oil price could exhibit high inter-day or intra-day volatility. The impacts and causes of the various forms of price movements are also different. National and international oil companies don't often give much consideration to intra-day or inter-day price volatility when making their decisions on whether to invest. This is in contrast with sharp price cycles in which peak and trough prices attained during price swings often impact the behaviour of key market players, oil demand, and long-term investment plans by increasing the degree of uncertainty. One should also distinguish between the causes of volatility and those of sharp price swings. Oil price swings often reflect changes in fundamental factors such as supply and demand shocks, periods of underinvestment or major transformations in the oil supply chain. Such fundamental factors, however, cannot fully explain short-term price volatility, which is often caused by the arrival of new information or data releases, some of which are not necessarily directly related to the oil market.

The price instability is linked to a fundamental feature of the oil market, namely the wide range within which the oil price can clear. The lower boundary of the range is set by the cost floor of oil production in key OPEC member countries, while the upper boundary is set by the entry of oil substitutes and, more recently, by the behaviour of market participants in the financial markets. When the market is characterised by excess supplies, as it was in 1998, the oil price tends to move towards the lower boundary. At low oil prices, production capacity is not immediately shut down, and concerns about security of supplies don't emerge in the short term. However, in the medium- to long term, sustained periods of low oil prices undermine security of supplies in at least three ways. First, a sustained period of low oil prices induces a cycle of underinvestment in the oil sector, affecting the availability of future oil supplies. Second, since oil revenues still constitute the main source of producers' export revenues and government expenditure, a sustained decline in oil revenues caused by low oil prices represents a major threat to producers' political, economic and social stability and hence their long-term capability to supply oil and undertake the necessary investment in the oil sector. Finally, low oil prices can induce demand growth both in producing and consuming countries, undermining the conservation and climate change agenda. In addition, they can undermine the promotion of renewable sources of energy and alternative fuels, which become uneconomical at low oil prices. These effects can be counteracted by increases in domestic taxation of petroleum products and subsidies, but such actions raise serious issues concerning the distribution of oil rents between producers and consumers, as discussed below.

When the market is characterised by excess demand (ex-ante), substitutes and adjustments in demand patterns cannot place a cap on the oil price in the short term. Instead, in the absence of spare capacity, most of the market adjustment is likely to occur through sharp increases in oil prices. While this leads to an immediate rise in producers' revenues, sustained periods of high oil prices can undermine security of oil demand by encouraging substitutes and unconventional supply sources to enter the market *en masse* and by inducing a permanent reduction in oil demand through price effects, anti-oil policies or structural changes in consumer behaviour.

Thus, both producers and consumers have an interest in keeping oil prices stable within a range whose lower boundary is not 'too low' or the upper bound is not 'too high'. However, views differ on what 'too high' and 'too low' mean and whether this stabilisation should be left to the market or whether the market should be supplemented by mechanisms to stabilise the oil price within a preferred price range.

Energy Taxation and Subsidies

Another dimension to the energy problem relates to the distribution of rents between producers and consumers and the subsidies and taxes on energy. Taxes and subsidies can divert demand and supply in directions that are desired at the national level of producing and consuming countries, but because energy is traded internationally can also have repercussions on the energy policies and sectors of other countries. In the 1980s, IEA member state policies' diverted demand away from oil in the power sector and stimulated demand for other fuels, such as coal, while oil demand in most OECD countries, particularly in the transportation sector was restrained by a relatively high excise tax on the consumption of petroleum products. Demand for petroleum products is highly inelastic due to limited substitutes, while its consumption is associated with negative externalities such as air pollution and adverse health effects. Thus, taxes on petroleum products are also perceived to be an efficient way to raise revenues for consuming countries and to correct for negative externalities.[3] Since taxes represent a large portion of the price of petroleum products at the pump, a one dollar rise in international crude oil prices is associated with less than one dollar increase in the price of petroleum products, and thus, like subsidies, taxation weakens the demand response of petroleum products to changes in crude oil prices in international markets.

In more recent times, many OECD countries are stimulating renewable energies as part of their climate change policies, often through a combination of subsidies and taxes, to change the composition of their energy mix to one with a lower carbon content. These policy measures change the distribution of rents in the value chain, for instance of oil, while also redistributing these rents among the various fuels. Such policy measures impact demand and supply for certain fuels, and obviously can also have implications for the relations among producers and consumers.

Oil substitution policies are not only limited to OECD countries. For instance, while China has fallen behind in the combustion engine technology, it is determined to become a leader in electric vehicle technology with the objective of creating a world-leading industry. China is promoting the electric vehicle through introducing plans to grant consumers tax credits on their purchase of electric vehicles, offering subsidies to taxi fleets, and encouraging cities to set up electric car charging stations. The government has also dispersed research subsidies for electric car designs. Since most of these electric vehicles will be powered by coal-fired power plants, the entry of the electric vehicle at a large scale means an indirect penetration of coal into the transport sector. Similarly, the wider adoption of CNG cars also means an indirect penetration of natural gas into the transport sector.

Security of supply concerns in OECD were the main driver of these policies but resulted in security of demand concerns for producing countries. From a producers' perspective, taxes on

[3] Taxation of petroleum products and oil substitution policies are not only limited to the OECD. For many net importers in developing countries, taxes on petroleum products constitute a main source of government revenue, ranging from 7% to 30% of total government revenues. Furthermore, many emerging economies are pursuing policies aimed at improving the efficiency in the transport sector. Gupta, S. and W. Mahler (1995). "Taxation of Petroleum Products: Theory and Empirical Evidence". *Energy Economics*, Vol. 17, No. 2, pp. 101-116.

petroleum products are discriminatory and tend to dampen oil demand growth, reducing its share in the energy mix in the long term. Equally importantly, they raise a distributional issue, as through taxation, consuming countries can capture part of the rent – in most cases larger than the share extracted by producers themselves. Furthermore, oil substitution policies through regulations, incentives, subsidies, taxation, moral suasion, and/or combination of these instruments induce a large degree of uncertainty and threaten long-term oil demand. Although in the short-run the impact of such government policies will be marginal, from a producers' perspective, their effects on oil demand are both cumulative and irreversible and hence cannot be ignored in the long term.

The counterpart of producers' complaints about taxation of petroleum products is concerns about energy subsidies. Subsidies offer protection against the impact of high energy prices, and as a result consumers have no incentive to adjust their consumption patterns. Thus, such subsidies encourage the consumption of energy including petroleum products, natural gas and electricity above the levels dictated by unregulated prices.[4] Over time this may strain the export capabilities of producers, when demand continues to rise faster than supply. Subsidies may also undermine the climate change agenda and sustainable development. Therefore, many calls have been made for the abolishment of energy subsidies in order to reduce world greenhouse gas emissions and to achieve sustainable development. In the Pittsburgh Summit of September 2009, the G20 leaders agreed:

> To phase out and rationalise over the medium term inefficient fossil fuel subsidies while providing targeted support for the poorest. Inefficient fossil fuel subsidies encourage wasteful consumption, reduce our energy security, impede investment in clean energy sources and undermine efforts to deal with the threat of climate change.

This is a large task for many countries - producing and consuming countries alike - as was shown in the World Energy Outlook 2010, which offered an estimate of fossil fuel consumer subsidies. In the top ten subsidising countries, both producers and consumers were represented, while the latter group consisted mainly of emerging economies.

The Climate Change Agenda

Recent concerns about the impact of fossil fuels on the environment add further dimensions to the oil problem. Nowadays, many major consuming countries consider climate change to be a security issue similar to that of energy security. Environmental concerns dominate all stages of the oil chain, from production to consumption. In the production phase, there are environmental concerns about issues such as the access to wilderness areas, the arctic, deep offshore reserves, the flaring of associated gas, and accidents and spills. In the transport phase, there are worries about pipeline leakages and tanker accidents. In the consumption phase, there are concerns about pollution and health effects of burning petroleum products. As in other parts of the world, producers are becoming increasingly concerned about the potential economic and social impacts of climate change such as water shortages, land degradation and rising sea levels. But for producers, climate change has an additional dimension, as it affects the market for fossil fuels, which constitutes the main source of their income. Producers fear that

[4] IEA, WEO 2010.

taxation policies and subsides for alternative sources of energy such as renewables, nuclear and ethanol can limit the growth or even reduce the size of the oil market in the long term.

Interdependency

The recognition that an energy problem exists does not necessarily imply that producers and consumers will seek cooperation. An important condition for cooperation is that the interests of both parties are interdependent in at least three respects: first, that both parties face a common energy problem; second, that the actions of one party to address the energy problem can undermine the interests of the other party; and third, that none of the parties believes that it is possible to solve the energy problem or at least alleviate some of its consequences by pursuing policies independently of the other.

The interdependency between the players in the oil market cannot be overemphasised. All parties have an interest in ensuring that oil continues to flow smoothly from deficit to surplus areas. Furthermore, the supply chain from the producer to the ultimate consumer is quite long, and disruptions and bottlenecks can occur at any part of the supply chain with repercussions for the global crude oil market. Disruptions can occur both in importing and exporting countries. While oil producers control the bulk of the upstream market segment, important parts of the industry, such as the refining and marketing of petroleum products, are under the control of players in consuming countries. Finally, oil price instability affects both parties, with producers being more prone to periods of price instability.

Another aspect of interdependency is reflected in the fact that consumers' concerns always have a counterpart in producers' concerns. For instance, consuming countries' policies regarding enhancing energy security and the climate change agenda, such as promoting renewables or raising taxes, increase producers' concerns about the future size of the market for their main product. Consuming countries' continuous calls to increase investment in the oil sector often translates into producers' fears that the increase in additional capacity will not be met by an increase in demand, placing downward pressure on oil prices and diverting funds away from social and economic projects. Consuming countries' policies to substitute away from oil increases uncertainty about demand and increases the reluctance of producers to invest in their capacity. In turn, decisions by producing countries not to invest in the oil sector due to demand uncertainty or other domestic and international constraints increase concerns in consuming countries about the future security of oil flows. [5]

The final aspect of interdependency relates to the idea that none of the parties can believe that it can address the oil problem on its own through pursuing individual policies. If any of the parties think that national policies are effective in tackling the energy challenge, then this party will not seek cooperation. Thus, the producer-consumer dialogue is premised on the belief that some problems, such as climate change or the investment challenge, require some form of common - or at least coordinated - policy responses.

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[5] Harks, Enno (2010). "The International Energy Forum and the Mitigation of Oil Market Risks", in: Global Energy Governance, The New Rules of the Game. Golthau, A. and J. M. Witte (eds.), pp. 247-267. Brookings Press, Washington, DC.

The Oil Market

Even if producers and consumers do not automatically seek cooperation to address the energy problem, it can be addressed by other mechanisms. The most obvious and in fact the only existing mechanism nowadays is the market. Over the years, the international oil market has developed into a complex set of physical and financial markets in which various participants in producing and consuming countries are able to transact. Through the forces of supply and demand and through price adjustments, the oil market can survive episodes of *ex-ante* excess demand and provide the signals necessary to induce investment in the oil sector. Episodes of oil price instability can occur, but the highly liquid financial markets provide participants with the means to withstand the various price shocks.

An underlying premise behind the producer-consumer dialogue is that the oil market needs to be supplemented by other mechanisms and that these can improve market outcomes. This raises the following question: What are some of the aspects of the oil problem that cannot be addressed by the usual adjustment mechanisms of the market? The answer seems to be that while the market adjusts to various events, price adjustments can be sharp at times imposing an unnecessary cost on producers and consumers. Furthermore, there is a belief that the market cannot generate the necessary signals to smooth the investment cycle in the oil sector. Some argue that OPEC and consuming countries' policies do not allow the market to operate freely, giving rise to some sort of 'market failure' which needs to be addressed by energy policies and/or producer-consumer cooperation.

One aspect of the oil problem relates to disruptions caused by political events. The market adjusts to such disruptions through sharp price increases and sometimes through a change in contractual agreements. In such events, buyers who are concerned about securing oil supplies tend to increase their precautionary demand, causing prices to jump higher than what is justified by the reduction in supplies. Sharp adjustments in the oil price are not desirable, and so consumers and producers try to avoid such shocks. Since these disruptions are driven by political events, the producer-consumer dialogue cannot resolve such problems. Government policy, however, can mitigate some of the effects of disruptions, either through maintaining certain levels of spare capacity in producer countries, holding strategic reserves in consuming countries, or both. It is very difficult to have international agreements on the level of spare capacity that should be maintained by producing countries and the volume of strategic reserves that should be held by individual governments. Nevertheless, the producer-consumer dialogue could help in some areas, such as coordinating efforts regarding the timing of the filling and releasing of strategic stocks, the composition of strategic reserves, and designing rules that govern the use of spare capacity and oil stocks in case of disruptions.

Another area in which the producer-consumer dialogue may improve market outcomes is smoothing the cycle of investment. Oil prices have often been highly volatile, blurring the distinction between transitory and permanent price movements. As suggested in the literature of investment under uncertainty, given the large investment outlays in oil projects and the irreversible nature of these investments, the option to wait is quite valuable. This is complicated by the fact that policies in consuming countries can contribute further to the degree of uncertainty. On the other hand, in consuming countries there are concerns

about issues such as access to reserves, the capability of national oil companies to develop these reserves and internal political factors that may prevent investment in the oil sector. Such factors restrict the capability of some producing countries to exploit its reserves and increase it oil exports in a timely manner. The producer-consumer dialogue may improve market outcomes by improving the investment climate in the oil industry and facilitating the flow of information between parties. For instance, exchanging information on issues such as future investment plans in producing countries and oil substitution policies in consuming countries may have the effect of reducing the degree of uncertainty, creating a more conducive environment for investment in the energy sector.

The oil market structure in which both low marginal-cost producers and high-cost producers coexist implies that prices can clear within a wide price range. Market forces rarely push the oil price towards the lowest boundary, as OPEC production cuts may succeed in placing a floor on the oil price. Market forces can push prices towards the upper boundary, but actions from both producers and consumers and supply/demand adjustment often prevent the oil price from staying at the upper limit for a long period of time. In a market structure in which the oil price often lies within an implicit range, the producer-consumer dialogue can provide a signalling mechanism which can move the market towards a preferred price range that is conducive to investment.

The Producer-Consumer Dialogue

Does the producer-consumer dialogue constitute an effective mechanism to address some of the aspects of the energy problem? At one extreme, there is the view that in the presence of a very well-developed oil market there is no need for the producer-consumer dialogue. The oil market can aggregate the interests and expectations of all market players and is flexible enough to self-adjust to the various types of shocks and generate the necessary signals to ensure smooth investment flows in the oil industry. At the other extreme, there is the view that the various oil price shocks and counter-shocks since the 1970s and the sharp cycles of investment are clear evidence that the market adjustment mechanisms are not effective in dealing with many aspects of the oil problem and that relying solely on market mechanisms can be costly and disruptive. Most consider the truth to lie somewhere between these two extremes: the producer-consumer dialogue and the market do not need to exclude each other. The producer-consumer dialogue is not intended to replace the market, but rather to supplement its role. The dialogue can provide a platform in which each party becomes more aware of the other party's concerns. It also provides each of the parties with the knowledge of the impact of their policies on the policies and decisions of the other party. A dialogue can create trust and confidence in the general direction of international economic relations, which help to smooth the expectations about investment decisions.

While the producer-consumer dialogue can, in principle, supplement and improve market outcomes, this is not a foregone conclusion. This depends among other things on the content of the dialogue, the interests of the parties, and the initiatives that producers and consumers propose and implement. It is possible to have a productive and purposeful dialogue with a clear agenda and objectives. But it is also possible to have a dialogue which is neither useful nor focused on the real issues: dialogue for the sake of dialogue just because both or one of the parties think it is desirable. As Mabro (1991) notes, the dialogue is "nothing but an

exercise in exploration which can lead to different types of discoveries or to none".[6] So, has the producer-consumer dialogue over the past twenty years resulted in any 'discoveries'? We leave the answer to this question to later chapters. But first, it is important to place the framework provided in this chapter in its historical context and to analyze the political and economic circumstances that have led parties with very diverse interests to pursue cooperation.

[6] Mabro, R. (1991). A Dialogue Between Oil Producers and Consumers: The Why and the How. Oxford Institute for Energy Studies, Special Paper 2, p. 23. OIES, Oxford.

Chapter 2: Shifting Worlds

Introduction

Very often we perceive developments in the world through a lens that narrows rather than widens our perception. Narrating the oil story often leads to highly politicised reports about the clash between producing and consuming countries over price and production levels, access to reserves and markets, and the fear of using oil as a political weapon. In institutional terms, this confrontation was epitomised by the creation of two organisations which represent the two sides of the oil concerns: the IEA, which pooled the interests of the industrialised oil-consuming countries after 1973, and OPEC, which has sought stable income from oil since the 1960s for the oil-producing countries. For a substantial number of years, these two organisations not only represented the producing or consuming country interests, but they also embodied the mistrust among countries which was rampant in those years. The dramatic change in governance of the international oil market came amidst heated debates about the so-called North-South relations and mounting international economic imbalances. [7] These imbalances caused many geopolitical and geo-economic tensions and prevented a swift cooperative solution from coming about. It is clear that the sharing of risks and benefits in the international economy was as much a debate then as it is now. Wider international economic issues, both trade and monetary related, easily intertwined with the international discussions about energy in general, and oil in particular, now and in the past.

The evolution of the producer-consumer dialogue, as the discussions prior to the naming of the International Energy Forum (IEF) were called, shows the vast changes in international relations – particularly economic relations – that have taken place since 1973. These changes concern not only the relations between oil-producing and -consuming countries but also to the relations among these countries and the way in which the oil companies - new and old, private and public - interact. Moreover, it is in this period of regulatory transition that the foundations were laid for the further globalisation of the world economy, including the international oil market, but also for new structures of international cooperation, such as the G-7/8 and, later, the International Energy Forum.

[7] Scott, Richard (1994). The History of the International Energy Agency 1974-1994, IEA The First 20 years, Vol. 1, Origins and Structure. OECD/IEA, Paris, pp. 32, http://www.iea.org/textbase/nppdf/free/1990/1-ieahistory.pdf.

Countries Always Balance and Re-balance

The often political orientation of the oil story's narration prevents a closer look at the conflicting views and interests within certain groupings of players, whether the group of IOCs, consuming countries or producing countries. These discussions are not limited to oil alone but are often seen by the various players in the context of their geopolitical or international economic positions or ambitions, often reflecting ideological differences about organisation and distribution. The IEA countries, for example, are neither homogeneous in their political systems nor in their domestic socio-economic organisation, despite their grouping as market economies. In many countries, the state has played and continues to play an important part in the economy as a producer. The domestic organisation of the economy does not prevent groupings from functioning along certain (geo-) political lines.

Countries often function in alliances because they are too weak in certain areas to exert power on their own and because cooperation can increase the benefits. The strength of these alliances can vary according to subject, depending on the extent to which the national interests are served. Sometimes we see leader-follower types of cooperation, but more often than not leadership is contested within the group. For example, sometimes the leader is forced to allocate sufficient benefits to all participants in the cooperation to make an alliance work. Yet when the distribution costs become too large for the leader or leaders and partners are unwilling to share these costs, they might lose interest in satisfying the needs of smaller coalition partners. The dynamics of satisfying the perceived national interests within a certain grouping of countries is important for the consistency of the group over time. Very often, countries participate in inter-governmental organisations in which they can operate in accordance with their national interests and bow out of decision-making that runs counter to their interests. Yet when a sufficient number of countries decide on a certain approach, the option to bow out can be costly.

An argument similar to that of the IEA countries also holds for OPEC countries. The OPEC member states, too, vary in political system, socio-economic organisation and importance of oil in their domestic economies. In seeking a national optimal outcome, these differences must lead to compromises in negotiating a coordinated production policy for OPEC as a whole. The ability of the strongest countries in a group to share the benefits of cooperation is important in order to remain consistent in implementation. However, for stronger countries or leaders to remain interested in cooperation, the weaker countries in a group must also be accountable for the cost of coordination. The effectiveness of cooperation can vary over time. In the case of OPEC, conflicts between individual member states temporarily weakened the organisation but did not lead to its demise. Like in other international organisations, when the need among the member arose to cooperate increased, these differences could be set aside or overcome.

Coordination, competition and collusion can play an important role among companies as well as nations, depending on the phase of market development.[8] The international companies operated oil consortia in the Middle East, which required them to manage production among themselves. Under the Red Line Agreement, these international

[8] De Jong, H.W. (1996). Dynamische Markttheorie. Stenfert Kroese, Leiden.

companies had actually formed a cartel.[9] In other instances, companies operate in joint ventures, implying competition in one market and cooperation in others. The stability of the various forms of cooperation varies, depending in part on market share they represent and government action to break up cooperation. It is important to note that in each of the periods of coordination or collusion, the competitive fringe managed to reduce the market power of the companies.[10]

Perception

In our narratives about oil, perception plays a very important role. For a very long time OPEC meetings were related, in many Western people's eyes, to the questions of if and when they would again use oil as a political weapon, while it was the Organization of Arab Oil Producing Countries (OAPEC), which had been responsible for the embargo. Even though insiders are fully aware of subtle differences, others are not. When fears of a political act on the part of OPEC had finally subsided in the late 1990s, these Western fears were easily transposed onto Russia when it embarked on a renationalisation of its energy sectors.

Apparently, there are many shades of grey when it comes to grouping the various interests together. Very often, the history of oil relations has appeared to be framed in a certain, sometimes undisclosed, fashion, which has led to only the mainstream ideas of the main actors or dominant geopolitical grouping being represented. Seen from another player's perspective, the narrative often changes. Perception also plays an important role in geopolitical positioning because countries can perceive their security or national interests in a certain way, while other actors see their role and position in serving the national interests in another way.[11] In the oil narrative, the Cold War and the support – or lack thereof – of the liberal democratic market approach have played an important role in the international political exchanges between the parties, each framing each other in a certain manner and acting on these perceptions.

In this chapter, "Shifting Worlds", which covers the run-up to the producer-consumer dialogue, it is important to understand the circumstances which led to the first and second oil price crises in the 1970s in order to comprehend the aftermath in terms of conflict and cooperation. These circumstances were not limited to changing oil relations alone but also include, among other things, decolonisation and the vast changes taking place in the monetary relations among countries. The emergence of a group of newly independent countries that questioned the economic system of distribution of economic wealth in the world slowly changed the international political landscape. At the same time, new strategies to develop export orientation as opposed to import substitution helped some countries in the early 1970s to improve their economic positions. Last but not least, also the transatlantic relationship between the US and the European countries was changing.

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[9] United States Senate, The International Petroleum Cartel, Staff report to the Federal Trade Commission submitted to the subcommittee on Monopoly of the Select Committee on Small Business, Washington D.C., 22 August 1952.

[10] Van der Linde, Coby (1991). "Dynamic International Oil Markets: Oil Market Developments and Structure, 1860-1990". *Studies in Industrial Organization*, Vol. 15. Kluwer, Dordrecht/Boston.

[11] Wendt, A. (1992). "Anarchy is What States Makes of It: the Social Construction of Power Politics". *International Organization*, Vol. 46, pp. 391-425.

The Bretton Woods Governance System and Oil

The political and economic importance of the US as a world power was exemplified by its strong say in the international economic governance of that time. Exchange rates became stable but adjustable and were pegged to a gold-dollar standard, administered by the International Monetary Fund (IMF). It created a world economy focused on trade with the US to maintain the external balance, while US companies increasingly gained access to markets (mainly in Europe) through direct investments. The dollar became a key currency in the world, at first because other currencies were not yet convertible, and later because of its assumed systemic stability. Much of the raw materials and energy trade was conducted in dollars.

The wider international economic governance was organised through the Bretton Woods institutions, the IMF, the World Bank and the General Agreement on Tariffs and Trade (GATT), a forerunner of a world trade organisation (WTO) that only materialised in the late 1980s. The Bretton Woods institutions and GATT were the main proponents of the post-World War II governance system to promote free trade and stable exchange rates. At the same time, the United Nations (UN) promoted self-determination, accelerating the de-colonisation process. For the old colonial powers, this process was painful and reduced their control over certain crucial economic sectors and trade flows. In the 1960s the process of political emancipation was followed by the ambition to achieve more economic independence and national capital formation. In Latin America, and later followed by developing countries in other regions, this led to import substitution policies in an attempt to develop from being raw material exporters into finished product producers. Multinational or international companies, with their practises of transfer pricing and tax advantages in their home countries, were increasingly frowned upon in developing countries. In many countries governments attempted to replace these companies with national companies. Some Asian countries, endowed with cheap labour rather than raw materials and/or energy, instead began to industrialise through export promotion policies. In Europe, the European Economic Community (EEC) was founded, in part with the aim to improve trade and wealth. Rapid growth of world trade and economic growth accommodated the many changes taking place in the organisation structure of the world economy.

The structure of the world economy was asymmetrical, however, and despite the rapid growth of trade, its benefits were mostly consumed in a few, mostly industrialised, countries. Moreover, the progress of countries developing from an agriculturally-based economy into an industrialised country was more gradual than befitted the ambitions of the international community. Particularly the newly independent, mostly developing, countries had difficulty translating their new political standing into an economic takeoff.[12] This created frustration

[12] Raul Prebisch was Director of the Economic Commission for Latin America. In 1950, he published a study called *The Economic Development of Latin America and its Principal Problems,* also known as the Singer-Prebisch thesis. In this study, he explained the decline in the terms of trade between industrialised and non-industrialised countries. Developing nations had to export more to get the same value of industrial exports, implying that all of the benefits of technology and international trade would accrue to the centre rather than the periphery. He claimed that free trade would not be able to close the development gap between developed and developing countries, inspiring the import-substitution policies of many of the Group of 77 countries.

with the UN governance system and criticism of the skewed economic order in the world. The discussion about the international economic order is also reflected in the discussion about governance in the international oil market of that time. In the UN General Assembly and in United Nations Conference on Trade and Development (UNCTAD), developing countries were becoming more and more vocal in demanding a change in the international economic order when even the inward-looking economic strategies did not bring sufficient development.

The Structure of the Oil Market in the 1950s and 1960s

While international sectors and markets were undergoing rapid change everywhere, the structure of the oil industry in the 1950s and 1960s remained largely a remnant of the old world order. The international oil companies had obtained their large concessions in the 1930s but only started to exploit these concessions after 1945. The concessions were divided among a small group of oil companies of both European and American origin, creating a network of consortia. The consortia were interested in supplying both the European and American markets with their new oil, but vested interests kept the American market difficult to access. The immense oil reserves of the Middle East did, however, greatly add to the strategic importance of the region.

Developments in the Middle East played a defining role in the development of the international oil market and the governance structures that emerged after 1973, just as Venezuela had played an important role in the 1950s in convincing the producing countries in the Middle East to cooperate in their negotiations with the IOCs. The Middle East was both increasingly important for its location, at the soft underbelly of the Soviet Union, bridging the naval and land routes between Europe and Asia, and for its vast energy resources. Moreover, the political makeup of the Middle East and North Africa had been in flux since the demise of the Ottoman Empire, with the subsequent Mandate Period ending with the young nations trying to find their direction in a politically contested region. Nation building in the diversely populated region was difficult for most of the newly independent countries, particularly within the boundaries of previously administrated constructs of the Ottoman Empire and the Mandate Period. The countries were also the theatre of a tug of war over geopolitical spheres of influence, as evidenced by the events in Iran in 1953 and the dealings of the US, France and the UK with Egypt. Internal and regional conflicts were extensive in the first decades of nationhood, with leadership challenges, competing minorities and battles over secularisation, inter-religious challenges and the severance of the last colonial links. The post-war development of the oil industry in the region hastened change in many of the countries.[13] With the declining roles of the United Kingdom (UK) and France in the region, the Arab-Israeli conflict increasingly drew the geopolitical interest of the US, particularly when the Soviet Union gained more influence in the region.

With the world economy rapidly modernising and adopting the new oil-based technologies from the US, the importance of oil as a basic input in the economy became large and widespread.

[13] Shwadran, Benjamin (1956). The Middle East, Oil, and the Great Powers. Atlantic Press, pp.435-445. London.

The expansion of the European and Japanese economies was fuelled by the easy access to low-cost oil flows. Although some consuming governments continued to protect the coal sectors in their own countries, the switch from coal to oil in the energy mix was impressive. Very often, oil was supplied to certain economies from one to three source countries only, increasing the structural import dependence. This became more problematic after the closure of the Suez Canal in 1967. The rapid expansion of large oil tankers, enabling them to supply countries despite the longer route around the Cape, largely satisfied the growing concerns about security of supply. The international oil companies had proven their reliability as market managers and security of supply providers. Yet the changing relations in the world economy and discussions about the international economic order did not escape them. As time wore on, security of supply became an increasingly important feature of consumer countries' policy agendas.

Developments in the US energy economy were somewhat different from those in Europe and Japan.[14] The role of the US must be seen in the context of the fact that it is not only a large consumer of oil but also a large producer which has always harboured the entire oil value chain within its jurisdiction. Many of the US policy decisions were directed toward the domestic market but did, nonetheless, impact developments in the rest of the world. This was not only true for issues related to the energy market but also for monetary and economic policies. The structure of the American oil industry was different from that in the rest of the world, in part helped by the subsoil ownership structure, the maturity of the sector, and anti-trust legislation. Many smaller oil companies were involved in all parts of the American oil value chain. Increasingly, the international oil companies sourced the American market from the cheaper resources in the Middle East and Venezuela. The size of these reserves had made the companies extremely crude-rich. Without the protection of the Gulf Plus system[15], these supplies rapidly gained market share. Concerns about import dependency began to surface, aided in part by the growing protestations of the smaller oil companies. The debate about promoting domestic oil production or importing oil from abroad was temporarily decided in favour of the domestic industry in 1958, when mandatory import controls were established. The impact of American energy policies on developments elsewhere has always been large. In this case, it created a surplus on the international market and declining oil prices, which in turn led to OPEC's foundation in 1960. The seeds for the emergence of competing oil governance were sown.

Until the late 1950s, the international oil industry outside the United States, Canada, the USSR and China had been characterised by the dominant position of the large multinational oil companies known as the Seven Sisters, or the 'majors'. The host governments did not participate in the production or pricing of crude oil but acted only as competing sellers of licenses or oil concessions. In return, host governments received a stream of income through royalties and income taxes. Each of the majors was vertically integrated and had control of upstream operations (exploration, development and production of oil)[16] and, to a lesser but

[14] Adelman, M. A. (1996). "The Genie out of the Bottle: World Oil Since 1970". *The MIT Press*, pp. 41-64. Cambridge, MA.

[15] ibid.

[16] In 1950 the majors controlled 85% of the crude oil production in the world outside Canada, the US, Soviet Russia and China. Danielsen, A.L. (1982). The Evolution of OPEC. Harcourt Brace Jovanovitch Publishers, New York.

still significant extent, of downstream operations (transportation, refining and marketing). At the same time, they controlled the rate at which crude oil was supplied to the market through joint ownership of companies that operated in different countries. The vertical and horizontal linkages enabled the multinational oil companies to control the bulk of oil exports from the major oil-producing countries and to prevent large amounts of crude oil from accumulating in the hands of sellers, thus minimising the risk of sellers having to compete to dispose of unwanted crude oil to independent buyers and pushing prices down.[17]

Until the mid-1970s the oil pricing system associated with the concession system was centred on the concept of a 'posted' price, which was used to calculate the stream of revenues accruing to host governments. Spot prices, transfer prices and long-term contract prices could not play such a fiscal role. The vertically and horizontally integrated industrial structure of the oil market meant that oil trading became to a large extent a question of inter-company exchange with no free market operating outside these companies' control. This resulted in an underdeveloped spot market. Transfer prices used in transactions within the subsidiaries of an oil company did not reflect market conditions but were merely used by multinational oil companies to minimise their worldwide tax liabilities by transferring profits from high-tax to low-tax jurisdictions. Because some companies had more crude oil than they could process within their own vertically integrated operation, while others had to purchase oil for their downstream operations, i.e. were crude long or crude short, transactions used to occur between the multinational oil companies on the basis of long-term contracts. However, the prices used in these contracts were never disclosed, as oil companies considered this piece of information to be a commercial secret. Oil-exporting countries were also not particularly keen on using contract prices, as these were usually lower than posted prices. Thus, the calculations of the royalty and income tax per barrel of crude oil going to the host governments had to be based on posted prices. Being a fiscal parameter, the posted price did not respond to the usual market forces of supply and demand and thus did not play any allocation function.[18] The multinational oil companies were comfortable with the system of posted prices because it maintained their oligopolistic position, and until the late 1960s OPEC countries were too weak to change the existing pricing system.

The oil pricing system and the supply management of the international oil companies in the late 1950s to the early 1970s, organised by the Middle East consortia[19], was increasingly questioned in the capitals of the producing countries. They were concerned about oil income

[17] Edith Penrose (1968). The Large International Firm in Developing Countries: The International Petroleum Industry. Allen & Unwin, London.

[18] Mabro, Robert (1984). "On Oil Price Concepts". WPM3, pp. 6-16. OIES, Oxford.

[19] The following IOCs are often referred to as the Seven Sisters: Exxon, Mobil, Texaco, Gulf, Chevron, BP and Shell. Each of these companies took part in two or more consortia in the Gulf. Saudi Aramco was owned by the American companies Exxon, Chevron, Mobil and Texaco, while the Iraqi Petroleum company, IPC, was a more European affair with BP, Shell and the French CFP as its main shareholders and Exxon and Mobil as smaller shareholders. BP and Gulf jointly owned Kuwait Oil Company (KOC). All companies, including CFP, held shares in Iranian oil after 1953. The companies of the Emirates and Qatar reflected the same ownership structure. In 1972, these seven largest companies owned 23.7% of the exploration areas in the world, represented 67.3% of world proven reserves and were responsible for 70.9% of world oil production. Evans, J. (1986). OPEC, its Member States and the World Energy Market. Keesing's Reference Publication. Longman, Harlow. p.24.

stability which, due to the relatively low oil prices, was mainly dependent on volume. In addition, it was becoming clear that management of political relations was causing a further distribution of the costs to accommodate the market. For instance, in the 1960s when supplies from North Africa and elsewhere needed to be accommodated in the market, the expansion of production in Kuwait and Iraq was kept below world production growth, while production from Iran and Saudi Arabia was allowed to grow more. This reflected not only the strength of the IOCs but also their political and economic importance to US foreign policy.[20]

From the 1950s onward, the changing international oil market and changing political situation increasingly led to a different organisation of the oil value chain. The companies began to switch their investments in the downstream part of the value chain, i.e. refining and petrochemicals, from close to crude production facilities to those close to the market. The implication was that oil producing countries became crude oil exporters rather than exporters of semi-finished or end user oil products. The logic of this new structure of the oil value chain was linked to the greater demand for a wider array of oil products, making crude oil transport cheaper than the earlier oil product shipments of before. In addition, some oil-importing countries also welcomed the switch from refineries close to the oil source to market refineries for reasons of balance of payment. For the companies themselves, the economic logic of such a change in the location of the various parts of the value chain was enhanced by the trade policies of consuming countries and their own growing reluctance to commit investment capital to countries undergoing large political changes.

The post-war organisation of the oil value chain increasingly reflected the impact of trade and investment policies by governments, company investment strategies and political and economic uncertainties. For instance, the foundation in 1958 of the EEC, a customs union, was a further impetus for the companies to geographically re-arrange the oil value chain, while also Japan pursued its own trade and industrial policies along these lines.

The Pre-1973 Not-So-Homogeneous World and Oil

The relations between producing and consuming countries had already radically changed when, in the 1970s, most producing countries of OPEC nationalised their oil sectors and replaced the international oil companies (IOCs) with their national oil companies (NOCs) as the main operators. Until then, the vertically integrated international oil companies of the Unites States and Western Europe had dominated the entire value chain, from pit to pump, and together they were *de facto* the world's oil market regulators and balancers. In this role they not only managed supplies from various sources around the world but also income and influence.

The IOCs performed this task with acquiescence from their home countries, most importantly the US and the UK, who were the dominant powers in the Middle East. Yet the Anglo-Saxon dominant position in the Middle East and the oil sector did not go unchallenged. France and,

[20] Alnasrawi, Abbas (1985). OPEC in a Changing World Economy. Johns Hopkins, Baltimore/London. Roncaglia, Alessandro (1985). The International Oil Market. Basingstoke/London. Øystein Noreng (2006). Crude Power, Politics and the Oil Market. I. B. Tauris, London.

to a lesser extent, Italy, had also been interested in developing oil assets for their NOCs but had largely missed out in the pre-WWII concession rounds and were later unable to gain substantial entry. The French and Italian companies remained crude short, and when North African oil was developed in the 1960s, the decolonisation process prevented them from translating this position into decisive equity. Moreover, the North African concession areas were already much smaller in area than the vast areas in the Gulf region, and the number of companies competing for these concessions was much larger due to the international expansion of the American independents. Yet despite the growing European market, the international oil companies had to accommodate the new supplies. The assets in the Middle East and Venezuela made up the lion's share of the companies' upstream assets. Due to the more competitive market structure in the US as compared to the international market structure, and the increasing share of non-consortium oil on the international oil market in the 1960s, the companies experienced more difficulty in managing the vast resources of these countries. The companies had become the swing producers in the international market, while pressure from the host governments to increase income from oil was mounting. These two tasks were increasingly difficult to combine, without denying income growth to one or two of the Gulf countries. Thus, the period of IOC governance was certainly not without business and political rivalry, and, more importantly, the challenges to the IOC governance originated in consuming and producing countries and from private and national companies alike.

The dominance of a small number of international oil companies of large, low-cost overseas assets in oil reserves and production, mainly in the Middle East, and the ability of these companies to supply the international markets, made these IOC supplies an important feature in the security of supply of the oil-importing industrialised countries. In some countries, the IOCs also had strongly developed downstream sectors (for instance, the US, the UK, the Netherlands and Germany), but more often than not, they had to share the downstream market in consumer countries with domestic NOCs (for instance with France, Italy, Japan and Spain). As price takers, these NOCs were always looking to diversify away from IOC supplies and were, after 1973, the first to seek opportunities to deal with producer country NOCs, while countries that relied more on the vertically integrated activities of the IOCs were more reluctant to do so. These differences in market organisation among consumer countries also played an important role in the post-1973 oil relations and the institutional make-up of energy relations.

The US, although an important oil producer itself, was comfortable with the ability to influence oil flows and in the 1950s facilitated its large oil companies in managing the mounting pressure to share income with the producing countries. Particularly the special relationship with Saudi Arabia and, after 1953, with Iran, placed oil centrally in the special security policy of the US, as part of the Cold War strategy and as part of the US international economic strategy to open up markets for American products and capital. Largely for this reason, the US also advocated decolonisation, breaking the economic hold of the traditional powers over resources and markets while convincing the new rulers of the advantages of participating in the new free market regime. The creation of the Bretton Woods institutions were part and parcel of this free market strategy, and the dominant position of the US dollar as a crucial currency greatly helped the US to gain access to new markets and tie newly independent countries into the new

regime. The convertibility of the dollar and the fact that all other currencies were pegged to it created a central economic and monetary role for the US in the post-WW II world.[21]

In the emerging post-colonial world, traditional and new producing countries, wishing to take more control over the direction of their countries and economies, inevitably challenged this regulatory role of the international oil companies. When the IOCs were challenged in the early 1970s to relinquish control over oil reserves and production by the growing group of OPEC countries, the international oil market and the relations among producing and consuming countries entered into a new phase of development.

International System in Flux

In a world in which economic progress is so closely related to the availability of relatively low-cost oil, anything perceived to obstruct this availability will lead to political conflict and attempts to reduce the impact of the change. But the political response is not always related to the economic response or impact. In the 1970s, the political response resonated for years after the crisis, whereas the oil economy adapted relatively quickly to the new circumstances. For instance, the 1970s oil price increases brought about vast changes in the energy mix of many importing countries, while at the same time it propelled previously uneconomical oil reserves into the mainstream oil market developments, creating new value for these economies. Still, the political response remained largely focused on reducing the impact of the power shift in favour of producing countries as a result of the oil crisis.

Moreover, the substantial changes in consuming countries' economic structures were merely hastened by the change in the relative price of energy. Already in the late 1960s and early 1970s, many companies saw that rising turnover was not translated in rising profits, and they increasingly struggled with escalating costs. Their markets were maturing. The subsequent increase in energy prices, combined with the communication and process technology developments allowing for more decentralised production processes, provoked a large change in the organisation of production and trade. In order to manage the new cost and reward structures, energy- and labour-intensive parts of the production chain were relocated elsewhere, also benefiting from the new export-oriented policies of some developing countries.

The shock with the oil embargo by OAPEC against the US and the Netherlands (and some other countries) and the production cuts by OPEC in the midst of the 1973-74 crisis are

[21] While the US was able to focus its economic and monetary policy on domestic issues, all other participants of the Bretton Woods system were forced to discipline their economies in accordance with the exchange rate regime. They were responsible for staying within a certain fluctuation margin of the dollar. Of course, the assumption was that in order for the dollar to fulfil this central role, the US would maintain a surplus balance of payments in order for the dollar to remain a hard currency. It also required vast amounts of dollar reserves for currency interventions by non-US participants, forcing their economies into a mould requiring trade surpluses with the US. See Eichengreen, Barry and Peter Kenen, (1994). "Managing the World Economy under the Bretton Woods System: an Overview", in: Managing the World Economy, Fifty Years after Bretton Woods. Peter Kenen, (ed.). Institute for International Economics, Washington, DC.

understandable from the perspective of the post-war efforts toward free trade and the eradication of harmful trade policies. Both free trade and the exchange rate system of Bretton Woods served as the underpinning of a world economy that was becoming more and more integrated. Trade and, later, foreign direct investments were seen as important tools in creating interdependencies and preventing countries from resorting to harmful (economic) nationalism. However benevolent the long-term intentions of the post-war economic structure were, in reality this market system had difficulty in dealing with the structural institutional inequalities inherited from the colonial era. The asymmetries in economic development, i.e. knowledge, capital, assets base and economic institutions, prevented developing countries from quickly reaping the benefits of this system. Moreover, their bargaining position was weak. Although the theory of the free trade system was appealing, the structural inequalities appeared to be emphasised rather than repaired in this system.[22]

Against the background of the increasing frustration of developing countries, the soft transition to a post-colonial political and economic system was therefore more problematic than had been foreseen by the industrialised countries. Initiatives such as the Decade of Development in the 1960s did not bring about enough change to prevent a more confrontational position from being adopted by developing countries. They saw their lack of economic sovereignty as an obstacle to being able to make a better bargain regarding their integration into the world economy. Their early attempts to improve their positions through import substitution had failed, and in the late 1960s they renegotiated their re-integration into the world economy through the various relevant institutions.[23] The oil industry had also been viewed with dismay since the 1950s, and although some progress had been made with regard to income, the producing countries remained dissatisfied with their lack of say over income from oil. It was also through the actions of the incoming leader of Libya that major changes in the sovereignty over oil were achieved by deftly playing out the interests of the IOCs against those of the American independents.[24] The Tripoli and Teheran Agreements of 1970 and 1971 marked an important change in the bargaining positions of the oil-producing countries. The already tight oil markets and the turmoil of late 1973 and early 1974 removed the last hindrances from the oil-producing countries' taking full control over their oil reserves and production.

For developing countries around the world, the success of these countries in their ability to determine a new bargaining regime was of great political importance and reached beyond oil. Apart from immediate security of supply concerns, the rebellion of the oil-producing countries against the IOCs' governance was of great geopolitical and economic concern for the US and the other OECD countries, precisely because the ramifications reached beyond oil issues. Moreover, it not only challenged the IOCs' bargaining power in the international system but also unleashed a discussion about the costs and benefits of this new bargain among themselves.

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[22] Singer, H.W. (1989). "Terms of Trade and Economic Development". *Economic Development*, pp. 323-333;The New Palgrave. Eatwell, J., M. Millgate and P. Newman (eds.).

[23] UN General Assembly, UNCTAD, GATT.

[24] Odell, P. (1986). Oil and World Power: A Geographical Interpretation, Pelican Books; Yergin, Daniel (1991). The Prize: The Epic Quest for Oil, Money and Power. Simon & Schuster; Sampson, Anthony (1975). The Seven Sisters: The Great Oil Companies and the World they Shaped. Viking Press, New York.

Thus while in the 1960s other developing countries were devising policies to increase the added value of their exports, oil-producing countries did not see much structural change happening in their economies. The global political atmosphere and the economic logic of the international arrangements were changing, however - not least because the Bretton Woods institutions were also challenged in the early 1970s.[25] Discussions about a new international economic order underlined the new atmosphere[26], and many believed that the economic dominance of the OECD-countries would be replaced by a system in which developing countries could claim more governance.

A Year of Confrontation

After the Tripoli and Teheran agreements of 1971 and 1972, which provided the oil-producing countries with more control over the development of their oil industries[27], the impatience with the oil companies grew. In the summer of 1973 they offered a smaller price increase than was needed, with the aim of stopping the erosion of the purchasing power of a barrel of oil. The depreciation of the dollar, the currency in which oil was traded and rising inflation around the world had contributed to the producing countries' desire to increase nominal oil prices and maintain the real price of oil. With the IMF – the main institution for disciplining international economic relations – rather in disarray, the sensitivity, particularly in the US, regarding the impact of the exchange rate crisis on the interests of other countries was small. Perhaps this internal focus was exacerbated by the on-going US domestic political difficulties over racial relations, the Vietnam War and the Watergate scandal, although it is always the prerogative of large powers to act out of self-interest. The country's main concerns were to readjust its competitive position in relation to its trading partners in Europe and to manage inflation, which was already rising, while maintaining the recent domestic socio-economic bargain. Rising oil prices were to be avoided. Moreover, the US was concerned with developments in the Atlantic Community as a result of European integration. For the US, 1973 started out as the 'Year of Europe' with the idea to reinvigorate the relationship with the enlarged European Community, but instead had to focus on overcoming the increasing difficulties in the transatlantic relationship. In his Pilgrims Speech in December 1973 in London, Kissinger remarked that:

> Europe's unity must not come at the expense of Atlantic community, or both sides of the Atlantic will suffer. It is not that we are impatient with the cumbersome machinery of the emerging Europe. It is rather the tendency to highlight division rather than unity with us which concerns us.[28]

The US was concerned that the growing disparity among the OECD countries about security and

[25] Williamson, John and C. Randall Henning (1994). "Managing the Monetary System", in: Managing the World Economy, Fifty Years after Bretton Woods. Kenen, Peter (ed.). Institute for International Economics, Washington DC.

[26] Dolman, A.J. (1976). Reshaping the International Order: a report to the Club of Rome, Tinbergen, J. (coordinator). New York, Dutton.

[27] Johany, Ali D. (1982). "OPEC and the Price of Oil: Cartelization or Alteration of Property Rights", in: OPEC: Twenty Years and Beyond. El Mallakh, Ragaei (ed.). Westview/Croom Helm, Boulder CO/ London.

[28] Kissinger, Henry, Text of Address by Kissinger in London on Energy and European Problems, *New York Times*, December 13 1973.

economic issues would come at a cost to their relation and wealth, while events in 1973 began to rapidly unfold.[29] Naturally, repairing the relationship took some time.

The relatively low oil prices of the 1960s stimulated oil demand around the world, and American oil imports had also been steadily increasing. Investments in new capacity in the late 1960s had failed to keep up with rising demand. Between 1965 and 1973, global demand for oil increased at a fast rate, with an average annual increase of more than 3 million b/d during this period.[30] Most of this increase was met by OPEC, which massively increased its production from around 14 million b/d in 1965 to close to 30 million b/d in 1973. During this period, OPEC's share in global crude oil production increased from 44% in 1965 to 51% in 1973. Other developments in the early 1970s, such as Libya's production cutbacks and the sabotage of the Saudi Tapline in Syria, further tightened the supply-demand balance. Although new refinery capacity was under construction, product markets were under pressure. Tightened oil market conditions created a strong seller's market and significantly increased OPEC governments' power relative to that of the multinational oil companies.

In September 1973, OPEC decided to reopen negotiations with the companies to revise the Tehran Agreement and seek large increases in the posted price. The American IOCs were instructed to negotiate for only a minimal price increase[31], while the producing countries were hoping for reparations of past real oil price slippage. The producing countries felt shunned and negotiations were still trundling along when hostilities between Egypt, Syria and Jordan and Israel broke out in October 1973. All the frustration of earlier years came to a head in a geopolitical climate that was already restive. On 16 October 1973, the six Gulf members of OPEC unilaterally announced an immediate increase in the posted price of the Arabian Light crude from $3.65 to $5.119. On 19 October 1973, members of OAPEC less Iraq announced production cuts of 5% of the September volume and a further 5% per month until 'the total evacuation of Israeli forces from all Arab territory occupied during the June 1967 war is completed and the legitimate rights of the Palestinian people are restored' (quotations in original).[32] OAPEC's announcement to embargo the US and the Netherlands at the start of the October war in 1973 later extended to include Denmark, Portugal and South Africa, and the production cuts to pressure Israel in withdrawing from the West Bank and Gaza were the political response to the mounting frustration in the Middle East. In December 1973, OPEC raised the posted price of the Arabian Light further to $11.651. As a result, oil-producing countries saw their oil income expand beyond their expectations. Equally important, for the first time in its history, OPEC assumed a unilateral role in setting the posted price.[33] Before that date, OPEC had only been able to prevent oil companies from reducing them and acted more as a trade union.

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[29] Only recently, he made similar remarks about the evolving relation of China and the US pointing out that the two countries should take care not "analyzing themselves into self-fulfilling prophecies" and that "conflict is not inherent in a nation's rise". Both then (in the 1973 speech) and now, he emphasised that cooperation implies subordinating national aspirations to a vision of a global order and that it is important to maintain a focus on what unites. Kissinger, Henry, "Avoiding a U.S.-China cold war", in: *The Washington Post*, 14 January 2011.

[30] BP Statistical Review of World Energy 2010.

[31] Sampson, A. (1975).

[32] Skeet, Ian (1988). Twenty-Five Years of Prices and Politics. Cambridge Energy Studies, Cambridge.

[33] Terzian, Pierre (1985). OPEC: The Inside Story. Third World Books, Distributor, Biblio Distribution Center.

Hard Transition

The oil price crisis of 1973-74 was one with many dimensions; it not only redesigned the energy governance in the world and changed the dynamic drivers in the oil value chain but also had wider implications for international (economic) relations. From an economic perspective, the oil price increases implied that the oil-consuming countries immediately faced higher inflation and growing trade deficits due to the short-term inelasticity of oil demand. Also, concerns about recycling the oil dollars back into the international financial system were large because of the low absorption capacity of most of the producing countries and the sheer size of the transfer of wealth in such a short period of time. The institutional structure for managing such imbalances was, however, incomplete, particularly after the breakdown of the Bretton Woods exchange rate system. The ongoing discussions about restructuring monetary relations among the OECD countries[34] gained another dimension when the oil price crisis unfolded. The large transfer of wealth as a result of the oil price increases and the asymmetric impact on oil-consuming countries further complicated these discussions. Particularly the developing oil-consuming countries were severely affected, but also the balance-of-payment difficulties of industrialised countries were large. The monetary consequences of the oil price crisis stood at the cradle of the modern international capital markets as we know them today, while the relation between the dollar and oil prices became a recurring feature on the international agenda.[35]

The route to oil-dollar recycling could have been the IMF, which was designed to handle balance of payment surpluses and deficits. The sheer size of the transfers between consuming and producing countries and the political tensions that had accompanied OPEC's decision to increase prices prevented such a solution from coming about quickly. In 1975, at the Rambouillet Summit of November 15-17, the US, the UK, Germany, France, Japan and Italy finally made some headway in restructuring monetary relations, including enlarging the quota, accommodating the shift in economic flows.[36] Yet the proposed changes allowed the US to maintain its blocking vote on decisions in the governing board. These changes were later laid down in the new amendments of the IMF accords in 1976. The position of the leading members of the IMF to maintain control over monetary policy can be explained in part by the fact that some of them were initially not convinced that the oil price increase was structural and thought that it would require a structural adjustment of the quota. But as time wore on, their belief that the oil price increase was unsustainable proved to be unfounded. The ability of OPEC to accommodate lower demand with lower production survived the political pressure of that time, although the erosion of the real oil price strained some producing countries' finances. The position of some major OECD countries can also be explained by geopolitical motives to stay in the macroeconomic driving seat and an unwillingness to accept - or a slowness to adapt to - the new circumstances in the world. In the end, the IMF did not play a central role in oil-

[34] Dam, Kenneth (1982). The Rules of the Game: Reform and Evolution in the International Monetary System. University of Chicago Press.

[35] Koopman, Georg, Klaus Matthies and Beate Reszat (1989). Oil and the International Economy, Lessons from Two Price Shocks. Transaction Publishers, New Brunswick/Oxford.

[36] Economic Summit at Rambouillet, France, 16-17 November 1975, in: *Foreign Relations of the United States, 1969-1976*, Volume XXXI, Foreign Economic Policy 1973-1976, pp. 386-452.

dollar recycling in the 1970s. In a restricted role, only a special IMF oil facility was set up, and some individual OPEC member states provided bilateral assistance to particularly hard hit consuming developing countries, but most of the surpluses were recycled elsewhere.

Due to the institutional uncertainties immediately after the oil crisis, a large share of the oil income found its way to the euro-dollar market, where it was placed in relatively short-term 3-month facilities and rolled over. In the space of a couple of months, the international private banks saw this relatively small inter-bank market swell to much larger proportions when they became the main channel to recycle oil-dollars. Yet the international private banks had to make this capital work for them in order to make the interest payments to the producing countries. Immediately, it became clear that there would be a mismatch between the short-term facilities with which it was placed and the duration for which lenders were willing to borrow. Moreover, the appetite in the relatively 'safe' OECD countries for borrowing had shrunk and many companies, with better communication and production techniques, began to disinvest in OECD countries and move the labour- and energy-intensive parts of their production chain to other, lower cost, countries.

Developing countries, with their recent switch to export-oriented strategies, found in the euro-dollar market the source of capital that they had craved in the past but had been unable to access. They had relied on the Bretton Woods institutions to finance their industrialisation efforts but had disliked the strict governance attached to these loans. Yet they required longer capital investments than the euro-dollar market could provide. The international private banks solved the mismatch in time and riskiness of the large loans in providing their four-year dollar loans to variable interest rates linked to the London Interbank Interest Rate (LIBOR). Often the banks tried to spread the subsequent sovereign debt risk by participating in loan consortia and asking for government guarantees. The developing countries thus became exposed to both an exchange and an interest rate risk in a time of large systemic uncertainties.

In the meantime, world inflation soared, in part because of policies to finance external deficits rather than adjust the economies to the structurally higher oil prices, and in part because recycling was more successful than had been anticipated. With the influx of the oil monies into the euro-dollar market, interest rates were very low, and oil-producing countries were quickly made aware that from then on they would have to manage value both in and above the ground as a new feature of their oil industry management.

Government deficits in oil-consuming countries increased in the first few years after the oil price increase, and demand for oil stagnated in the OECD countries. The restructuring of the economy and the emphasis on policies to diversify away from oil radically changed the outlook for investment in the various parts of the oil value chain. Surplus capacity existed throughout the value chain, due to depressed demand and the long lead times on investments. As time wore on, OECD countries translated the higher oil prices in their export prices, but developing countries had difficulty doing so because their exports were still mainly raw materials.[37] As long as real interest rates were low, the international economic system seemed to adjust to the new situation, but when oil prices increased a second time, in 1978-79, due

[37] Koopman, Georg et al. (1989).

to political turmoil in Iran, OECD economic policies changed. Although the price increase of 1978-79 was less structural and was later referred to as the price of a 'panic barrel', the policy response was defined by structural adjustment. The level of inflation was too high and the external imbalances were again too large to finance the deficits, and austerity policies became widespread throughout the OECD.

With a strict US monetary policy, inflation was brought back under control, and real interest rates soared, much to the detriment of oil-consuming developing countries, who saw the interest rates on their dollar loans rise and their own currencies lose value against the dollar. Almost immediately they began to experience difficulties in servicing their loans. The 1980s were, for them, a time of periodical debt restructuring. Only with the outbreak of the developing countries' debt crisis in 1982 and the systemic danger these debts posed to the large international private banks was the IMF reintroduced as the main monetary institution. For the remainder of the 1980s, the debt crisis hampered economic development in many developing countries in Latin America and Asia. Only in the late 1980s, with the Baker and, later, Brady bonds, were the after-effects of the 1970s oil crises and the handling of recycling digested.

The monetary implications of the oil crisis of 1973-74 and 1978-79 were far-reaching: the more structured international capital flows of the Bretton Woods era had developed into flows on the largely unregulated private international capital markets. With it came the privatisation of risks associated with international capital transactions, although the systemic risks were left with the governments. For oil-consuming developing countries, the oil crisis, heralded as an important resetting of the post-colonial bargaining position, left them with stricter governance from the IMF and World Bank than before. Moreover, the restructuring of their debts was used to enforce compliance with the new insights of the so-called Washington consensus, in which liberalisation of both the trade and capital account was key. This integration of developing countries into the international market economy was the 1980s' answer to the hard transition of the 1970s. Companies based in OECD countries had responded to the 1970s reshuffling of relative prices in the world and the internationalisation of capital markets by restructuring the organisation of their production chains to secure the new efficiencies.[38] They needed unhindered access to markets, resources and capital to escape the maturity of their domestic markets. In the space of a couple of years, labour-intensive industries had disappeared from the OECD countries and were replaced by more service-oriented sectors. This shift in the composition of GDP not only reduced the energy intensity of these economies but also allowed for a partial move away from oil. Coal, nuclear and natural gas gained prominence in electricity generation and industry. The internationalisation of production and capital and the restructuring of developing countries' debts also streamlined the discussion about economic governance among the OECD countries, particularly when the EU countries managed to maintain their exchange rate regime and Japan gave up its managed float against the dollar in the mid-1980s.

[38] Dicken, Peter (2007). Global Shift: Mapping the Changing Contours of the World Economy. Sage Publications Ltd., London.

For producer governments, the international economic developments also had large implications. Their goal to increase and stabilise their real income from oil was lost in the chaotic economic governance prevalent after 1973. In the years to follow, nominal price increases could not keep up with inflation. Producing countries with a low absorption capacity had different problems than OPEC countries, which had a more substantial absorption capacity. Almost immediately, the success of 1973-74 led to internal governance problems in OPEC and showed the diversity of its membership. These problems centred on the distribution of income among the member states, an often-recurring theme in the years thereafter. The allocation of risks and benefits in the new governance system centred on the levels of production of the member states, the price system linking the OPEC crudes to the marker crude, and the role of the dollar in oil pricing. Some governments had also raised expectations among their populations for a quick and decisive spurt in welfare on the back of the political victory over the IOCs and the OECD countries. The fall in real oil prices - but also the complexity of quickly ramping up investments in the uncertain economic environment - quickly frustrated the delivery of these promises. Although the reshuffling of control over reserves and production had succeeded, the monetary developments challenged their ability to manage their economic sovereignty in a different manner.

Managing Oil Markets and Money Income

For oil-producing countries, the aim to stabilise oil prices and secure a stable oil income had proven to be very difficult. The economic difficulties in the main market, the OECD countries, had arrested growth of oil demand. Moreover, the decision to replace oil in power stations with coal, nuclear and gas changed demand for oil to the whiter end of the barrel. The OPEC countries were thus confronted with low oil demand growth in their main market, a depreciation of the dollar and a decline in the value of their oil income, which could not be compensated by the low real interest rates. At the same time, they began investing in their own economies, mainly in refining and petrochemicals. The oversupply in these markets was large, however, because a sizable capacity had been under construction from before the oil price increase and came on stream when the markets had changed. Large barriers to trade for these products persisted into the late 1980s, when the rationalisation of the sector was completed.

The performance of these investments was further undermined when oil prices had to be supported by production reduction policies. The distribution of production quota to stabilise the market had already been difficult in the 1970s, bringing to the fore the large diversity among the OPEC member states. The swelled ranks of member states consisted mainly of relatively small producers and producers with a higher absorption capacity than the Middle East Gulf producers. It was the Middle East producers that were called upon to reduce production and manage world supply. The growth in their buffer capacity in the 1980s testifies to this costly role. At the same time, the decision to stabilise the oil price at a fairly high level unlocked previously uneconomic resources in, for instance, the North Sea and Alaska, which increasingly competed for market share with OPEC producers, who were also embroiled in discussions about balancing the quality of crudes and the price compared to the marker crude. Distributing the risks and benefits of being the main oil market governance provider after 1973 has proven to be more difficult for an organisation of countries than it had been for a group of companies in the 1960s, in part because more politics was introduced than had already existed in oil market governance.

If lack of investment capital had been holding the development of their economies back before 1973, the abundance of capital was almost as difficult to manage from the perspective of development and monetary stability. Although developing the oil value chain in their economies was logical, the performance of these investments was slow to manifest. This was partly due to the partial reversal of the value chain organisation from refineries located close to the market back to close to the location of crude oil production in an international market already suffering from overcapacity. Depending on the strategy in certain markets, the IOCs that maintained an international market focus were interested in joint ventures in the producing countries while rationalising their own downstream capacities in the OECD. After the nationalisation of reserves and production of the 1970s, IOCs like Exxon, Chevron and Shell engaged in backward integration in new oil provinces (North Sea, Alaska) and in reorganising their downstream operations to reflect their new market positions. Other US companies initially withdrew on their home markets, while BP was focused on both the American market and the North Sea. Some companies, both in the US and in Europe, were also proponents of protection of their downstream markets for this new competition from producing countries.

In Saudi Arabia, the downstream sector also suffered from OPEC's oil production policy because the petrochemical sector depended on associated gas for feedstock. OPEC's decision to attempt to stabilise oil prices at the high 1979 level required substantial cuts in oil production and subsequently reduced the supply of feedstock. Furthermore, the development of similar projects in neighbouring countries led to oversupply in the new oil-related industries. The oversupply in international airports, shipyard docks for large oil tankers, refining, etc. emphasised the lack of coordination in these economic development plans and undermined their initial performance until more coordination was introduced and oversupply in other markets was worked away.[39] Regional competition in the Gulf was great and was politically driven, particularly after the Iranian revolution and the subsequent outbreak of the Iran-Iraq war in the 1980s.

The investment of oil income in the domestic producing economies was both complicated - due in part to gaps in infrastructure and to labour market rigidities - and slow in terms of changing the economic structure of the countries. The dependence on oil income had grown substantially since 1973 and persisted when the new investments were slow in showing profits. Throughout the 1980s and 1990s, the dependence of OPEC member states on oil income was very high, particularly as compared to countries such as the US, the UK, Norway and Russia, which had much more diversified industrial bases.[40] The relatively low absorption capacity in some producing countries also prevented some of the oil income from being invested in the domestic economy and was either invested in companies in the US and Europe or in portfolio investments. In the early 1980s some industries had difficulty raising capital to restructure their businesses. Capital from oil-producing countries was available but often created political problems, and holdings were, more often than not, limited to 22-24%. The investments in market refineries in the US and Europe encountered initial adverse government responses when the Kuwait Oil Company (KOC), Saudi Aramco and Petroleos de Venezuela, SA (PDVSA) began to invest in forward integration to secure markets for their oil.

[39] Noreng, Øystein (2007).

[40] Treisman, Daniel, "Rethinking Russia: Is Russia Cursed By Oil?" in: *Journal of International Affairs*, Vol. 63, no.2, Spring/Summer 2010, pp. 85-102.

The opposition that they encountered was largely politically strategic in nature and reflected the fear foreign governments had of becoming dependent on foreign state-held companies as opposed to foreign private companies (whose head offices were in the OECD). State-held companies, it was feared, would not act in the interest of security of supply or help these consuming countries to achieve relatively inexpensive energy prices, two main goals of their energy policies.

The Restructured Oil Value Chain After 1978

The 1973 crisis made painfully clear that the oil governance of the previous decades had come to an end. In its place came an emboldened OPEC, representing the net oil-exporting countries, which, with its production policies, could influence crude oil prices and flows but also the external balance of importing countries. National oil companies took over the exploitation of crude oil reserves. Initially, the IOCs had maintained a privileged role in trading this oil and thus were also able to restructure their relations with the host country governments, but after the second price increase of 1978-79 this trading prerogative of the IOCs was severed and oil found its way to the market directly. With the termination of many long-term oil contracts during and after the second price increase and the introduction of shorter-term oil contracts or spot market oil contracts, the vertically integrated model became less prominent. Although IOCs began to develop oil resources elsewhere, they never returned to their crude-rich positions of the previous decades. Instead they sourced their downstream operations with a mixture of traded and equity oil, based on market prices.

The nationalisation of crude oil reserves and production stimulated the IOCs to concentrate their new upstream investments in 'safe' countries, i.e., where the risk of appropriation was small to negligent. They replaced this old risk with the risk of developing frontier oil in OECD countries. The development of new oil in Alaska and the North Sea played an important role in the recovery of many companies as significant market players, helping them to regain some of their market power in the rather stagnant oil market of the late 1970s and first part of the 1980s. The price policy of OPEC helped them in this strategy because it provided them with a more or less guaranteed minimum price with which they could make their business case for developing this more expensive oil. Once this oil came on stream, it began to compete for market share with OPEC oil, acting as OPEC's competitive fringe. As a result, some OPEC member states had mounting difficulties adhering to the OPEC policies, particularly because no solution was found as to the proper price spread to the administered OPEC crudes.

The IOCs also began a process of consolidation: purchasing oil reserves on Wall Street, in part to rebuild their portfolio in addition to developing new oil provinces. Some of the IOCs, although stricken by the sudden loss of their very profitable assets in OPEC countries, managed to survive and rebuilt the company activities, while others were taken over. New business models began to surface based on their strong positions in the downstream and distribution parts of the value chain and their ability to generate knowledge and capital to develop more complex upstream projects. Some of the large IOCs also began to develop their natural gas businesses as a second core activity, particularly when natural gas gained more prominence in the energy mix of countries. Most companies focused their efforts on cost savings, the energy efficiency of operations, technology and capital-intensive developments.

Yet the overwhelming competitive edge of the IOCs of the 1950s and 1960s, based on the then large and relatively inexpensive opportunity to develop sources of the Middle East, was gone. Companies that had been crude short before 1973 seemed more able to adapt and develop strong trading departments, in effect benefiting from the levelling playing field, while companies that had depended solely upon their Middle East assets encountered more difficulties in invigorating their business models. Although the price increase of 1978-79 had boosted most of the companies' balance sheets enough to afford investments in new crude oil production capacities, some companies simply did not have the upstream capability to quickly retool for new provinces. Moreover, depressed demand also pressured the margins in the downstream end of the business, requiring the substantial rationalisation of capacity. Government policies played an important role in the restructuring of both the refining and petrochemical parts of the value chain.[41]

By the mid-1980s both oil prices and the value of the dollar had begun to slip, reducing the pressure on the margins of the most efficient petrochemical plants in the OECD. Furthermore, the change in OPEC price and production policy allowed Saudi Arabia to gain a larger share of OPEC production consistent with their reserve base and subsequently increased the availability of feedstock. The time was becoming ripe to restructure this part of the value chain. When restructuring in OECD markets commenced in the late 1980s, capacities of smaller or less efficient companies were scrapped, and market access for the new capacity in oil-producing countries became easier. Only when overcapacities were finally worked away did market access improve. In some cases, the NOCs improved their market access through direct investments in the downstream sectors in consuming countries by purchasing – either in joint venture or in full – distressed assets of oil companies. Saudi Arabia, Venezuela and Kuwait took the lead in developing market access through vertical integration in foreign markets. This was a response to the increasing crisis in the oil processing industry in their countries and the desire to create security of demand for their oil.

OPEC Production Policy in a Depressed Oil Market

The combination of oil price increases in the 1970s, the appreciation of the dollar in the early 1980s, the shift away from oil policies and economic restructuring in the OECD countries greatly reduced demand for oil. When new supplies began to enter the market in the early 1980s, the OPEC countries were forced to reduce production substantially in order to defend the agreed upon (relatively high) price level. Circumstances surrounding the price increases in 1979-80 had tested confidence among OPEC member states. As a result, the reduction was mostly borne by Saudi Arabia, Kuwait and the United Arab Emirates. When more production cuts were needed, the cost of having stabilised prices at a high level became visible.

[41] In the US market, a large part of refinery capacity was with stand-alone small refineries geared towards the lighter end of the barrel. The sector was much more dispersed among many companies, some of them very small, while in Europe, refineries were often part of larger petro-chemical complexes (Marseilles, Rotterdam and Antwerp) and the market was more of an oligopoly. Both in the US and Europe, authorities at first protected their downstream sectors and only later began to pressure them to restructure capacity. In the US, the Clean Air Act was eventually a strong motivation to restructure capacity, while in Europe, the Commission allowed companies to swap capacities to rationalize. This all took place in the second part of the 1980s. See also Seymour, Adam (1990). The World Refining System and the Oil Products Trade. OIES, WG2.

The Iran-Iraq war that broke out in September 1980 and lasted until August 1988 strained OPEC's cohesion at the political level but also effectively removed both crude oil export capacity and impending downstream capacity from the market, reducing some of the pressure on both the crude and product markets. Managing the international oil market and satisfying the national political and economic needs of the member states was very difficult without upsetting relations among producing countries. Stabilising the crude oil price at the relatively high post-1978-79 level was thus ultimately very costly and now appears to have been short-sighted.[42] The impact of the oil price decline of 1986 on their economies was very large.

Conclusion

The policy response of the OECD countries, which represented the bulk of crude oil demand in the world at that time, not only helped the international oil sector to absorb the 1970s oil crises but also delineated the framework in which oil relations would evolve thereafter. In addition to their market size and capital formation, the OECD countries were very influential in the then existing multilateral organisations. The assessment of the OECD countries of the impact of the oil crisis included a mixture of economic and political short- and medium-term concerns, in which maintaining the balance of power was important. Their response to the 1973-74 crises had been largely political, while their response to the 1978-79 crisis was mainly economic. Unwittingly or not, the international monetary relations were redesigned as a side effect of the oil crises. This response was not only inspired by the deeds of the producer countries, which seriously challenged OECD supremacy over the market economy governance, but also by the mounting wrangles among the OECD countries over the evolution of that same governance system. The different visions and aspirations about the international political and economic system that had surfaced in the early 1970s played a major role in the way the consumer countries responded to the oil crises of the 1970s and how, in addition to OPEC, governance of international oil relations was eventually shaped.

[42] Saudi Arabia initially resisted increasing its price level in 1980 for this reason, and followed the new OPEC policies from 1982 onwards. Alnasrawi, Abbas (1985), pp. 83-85.

Chapter 3: Shifting Relations

Introduction

With the growth of trade and the political emancipation of many new countries, the expectation that there would be a quick catch-up in terms of development was widespread. The changing energy relations were part and parcel of the changing political and economic relations. Yet the speed and the way in which these changes came about rocked the international system and created a relatively long period of adverse relations.

The foundation of the United Nations and its many organisations had created a new system of international governance for a world that gradually took shape from the 1940s onward. A world system of nation states, which were represented in the General Assembly (GA) of the United Nations, replaced the former colonial empires. Many issues were now discussed on a one country, one vote basis, with the exception of two key areas important for a country's relative power: international peace and security and international economic governance.[43] Yet the newly independent, mostly developing, countries had difficulty translating their new political standing into an economic take-off. This increasingly created frustration with the UN governance system and resulted in criticism of the skewed economic order in the world. While political momentum was growing in the various UN institutions to discuss changing the governance system, the period of rapid world trade growth and monetary stability had come to an end.

In the 1960s, mounting balance of payments and fiscal deficits in the US had weakened the dollar, the bedrock of the Bretton Woods system. The European countries were, however, reluctant to appreciate their currencies and thus lose the competitive advantage that had propelled their economic growth, without generating some more influence in governance. The European countries much preferred the US to absorb this 'economic governance cost', although they had benefited greatly from the removal of trade barriers in the successive GATT trading rounds, the exchange rate stability and the availability of cheap energy, in addition to having been able to remove the internal barriers to trade. Additionally, in the 1960s the European Community had begun to organise its relations with its members' (former) colonies in the Yaoundé agreement, followed in the 1970s by the Lomé agreements, in effect giving more benefits to these countries than others had in accessing the European market and providing economic assistance. Particularly France had become more and more outspoken about the

[43] In the UN Security Council, the five permanent members - the US, France, the UK, Russia and China - have veto power, while in the IMF and World Bank, the US and the Organisation of Economic Cooperation and Development (OECD) countries have a controlling vote over IMF policy.

dominance of the US in the international economic system. The War of Independence in Algeria, and the attempts to normalise relations thereafter, also had a deep impact on the French foreign policy position. At the same time, the US was also challenged in its position as leading geopolitical power in the UN, and North-South issues were resounding more and more loudly in meetings.[44] The forcefulness of some leaders in resisting US leadership was significant and gained ground in the years preceding the oil crisis of 1973:

> As a closely related phenomenon, increasing LDC cohesion and militancy on the issue of the control of natural resources. While the difference from previous GAs [General Assemblies] was one of degree, we saw significance in the thunderous applause greeting the speeches of Bouteflika (Algeria), Salvador Allende and other spokesmen for more extreme positions; in the resonance for charges against 'multinational corporations' and the unanimous LDC vote on permanent sovereignty over natural resources.[45]

From discussions in the UN we learn that developing countries raised their concerns about uneven economic development in the world at any opportunity. It became clear that the discussion about oil in 1973-74 was part of a much larger discussion about the international economic system. In many developing countries, the oil price increases of 1973 were seen at first as a political act in defiance of the North's hegemony.

Non-OECD Countries' Perspective

Developing countries were enthusiastic about the assertiveness of OAPEC and OPEC in taking control of oil. They initially translated this enthusiasm into the adoption of a resolution in the UN General Assembly. In this resolution of 1 May 1974 they called for a new international economic order, in which many of their objections to the existing economic system were voiced.[46] This response underlined how the oil crisis was embedded in wider issues concerning economic governance and dealt with unequal development and growth. Also, many developing countries had not entered their energy-intensive phase of development, or had done so only recently, and were initially less concerned about their energy costs. Instead, they were more focused on broadening the improvement of the terms of trade to other resources, which would compensate for higher energy prices, and expanding sovereignty over economic policy-making. The political claim of the developing countries were aided by a public discussion about the Club of Rome's report of 1972, which warned of growing raw material scarcity and fuelled the fears held by the OECD countries that the cartelisation of these markets, their nationalisation, or both, was imminent, and also laid down in a report on Reshaping the International Order.[47]

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[44] *Foreign Relations of the United States, 1969-1976*, Volume V, United Nations, 1969-1972, Document 109.

[45] *Foreign Relations of The United States, 1969-1976*, Volume E-14, Part 1, Documents on the United Nations, 1973-1976, Document 1 at http://history.state.gov/historicaldocuments/frus1969-76ve14p1/d1.

[46] The *Declaration for the Establishment of a New International Economic Order* was adopted by the United Nations General Assembly in 1974 and referred to a wide range of trade, financial, commodity and debt-related issues (1 May 1974, A/RES/S-6/3201); http://www.un-documents.net/s6r3201.htm.

[47] Meadows, Donella H., Dennis L. Meadows, Jorgen Randers and William W. Behrens III. (1972). *The Limits to Growth*. Universe Books, New York; Dolman, A.J. (ed.), Tinbergen (coordinator) (1976). Reshaping the International Order: A Report to the Club of Rome. Dutton, New York.

Although not immediately, it became clear that other natural resources were not as easily organised into a grouping or alliance which could be leveraged in higher prices, and also that scarcity was not as acute as had been feared. Nevertheless, the uncertainty about scarcity, the loosening grip of multinational companies on raw materials and the mounting political demands in the UN institutions of the developing countries, egged on by the oil crisis to further their demands, absolutely prejudiced the various political responses of the industrialised oil-consuming countries. The early enthusiasm of the oil-consuming developing countries began to fade when their economies, too, were impacted by the oil price increases.

The centrally planned economies of China[48] and the Soviet Union and Eastern Europe trading bloc, Comecon, were not dependent on oil imports, and inter-bloc oil trade was based on administrated prices which reflected a five-year average of international oil prices. Based on that system, the impact would be delayed and the peaks possibly averaged out. From the 1960s onward, the Soviet Union was a small exporter to international markets and thus saw the value of these exports increase as a result of the oil crisis. It also created a much wider gap between the inter-Comecon oil prices based on the Bucharest formula and the world market price, raising Soviet interest in renegotiating this system. The availability of cheap energy from the Soviet Union and of cheap capital from international banks involved in oil-dollar recycling enticed the Eastern European countries to speed up the modernisation of their economies. Before long, however, the Bucharest price formula was adapted to follow world market prices much more quickly, in an attempt to reverse the growing role of the Soviet Union as a mere raw material supplier to the other partners in the trading bloc. The oil crisis also had a large impact on relations within the group of Comecon countries, something which is often underestimated.[49] For instance, the 1980s gas campaign was but one of the results of the changes in the energy relations among the Comecon countries. Although delayed, the oil price crisis also led to large changes in the fuel mix of the Comecon countries.

Confusion in OECD Consumer Country Relations

The industrialised consuming country front was not as homogeneous as is often assumed, although in the 1980s many of the disparities had softened somewhat.[50] The immediate response to the 1973 oil crisis had been to rely on national policy measures to manage demand, despite the existence of some joint policy instruments, and to begin to diversify away from oil, as evidenced by statements by President Nixon and some European leaders.[51] The availability of domestic resources obviously played a role in the political response to the crisis. The US, although importing oil, was also a substantial energy producer, and the price increase also boosted the domestic oil sector. For other consuming countries, expansion of domestic production was not an immediate option, although the shift in relative energy prices was also for them an incentive to explore other options in the energy mix. Furthermore, some countries immediately began to engage in country-to-country negotiations to secure their oil imports, while others relied on the ability of the IOCs to re-arrange flows.

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[48] China was self-sufficient in energy at the time, and the opening up of its energy market came much later.

[49] Gustafson, Thane (1989). Crisis amid Plenty: The Politics of Soviet Energy under Brezhnev and Gorbachev. Princeton University Press.

[50] Scott, Richard (1994). pp. 32-33,

Within the framework of the OECD, cooperation in oil policy had already been initiated in the wake of the Six Day War of 1967 and included strategic oil stocks and discussions about oil sharing in times of tight supplies. Yet surprisingly, this scheme was not activated during the oil crisis.[52] The Arab-Israeli conflict and the oil crisis exposed the wide-ranging differences of opinion among the US, the European countries and Japan on many issues. Also within the EC it very quickly became clear that solidarity among the member states would be thin, also with regard to the embargo on the US and Netherlands (and later also Portugal and Denmark).[53] This was not only due to different economic interests, but also to political differences about the extent of European cooperation, the future of the trans-Atlantic relations, governance of the economy and, last but not least, relations with the Arab countries.

In particular, US-French relations were strained over both economic governance and security matters, which were further emphasised during the oil crisis. All sorts of differences, which had lingered before, began to surface in 1973. Yet in his landmark Pilgrims speech in December 1973 London[54], Secretary of State Kissinger made an important outreach[55], commenting on relations with the European countries, and the changing relations in the world, saying:

> As we look into the future we can perceive challenges to which our recent disputes are trivial. A new international system is replacing the structure of the immediate post-war years. The external policies of China and the Soviet Union are in periods of transition. Western Europe is unifying. New nations seek identity and an appropriate role. Even now, economic relationships are changing more rapidly than the structures which nurtured them. We, Europe, Canada and America have only two choices: creativity together or irrelevance apart.

His speech then moved to energy relations and the proper response to the oil crisis, which he declared were not caused by the Arab-Israeli conflict, but which had merely hastened to bring out the underlying chronic problem to an acute phase. He proposed as a long-term

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[51] www.ena.lu, Search under the heading "Oil Crisis 1973".

[52] Scott, Richard (1994). P. 37.

[53] The Netherlands, at that time, home of the world's largest port and important for oil and oil product supplies to surrounding countries, was particularly hit by the embargo. To strong-arm the EC member states into cooperation, the Netherlands went so far as to threaten to withhold oil and oil product exports, on which Germany and Belgium depended, and natural gas exports. See Hellema, Duco, Cees Wiebes and Toby Witte (2004). "The Netherlands the Oil Crisis: Business as Usual". Amsterdam University Press, pp. 73-95.

[54] Kissinger, Henry, *New York Times*, 13 December 1973.

[55] This was necessary since an earlier speech in April 1973 about the Atlantic relationship and the inclusion of Japan had led to confusion and dismay among European countries, which were keen on developing political unity. Work on the renewal of the 'Atlantic Charter' in the summer of 1973 showed however that relations between the US and France were quickly unraveling. Pompidou's health, Watergate and the role of the French foreign minister Jobert in carving out a strong position for France to 'unlock the Year of Europe', were important reasons for the cooling of relations. These issues, including the economic ones, played an important role in the response to the oil crisis and its aftermath. Kissinger, Henry, Years of Upheaval, Little & Brown Company, Boston, 1982, Chapter V The Year of Europe, pp. 151-162 and Chapter XVI Troubles with Allies, pp. 700-746.

solution to make 'a massive effort' to create incentives for producers to increase supply, to encourage consumers to use existing supplies 'more rationally' and 'to develop alternate energy sources'. For this purpose he proposed that the US, Canada, Europe and Japan would create an energy action group to solve what he coined 'the energy problem'. This proposal to cooperate in the field of energy resulted in the Washington Energy Conference in February 1974 and the foundation of the IEA in November 1974.

Yet the foundation of the IEA came about with some difficulty. There were differences between those countries that were home to one of the IOCs (the US, the UK and the Netherlands) and those that were not (France and Italy), while in addition, the level of import dependency and dependence on transit countries (Germany and Belgium) influenced governmental response. Distrust among certain consumer countries ran deep, as did domestic political problems, for instance in the UK (about EC accession and a coal strike) and the US (Watergate), complicating a more coordinated response. France, while promoting a strategy of broad cooperation was at the same time, like others, involved in pursuing special relationships with OPEC countries. In the many years thereafter, the failure to overcome the national interests in the early 1970s and the different foreign policy approaches emerging during the oil crisis became a large stumbling block to being able to coordinate energy policies within the EU.[56] Some of these difficulties stemmed from the preference for intergovernmental coordination rather than the intra-governmental approach of the EC of that time, which could have been encouraged by the growing distrust over motives when dealing with the transatlantic relations.[57]

In the course of the step-by-step diplomacy process in the Middle East, conducted by American Foreign Secretary Kissinger, tensions in the EC mounted between the Atlantic-oriented member states and the French. According to Kissinger's memoirs covering that particular period, *Years of Upheaval*, the animosity between himself and Foreign Minister Jobert surfaced repeatedly.[58] The differences of opinion between the French and the

[56] In a Final Declaration of the Copenhagen Summit: special annex on the energy crisis (15 December 1973) regarding the strategy to open discussions with both producing countries and with other consuming countries, it says: "The Heads of State or Government confirmed the importance of entering into negotiations with oil-producing countries on comprehensive arrangements comprising co-operation on a wide scale for the economic and industrial development of these countries, industrial investments, and stable energy supplies to the Member Countries at reasonable prices. They furthermore considered it useful to study with other oil-consuming countries within the framework of the OECD ways of dealing with the common short and long-term energy problems of consumer countries." (www.ena.lu See "Events, Period and Relations with Middle East"). The wording reveals that seeking cooperation with producers is stronger phrased than the sentence referring to the invitation of the US to form a consumer action group, mentioned by Kissinger in his speech in London days before the Summit. In the run up to and during the Washington Energy Conference European unity unravelled and the OECD countries, except for France, began preparations in the Energy Co-ordinating Group, which led to the IEA. Scott, Richard (1994)), p. 46/47. Until today, security of supply policy has largely fallen outside the realm of the EU, although the Lisbon Treaty (2009) finally made it a shared responsibility (with national governments of the member states).

[57] "Energie vergt een energie(k) beleid". Lefeber, R. and J. G. van der Linde, in: SEW (6), June 1987.

[58] Confirmed in an interview with Davignon (who later chaired the ECG in 1974) on his assessment of developments at the energy conference in Washington in February 1974. www.ena.lu. See "Events, Period and Relations with Middle East".

Americans also emerged during the Washington Energy Conference in February 1974.[59] In his speech at the conference, the French Foreign Minister Jobert spoke out against an organisation of only industrialised consumer countries, and instead stressed the importance of including developing consuming countries and producing countries[60], despite references in the closing statement of the Washington Energy Conference and in the IEA preambles to cooperation with producing and developing consuming countries.[61] France was determined that the oil crisis should be seen in the wider economic context and include all parties in a reshuffling of the world economic order.[62] The French promoted European leadership in these discussions, but others took a dim view of their approach, not least because of the confrontational position taken by some of the developing countries, such as Algeria, in the midst of the oil crisis and the value they attached to the transatlantic relation.

The Netherlands was particularly upset by the limited support it had received from its EC partners in dealing with the oil embargo and had to strong-arm support for its position as an important point of entry for oil and oil products to the Northwest European hinterland.[63] Moreover, it was also a main gas supplier to other European countries. The Dutch were deeply engaged in trans-Atlantic relations and were, perhaps for that reason, less enthusiastic about the French approach. A Dutchman (Van Lennep) was heading the OECD, while the Dutch also held crucial positions in the IMF (Witteveen) and NATO (Luns), creating a much closer relationship with the US administration than perhaps had by other countries.

Despite the US-French differences and the early death of the French president Pompidou in the spring of 1974, the Washington Energy Conference resulted in the establishment of the IEA, under the aegis of the OECD. The IEA was fast tracked to start work as quickly as possible, and in November 1974 the International Energy Programme was adopted, giving hands and feet to an emergency response policy for the member states.[64] The new presidency of Giscard 'd Estaing did not change the position of France with regard to the IEA and it declined to join. Moreover, the French redoubled their efforts to promote more wide-ranging discussions in which oil would be part of the agenda, too, in the Conference on International Economic Cooperation. In April 1975, in an attempt to entice France in through the IEA's back door, the industrialised consumer countries participated in a preliminary Conference to the International Economic

[59] Speech by Jobert at the energy conference of 11 February 1974 in Washington and the press conference of 13 February 1974. Ortoli, for the European Commission, and Walter Scheel, Foreign Minister of Germany and speaking for the EC Presidency, also stressed cooperation with consuming developing and producing countries demonstrating the European concerns about wider international relations. (At www.ena.lu. See "Events, Period and Relations with Middle East"). The conclusion of most ministers was however different from that of Jobert at the end of the meeting, when they agreed to participate in the ECG and then the IEA.

[60] The Americans had argued that constructive producer-consumer cooperation could only come about when consumers would cooperate among themselves first. The fact that OPEC had acted in unity had convinced them that consumers also needed to become organise. www.ena.lu. See "Events, Period and Relations with Middle East". Kissinger, Henry (1984), p. 920-925; See Hellema, Duco, Cees Wiebes and Toby Witte (2004), pp. 214-217.,

[61] Scott, Richard (1994). pp. 45-48.

[62] Odell, Peter (1986). pp. 239-244.

[63] Hellema, Duco, Cees Wiebes and Toby Witte (2004).

[64] Scott, Richard (1994).

Cooperation, held prior to the larger conference of this name later that year in Paris.[65] In this preliminary conference Algeria, Saudi-Arabia, Iran and Venezuela participated on behalf of the producing countries; other developing countries were also present. A failure to reach agreement on oil matters not only changed the scope of the larger conference later that year, but also closed the back door to early French participation in the IEA. France's participation in emergency policies was then secured through the later adoption of similar EC policies, mimicking membership in this roundabout manner.

France's efforts to discuss the oil crisis in a wider international economic context did not stop there. They also organised the very first G-7 meeting, which at the time included 6 countries: the US, the UK, Germany, Italy, Japan and France. They convened 15-17 November 1975 at Rambouillet, with the oil crisis and restructuring of monetary relations dominating the agenda. From the documents of President Ford, released by the US State Department, we learn that the discussions at Rambouillet about the oil crisis and the international monetary situation were surprisingly frank and profound.[66] The atmosphere was constructive rather than acrimonious. The change in leadership in some of the leading industrial countries and the economic situation certainly played a role in this change of temperature. Yet the approach among the leading industrial countries remained divergent, with France focused on the wider, more systemic, political and economic issues and the Americans more focused on specific issues within the prevailing political and economic arrangements. Interestingly, the other leaders also expressed their preference for dialogue with the producing countries, although they were also aware of the difficulties due to the antagonistic North-South relations. Importantly, at the meeting also agreement on the need to restructure the IMF was reached, although it took some time for it to be finalised. Balance of payment assistance for developing oil-consuming countries was also agreed upon, reaching out to this group of countries.

The success of the first G-7 meeting was not repeated in the Conference on International Economic Cooperation, which started on 16 December 1975. Too many issues and too many opposing views and positions prevented this conference from producing any substantive results, although discussions continued for a number of years. The discussions between oil-producing and -consuming countries continued as well until the oil crisis of 1978-79, at which time, in the eyes of consuming countries, OPEC countries took advantage of the Iranian-Islamic revolution by allowing prices to increase. From then on, the dialogue broke down due to a lack of trust.

Thus, the attempts of France to come to a restructuring of the global governance system, including that of resource trade and making the EC a front-runner in those developments, did not really materialise. The second oil crisis and the subsequent tightening of the money supply in the US and the general atmosphere of economic restructuring changed the focus from the international to the national spheres. The US change in economic and monetary policy was instrumental in changing the focus of economic policy-making in other countries. The European countries very quickly discovered that diverging economic policies were constrained

[65] Metzemaeker, L. "De Europese Gemeenschap en de energiecrisis",in: *Nieuw Europa*, No 1, January 1975, pp. 52-56. Via www.ena.lu

[66] "Economic Summit in Rambouillet, France, 15-17 November 1975". in: *Foreign Relations of the United States, 1969-1976*, Volume XXXI: Foreign Economic Policy 1973-1976, pp. 386-452.

by their integrated economies. France had to follow the tight monetary and economic policies prevalent in other member states and was unable to follow its own formula in this new round of imbalances.

Also, the common energy policy to which the EC member states had aspired in December 1973 was sidelined as a result of the conflicting policy approaches. The Euro-Arab Dialogue, also part of the many-pronged EC energy diplomacy initiatives of the EC Summit meeting in December 1973[67], also quickly petered out when oil was removed from the agenda. The Conference on International Economic Cooperation, held in Paris on 16 December 1975 and destined to include a producer-consumer dialogue, became sidetracked in all sorts of other development issues. In 1991, again with the active involvement of France, the first ministerial meeting of a producer-consumer dialogue, now known as the International Energy Forum, took place in the atmosphere prevalent after the first Gulf War in which consuming and producing countries recognised sufficient common interests in oil market stability to be willing to try again.

Maintaining Producer Unity

The events surrounding the second oil price increase in 1978-79 and the economic impact started a period of more confrontation and established a dual governance structure, with OPEC representing the interests of producer countries and the IEA representing the interests of the consuming countries. The producing countries organised in OPEC had been struggling with the impact of inflation on their real oil income in the 1970s. Many OPEC member states had embarked on ambitious development programmes, using their oil income to leverage them into industrial economies, and some had used their oil reserves as collateral for loans. The changing monetary relations - but also the shrinking demand for OPEC oil in OECD markets - tested their new economic policies and their roles in international politics.

The North-South discussions also impacted the relations among the producing countries when it became clear that winning the oil debate with the international oil companies and their home countries was one thing, but winning stability of oil income was another. A complicating matter for the producing countries was the large difference among the OPEC member states in absorption capacity. The economies of the OPEC countries varied widely in terms of oil reserves, production capacity, population, institutional make-up, economic development and political orientation. They represented a group of developing countries, some of them newly independent and not always politically stable at the time. In the period between the two oil crises, both Iran and Iraq, which were embroiled in a bloody war during most of the 1980s, encountered internal political difficulties and a change of leadership. Many countries struggled with the political absorption of the new riches, in some cases because the pace of modernisation was too fast, leading to anger among more conservative forces in society, while in other countries it was too slow, leading to social unrest. Adaptation to the new circumstances thus challenged both the internal (mainly economic) policies and the external policies of the producing countries in an international context that was also highly uncertain.

[67] Annex to the Summit Conference Final Communiqué, in: Bulletin of the European Communities. December 1973, No 12, pp. 11-12. www.ena.lu

As a result, OPEC meetings were as if in a kaleidoscope; every word and move made a difference in capital cities around the world. At each meeting, the world press was out in large numbers, adding to the political stress surrounding the ministerial meetings. Public statements served more purposes than oil policy alone, which no doubt complicated energy diplomacy further, with politicians engaged in both domestic and international political positioning. The turmoil surrounding the OPEC meetings was complete when Carlos, an international terrorist, captured the entire entourage of oil ministers, convening in December 1975 at the OPEC headquarters in Vienna. It showed that oil and (international) politics had become completely intertwined in the heated atmosphere of those days. Although OPEC represented producing countries from South America, Africa, Asia and the Middle East, the dominance of the latter implied that the political difficulties among Arab countries and the Arab-Israeli conflict kept cropping up on the oil agenda. In both consuming and producing countries, the first half of the 1970s was clearly an intense and chaotic period in which political and economic balancing and re-balancing created massive uncertainties.

The migration of oil relations from the economic sphere (both commercial and strategic) solidly into the strategic political sphere not only affected relations between producers and consumers, but also among producers. Oil producers with relatively modest proven oil reserves and a substantial absorption capacity became proponents of higher prices, the so-called price hawks, while producers with substantial proven reserves and lower absorption capacities, the moderates, preferred policies that underpinned their longer-term oil income stability. These economic positions and preferences were often defended in political terms. The impact of the oil price increase on developing consuming countries led to the erection of several development funds to assist these countries with their economic problems. Nevertheless, the economic problems of this group of developing countries did cause some strain within the Group of 77 countries, which had at first hoorayed the change in the oil market governance. Also here, the complexity of the international political and economic situation was amplified by the changes in exchange rates and money flows, challenging the relations among oil producing countries and relations with consuming countries as time wore on.

National versus International Governance

For a substantial number of years, OPEC meetings carried much geopolitical weight. On the one hand, this signalled the importance of oil and oil prices to the world economy. Yet on the other hand, it echoed the new projection of power in international relations by a group of developing countries.[68] The intertwining of geopolitics and the new task of running their oil sectors in a way that both served the economic development of their countries and maintained stability in the international oil markets immediately after 1973-74 began to emphasise the differences in policy priorities between the OPEC member states. For large oil exporters such as Saudi Arabia, stability and prosperity of the global economy was crucial as this ensured healthy growth in long-term oil demand. For smaller exporters with a relatively large absorption capacity, such as Algeria, securing a robust price in the shorter term was important. These differences in oil policy priorities came to the fore in the oil price crisis of 1978-79, provoked by problems in

[68] Montgomery, Scott L. (2010). The Powers that be, Global Energy for the Twenty-first Century and beyond, pp.213-240. The University of Chicago Press.

Iranian oil production and again in the events surrounding the oil price collapse in 1985-86.[69]

Due to a strike of the Iranian oil workers in 1978, Iranian exports quickly declined. Japan was a large importer of Iranian crude oil and was forced to purchase oil on the very small spot market to supplement its deliveries. At the time, most oil was traded in long-term contracts, of which some were a continuation of the agreements with the large oil companies, and some in government-to-government contracts. The spot market represented only a small share of total trade, allowing players to balance demand and supply. With the Iranian exports in default on the long-term contracts, Japan began to purchase oil on this spot market, pushing prices to unprecedented levels. At the same time, due to growing supply uncertainty caused also by discussion in OPEC, the IEA member countries decided to increase the strategic reserve requirements, temporarily pushing up demand in an ever-tighter international oil market.

The OPEC countries did have surplus capacity to compensate for the lost Iranian capacity. The way in which this surplus was offered on the international market revolutionised oil trade. Saudi Arabia offered its additional production on the international market at the pre-crisis prices, but other member states increasingly offered their oil on the spot market - at first only the additionally produced oil but later most of their oil. The difference in price between the contracted oil and the spot market became very large indeed and led in 1980 to the abandonment of increasingly more of the long-term contracts for the temporarily more lucrative spot market deals.[70] This had a profound effect on oil markets, as de-integration and emergence of new players expanded the external market in which buyers and sellers engaged in transactions at arm's length. The crude market became more competitive, and the majority of oil moved through short-term contracts or the spot market. Prior to these developments, the market had consisted of a small number of spot transactions, usually done under distressed conditions, for disposing of small amounts of crude oil not covered by long-term contracts.

The position of Saudi Arabia to increase production and charge the old price of oil was frowned upon by those member states more sensitive to short-term gains in oil income.[71] They saw Saudi Arabia's policy as a frustration of their attempt to maximise short-term oil income and argued that oil was moving towards the new equilibrium price level. They also welcomed the price increases as compensation for the inflation of the years before. The advocates of price increases were all countries with a limited capacity to manage oil income through production policies. The earlier oil income increase had been incorporated in their economic planning and served as an underpinning for international bank loans. The countries had embarked on an intense industrialisation process that was just beginning to gain momentum.

Saudi Arabia saw the abandonment of the earlier price policy and structure of trade as a danger to their long-term policy goals and feared the inflation of higher oil prices and its probable impact on demand. With its relatively low absorption capacity, the country was very concerned about managing the value of its oil under and above ground, both in the short- and longer term. Its holdings in international capital markets made it more sensitive to monetary

[69] Mabro, Robert (ed.) (1986). OPEC and the World Oil Market: The Genesis of the 1986 Price Crisis. Oxford Institute for Energy Studies/Oxford University Press, Oxford.
[70] Hartshorn, J.E. (1993). Oil Trade, Politics and Prospects. Cambridge University Press.
[71] Noreng, Øystein (2006), p. 110.

developments. Also, it was aware that if the 'new' oil price had to be defended, it would fall mainly to Saudi Arabia to cut production. The OPEC countries could not agree on how best to respond to the Iranian crisis and were, for a time, divided over price and production policy.

Saudi Arabia, producing lower-priced oil at maximum capacity (at the time 10 million b/d) found out that its substantial production increases were not enough to stabilise the international oil market at a lower price level. In 1981 it agreed to adapt its policies to the majority position in OPEC and began a period of serious production cutbacks. In the years to come, regional tensions would define the relations within OPEC, linking Middle East politics more firmly to oil.

The US hostage crisis in Iran and the position on oil prices of a majority of the OPEC member states created a new political climate in the US and among its allies: less forgiving and less cooperative with regard to oil-producing countries. Moreover, the economic impact of the second price increase was large and led to a radical re-orientation of monetary and economic policies in the OECD countries. The erosion of trust in consuming countries regarding cooperation with OPEC was very large indeed. The developed consuming countries began to push ahead with policies, changing their dependence on imported OPEC oil, and attempted to reduce the share of oil in their energy mixes. For developing consuming countries, a decade of economic hardship commenced as a result of the second oil price increase, the subsequent re-orientation of monetary policies, higher taxation of petroleum products and oil substitution policies.

Maintaining Cohesion

Oil politics within OPEC very quickly became not only a discussion about the international oil price level, but also about the distribution of income among the member states.[72] Due to the difference in reserves, production capacity, absorption and politics, the costs of OPEC's production policy befell only a few member states. Saudi Arabia, Kuwait and the United Arab Emirates were the main contributors to OPEC's growing spare capacity in the 1970s and 1980s, although other member states also agreed to cap some of their production capacity. Yet these countries were also among those that complied rather loosely with these production agreements, redistributing the cost mostly onto the three Gulf producers. Also within OPEC, the more expensive oil was produced first, while the oil that could be produced with lower costs had to stay in the ground. The decline in demand for OPEC oil and the relegation of OPEC to the role of swing producer created economic hardship in many OPEC countries, particularly when Non-OPEC oil began to encroach on its market share and undercut OPEC prices.[73]

The OPEC meetings in the early part of the 1980s were defined by declining supply management and price adjustments until the latter part of 1985 when Saudi Arabia claimed a share of OPEC production consistent with its official reserve base and long-term policies. This helped to reposition OPEC oil in the market, as the new policy implied more production and lower prices. Lower oil prices also stimulated demand in depressed economies, such as the European economies and the oil-consuming developing countries with debt problems.

[72] Noreng, Øystein (2006), p.113.
[73] Alnasrawi, Albas (1985), pp. 83-85.

Furthermore, the oil price decline coincided with a reorientation of OECD monetary policies. In the Plaza and Louvre agreements, the G-7 countries had agreed in 1985 to depreciate the dollar in a coordinated intervention. The era of the Washington consensus commenced, and the liberal economy became the new norm. The double effect of lower oil prices and a depreciated dollar freed the world economy from its low growth path and helped to further restructure developing country debt. But the flip side of this policy was that oil producing countries, among which were half of the OPEC member states, and which had used highly valued oil reserves as collateral for international bank loans, were now the world's new debtor countries requiring IMF assistance.

New oil discoveries in non-OPEC countries, helped by OPEC price policies, implied that significant amounts of oil began to reach the international market from outside OPEC.[74] The increase in this outside supply also meant an increase in the number and diversity of crude oil producers. These producers were setting their prices in line with market conditions, undercutting OPEC prices. With the continued decline in demand for its oil, OPEC saw its own market share in the world's oil production fall from 51% in 1973 to 28% in 1985.

It became clear by the mid-1980s that the OPEC-administered oil pricing system was unlikely to hold for long and OPEC's – or, more precisely, Saudi Arabia's – attempts to defend the marker price would only result in loss of market share, as other producers could offer to sell their oil at a discount to the administered price of Arabian Light. As a result of these pressures, the demand for Saudi oil declined from 10.2 million b/d in 1980 to below 3 million b/d in the summer of 1985.

For a short period in 1986, Saudi Arabia adopted the netback pricing system to restore the country's market share.[75] Soon afterward, other oil-exporting countries adopted this system in an attempt to enhance their market shares. The netback pricing system, which provided oil companies with a guaranteed refining margin even if oil prices were to collapse[76], contributed to the 1986 price collapse, from $26 a barrel in 1985 to less than $10 a barrel in mid-1986. Out of the 1986 oil price crisis emerged the current 'market-related' oil pricing system. The transition, however, did not occur instantaneously. In 1987 Saudi Arabia reverted back to official pricing for a brief period of time, but the position was untenable, as many other oil-exporting countries had already made the switch to the more flexible market-related pricing

[74] This process began well before the 1970s. The North Sea attracted oil companies starting in the early 1960s, and the first rounds of leasing were awarded in 1964 and 1965. In 1969, oil was found in the Norwegian sector, and in 1970 a major find (the Ekofisk field) was confirmed. In 1969 in the UK sector, Amoco found some oil, but it was deemed to be non-commercial. In 1970, BP drilled the exploratory well that found the Forties field. One year later, Shell-Esso discovered the Brent field. It is important to note that all these major discoveries preceded the significant rise in oil prices. Seymour, A. (1990), *The Oil Price & Non-OPEC Supplies,* OIES, shows that half of the increase in non-OPEC supply over the period of 1975-85 would have materialised regardless of the level of oil prices.

[75] For a detailed analysis of the netback pricing system and the 1986 price collapse, see Mabro, R. (1986). OPEC and The World Oil Market: The Genesis of the 1986 Price Crisis, OIES 3.

system. The date as to when Saudi Arabia explicitly adopted the pricing formula is not clear, but it might have occurred sometime in 1987.[77] This opened a new chapter in the history of the oil market, which saw OPEC lose control of the administered pricing system and transfer the power of pricing crude oil to the so-called market.

In the mid-1980s it was clear that the power projection of the 1970s, with oil as a weapon for redesigning the economic and political power structure in the world, was incomplete. Other strengths in the economic, political and security spheres were just as important to establishing a position of power. Yet the impact of the two oil price increases of the 1970s had shown that cooperation to include rather than to exclude countries in the international system was important, and that gradual change is very difficult to manage in a world where national, private and public interests compete for prominence. Despite the change of course within OPEC, the economic difficulties of individual member states and the Iran-Iraq war defined their relations in the second part of the 1980s. Although oil demand began to grow, energy policies - for instance in Europe - prevented a quick return to previous oil demand trends, while demand in electricity generation was structurally lost. As the oil-consuming countries had discovered the importance of security of supply in the 1970s, the oil-producing countries discovered the importance of security of demand in the 1980s. These two important pillars of energy policy became the key to the initiatives for closer cooperation in the 1990s.

Conclusion

The result of the vast changes in the oil value chain and oil producer-consumer country relations was that from 1973 onwards the IEA countries bore the cost of security of supply with their strategic reserves, while some OPEC countries bore the cost of oil market stability with their buffer production capacity. Together, these mechanisms provided the post-1973 market with security vents to overcome short-term mismatches and disruptions. Previously, this had been the self-regulated task of the main international oil companies. Despite the new international organisations, until the late 1980s the governance of oil market security was conducted in official institutional isolation and was very much part of great power politics and dramatic shifts in economic policymaking. Although the potential strength of more cooperation between consuming and producing countries was gradually recognised in more circles, in the 1980s the countries were unable to overcome the political and economic differences that originated in the 1970s. Only when economic barriers in the internal and external economies of many countries were removed and developing country debts were integrated in a new economic growth model, in addition to some important geopolitical stumbling blocks being removed, such as the end of the Iran-Iraq war and the fall of the Berlin Wall, did the time ripen for closer oil cooperation.

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[76] It involved a general formula in which the price of crude oil was set equal to the *ex post* product realisation minus refining and transport costs. A number of variables had to be defined in a complex contract including the set of petroleum products that the refiner can produce from a barrel of oil, the refining costs, transportation costs and the time lag between loading and delivery.

[77] Horsnell, P. and Robert Mabro (1993). Oil Markets and Prices, The Brent Market and the Formation of World Oil Prices. OIES, Oxford University Press, Oxford.

Chapter 4: From Confrontation to Cooperation

Introduction

The 1980s left the OPEC member states with widely different outlooks on how best to reap the benefits from the economic upswing in the global economy. These differences came to a head in February 1990, when Iraq opened its new oil export pipeline through Saudi Arabia, only to find that it could not be sufficiently filled with oil. The Iran-Iraq war had left the country with huge debts, and without foreign direct investment or a substantial increase in oil revenues, Iraq could not finance new capacity investments. Overnight, Iraq reverted from a recent convert as volume producer back into a price hawk, challenging the oil policies of member states with more internationally-oriented and long-term strategies. The months that followed witnessed a rapid deterioration of relations between Iraq and the other Gulf states, resulting in the occupation of Kuwait in August 1990, despite the intense efforts of Saudi Arabia and others to mediate. The geopolitical impact of Iraq's occupation of Kuwait was large, not least because, if unchallenged, they would represent about 20% of the world's proven oil reserves and about 5% of world refining capacity in that year. Moreover, they threatened security of production in the neutral zone and in Saudi Arabia. Such a threat to oil security was unacceptable to both producers and consumers. Immediately, oil from Iraq and Kuwait was denied market access, while other producers tried very hard to compensate for lost supply to manage the price impact. A coalition of willing countries, mainly the US, the UK, Saudi Arabia and France and forces from Arab countries such as Egypt, Morocco and Syria, began to build up military strength along Iraq's borders to contain the risk.

The 1990-1991 Gulf War and the Response to the Supply Disruption

The first Gulf War demonstrated the importance of utilising spare capacity in times of crisis.[78] As a result of Iraq's invasion of Kuwait, some 4.5 million b/d were taken out of the oil market. There were disagreements within OPEC members as to the best way to respond to this adverse supply shock. OPEC members, mostly those that did not have any spare capacity at that time, opposed any production increase. These were in favour of the IEA's activating its emergency response measures and releasing stocks from the strategic petroleum reserves. Others, led by Saudi Arabia and Venezuela, were in favour of boosting oil supplies. These member countries argued that since the interruption of supply was induced by OPEC members, and given that many OPEC countries were sitting on large spare capacity, the Organization should step in and aim to stabilise the oil market. Furthermore, since developing countries had little inventory

[78] Harks, Enno (2010), pp. 252-54.

capacity, and since their oil dependence was much higher than that of OECD economies, it was those countries that would suffer the most from the supply interruption.

On the 16th of August 1990, Saudi Arabia called for an immediate extraordinary OPEC meeting. Despite strong opposition from some key member countries such as Algeria and Iran, the OPEC Ministerial Committee convened in Vienna on the 29th of August. The meeting was successful in reaching a deal in which OPEC members agreed to "increase production, according to need". OPEC argued that this decision would help to restate to the world that the Organization "stands for market stability and regular supply of oil to consumers". OPEC's Vienna agreement also called for consumers "to actively participate in the stabilisation process". There were some concerns among OPEC members that the decision to increase output would coincide with IEA's release of stocks, placing downward pressure on oil prices, though there was no clear indication at that time that the IEA was contemplating such a move. During the OPEC meeting, Saudi Arabia made initial contact with the IEA to obtain a statement from the consumer organisation in response to OPEC's decision to increase production. On the 29th of August, the Executive Director of the IEA, Mrs Helga Steeg, issued a statement which welcomed OPEC's increase in oil production and noted that the "oil supply situation has not warranted additional measures, including recourse to government stockpiles". However, the statement noted that the proposal "for a link between a production increase by OPEC and government stock draw by the IEA, as well as for a joint meeting between IEA and OPEC Ministers, is not feasible, politically or economically". The speed at which this statement was issued indicates that contacts and channels of communication between IEA and some OPEC officials may have already been established, perhaps well before the eruption of the Gulf War.[79] In terms of content, the statement indicates that although the IEA member countries have taken preparatory measures[80], they preferred to shift the responsibility of filling the supply gap to OPEC.

The Gulf War proved to be a turning point in producer-consumer relations.[81] It revealed the importance of a concerted and coordinated global response to an adverse supply shock. On October 1, 1990 in the UN General Assembly, the Venezuelan President Perez called for an urgent meeting of producers and consumers under the auspices of the UN to help the world face "the political realities of oil", stating that "excessive fluctuations are harmful to all of us, consumers and producers, and only favour speculators".[82] He proposed that the dialogue should start with a meeting between OPEC and the IEA. This echoed an earlier proposal made

[79] In a private interview, Prince Abdulaziz Bin Salman Bin Abdulaziz, Assistant Minister for Petroleum Affairs in Saudi Arabia's Ministry of Petroleum and Mineral Resources, revealed that initial contacts with IEA were made in the late 1980s. In a recent interview, Dr Alirio Parra, a former Energy and Mines Minister of Venezuela between 1992 and 1994, revealed that in the late 1980s, and unknown to other OPEC member countries, he invited the Executive Director of the IEA for a visit to Caracas.

[80] Scott, Richard (1994). P. 166.

[81] See interview Dr. Subruto in OPEC Bulletin 3/10, pp. pp.10-15, where he said "Reflecting on the period as a whole (of his time as Secretary general of OPEC), however, I believe that the most important development was the establishment of cooperation between OPEC and the International Energy Agency (IEA). For many years prior to 1988 and during the early part of my time at the Secretariat, the relationship was one of cat and mouse. It often felt like the two organisations were crossing swords every time they met. (…) The slogan I remember from that time was ' from confrontation to cooperation'. And there is clearly a more cooperative environment today."

[82] *Middle East Economic Survey*, Vol.XXXIV, No.1, p.A7, 8 October 1990

in the World Commission on Environment and Development in 1987 which called for closer cooperation between consumers and producers. At the World Economic Forum in Davos in 1989, the Chairman of the Commission and the Norwegian Prime Minister Gro Brundtland called for an informal "Workshop of Ministers" from both producing and consuming countries to discuss energy related issues.[83] As a petroleum-exporting industrialised country, Norway felt that it was in a bridge-building position between producers and consumers. The concept of a "workshop" was meant to underscore informality and to imply that the initiative was not intended to produce a big conference that would create high political expectations that could in turn not be met. These calls, however, fell on deaf ears, with important consumers regarding cooperation with producers at the political level as ineffective, given the wide divergence of interests between the two groups. Norway attached great importance to having the US on board for the dialogue process, but later in 1989 the new President Bush made it clear to the Norwegians that the US still had misgivings about the dialogue.

In 1989, Venezuela's new President Perez was confronted with economic hardship at home. Unlike in the 1970s when he presided over the country in the years of increasing oil income, he now had to deal with a country under an IMF restructuring programme. Moreover, PDVSA management had proposed fairly large expansion plans and forward integration strategies in the US. If achieved, these plans could potentially create difficulties in OPEC in the absence of an expansion in world oil demand and as other countries were interested in raising supply to boost their income. Perez began to aim for international recognition for supply and demand issues by initiating multilateral initiatives. In a meeting on the sidelines of the 45th Session of the UN General Assembly in September-October 1990, Presidents François Mitterrand of France and Carlos Andres Perez of Venezuela provided their political support for the initiation of the 'Ministerial Seminar' of producers and consumers, which with the help of the Norwegians, led to the first meeting in Paris in 1991.

For Venezuela, France was a natural choice to partner with, as France continued to be viewed by many OPEC members as open to such initiatives. France had been a main promoter of such a dialogue in the 1970s, and other European countries had shown consistent interest in such dialogues. The relations with producing countries remained important for France and the Europeans in general, and based on the first contacts in the 1970s, the EU later engaged in talks with OPEC and the Gulf Cooperation Council. At the same time, although France had declined to join the IEA when it was initially established, they had taken the first internal steps to prepare for IEA membership in 1990 and began to participate in the governing board later that year.[84]

Other producers' interest in opening a dialogue with consumers has also intensified during the early 1990s. PDVSA, Kuwait Oil Company (KOC) and, to a lesser extent, Saudi Aramco, had embarked on forward integration strategies in the main markets for their oil. They had purchased downstream facilities in the US and Europe and were keen to further develop

[83] Walther, Arne (2007). "Dialogue for Global Energy Security: The Role of the IEF", in: *Middle East Economic Survey*, Vol. 50, No. 47, 19 November.

[84] In 1992, France ratified the agreement to join the IEA, explaining the listing of the official year of membership. Because membership of the IEA involved signing a treaty, the ratification took place in 1992, but France had participated in the IEA governing board since late 1990.

these assets in an effort to secure demand for their oil. The restrictions on production were increasingly seen as an impediment to their development as vertically integrated oil companies. Other OPEC member countries, mainly those with a smaller oil asset base, debt problems and/or regional or domestic political instabilities, were unable to pursue a similar strategy to secure demand for their oil. Economic hardship and/or political difficulties also impeded these countries' abilities to invest in production capacity, tempting some to again consider foreign direct investments to bring their capacities closer to potential. Some producers considered improvement in relations with consumers through a purposeful dialogue could help in creating confidence between parties and hence result in a more conducive environment for investment in their energy sectors.

The Isfahan Oil Conference

Calls for the producer-consumer dialogue began to spread widely during and in the aftermath of the Gulf War. In his address to the annual meeting of the Indonesian Petroleum Association on 16 October 1990, OPEC President Mr Sadek Boussena called for an end to the confrontational behaviour between producers and consumers, proposing that the two sides reach a consensus on a desired equilibrium oil price level. He called for an international conference that included OPEC, non-OPEC, IOCs and consuming governments to be held after the Gulf crisis to discuss the outlook for price stability.[85]

Iran also attempted to mend fences with other countries and organised a conference in Isfahan on 27-29 May 1991 entitled 'Oil and Gas in the 1990s: Prospects for Cooperation'. The meeting was attended by senior officials from producing and consuming countries, including ministers from the Soviet Union, Saudi Arabia, Venezuela, Indonesia, Nigeria, the UAE, other senior officials from France (the Deputy Minister of Industry), Japan (an official from MITI) and China (the Deputy Minister from the Ministry of Petroleum) and representatives from international oil companies. The then Iranian oil minister Mr Aghazadeh was the main driving force behind the Isfahan conference. Iran opened its offshore oil and gas sector for IOC investments in the period after the Iran/Iraq war and entered into negotiations with international oil companies for joint investments. Iran had a very ambitious programme of increasing capacity from around 3.5 million b/d to 5 million b/d by 1993, which could not be achieved without foreign players' involvement. Mr Aghazadeh considered that a genuine producer-consumer dialogue could help in creating confidence between parties and hence result in a more conducive environment for investment in the oil and gas sectors. More generally, one of the objectives of the Isfahan meeting was also to open new lines of communication between the various parties, which had been blocked due "to many misconceptions and misunderstandings". In an interview just before the Isfahan meeting, Minister Aghazadeh made a strong case for the dialogue, stating that if the two sides were to reach common understanding about oil reserves belonging to the world and all parties involved being responsible for safeguarding these reserves and optimising their use, then "this will create a strong reciprocal bond and lay the foundations for a meaningful producer-consumer dialogue".[86] The Minister also welcomed the French-Venezuelan initiative, arguing that if the dialogue is organised in such a way that both

[85] MEES (1990). "Boussena Calls on Producers and Consumers to Reach Consensus Equilibrium Price for Oil", Vol. XXXIV No. 4, 29 October, p.A3.

[86] *Middle East Economic Survey*, Vol. XXXIV, No.34, 27 May 1991

parties can achieve mutual gains, then this could promote reliability and stability in the 1990s and the decades after. A similar message came from another key producer during the Isfahan conference. Mr. Hisham Nazer, Saudi Arabia's Minister of Petroleum and Mineral Resources, expressed strong support for the dialogue, stating that "the recent crisis in the Gulf brought into sharp focus the extent of this interdependence, especially with reference to oil". In his speech, he laid the foundation for an important component of the dialogue for years to come, stating:

> To the consumers, security means the availability of supplies at reasonable prices to foster their economic growth and competitiveness. This clearly means that the consumers have a shared interest with the producers in order to give a solid foundation to the concept of 'energy security'. To the producers security means continued access into the markets of oil importing countries, the steady share of oil in total energy consumption over the long term, and fair and stable prices that allow for their sustainable development over the lifetime of the resource. Defined this way, security is a mutual concern of producers and consumers. It is what I have termed 'reciprocal security'.[87]

The Paris Energy Seminar

The calls for a producer-consumer dialogue propagated widespread reactions and responses and produced a new momentum within producing and consuming countries alike. Exploiting the momentum, in 1991 the governments of France and Venezuela called for a meeting at the ministerial level between representatives of oil-exporting and consuming countries. In the invitation letters to participants, the organisers emphasised the importance of the meeting especially in the light "of the lessons derived from the recent Gulf crisis, which has evidenced the fact that oil producers and consumers are today more conscious of the long-term convergence of their interests".

However, not all of the parties were enthusiastic about the French-Venezuelan initiative. Venezuela and France tried to gather support for the producer-consumer dialogue initiative by bringing on board key consuming countries. In May 1991, US President George Bush rejected the proposal by the Venezuelan President to conduct multilateral talks between oil consumers and producers. The US objection to the dialogue was three-fold. First, a dialogue with a large number of countries was unlikely to produce any meaningful results. Second, multilateral talks with OPEC would eventually lead to discussions on production and prices. The US made it clear in the various ministerial conferences that its government takes no view on optimal, fair, or just oil price and production levels, as it believes that price and production decisions are best left to market forces resulting from the individual actions of producers and consumers. Finally, in the field of energy relations, the US has always favoured direct bilateral talks with its major suppliers. In the end, however, the US did observe the meeting at a relatively junior level, after assurances that issues of prices and production would remain off the agenda.

The IEA also seemed to be uncomfortable with this high-level political dialogue. Instead, it opted to organise an annual Technical Meeting of Experts from both producing and consuming

[87] Nazer, Hisham (1991), "The Interdependence of Producers and Consumers in the Oil Market", Vol. XXXIV, No.35, 3 June.

countries as a 'confidence-building' gesture. The first such meeting was held in February 1992 and continued well into the 1990s.

Saudi Arabia participated at the Paris Energy Meeting, but also at a junior level. Given the key role it played in stabilising oil market conditions during the Gulf War, the Kingdom felt that it should have been given a more prominent role in the preparation for the Paris Energy Meeting. As for other OPEC members, they also did not play a leading role in the dialogue, with little coordination taking place among the member states. In many instances, some ministers regarded the meeting as an opportunity to detail their countries' hydrocarbon sector and investment opportunities. In contrast, consuming countries were better focused, raising issues such as access, transparency, energy supply security and the role of markets in oil price determination.

The first meeting took place in Paris on the 1st and 2nd of July 1991 with France as a host and Venezuela as a co-host. In preparation for the seminar, the organisers contacted Norway as a potentially collaborative participant, which reflects Oslo's important role played in organising the first meeting.[88] Twenty-five countries and nine international organisations participated in this meeting.[89] The agenda was very broad and covered many aspects of the oil market, including issues such as the major uncertainties of the 1990s and their impacts on investment, the functioning of the futures market, and ways to enhance the transparency and the smooth functioning of the market. The agenda also focused on industry issues such as cooperation between the different components of the industry, the challenges in financing petroleum investments, and the degree of integration between the upstream and downstream components and its implication on security. Environmental issues also featured highly on the agenda, and issues such as the future role of oil in the social and economic developments and whether oil could become a cleaner source of energy were raised.

Given the broad agenda, the diversity and complexity of the issues raised and the low interest shown by key parties such as the US, the UK, Japan and Saudi Arabia in the dialogue, the first meeting achieved little progress on resolving any of the key issues. Nevertheless, the French Summary of the Seminar results points to consensus on a few broad issues, such as the need to strengthen the market so it can function in a proper manner, and to improve transparency so individual players can base their investment and purchasing decisions on accurate information. There were also calls for countries to commit to the principles of predictability and continuity "in order to ensure that the market function properly while at the same time creating a stable environment". The Paris Seminar also highlighted the high degree of energy interdependence which "dictates a concrete and pragmatic approach" for cooperation in many areas, such as raising production capacity, the utilisation of stocks and the strengthening of the integration between upstream producers and downstream consumers. However, the major

[88] The role of Norway is also reflected in the fact that the Norwegian Minister of Foreign Affairs was one of the principal speakers at the opening session.

[89] Producers included Algeria, Egypt, Indonesia, Iran, Mexico, Nigeria, Norway, Oman, Saudi Arabia, the USSR, the UAE and Venezuela. Consumers included Brazil, Canada, Czechoslovakia, France, Germany, the Netherlands, India, Italy, Japan, South Korea, the UK and the US. The nine international organisations included the IEA, EBRD, IBRD, ECC, GCC, IMF, UN, OPEC and EUROPIA on behalf of European Oil Companies. The European Commission was represented at the Commissioner level.

achievement of the Paris meeting is that it 'broke the ice' between producers and consumers and set the foundation for potential future cooperation. The seminar allowed the participants to "break certain taboos and even to propose joint projects. The era of confrontation, we hope, is over; dialogue and communication must take its place".[90] The G-7 summit held in London in July 1991 welcomed the producer-consumer dialogue, noting that the Gulf crisis "has led to improved relations between producers and consumers, contacts among all market participants [being] further developed to promote communication, transparency and [the] efficient working of market prices". [91]

Despite these concrete achievements, the Paris seminar showed that a constructive dialogue still had a long way to go. At that time, MEES commented on the meeting:

> It is clear that France and Venezuela, after much effort and persuasion, and taking full advantage of the post-Gulf crisis awareness of the need to tackle energy problems on a multilateral basis, have succeeded in starting the dialogue on the right track, despite the fact that in one sense discussions in the meetings were more of a monologue since the leading industrial states (US, UK, Japan) did not make any contribution and some vital issues, like prices and production, were deliberately excluded from the agenda.[92]

Oil Market Developments and the Dialogue in the 1990s

Oil market developments in the rest of the 1990s influenced the content of the producer-consumer dialogue and shaped the interests and attitudes of key players towards cooperation. The 1990s proved to be a gloomy decade for the oil market. Despite the collapse of the Soviet Union and its diminished contribution to global oil supplies, the 'containment' of Iraq which meant the exit of Iraq from the oil market for most of the decade, and the US sanctions on Iran and Libya which limited capacity expansion in these countries, the world oil supply continued to grow faster than demand. From being a price setter in the mid 1980s, OPEC's role was transformed to that of a mere manager of surplus capacity, with OPEC being squeezed from both the demand and supply sides: a relatively slow growth in global oil demand and expansion in non-OPEC supply, though at a much slower rate than that of the 1980s. An environment of low oil prices, poorly informed optimism about non-OPEC supply and widespread pessimism about the prospects for global oil demand threw the industry into a deep recession and reduced the attractiveness of investment in all parts of the oil supply chain. Producers found it difficult to adjust to this new reality. The issue of how to allocate the burden of output cuts increased the tension between OPEC members and ultimately resulted in an oversupply of oil and the collapse of the oil price in 1998. The Asian financial crisis of 1998 brought to an end the hopes of stronger oil demand from Asian economies. The growth in Asian demand did eventually materialise, but OPEC countries had to wait for a few more years.

Oil companies also had to adjust to this new world. They embarked on industrial and financial restructuring, which resulted in, among other things, the erosion of their human capital and

[90] French Summary of the Seminar Results, Mr Dominique Strauss-Kahn, the French Minister of Industry and Foreign Commerce, 2 July 1991. Source: MEES, vol. XXXXIV, No. 10, p. A6, 8 July 1991.
[91] http://www.g8.utoronto.ca/summit/1991london/communique/energy.html
[92] MEES, vol. XXXXIV, No. 10, p. A3, 8 July 1991.

managerial skills. Oil companies lost their appeal to investors who preferred to invest in high-growth companies. Eventually, a wave of mergers swept the oil industry, resulting in the concentration of the industry and the emergence of a new class of oil companies, the so-called 'super majors'.

In such an environment, security of demand and oil price stability became the dominant concerns for producing countries. On the other hand, for consumers, the issue of supply security, though still discussed, received less attention in policy circles. The US felt confident enough to impose sanctions on key oil-producing countries without fearing the repercussions of their negative impact on global oil supplies. In contrast, the climate change agenda was elevated in consuming countries' policy agendas. Sustainable development, taxation of petroleum products and green taxes became the focus of consumers' interest in the dialogue, issues that producers considered as additional threats to an already very weak oil market.

Another producer-consumer meeting in July 1992 followed the Paris meeting. The meeting, entitled "Global Energy Policy Inter-relationship" was hosted by Norway with Egypt and Italy acting as co-hosts.[93] While the meeting reiterated the importance of the dialogue, given the increased interdependence between countries, it also highlighted the gulf between the two parties, especially in relation to the eco-tax proposed by the EC. In this meeting, OPEC made clear its position regarding the carbon tax, considering it as another form of excise tax and one which is primarily aimed at reducing oil demand with negative repercussions on oil producing countries' export revenues and consequently on their economic and social stability. Such taxes also entailed a large transfer of income from producers to consumers. This was echoed in the media, where Platts considered that the "gap between the North and South grows wider and the EC's Carbon Tax proposal simply registers as too hostile an idea to those producers struggling to balance and contain fast-growing populations at 20/bbl".[94] One important aspect of this meeting is that it placed a new and crucial focus on Russia, instead of only on the traditional IEA-OPEC agenda. Whereas there were no agreed conclusions at the Paris meeting, at the meeting in Norway, the host and co-hosts summed up in a document the thrust of the exchanges, leaving it to individual delegations to say what they wanted to the media on an individual basis. The joint document by the hosts and co-hosts issued on the 8th of July came out as being very weak. The memorandum noted, "energy goes to the core of political, economic and environmental interests"; emphasised the importance of "the interlinkage between security of supply, demand and investments" and that "of developing technological partnerships between producers and consumers". Such diluted statements reflected deep divisions between the two camps.

The 3rd International Energy Conference held in Spain on 19-20 September 1994 reiterated the same messages from the previous meetings.[95] However, there were three new developments that are worth noting. First, for the first time, the participants agreed on a document to be published at the end of the conference in the form of concluding remarks. The document was

[93] The meeting was attended by 22 countries, the European Commission, the IEA, OPEC and the UN.
[94] Platt's Week, 6 July, 1992.
[95] The host country was Spain and the co-hosts were Algeria and Mexico. Three countries participated in the 3rd International Energy Conference, in addition to the European Commission, the IEA, OPEC and the UN.

not a binding resolution but represented a consensus among the various participants. Second, in terms of content, for the first time, the participants made an explicit reference to price stability, in which the concluding remarks noted that "price stability is a key concern for the energy security from the point view of both consumers and producer countries. It is therefore necessary to enhance the study of the limits of that reasonable price level in order to identify the range that would provide for common benefits and at the same time, avoid the risks of price volatility for both consumer and producer countries". Such a concluding remark represented a U-turn from the previous approach, which had excluded any discussion on prices. Finally, the concluding remarks emphasised the increasing strategic importance of natural gas in energy security, calling for measures to increase its use in the energy mix, which would help achieve environmental benefits and efficiency improvements.

The 4th International Energy Conference, held in Venezuela on 25-27 September 1995 - the first time such a meeting had been held in an OPEC country - proved to be disappointing. Forty-five producing and consumer countries and 28 oil and energy ministers participated in the meeting, including eight OPEC Ministers (Algeria, Iran, Kuwait, Nigeria, Qatar, Saudi Arabia, the UAE and Venezuela). The meeting was co-sponsored by Russia and the EC Commission. Key consuming countries - the US, UK and Japan - sent junior delegates. Rather than being a dialogue between producers and consumers, the issue of quota discipline dominated bilateral talks among the OPEC Ministers. There were growing concerns about the quota observance problem, with Saudi Arabia and Kuwait delivering messages to Venezuela on the need for OPEC quota discipline. The plenary sessions in the Conference reiterated the same positions, with producing countries raising the issue of taxes on fossil fuels and consuming countries raising the usual environmental concerns. The conference ended on a downbeat note and, unlike previous meetings, the Conference did not issue any concluding remarks.

By the time of the 5th International Energy Conference held in Goa, India in 1996, it had become clear that the dialogue had lost momentum and had failed to make any concrete achievements. While parties recognised that the exchange of views between producers and consumers was useful, the dialogue had turned futile, with both parties simply reiterating their positions. This was reflected in the concluding statements, which were very general, such as "ensuring a sustainable energy future for the world is both a challenge and an opportunity" or "energy in its intimate relation to economic development and environment encompasses some of the most critical issues mankind will face collectively". It was recognised that for the dialogue to intensify, there must be a change in approach.[95A] Here again, Norway played an important role. At the end of the Goa meeting, it was agreed that Norway would host a meeting of officials in order to help to prepare for the next conference at a ministerial level.

The Producer-Consumer Dialogue and the 1998 Asian Financial Crisis

In 1998, key players such as Saudi Arabia started showing greater interest in the producer-consumer dialogue. This can be explained in large part by the events surrounding the oil market in 1998, where over-production and decline in Asian oil demand in the aftermath of the Asian financial crisis caused a collapse in the oil price.

[95A] Zhiznin, Stanislav,(2007). Energy Diplomacy. East Brook, Moscow, pp.97.

The roots of the 1998 oil price crisis could be traced to earlier events in the 1990s. In anticipation of higher global oil demand and the wish for further downstream integration in consuming countries, Venezuela embarked on an ambitious investment programme which saw Venezuela's capacity and production increase well above the OPEC quota. In October 1997, Venezuela's production amounted to 3.2 million b/d, substantially above its OPEC quota. A temporary increase in the oil price in 1996 and observing another OPEC member increase its market share induced Saudi Arabia to increase its production above its quota. In October 1997, Saudi Arabia's production stood at 8.27 million b/d - approximately 300,000 b/d more than the old quota. OPEC members sought to legitimise their production levels, which were well above OPEC official quotas, and pushed for an even higher quota in the 103rd Meeting of the OPEC conference held in Jakarta between 26 November and 1 December 1997. In the Jakarta meeting, the Organization decided to raise the output ceiling from the previous official limit of around 25 million b/d to 27.5 million b/d. In terms of an increase from actual levels of production at that time, this represented a modest increase of around 400,000 b/d. Nevertheless, this increase coincided with fall in Asian demand due to the Asian financial crisis, causing a collapse of the oil price from around $18 in 1997 to below $10 in 1998.[96]

Another complication in the 1990s for OPEC's production policy was the UN sanction regime for Iraq. Iraq was allowed to export oil in order to generate income to finance imports for medical and nutrition needs. The sanction regime allowed for a set income, and when oil prices weakened Iraq was allowed more export volume. In effect, this undermined the efforts of OPEC to stabilise prices and continued to hinder OPEC policies.

All producing countries felt economically and politically vulnerable to the oil price collapse and started exploring ways to reverse the decline in the oil price, which could only be achieved by implementing output cuts. Non-OPEC producers realised that the old policy of free-riding on OPEC cuts was no longer appropriate and that they needed to cooperate among themselves and with OPEC to bring balance into the market. As Mabro (1998) notes, the "awareness of some non-OPEC countries about the need to co-operate was perhaps a most significant feature of the 1998 oil price crisis".[97] There were indications that some non-OPEC producers, such as Mexico and Norway, were willing to cut supplies in order to stabilise the oil price. From the side of OPEC, there was awareness among most members that reversing the decline in the oil price could not be achieved without cooperation from non-OPEC producers.

Early 1998 witnessed many initiatives aimed at bridging the gap between Venezuela and Saudi Arabia. Mexico, hurt by the drastic fall in oil revenues, approached Saudi Arabia in January to explore ways to reverse the slide in the oil price. At that time the level of trust between Saudi Arabia and Venezuela had reached very low levels and while Saudi Arabia showed a willingness to engage in discussions, the Kingdom agreed to do so under very strict conditions, the most important of which is that all members concerned should commit to cutting output. In an interview published in the official Saudi Press Agency on 8 March, Saudi Arabia's Oil Minister Ali Al-Naimi declared that the Kingdom has abandoned once and for all the role of swing producer stating that "those who demand that the Kingdom should assume alone, or together with other GCC countries, the burden of market stability do not recognise that the Kingdom

[96] Mabro, R. (1998). The Oil Price Crisis of 1998. OIES, SP10.
[97] Mabro, R. (1998). p. 32

pursues a consistent line which is based on the fact that market stability is a joint responsibility, and one of the main reasons for the price decrease is due to the non-adherence of some OPEC countries to their quotas. These countries should take significant and tangible steps to reduce their production so that other producing countries could cooperate to achieve stability". The Kingdom's message of the importance of joint responsibility in implementing output cuts could not be clearer. In March 1998, a secret meeting took place between Venezuelan and Mexican representatives. Mexico managed to convince Venezuela that cutting production would serve its interests in the long term. Venezuela agreed to production cuts on the conditions that these cuts be taken from existing production and not from quotas, that the meeting would not discuss long term-investment plans, and on the requirement that non-OPEC countries would also implement production cuts.[98] On the 19th of March, the Energy Ministers of Norway and Mexico met in Oslo to discuss "bilateral problems in oil policy" as well as "the current oil market situation and possible future developments". A secret meeting between Saudi Arabia, Venezuela and Mexico took place in Riyadh between the 21st and 22nd of March, in which the parties agreed to cut production by 1.725 million b/d, of which 1.325 mb/d would be cut by OPEC (excluding Iraq) while non-OPEC exporters including Norway and, Mexico would cut the remaining 400,000 b/d. On March 30, 1998, in its 104th Extraordinary Meeting in Vienna, OPEC member countries ratified the Riyadh accord and agreed to voluntary cuts from each country's current production levels, totalling 1.245 million b/d effective April 1, 1998. The Conference acknowledged that "the production cuts pledged by some non-OPEC oil-producing countries, in particular the Sultanate of Oman, Mexico and others, and agreed to continue consultations with the non-OPEC oil producers so as to establish and maintain stability in the oil market in the future". At its 105th Ministerial Conference convened in Vienna on the 24th of June 1998, OPEC agreed to a further round of cuts, bringing the Organizations' total reductions since March 1998 to 2.6 million b/d.

A Saudi delegation led by Minister Ali Al-Naimi visited Washington and met with a team from the US Department of Energy headed by Energy Secretary Frederico Pena in May. In this meeting, the Saudi side urged the US to take a more positive view of the current collective effort by OPEC and non-OPEC oil exporters to reduce output in pointing out that such a move provides stability to the oil market. The US refrained from expressing outright US opposition to the joint action between OPEC and non-OPEC. Nevertheless, they re-emphasised the US position that it "cannot endorse collective action which might attempt to interfere with the market."[99]

Against the background of these turbulent market conditions, the 6th International Energy Conference took place in Cape Town in South Africa between the 29th and the 31st of October 1998. Before the meeting, Norway called for a meeting in its embassy in London to formalise a support group known as the Informal Support Group (ISG) to assist the host country in preparing the agenda for the ministerial meeting in Cape Town.[100] One of the purposes of the

[98] Mabro, R. (1998).

[99] MEES, VOL. XLI, No. 20, 18-May-1998.

[100] The group consisted of France, Norway, the UK, Japan, the EC, the Netherlands, India, South Africa and Saudi Arabia. The EU Commission was also an ISG member. As a matter of fact, the activities of the Commission in the producer-consumer dialogue became, after the publication of the green paper on security of supply, an important part of developing shared views among member states on security of supply issues.

ISG was to give the meeting more structure so that it could result in a more purposeful dialogue. Although the origins of the ISG can be traced back to the preparation of the ministerial meeting in India, it was given more structure in 1998. The group agreed to the terms of reference drafted jointly by UK and Saudi representatives. The ISG was later expanded to include the US, Russia and Italy, while China, India and Iran were invited to join after the Riyadh meeting, and was incorporated into the IEF framework.

In terms of representation, the conference was a success, attracting 46 countries and six international organisations. However, in terms of content, the concluding statements surprisingly did not reflect any of the dramatic events of earlier that year, with only a shy concluding remark stating that "oil market stability is a basic pre-requisite for energy security and a dynamic global economy". In effect, the meeting amounted to no more than an exchange of views about the general situation of the oil market. After the meeting in South Africa, Saudi Arabia, the organiser of the next meeting, suggested a new name for the producer-consumer dialogue: the International Energy Forum, which would underline the informal character of the meetings and could lead to more open discussions, avoiding "Conclusions and Recommendations".

Conclusion

The first decade of producer-consumer dialogues ended with a larger sense of trust among the countries involved. The meetings promoted a greater understanding and a commonality of perceptions among participants, helping decision making at the national level and promoting cooperation between existing bodies. Security of supply and demand was a recurring theme of the informal discussions, as were investments and market stability. Both consuming and producing countries often repeated a call for greater data transparency. Environmental issues and energy taxes were among the themes which remained subject to different views. The first decade can therefore be seen as a long process of confidence building. Nevertheless, the fact that relatively low oil prices dominated throughout the decade, even though the decade both started and ended with higher prices, was perhaps a factor in the slow start with regard to substantive matters.

Colour Plates

We acknowledge with thanks the following images provided by IEF Host Countries, the OPEC Secretariat and Saudi Aramco.

IEF 2 – Solstrand 1992. IEF Ministers at the Ministerial Workshop on Energy.

IEF 5 - Goa 1996. IEF Ministers at the 5th International Energy Conference.

IEF 7 - Riyadh 2000. HRH King Abdullah Ibn Abdulaziz Al-Saud (then Crown Prince) opens the 7th IEF in Riyadh.

IEF 7 - Riyadh 2000

IEF 7 - Riyadh 2000

IEF 7 - Riyadh 2000

IEF 8 - Osaka 2002. Delegates at the 8th International Energy Forum.

IEF 8 - Osaka 2002. Delegates at the 8th International Energy Forum.

2003 - In his former role as Chair of the Executive Board, Noé van Hulst signs the protocol on immunities and privileges for the IEF Secretariat with H.E. Ali Al Naimi of IEF Host Country, Saudi Arabia.

IEF 9 - Amsterdam 2004. Crown Prince of the Netherlands, Willem-Alexander joins IEF Ministers for the 9th IEF

IEF 9 – Amsterdam. Arne Walther, the first Secretary General of the IEF, participates in a Ministerial panel soon after the establishment of the IEF Secretariat in Riyadh.

IEF 9 – Amsterdam. H.E. Minister Brinkhorst hosts the first International Energy Business Forum (IEBF). Chaired by Peter Sutherland.

IEF 10 - Doha 2006 - H.E. Minister Abdullah Bin Hamad Al-Attiyah, Deputy Prime Minister and Minister of Energy & Industry Qatar addresses fellow IEF Ministers.

IEF 10 - Doha 2006. IEF Ministers

IEBF 2 - Doha 2006. IEF Ministers and Business Leaders

IEF 11 - Rome 2008. IEF Ministers

IEF 11 – Rome 2008. The first meeting of JODI Head of Delegations.

IEF Secretary General, Noé van Hulst congratulates incoming Chair of the Executive Board, Aldo Quiroga as Mexico assumes the role of host country for IEF 12 at the conclusion of the 11th IEF in Rome.

HRH Prince Abdulaziz bin Salman Al Saud, Chair of the IEF Expanded High Level Steering Group conferring with IEF Secretary General Noé van Hulst.

Dialogue makes a difference – IEA Executive Director Nobuo Tanaka, OPEC Secretary General Abdullah El-Badri and IEF Secretary General Noé van Hulst at IEF 11 in Rome 2008.

The dialogue has its lighter moments...

June 2008 - HRH King Abdullah Ibn Abdulaziz Al-Saud hosts the Jeddah Energy Meeting

June 2008 - HRH King Abdullah Ibn Abdulaziz Al-Saud, Ministers and Industry Leaders at the Jeddah Energy Meeting

June 2008 – Press Conference following the Jeddah Energy Meeting

November 2008 - International Support Group Meeting (ISG), OPEC Vienna.

December 2008 - Prime Minister Gordon Brown Hosts the London Energy Meeting

7th International JODI Conference, Quito, Ecuador - June 2009

IEF 12 – Cancun 2010. Mexican President Felipe Calderón inaugurated the 12th IEF

IEF 12 – Cancun 2010. IEF Ministers.

H.E. Georgina Kessel Martinez, Minister of Energy of Mexico chairing a session of IEF 12 Cancun

Ministers of Energy and high-level officials issue the historic Cancun Declaration agreed upon by 66 IEF Countries

IEF 12 - Cancun 2010. IEF Ministers

IEBF 4 – Cancun 2010. IEF Ministers and Business Leaders.

Chapter 5: The 2000s - Shifts in Interests and the Institutionalisation of the IEF

Introduction

The turn of the 21st century proved to be an eventful period for the global economy and energy markets. It witnessed major transformations in the oil market as well as shifts in the attitudes and the interests of some key players, helping to shape new producer-consumer energy relations. Key among the oil market transformations were: the rapid rise in non-OECD oil demand, driven by rapid economic growth, urbanisation and general improvements in living standards; the shift in international oil trade flows associated with the rise of the Asian consumer; the rise of NOCs as important players on the global energy scene; the large concentration of proven oil reserves in the hands of a few NOCs in producing countries; and the emergence of new and diverse sources of supply in Africa, Latin America and the Former Soviet Union. These changes led to the rising importance of new energy players outside the auspices of IEA and OPEC, such as China, India, Russia, Brazil, South Africa and the Caspian countries. These new players have different interests, aspirations and perceptions of the energy challenges.

The 2000s also witnessed the most sustained increase in oil prices in recent history, with the annual average price rising year-on-year for seven consecutive years between 2002 and 2008. This boom, however, ended with a spectacular collapse of the oil price towards the end of 2008. The rapid rise in oil prices, the sharp price swings and heightened volatility brought several key issues to the fore. These included the role of spare capacity in promoting oil market stability; improvement of the investment climate in the energy sector; the underlying drivers of oil price movements; the economic, political and social costs associated with oil price instability; and the measures that producers and consumers are able to undertake to improve the functioning of the market, such as enhancing data transparency and regulating derivatives markets. The 2000s were not only an eventful time for the global oil market, but the decade also witnessed the rapidly increasing importance of natural gas on international energy markets and in producer-consumer relations. In addition to these transformations, national energy policies in consuming countries continued to evolve, driven by energy security concerns and the climate change agenda, while producing countries' long-term investment plans, their rising domestic demand and issues of access to reserves remained at the centre of consumers' energy security concerns.

In parallel with these developments, the financial layers surrounding the physical markets also witnessed structural changes that imposed themselves on the producer-consumer dialogue. These changes were manifested in the massive flows of financial investments into commodities markets; the entry of new types of players such as hedge funds, pension funds,

insurance companies and index investors; financial innovation which allowed investors to gain greater exposure to commodities through the creation of sophisticated financial products; and the higher degree of interconnectedness between financial and physical markets in the oil price formation process.

Shift in Interests

Alongside these transformation in energy markets, the 2000s saw a shift in the interests of key market players. For most of the 1990s, producers were not very active in the dialogue, and their interests were not very well articulated. By 2000, however, the situation had changed and a key producer, Saudi Arabia, expressed strong interest in the dialogue. The Kingdom's political and financial support proved to be important for strengthening the dialogue in the 2000s after a decade in which the dialogue had made little progress on substantive matters. The shift in Saudi Arabia's position can be explained in large part by the events surrounding the oil market in 1998, through which the Kingdom realised that it cannot afford to not actively engage in international energy policy and strengthen its energy relations with both producers and consumers. The Kingdom made the IEF central to its bilateral and multilateral energy relations. There was also awareness within OPEC that stabilising the market may at times require closer cooperation with non-OPEC producers.

While in the mid 1990s Venezuela's plans to boost productive capacity in a weak market created serious tensions and conflicts within OPEC, this became a minor factor in the 2000s. The arrival of Hugo Chavez to the Presidency of Venezuela heralded a major change in the direction of the country's oil policy and a reversal in its expansion plans. The strikes that erupted following Chavez's decision to change the management of PDVSA and exert his complete control over the country's oil policy resulted in a major global oil supply shock, with production dropping sharply in the first months of 2003. The relations between Venezuela and the US continued to deteriorate in the 2000s, reaching very low levels in September 2008, when Venezuela broke off diplomatic relations with the US. Although diplomatic ties were re-established later in June 2009 after the arrival of President Barack Obama to the White House, the traditional strong trade and investment relations and cooperation that characterised the US-Venezuela relations in the 1990s were never restored. Iran's plans to expand its oil and gas production capacity in the 1990s were also derailed. International sanctions against Iran intensified as relations between Iran and the West continued to deteriorate over Iran's nuclear programme. Nevertheless, the interests of Iran and Venezuela in the dialogue did not fade away, and the two countries continued to participate in the various Ministerial meetings during the 2000s. But unlike the 1990s, during which these two producers assumed an important role in initiating and promoting the dialogue, Iran and Venezuela took more of a back seat in the past decade.

The US position regarding the dialogue continued to oscillate during the 2000s. The 7th IEF in Riyadh in 2000 saw an important development in terms of both appearance and content. For the first time in IEF history, the US was represented at a very senior level, by the then Secretary of Energy Bill Richardson. In previous IEF meetings, the US had always opted for a lower level of representation, reflecting its lukewarm support for the producer-consumer dialogue. More importantly, during this meeting, the US came out clearly in support of a price range which overlapped with that of OPEC at that time. In a press conference on the 18th of November during the 7th IEF meeting, Secretary of Energy Bill Richardson stated:

> $10/B is too low and $30/B is too high. When it is more than $30/B consuming countries, particularly developing countries, are hurt. Stock levels drop, and it leaves the world vulnerable to spot shortages and price spikes. We should not get drawn into accepting $30/B nor should we try to return to $10/B oil. As I've said many times, for the United States the ideal price is between $20/B and $25/B.

This announcement represented a major shift in the position of the US government, which until then had refused to discuss oil prices. Secretary of Energy Bill Richardson qualified the above statement by noting that relying "on open competition, market forces, is the first principle" that the US abides by. This, however, is a clear contradiction: open competition will most likely drive the price either below or above the optimal or 'ideal' price range. To maintain the price within a given range, some form of market intervention - most likely through the auspices of OPEC - cannot be avoided. The idea of an optimal price range did not survive long. In January 2002, Saudi Arabian Oil Minister Ali Al-Naimi announced that OPEC's price band mechanism would be suspended due to imbalances in the world oil market, while the US reiterated its traditional position on reliance on market forces to determine the oil price. In the 12th International Energy Forum (IEF) in Mexico in March 2010, the US Deputy Secretary of Energy Daniel Poneman called for free markets to reign supreme, stating that the "goal of the US is a clear and long-standing one, and that is to let supply and demand set prices".

In 2000, energy had become a more important topic on the US political agenda, with the occurrence of the Californian electricity crisis, mainly a result of regulatory imperfections, being a crucial contributor. But also developments in the Middle East had caught Washington's attention, namely the ongoing activities in Iraq and discussions in the UN Security Council about a switch to smart sanctions. The fact that shortly after the elections of November 2000 President-elect Bush appointed a special energy team to devise a new energy policy for the US shows how serious the concerns with the internal and external dimensions of energy policy had become. In May 2001 this committee, led by Dick Cheney, presented its report. The main thrust of the policy proposals concerned the internal energy policy, stimulating domestic energy supply, and infrastructure. Nevertheless, a full chapter was devoted to relations with other consuming and producing countries. In addition to diversity of supplies, cooperation with both producing and consuming countries was deemed very important to enhancing energy security.[101]

Another important development was that the European Commission, which was becoming more concerned with security of supply, as witnessed by the green paper Towards a European Strategy for the Security of Energy Supply (Com 769 final, 2000), began, more actively than before, to promote security of supply policy at the EU level. At the Riyadh meeting both the Presidency of that time, France, and EU Commissioner de Pallacio were present and coordinated the EU commitment to the dialogue. For the EU Commission the producer-consumer dialogue was an important channel to engage in discussions on global energy market stability, while its competence in these matters was still debated internally. The Commission had been interested in the producer-consumer dialogue from the start and became an active participant in the

[101] Energy Policy (2001). Report of the National Energy Policy Development Group, May 2001, http: //wtrg.com/EnergyReport/National-Energy-Policy.pdf

ISG. Commissioner Cardosa e Cunha participated in the first and second meetings in Paris and Bergen (Norway), respectively, while Commissioner Oreja was present at the third in Spain. Commissioner Papoutsis attended the meeting in Venezuela, while he missed the meetings in India and South Africa.

The sharp rise in oil prices in 2008 provided another big push for the dialogue, increasing the involvement of key consumer countries such as the UK, France, Germany, Norway and India. As oil prices started rising sharply in mid-2000s, some officials from both consuming and producing countries started playing the 'blame game', attributing the oil price hike to each other's policies. By 2008, the realisation arose that this blame game and provocative remarks from both parties often exacerbated existing market volatility and that it was therefore in the interest of all parties to make their best efforts to reduce unhelpful commentary and communicate their concerns in private. More importantly, there was greater awareness of the costs of oil price instability. Both parties recognised that low and volatile oil prices undermine investment in the oil sector and lay the roots for the next energy crisis, while high oil prices could endanger global economic prospects and result in demand reduction. India went a step further, proposing a price band mechanism in which consuming countries would guarantee that oil prices not fall *below* an agreed level and producing countries would guarantee that they not rise *above* an agreed level. The proposal won the backing of some consumer countries, though due to the difficulties in implementing such a price band the idea was not pursued any further. However, the support for the producer-consumer dialogue as one of the means to tackle the causes of price instability continued to strengthen. At the G-8 Summit in L'Aquila in the summer of 2009, the G-8 leaders found exceptionally clear words about the need for an improved energy dialogue framework:

> It is in the interest of both producers and consumers to enhance transparency and to strengthen their dialogue towards reducing excessive volatility in the market. Fossil fuel producing, transit and consuming countries must work together to increase stability and predictability of supply and demand patterns and promote investments in the energy sector, including by supporting and developing further predictable legal and regulatory frameworks....We call for better coordination among the international institutions and for the acceleration and strengthening of the existing initiatives towards a more structured dialogue,….., between producing, transit and consuming countries, focused on improving the investment climate, discussing ways to reduce excessive volatility of prices and promoting energy security.[102]

The Institutional Evolution of the IEF

The political and economic developments of the 2000s proved to be decisive for the producer-consumer dialogue, as manifested both in the institutional evolution of the IEF and in the intensity, breadth and content of the dialogue (discussed in the next chapter). Since its inception in 1991, the IEF as an organisation had remained largely informal, providing a regular, biannual forum for producers and consumers. While the informality feature was seen as practical and convenient for both parties during the 1990s, it was important to create a central institution that would plan

[102] G-8 Leaders' Declaration "Responsible Leadership for a Sustainable Future", L'Aquila, 10 July 2009, Paragraph 42.

and coordinate future IEF activities and broaden and strengthen the global producer-consumer dialogue. The institutional framework had been built on practice since its inception in 1991, and the beginning of the new millennium seemed to be the right time to further debate within the organisation as to its future *modus operandi*.[103] The 7th International Energy Forum held in Riyadh from 17-19 November 2000 proved to be the turning point for the institutionalisation of the producer-consumer dialogue. In that meeting, Saudi Arabia's then Crown Prince Abdullah Ibn Abdulaziz Al-Saud proposed to create a permanent Secretariat and headquarters for the IEF. In his speech, he emphasised that producers and consumers should seek cooperation based on constructive and transparent dialogue between all parties interested in energy issues. To achieve these goals, the then Saudi Crown Prince suggested:

> the establishment of a permanent secretariat for the Energy Forum to work towards promoting a continuous dialogue between producers and consumers. This dialogue should also include the industry and all other parties interested in energy matters. The establishment of such a secretariat will enhance our dialogue and make it more regular and more conducive to achieving our goals. The Kingdom stands ready to host the Forum's Secretariat in Riyadh.[104]

The proposal to establish the IEF Secretariat was welcomed at the Ministerial meeting and embraced two years later at the 8th International Energy Forum in Osaka in September 2002.[105] A permanent body of staff subsequently began its work in December 2003 in temporary accommodation and then relocated to the newly built headquarters in Riyadh in 2005. The establishment of the IEF Secretariat marked a turning point for the IEF as an organisation: it provided the Forum with an administrative arm. The Secretariat performs a number of key functions which include providing a neutral platform for dialogue; exchanging energy data and information among energy producing, consuming and transit States and energy-related industries; organising seminars, symposia, conferences, workshops, training programmes and roundtable discussions on energy-relevant global or regional issues; establishing dialogue and cooperation with other energy-relevant entities in undertaking research and analyses; preparing and disseminating analytical reports, statements and press releases on activities of the Forum; and providing assistance to Members of the Forum to ensure that the dialogue among them is more focused and result-oriented.

Since its establishment, the Secretariat has played a key role in providing logistical support for the Ministerial meetings, including preparing and disseminating the agenda, providing background material for discussion, and preparing the host country's Concluding Statements. The Secretariat has also been given the important role of translating some of the broad objectives of the dialogue into concrete initiatives.[106] The outcome of such reform efforts

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[103] See the IEF-commissioned Report of the Expert Group, as convened by the 2008 ad-hoc energy ministers meetings held in Jeddah and London. 16 January 2010. See also 12th International Energy Forum in Cancun, Mexico, March 29-31, 2010, Ministerial Declaration.

[104] MEES, Vol. XLIII, No. 48, 27 November 2000.

[105] 8th International Energy Forum in Osaka, September 21-23, 2002, Summary by the host and the co-hosts.

[106] However, the success in this area has been limited, as recently acknowledged by the Cancun Ministerial Declaration which called for a "more result-oriented forum".

has been a more ambitious agenda in which energy ministers have been willing to discuss a wide range of energy issues as reflected in some of the recent Concluding Statements. These have become more substantive, providing insight into the common interests of producers and consumers, and even identifying some areas of agreement which could form the basis for joint coordinated actions between the parties in the future.[107] The IEF Secretariat has also become more active and dynamic. Communication has improved: an updated website has made available background documents about most IEF meetings, as well as bi-annual newsletters and various reports and articles to the public, therefore rendering IEF activities more transparent.[108] The representation of the IEF at other organisations' activities via the IEF's Secretary General or other permanent staff representatives has been an important step towards raising the IEF's profile while also promoting the IEF's main cause. The Secretariat has moreover gained from the expansion of its activities, often in cooperation with other related organisations and research institutions.[109]

Towards the end of the decade, a second reform process was initiated with the aim of further strengthening the institutional framework of the IEF in order to facilitate and promote a more effective and productive dialogue. The sharp swings in oil prices in 2008 and 2009 helped shift the global attention back onto the oil market and provided the much needed support for the institutional development of the IEF. In June 2008, Saudi Arabia took an unprecedented action by calling for an ad-hoc meeting between producer and consumer countries with the aim to identify the causes of the current high oil prices. At the Jeddah Energy Meeting, the UK committed to hosting a follow-up meeting in London by the end of 2008. By December, the global economy and the oil market had witnessed a major shock. In the London Energy Meeting in December 2008, the Chair's summary noted that the "recent developments in the global economy had highlighted the need to examine the institutional architecture as it relates to energy, to ensure that it most effectively supports the creation and maintenance of well-functioning markets, while reducing excessive volatility".

An Expert Group (EG) was established pursuant to the decisions made in the Jeddah and London ad-hoc Energy Meetings (2008) to provide recommendations to the 12th International Energy Forum (IEF) Ministerial meeting on 29-31 March 2010 in Cancun, Mexico for "strengthening the architecture of the international dialogue, the IEF, and reducing volatility in the oil market". A High Level Steering Group (HLSG), coordinated by the IEF Secretariat and including officials from the host and co-host countries of the 12th IEF, along with the hosts of the two ad-hoc Ministerial meetings in Jeddah and London, oversaw the terms of reference

[107] Perhaps the most notable of these is the 11th International Energy Forum in Rome in 2008, where the Concluding Statement included discussion about both levels and volatility of oil prices, interdependence, investment in the entire oil and gas supply chain, increased cooperation between IOCs, NOCs and service companies, achieving the Millennium Development Goals, Carbon Capture and Storage (CCS) and a sustainable energy future.

[108] All are available online at the IEF website, http://www.ief.org.

[109] The IEF is now a partner organisation of the IEA, OPEC, the IMF, the UN, the IGU, OAPEC and the World Bank. It has concluded memoranda of understanding with a number of research institutes, which often co-organise special fora such as the CCS Symposium: with Chatham House, the Energy and Resources Institute (TERI), Institut Francais du Petrole (IFP), Institute of Energy Economics of Japan (IEEJ), and the Energy Charter Conference Secretariat.

and work of the EG.[110] The HLSG was chaired by HRH Prince Abdulaziz Bin Salman Bin Abdulaziz Al-Saud of Saudi Arabia and co-chaired by Graham White of the United Kingdom. The EG recommendations for areas of reform were modified by the HLSG and both the recommendations and the implementation plan of the HLSG were reviewed and endorsed by an Expanded High-Level Steering Group (EHLSG) composed of representatives from producer and consumer, developed and developing countries, to be presented to the ministers at the 12th IEF Ministerial in Cancun in March 2010.

The Cancun Ministerial Declaration proved to be a landmark declaration in more than one respect. For the first time in its history, a document was approved by no less than 66 countries. It also marked a critical juncture in the history of IEF's institutional development. Resulting from the EG recommendations, the most important proposal accepted at the 12th IEF Ministerial was that of the IEF Charter. Given the lack of any document outlining the structural framework, the working process and objectives of the IEF, the creation of such a charter was overdue.[111] HRH Prince Abdulaziz bin Salman bin Abdulaziz Al-Saud, the Chair of the HLSG, stated that the "Declaration is an embodiment of the shared views of producers and consumers and a recognition of the need for stronger, broader and more effective cooperation. The IEF Charter, reflecting the expanded role and additional tasks of the IEF, will enable us to achieve such an objective." Lord Hunt, UK Energy Minister stated that the "international agreement will set the IEF on a course to becoming a Forum that will guide action and delivery for both producers and consumers".

To oversee the creation of the new charter, the Ministers in the Cancun Ministerial established a new HLSG, composed of representatives of the countries that approved the Cancun Ministerial Declaration.[112] The HLSG whose chairmanship and co-chairmanship remained the same, was given the responsibility of overseeing the drafting of the IEF Charter, with a mandate to develop and finalise the IEF Charter before March 2011, in accordance with the Guiding Principles contained in the EHLSG's Recommendations and Implementation Plan.

The IEF Charter was written by the IEF Secretariat and overseen by the new HLSG to be presented for formal agreement by the ministers in the Ministerial meeting to be held in Riyadh on 22 February, 2011. The short period in which the Charter was written and approved and its breadth are testimony to the commitment of producers and consumers to cooperation

[110] The HLSG is comprised of the following eleven countries: Algeria, France, Germany, Japan, Kuwait, Mexico, Norway, Qatar, Saudi Arabia, United Kingdom and United States.

[111] As discussed above, the Statute of the IEF Secretariat includes an outline of the objectives of the Secretariat only, while the IEF as a whole essentially functioned without any formal declaration of its purpose or provisions for its organisation. See the IEF-commissioned Report of the Expert Group, as convened by the 2008 ad-hoc energy ministers' meetings held in Jeddah and London. 16 January 2010.

[112] The following countries approved the Ministerial Declaration: Algeria, Angola, Australia, Austria, Azerbaijan, Bahrain, Belgium, Brazil, Brunei Darussalam, Bulgaria, Canada, China, Colombia, Costa Rica, Czech Republic, Denmark, Ecuador, Egypt, Finland, France, Germany, Greece, Hungary, India, Indonesia, Iran, Iraq, Ireland, Italy, Jamaica, Japan, Jordan, Korea, Kuwait, Mexico, Morocco, Netherlands, New Zealand, Nigeria, Norway, Oman, Pakistan, Philippines, Panama, Peru, Poland, Portugal, Qatar, Romania, Russia, Saudi Arabia, Slovak Republic, South Africa, Spain, Sri Lanka, Sudan, Sweden, Switzerland, Thailand, Turkey, Turkmenistan, United Arab Emirates, United Kingdom, United States of America, Venezuela and Yemen.

and the effectiveness of the HSLG to bridge the gap between the different interests. Central features of the Charter include: a mission statement, or objectives of the organisation, thereby defining what the IEF's future role will be; provisions regarding IEF membership; provisions regarding decision-making at the executive level of the IEF, including the Executive Board; and provisions for the financial contributions to be made by member states, organisations and other forum participants.[113]

The agreement to establish an IEF charter represents a decisive juncture in producer-consumer relations. The Charter describes the IEF as:

> an intergovernmental arrangement that serves as a neutral facilitator of informal, open, informed and continuing global energy dialogue among its membership of energy producing and energy consuming States, including transit States.

The Charter states that the fundamental objectives of the IEF are to foster greater mutual understanding and awareness of common energy interests among its members, promote a better understanding of the benefits of stable and transparent energy markets, and to narrow the differences among energy producing, consuming and transit Member States on global energy issues. Another key objective is to facilitate the collection, compilation and dissemination of data, information and analyses that contribute to greater market transparency, stability and sustainability.

Besides providing a statement of IEF objectives, the Charter also specifies the various organs of the Forum, consisting of Ministerial activities made up of biennial Ministerial Meetings, extraordinary Ministerial Meetings and Working Groups at Ministerial or other levels for the performance of a specific task, the Executive Board, a Secretariat, an International Support Group and an Industry Advisory Committee. The Charter specifies the functions of each of these organs and the links between them. At the apex of the IEF are the Biennial Ministerial Meetings, which "are the primary body of the Forum and serve as a neutral venue for high-level, informal, open, informed and continuing global energy dialogue among the Members of the Forum". The IEF is governed by an Executive Board and is headed by a Secretary General, initially Arne Walther, and since 2008 by Noé van Hulst. The Executive Board consists of representatives of Ministries responsible for energy matters from thirty-one members of the Forum. The representatives of the IEA and OPEC are non-voting members of the Executive Board. From among the thirty-one members of the Board, twenty-three serve as permanent members and eight as rotating members, where the permanent members are the host country of the Secretariat, the eleven largest oil and gas producers and the eleven largest oil and gas consumers.

Another important organ is the International Support Group (ISG), whose function is now more specified in the Charter, namely to provide the Executive Board and the Secretariat with advice on the structure and themes of the forthcoming biennial Ministerial Meeting and to advise and assist the Executive Board and the Secretariat in the implementation of the biennial Programme of Work. The ISG is comprised of representatives from members of the Executive

[113] 12th International Energy Forum in Cancun, Mexico, March 29-31, 2010, Ministerial Declaration. High Level Steering Group, Draft Recommendations and Implementation Plan, Draft submitted for the HLSG's consideration and approval at its first meeting, 6-7 February 2010, Riyadh.

Board, the IEA and OPEC Secretariats and from as many members of the Forum as are willing to participate. The Chair of the Executive Board and the Secretary-General can invite other international organisations to participate in the ISG.

Another organ is the Industry Advisory Committee, whose role is to advise the Executive Board and the Secretary General on activities of the Forum. The Industry Advisory Committee includes representatives of business enterprises and industry entities which contribute to the Forum and are invited by the Secretary- General in consultations with the Executive Board.

In addition to organising the institutional structure of the IEF, the Charter also aimed to provide adequate and predictable financial resources with the IEF Charter, calling on its members to ensure the provision of the IEF and its Secretariat with a minimum, stable and predictable source of funding to permit long-term planning and the fulfilment of multi-year programmes.

Another important institutional development has been directed towards involving a greater variety of actors in the dialogue. There was recognition in the 7th IEF that business and industry leaders should be more involved in the producer-consumer dialogue, which had so far remained limited to meetings at the ministerial level. In consequence, a first informal gathering of business leaders took place prior to the 8th IEF Ministerial in Osaka in 2002, followed by the first International Energy Business Forum (IEBF) at the 9th IEF Ministerial in May 2004 in Amsterdam. Since then, it has been decided that the IEBF be held regularly the day before the IEF's biannual Ministerial meetings, and reports of IEBF findings be presented at subsequent Ministerial meetings.[114]

The Joint Oil Data Exercise (JODE) – later renamed the Joint Oil Data Initiative (JODI) – was also the outcome of proposals made at the 7th IEF in which the host and the co-host statement emphasised the importance of "improving and timely accessing to energy data" for "market assessment and transparency". The idea of an oil data exercise was first aired at an ISG meeting in the process of preparing for the 7th IEF in Riyadh. Calls for greater oil market transparency through the provision of data to a centralised data collection centre led to the creation of a working group and the start of JODE in 2001 on a trial basis.[115] Two years later, the features of the initiative became more concrete, and the Joint Oil Data Initiative (JODI) as a permanent mechanism was established in 2003. The host and co-host of the 8th IEF issued a statement commending the monthly oil data reporting initiative established by the Asia Pacific Economic Cooperation (APEC), the EU (through EUROSTAT), the IEA, the Latin-American Organization for Energy Cooperation (OLADE), OPEC and the United Nations Statistics Division (UNSD) and urging all countries to participate, noting that "data transparency will only be achieved if all parties are fully committed to this important initiative". The development of JODI and the dedication of the six partner organisations was an important justification for the establishment of the IEF Secretariat. Following the endorsement by IEF Ministers, and with the support of partner organisations, the IEF assumed the role and responsibility of coordinator of JODI in January 2005 and currently manages the JODI World Database with the objective of improving the quality and transparency of international oil statistics.

[114] IEF, About the IEBF, available at http://www. ief.org.

[115] "About JODI", http://www.jodidata.org/aboutjodi.shtm; See also 7th International Energy Forum in Riyadh, November 17-19, 2000, Summary by the host and the co-hosts.

The importance of achieving better quality data through JODI for energy security was forcefully echoed by the G-8 Heads of Government in their St. Petersburg Plan of Action on Global Energy Security in 2006. The participants welcomed "the beginning of implementation of the Joint Oil Data Initiative (JODI) and will take further action to improve and enhance the collection and reporting of market data on oil and other energy sources by all countries including through development of a global common standard for reporting oil and other energy reserves". The G-8 leaders also invited the IEF "to work on the expansion of JODI membership and to continue to improve the quality and timeliness of data". High-level political support to JODI has been expressed also by APEC Summits and other international meetings of Ministers.

Against this backdrop of high-level political attention and expectation, the IEF Secretariat hosted the 6th International JODI Conference in Riyadh in November 2006. The Conference gathered 120 participants, representing thirty governments, nine international energy organisations, nine international and national energy companies, and research institutes and consultants. It marked the first anniversary of the release to the public of the JODI World Database. The JODI World Database was released to the public in November 2005 by King Abdullah on occasion of the official inauguration of the Secretariat headquarters, also attended by Ministers of important IEF countries.[116]

JODI has since become a permanent database that collects oil market data from all IEF member states.[117] The Secretariat has consistently promoted JODI as representing "the single most important collaborative effort to address the issue of market data transparency". The promotion of greater transparency in energy markets has been a recurring key message in most international gatherings. Partner organisations participate in the project via data submission, training workshops for staff submitting data, and providing technical support.[118] JODI has a niche, given that it is a rare attempt of data comprehensiveness in a market characterised by diverging estimates and lagging data availability. Calls were made in recent IEF Ministerials to include other data relevant to demand and supply, such as reserves and investment in new capacity. First trials have in addition been made to include data on gas markets.[119]

While there has been a steady improvement in the timeliness and quality of data submissions to JODI in recent years, important gaps still exist in terms of geographical coverage and types and quality of data. Completeness, timeliness and quality of data submitted differ substantially between member countries, something the database is currently still unable to overcome.[120] At

[116] Walther, Arne (2007). "Dialogue for Global Energy Security: The Role of the IEF" A speech given at the Center for International and Strategic Studies Washington D.C., 7 November.

[117] IEF Secretariat, Programme of Work and Budget for 2005, February 2005, p.11, and reflected in various IEF publications. In 2004, IEF Secretary General Arne Walther described JODI as a future "flagship for our activity of promoting producer-consumer dialogue." WPA, 25 October 2004, p.5.

[118] IEF Secretariat, Programme of Work and Budget for 2006, 1 January 2006, p.i; JODI's website is http://www.jodidata.org.

[119] 11th International Energy Forum, Rome, 20-22 April 2008, Closing Statement by host Italy and co-hosting countries India and Mexico; 12th International Energy Forum in Cancun, Mexico, March 29-31, 2010, Ministerial Declaration.

present, submissions by member countries are made on a voluntary basis. The data coverage is quite narrow. Countries provide data on production, refining, trade, demand and stocks of seven product categories. The Cancun Ministerial Declaration in 2010 has been vocal in the necessity to improve JODI's coverage, timeliness and quality, stating:

> The IEF Secretariat data and information system should be forward-looking. Further support for the IEF Secretariat's ongoing work in the expansion of JODI to cover natural gas is needed. Additional expansion of JODI should also include data on investment in new capacity in the upstream and downstream oil and gas sectors, in cooperation with relevant organisations. The comparison of official data against secondary (other than governmental) sources and subsequent analyses could prompt participating states to provide better data, thereby improving JODI's timeliness and quality. The IEF Secretariat should also explore the collection of demand-relevant data such as energy pricing information, energy intensity and energy efficiency measures.

The Institutionalisation and Formality of the Dialogue

The institutional evolution of the International Energy Forum has been one of the defining features of the producer-consumer dialogue in the 2000s. This institutionalisation, however, did not induce any shift towards creating a global energy organisation with binding global energy governance, nor did it affect the informality of the dialogue. The centrality of energy in a country's economic, political and social development and the strong aversion to relinquishing national decision-making processes in the field of energy suggest that this objective is impossible to achieve. The twenty-year history of the IEF demonstrates that the parties concerned are strongly attached to the idea of the informality of the dialogue. This is expressed very clearly in the new IEF Charter, which states that the "Charter does not create any legally binding rights or obligations between or among its members". The emphasis on informality is expected, as energy issues involve quite complex political, economic and social dimensions that are difficult to reconcile. Changing the IEF into a forum with power to make binding decisions would dampen the interest of both producers and consumers and could limit the scope for an open and frank discussion. As noted by the Expert Group report to the HSLG, the informality of the dialogue has made it "non-threatening and attractive, since the participants have had nothing to lose but possible opportunities to gain". Though some interviewees have voiced concerns about the effectiveness of informal dialogues, whether dialogue is formal or informal seems to be of secondary importance to its achievements. It is possible to have a formal but unproductive and ineffective dialogue; or an informal dialogue which is of high-quality and effective in addressing participants' concerns and improving relations among participants. Thus, the success of the dialogue is not linked to its nature, but rather to its quality, content and the extent to which the dialogue is able to create common ground to allow producers and consumers to tackle some of the common problems and challenges they face through higher levels of cooperation or at times through coordinated efforts.

[120] Concern about the uneven quality of data submitted to JODI has recently been expressed by IEA Head of Energy Statistics Jean-Yves Garnier in the WPA: "Not all the countries are performing the same way. You have good pupils in the class and you have pupils who still have to do some extra work for them to meet the requirements of JODI". WPA, XL: 13, 12 April 2010, p.10.

Chapter 6: Oil Market Developments in the 2000s and the Content of the Dialogue

Compared to the 1990s, the agenda of the 7th IEF and subsequent meetings dealt with a broadened set of themes and discussion topics. In addition to 'the usual suspects' of demand, supply and investment outlooks in the oil market, other topics filtered into the dialogue: the changing structure of the energy industry, sustainable energy development, technology challenges, energy poverty and the mutual impact of energy markets and climate change. These topics received more focused attention later on in the decade.[121]

Shifts in Global Oil Demand Dynamics

One of the most important shifts in oil market dynamics in recent years has been the acceleration of oil consumption in non-OECD economies. Between 2000 and 2009, demand growth in non-OECD countries outpaced that of OECD countries in every year (see Figure 6.1). During this period, non-OECD oil consumption increased by around 10.5 million barrels per day (mb/d) while that of OECD dropped by 2.1 mb/d. At the heart of this growth lies the Asian Pacific region, which accounted for more than 50% of this incremental change in demand during this period, but other areas such as the Middle East and Latin America have also become important centres for oil consumption. This shift in global oil demand dynamics, which is still in its early stages, will have wide geopolitical and economic implications, affecting many aspects of the oil market, such as the emergence of new players with their own organisational models, the opening up of new trade routes and refining centres, and the establishment of new pricing benchmarks.

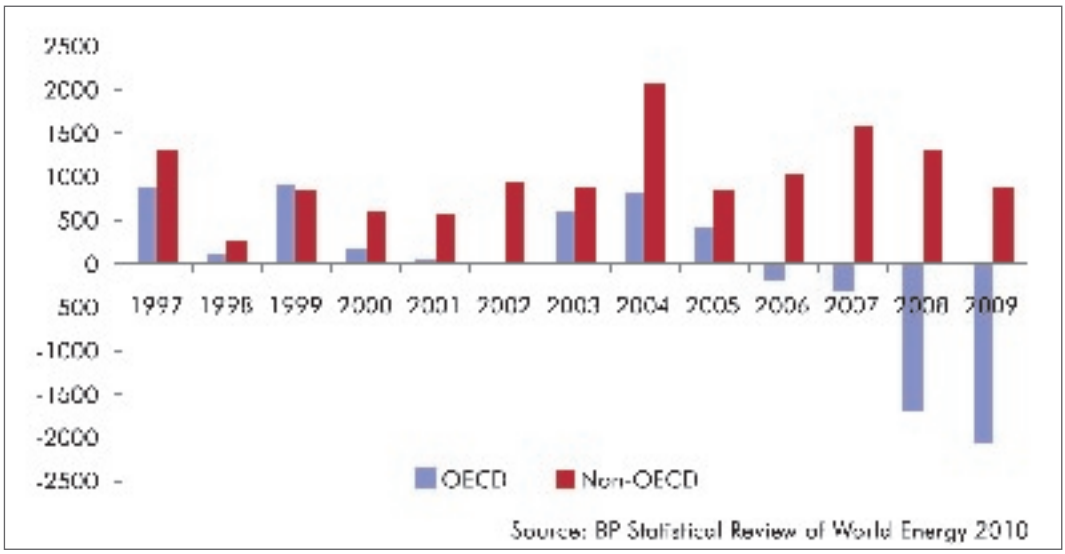
Non-OECD demand became one of the key subjects of debate in the producer-consumer dialogue that has taken place since the early 2000s. The Closing Statement of the 8th IEF in Osaka in 2002, for instance, notes that the growing demand of emerging economies, especially from Asia, "will have international energy implications such as the increased need for investments, increasing trade in oil and gas, and the need for environmentally-acceptable energy utilisation".[122] Mr Akira Amari, the former Japanese Minister of Economy, Trade and Industry, carried this new Asian self-confidence into the producer-consumer dialogue in his

[121] 7th International Energy Forum in Riyadh, November 17-19, 2000, Summary by the host and the co-hosts. Comprehensive summaries and background material on all of the mentioned topics can be found on the IEF Secretariat website at http://www.ief.org.

[122] Summary by the host and the co-hosts of the 8th International Energy Forum in Osaka, September 21-23, 2002. Similar statements followed, for instance at the 10th IEF in Rome in 2008, which concluded that "world energy demand is set to increase significantly in the coming decades, with strong growth projected in emerging economies and developing countries."

Opening Statement to the second Asian Roundtable in 2007, claiming that "it would not be an overstatement to say that world energy problems in the future [will] depend on [Asian] energy policies in the coming decades".

Figure 6.1: OECD and Non-OECD Oil Demand Dynamics



The rise of Asian demand was not only reflected as one of the themes for debate in the dialogue; Asian countries have also been members of the IEF and have participated in various fora and symposia, and have in recent years increased their engagements, for instance as hosts, co-hosts and sponsors of a wide number of fora and symposia.[123] The rise in Asian demand, and the shift in weight in oil and gas markets towards non-OECD countries, may be seen as the main reason behind the development of a more regionally focused producer-consumer dialogue, though concerns about competition between the IEF, the IEA and OPEC and fears of duplications of effort between these organisations may have also played a role in the regional activities of the Secretariat in the periods between Ministerials. In January 2005, the first of subsequently biannual Asian Ministerial Energy Roundtables was held in Delhi, India, following a similar concept as the biannual IEF Ministerials. Since Delhi, two more Asian Roundtables have taken place, one in Riyadh in May 2007 and a third in Tokyo in April 2009. The fourth Roundtable is planned for 2011 in Kuwait. Attendees included energy ministers from seventeen countries from East and South Asia, including China and India, and the Gulf States (defined as West Asia), along with representatives of the IEA, the IEF and OPEC.[124] The aim of an Asian Roundtable has been to give Asia-specific energy issues a separate forum for debate. Criticism of such regional

[123] For example, China became the host of the IEF's first CCS Symposium in September 2009, with China's National Development Reform Council, China's economic management agency, as sponsor. Japan, part of OECD-Asia, has been host to a number of IEF events, including the 8th IEF Ministerial in Osaka in 2002.

[124] The full list of attendant countries include Bahrain, Brunei, China, India, Indonesia, Iran, Iraq, Japan, Kuwait, Oman, Pakistan, Philippines, Qatar, Saudi Arabia, South Korea, Thailand and the UAE. Like the IEF Ministerials, the Asian Roundtables are held alternately in a producer and a consumer state.

approaches is based on the notion that they divert attention from global initiatives by creating regional blocs and by crowding ministers' calendars. The argument that regional approaches are unable to solve global problems, such as uncertainty over fundamentals and financial regulation, has also been put forward.[125] An additional concern in relation to the outcomes of Asian and other regional initiatives is the extent to which the meetings actually focus on their stated purpose, the discussion of specifically Asia-relevant topics. In fact, a number of agenda points of the Asian Ministerials reiterate typical IEF Ministerial discussion points, with little or no specific relevance to Asia over and above their relevance to all oil market participants. Many of the Roundtables' conclusions resemble IEF Ministerial Summary Statements with little less specificity or result-orientation, including issues of transparency, price volatility, investment outlooks, among many others.

Asia-specific topics, such as Asian upstream and downstream investments, the role of Asian NOCs, the domestic pricing policies of petroleum products and the environmental concerns in the Asian Pacific, promise greater relevance and justification for an Asian initiative in addition to global fora. One promising start in this direction has been made in the area of technology that enhances energy efficiency and reduces emissions, for instance in the case of carbon capture and storage (CCS) technology. In this area, the 3rd Asian Roundtable noted that:

> Participants recognised that fossil fuels will continue to be a dominant part of the energy mix for the foreseeable future and that carbon capture and storage (CCS) will play an important role in promoting the sustainable use of fossil fuels. In this context, participants stressed the importance of developing roadmaps for innovative technology, promoting demonstration projects, discussing regulation, monitoring methodology, social acceptance and funding for CCS, such as inclusion of CCS in the Clean Development Mechanism (CDM), and strengthening international cooperation to promote technology transfer. Participants affirmed that in order to address climate change, engagement from the energy sector is crucial.

Future Oil Supplies and the Investment Challenge

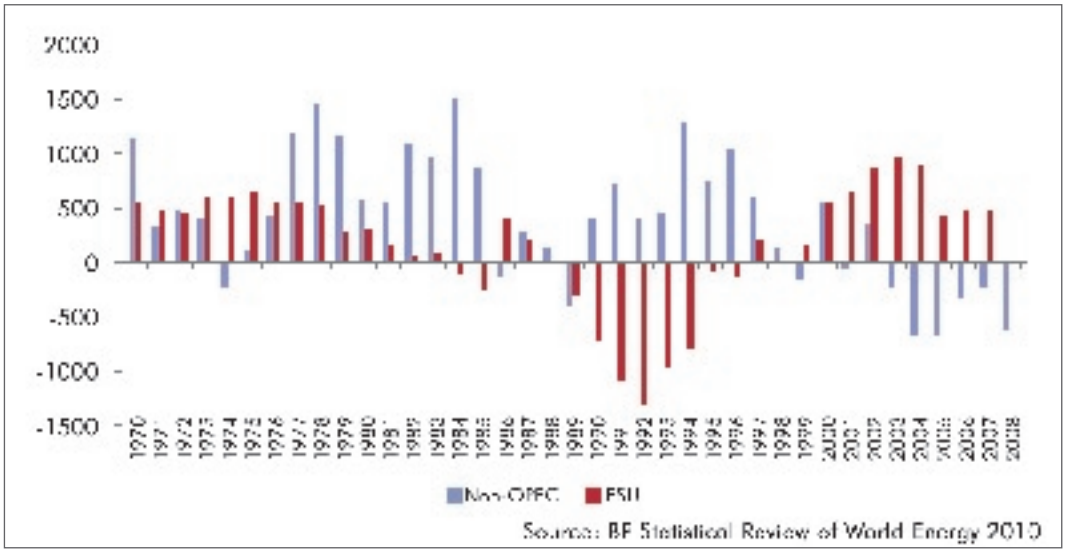
In the 2000s, investment in the energy sector moved back into the centre of attention. Surging oil prices added to existing fears of insufficient future supply and raised consumers' concerns over investment levels to new heights. The subsequent oil price collapse in the second half of 2008 in turn reinforced producers' concerns over an unpredictable price environment, rendering investment decisions all the more difficult. Like no other topic, the investment challenge became an omnipresent theme in the producer-consumer dialogue.

Consecutive upward corrections in oil and energy demand outlooks every single year between 2000 and 2008 raised expectations about higher overall consumption levels. At the same time, the less than expected growth of non-OPEC supply, due to maturing oil fields and above-ground constraints, disappointed hopes of adequate supply growth. Despite the sharp oil price rise between 2001 and 2008, the response of non-OPEC supply outside the Former Soviet Union (FSU) remained weak (See Figure 6.2). During this period, non-OPEC total liquid

[125] Such criticism was expressed by a number of interviewees about all regional approaches, including Asian approaches and the EU's numerous own initiatives.

production added 3.14 mb/d to the world's oil supply. Most of the increase was accounted for by Russia, which added around 2.8 million mb/d. More recently, however, Russian supply growth has slowed down and fell slightly in 2008. Russia oil production expanded in 2009, partly in response to changes in taxation, but most analysts are sceptical about whether the expansion in Russian oil supply as witnessed in the early 2000s can be repeated.

Figure 6.2: Non-OPEC (ex-FSU) and FSU Supply Growth (Year-on-year, thousand barrels/day)



The increasing pessimism about non-OPEC supply over the past few years reflects key structural changes, the most important of which are high decline rates for existing fields and changes in the sources of non-OPEC supply growth.[126] Many mature basins have witnessed rapid declines. According to a recent OPEC report, the weighted average of the annual observed decline rate over the period 2000-2008 stood at 4.6% per annum, implying that 1.8 mb/d of non-OPEC supply needs to be replaced simply to prevent supply from declining.[127] Such high decline rates imply that special attention needs to be given to recovery rates. Furthermore, the main sources of non-OPEC supply growth have become more varied as compared to the 1970s and now include deep offshore in Brazil and the Gulf of Mexico, ethanol in the US and tar sands in Canada.

A combination of high oil prices and limited access to reserves has pushed many oil companies in non-OPEC countries to explore new frontiers. These new frontiers include the exploitation of oil reserves in deep and ultra deep waters in places such as the Gulf of Mexico in the US, Angola and Nigeria in West Africa and Brazil in Latin America. In addition, oil companies have been looking at potential development of unconventional oil such as oil sands, bitumen, shale oil, Coal to Liquid (CTL) and Gas to Liquid (GTL), extra heavy oil and bio-fuels. According to

[126] IEA, WEO 2009.
[127] OPEC (2009). World Oil Market Outlook 2009. OPEC, Vienna, Box 4.2.

a latest EIA International Energy Outlook, global production of unconventional liquids will increase from 3.4 mb/d in 2007 to 12.9 mb/d in 2035, accounting for 12 percent of the world's total liquids supply in 2035.

These changes have a number of important implications. On average, it has become more costly to develop oil reserves in non-OPEC countries. In addition, maintaining stable decline rates in mature fields requires the use of advanced and more costly technology. Furthermore, the scale and risk profile of non-OPEC suppliers are different from those of the past. It is now technically, financially, and managerially much more challenging to extract oil in these areas. Regarding deep offshore, the BP oil spill in the Gulf of Mexico has raised serious concerns about safety and the maturity of technology and has necessitated the reassessment of the balance of costs and benefits of operating at these new frontiers. Although such environmental disasters will not stop the drive for offshore oil production, they are most likely to result in more government regulation and will place the industry under very close scrutiny. This may cause delays in project completion, inducing uncertainty about the timing of entry and the size of the output increment. Moreover, the production of unconventional oil such as tar sands and shale oil raises serious issues regarding the environmental cost. Finally, because of the different risk profile and the higher costs involved in development and production, non-OPEC supply has become more sensitive to oil price cycles. Specifically, there seems to be an asymmetric response to oil price changes. A sharp rise in the oil price induces a modest investment response in non-OPEC countries, while a decline in the oil price generates a sharp fall in investment in the oil industry, especially in those segments with relatively high marginal costs.

The weak response of non-OPEC supply to the sharp rises in oil prices, and the change in the risk profile of potential sources of non-OPEC supply, shifted the attention to investment decisions and resource access in resource rich countries. The 2000s were characterised, like no previous decade, by the dominance of NOCs over the world's oil and gas reserves. This is in stark contrast to the early 1970s, when IOCs dominated the oil industry. The concentration of proven reserves in the hand of NOCs implies that they are expected to play an increasingly important role in providing future supplies to the market. Given that the bulk of oil reserves are in the Middle East, the issue of investment in the oil sectors of the region received special attention. Many international organisations such as the IEA, and also the Energy Information Agency (EIA) of the US Department of Energy, project that most of the increase in global demand for oil will be met by OPEC and especially the Middle East producers within OPEC. From consumers' perspective of energy security, this would require that these Middle East oil exporters increase their investment outlays substantially or increase the involvement of foreign investors in the development of their oil and gas sectors.

For most of the 1980s and 1990s, investment in the oil and gas sectors in OPEC countries was stagnant. The large spare capacity and the oil price decline in the 1980s and most of the 1990s threw the industry into deep recession, reduced the attractiveness of existing investment plans and adversely affected the incentive to invest. This was accompanied by widespread demand pessimism and exaggerated expectations of non-OPEC supply. Geopolitical instability and wars have also prevented capacity expansion in many Middle Eastern countries. For example, the Iran–Iraq war, the Iraqi invasion of Kuwait and the US invasion of Iraq have limited the capacity of Kuwait, Iran and Iraq to channel investment into their oil sectors. Economic sanctions against Iran, Libya and Iraq limited the access to technology and foreign capital and hindered

any serious capacity expansion. Furthermore, oil prices have often been volatile, blurring the distinction between transitory and permanent price movements. The potential uncertainties facing the oil market in the current context have become more complex, especially uncertainty concerning importing countries' responses to the climate change challenge. As suggested in the literature regarding irreversible investment under uncertainty, the large investment outlays in oil projects and the irreversible nature of these investments have the effect of increasing the value of the option to wait. There is thus a case for delaying the investment until new information about market conditions arrives, especially information about expected global demand and oil supplies from other countries. For the oil industry, the option to wait is very valuable, though tight market conditions due to underinvestment can result in an accelerated rise in the oil price, more frequent price spikes and higher price volatility. Such behaviour in oil prices has important direct implications on oil demand through price effects and its impact on growth. Yet there are also indirect effects, since such price dynamics will result in a change in consumer behaviour, the acceleration of technological innovations and government policy, with detrimental effects on long-term global oil demand.

In many oil-exporting countries, the relationship between the owner of the natural resource (i.e. the government) and the operator and extractor of these reserves (i.e. the NOC) is highly complex and inefficient, yielding very low rates of investment in the oil sector and causing a general deterioration in the NOCs' capabilities. Given the competing and increasing demands for economic, social and infrastructure projects, the financial resources channelled to NOCs are rather limited, and this prevents them from undertaking the necessary investment, acquiring technological capabilities and enhancing their managerial expertise. The impact of the inefficient relationship between NOCs and their governments is likely to be felt more strongly in coming years. Many NOCs from resource-rich regions might be underestimating the magnitude of the cost and the effort that capacity expansion requires. In many instances, since nationalisation the main task of NOCs has been to manage excess supply, not to grow capacity. Currently, few NOCs have experience in dealing with large-scale capacity expansion projects.

The sharp rise in oil prices during the 2002-2008 price cycle also highlighted tightness in refining capacity. Excess refining capacity and low historical margins in the 1990s curtailed investment in refining to very low levels. Only mandated product quality improvements and environmental protection obligations generated investment projects irrespective of returns. Strict environmental regulations have made the building of refineries more difficult or nearly impossible in certain markets. The expansion of refining capacity has also been constrained by uncertainty about the extent and timing of government regulations with which refineries must comply. Thus, over the years, the refining sector has lost much needed flexibility, given the changes in the structure of demand for its products, the mandated modification of product specifications and other environmental restrictions, and the changing mix of its crude slate, due to higher incremental volumes of sour and heavier crudes. This more generalised underinvestment problem across the different parts of the oil supply chain has important policy implications. Even if investments in the upstream oil sector materialise and result in an increase in oil production, bottlenecks in refining capacity mean that this higher crude oil production will not necessarily translate into higher volumes of petroleum products which consumers want. Since producers have little control over the global oil logistics systems, a close coordination of investment plans is required between oil-consuming countries and oil-producing countries to address the bottlenecks in the oil value chain.

The Investment Issue and the Producer-Consumer Dialogue in the 2000s

The investment environment in the oil sector, infrastructure constraints and bottlenecks became the focus of the producer-consumer dialogue. The need for investment alongside the entire supply chain has been one of the consistently recurring themes at IEF meetings, both in its Ministerials and at subject symposia and regional fora such as the Asian Energy Roundtable. In 2002, at the 8th IEF, natural gas had joined the investment debate, which had also been expanded to include once again the concept of energy security:

> While there appears to be sufficient oil and gas to meet the world's growing demand for energy to 2020, a massive amount of investment would be required in exploration for, and development and transportation of, additional oil and gas supplies. Oil and gas producing countries emphasised the importance of secured and reliable demand to energy supply security and future investment in this sector, while consuming countries welcomed recent developments that encourage foreign investment in oil and gas producing countries. The Forum stressed the importance of a favourable investment climate for market stability and energy security.[128]

Transparency as a separate aspect of security was also included, now specifically in relation to investment. Participants "underscored the importance of transparency and exchange of energy data for market predictability and stability, providing also for a more stable investment climate while supporting planning and enhancing global energy security".[129]

The inclusion of industry leaders at the 9th IEF in 2004 in Amsterdam through the first IEF Business Forum (IEBF) added the industry's view on the issue. The IEBF's closing statement recommended that governments "create a transparent, predictable and consistent policy and regulatory framework".[130] They called for countries to focus their policies on promoting a stable economic, fiscal, regulatory and legal climate which will encourage and attract financial resources and especially foreign direct investment (FDI) in energy, including investments in cleaner fossil fuels and in the reduction of detrimental environmental effects of growing energy use. The Forum also emphasised the availability of funds through development bodies and questioned whether the energy sector can attract sufficient funds in the global capital market. It called upon financial institutions, investors and policy makers to improve their assessment on the attractiveness of energy. The meeting also emphasised the urgency of changing the image of the oil sector in the public eye.[131]

At the 10th IEF in 2006 in Qatar, the investment agenda was further expanded by the inclusion of the dimension of NOC-IOC cooperation and the idea that energy companies themselves were

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[128] Summary by the host and the co-hosts of the 8th International Energy Forum in Osaka, September 21-23, 2002.

[129] Conclusions by host and co-host of the International Energy Forum, 10th International Energy Forum, 2nd International Energy Business Forum, Doha, Qatar, 22-24 April 2006.

[130] Summary by the host and co-Hosts of the 9th International Energy Forum, Amsterdam, 22-24 May 2004.

[131] ibid

part of the investment solution. In the 10th IEF, Ministers noted "the potential of reciprocal and joint investment between producers and consumers as well as between National Oil Companies and International Oil Companies, all along the energy supply chain. This would increase the volume of investment in the energy sector and enhance energy security by establishing interdependencies".[132]

By mid-decade, the topic of how to improve the investment climate had taken on an almost monotonous tone, reiterated throughout all IEF activities. High oil prices had done their part of popularising the call for more investment – after all, times had never been better as oil prices go, and investment in new developments were not only economic in conventional oil and gas but also increasingly so in unconventional development, such as oil sands and shale gas, soon to become the latest catch words in the industry. Much smaller in scale than IEF Ministerials, the G-8 Summit in St. Petersburg in July 2006 became the unusual site of dialogue between different oil market participants. Global energy security had been chosen among the summit's three main themes for discussion, in the context of rising global demand for energy, raising oil prices, and a rise in climate change debate and policy response.

Starting in 2006, the investment debate within the IEF became increasingly tied to the parallel debate surrounding increasingly high oil prices and, later on, in 2008, the issue of heightened oil price volatility. The surge in prices, attributed partly to tight fundamentals and partly to financial market structures, rapidly increased the urgency in the calls for investment along the supply chain. For producers, investment decisions remained locked by uncertainties about prices, about the economic viability of their development projects and about demand. The latter of these concerns stemmed from seeing high demand growth from Asia but a decline in demand growth in most OECD countries, combined with two years of negative global demand growth in 2008 and 2009 – the first since the 1980s – and uncertainty about the availability of supplies from other regions.

Locked into reiterations of already existing goals, the Forum inevitably ended up as an onlooker of oil price movements. The Jeddah Energy Meeting in June 2008, by contrast, addressed the issue of investment in a far more dynamic manner. Saudi Arabia also issued a pledge to invest in more capacity if needed. The meeting, called by Saudi Arabia, was in part an emergency response to the surge in oil prices and resulted in a Joint Declaration by the government of Saudi Arabia and the Secretariats of the IEA and OPEC, the first of its kind at an IEF meeting. The Jeddah Joint Statement clarifies that "appropriate increase in investment both upstream and downstream is necessary to ensure that the markets are supplied in a timely and adequate manner. Predictable energy and investment policies as well as better access to technology are necessary to this end" and invites "enhanced cooperation among international, national and service companies from all producing and consuming countries in investment, technology and human resource development".[133] In addition, suggestions were made to include data on investment in new capacity in the upstream and downstream oil and gas sectors in the IEF's central database JODI.

[132] Conclusions by host and co-host of the International Energy Forum, 10th International Energy Forum, 2nd International Energy Business Forum, Doha, Qatar, 22-24 April 2006.

[133] Joint Statement, Jeddah Energy Meeting, 22 June 2008.

Investment-Related Topics

In addition, the IEF substantially expanded its various activities with regards to specific investment-related topics. Its new, subject-focused symposia and fora, offered since 2008, have included regular events such as the CCS Symposium and the NOC-IOC Forum, along with other events such as the IEF-IFP Technology Forum and the Energy Efficiency Forum planned for the spring of 2011. While not primarily focusing on investment itself, all of these fora serve the purpose of enhancing information sharing and thus aim to promote a more conducive environment for investment. The IEF commissioned a report on the prospects of biofuels, still an *enfant terrible* for many oil and gas producers, as prospects for biofuels have added to already existing demand uncertainty for oil and gas producers.[134] Another report, the IEF's *Uncertainties Report*, was published in July 2009.[135] A symposium looking at one specific aspect of the investment challenge, the need for investment in human resources, was organised by the IEF in March 2009. Skills shortages in the industry, lamented by both NOCs and IOCs throughout the 2000s, reminded many of the 1980s, when the oil industry lost its attractiveness as an employer.[136] Throughout the 2000s, staff shortages once more became an issue of concern. The 1990s with their low oil prices, and the super majors' cost-cutting which included staff cuts, had left their toll on the industry's skills base. Its image as an attractive employer had furthermore suffered as a consequence of the oil industry's environmental record on the one hand and peak oil debates on the other.

Previously, the skills shortage had been raised at a number of producer-consumer forums, including the 11th IEF Ministerial in April 2008. This Forum noted the need to broaden cooperation and exchanges in the fields of human capital and technology advancement. It pleaded the importance for the oil and gas industries to work together with universities and research centres to promote a world-wide campaign in consuming and producing countries, with the aim of improving the image and rewards of technicians and skilled staff working in the oil and gas industries.[137] The Jeddah Energy Meeting's Joint Statement identified the problem with greater depth, stating:

> The Human resources crunch is an industry-wide problem requiring global cooperation towards a resolution. Studies show that by the end of this decade, the oil and gas industry may be faced with significant shortages, due to a wave of retirements and inadequate recruitment. A key factor in this unfortunate situation is the perception by many potential recruits that the industry is in a "sunset" phase. Competing for recruits

[134] Mandil, Claude and Adnan Shihab-Eldin. "Assessment of Biofuels Potential and Limitations", February 2010, available online at http://www.ief.org/PDF%20Downloads/Bio-fuels%20Report.pdf . Ministers at the 11th IEF had asked for such a report to be produced.

[135] "Unpacking Uncertainty: Investment Issues in the Petroleum Sector", July 2009, A Report commissioned by the IEF, written by PFC Energy. Available online at http://www.ief.org/PDF%20Downloads/IEF%20Unpacking%20Uncertainties%20Report..

[136] Qatar's Energy and Industry Minister Abudullah Al-Attiyah remarked at the IEF Human Resources Symposium in Doha in March 2009: "I sincerely hope that we do not see an exodus from oil-related disciplines similar to that of the mid 1980s."

[137] See 11th International Energy Forum, Rome, 20-22 April 2008, Closing Statement by host Italy and co-hosting Countries India and Mexico.

> with the I.T. and other hi-tech sectors' images of hard-hats, drilling-rigs and other heavy machinery continue to characterise the industry in the press and elsewhere even though computing power, R&D, and cutting-edge high-tech of all descriptions are the reality of a modern oil & gas company. These and other factors combine to discourage belief in the sector as an employer of choice. [138]

The Joint Statement at the end of the meeting called for "enhanced cooperation among international, national and service companies from all producing and consuming countries in investment, technology and human resource development".[139]

The Human Resources Symposium in March 2009 was held under the title "Tackling the Human Resources Crunch in the Petroleum Industry". Attendees included industry representatives from oil and gas companies, as well as representatives of educational institutions. For the IEF, the symposium was an opportunity to highlight shared interests: the need by the energy industries for skilled staff in the long-term on the one hand, and the attractiveness of the hydrocarbon industries as an employer on the other: "An industry-wide deficit of skilled employees represents a critical bottleneck and long-term challenge to the petroleum sector", said IEF Secretary General Noé van Hulst at the Symposium. He further stated that commonly held, negative perceptions of the industry should be challenged by better communicating "the reality of the modern oil and gas sector as a high-tech, diverse and environmentally conscious entity, integral to the long-term future of the global economy".[140] Importantly, key messages to address the skills shortage were agreed upon, albeit without specific commitments by either side: industry action in the form of broadened mentoring programmes, widened scholarship and internship opportunities for university students as "proactive initiatives with the potential to attract, develop and retain interest in the sector as career path of choice", more cooperation between industry and academia, as well as the immediate importance for companies to "resist short-term economic pressures to implement cuts in workforce."[141]

Changing Industry Structures: The NOC-IOC Relationship

In the current environment, four key features of IOCs stand out: their limited access to reserves; their relationship with oil-producing countries; the increased competition from multiple players; and the adherence to the principle of maximising shareholder value. As noted by the Economist, IOCs are "small next to the industry's true giants: the national oil companies (NOCs) owned or controlled by the governments of oil-rich countries.... Of the 20 biggest oil firms, in terms of reserves of oil and gas, 16 are NOCs".[142] IOCs often cite the difficulty of access to reserves in resource-rich regions as the main obstacle to replenish their reserves and to

[138] Executive Report, Jeddah Energy Meeting, 22 June 2008.
[139] Joint Statement, Jeddah Energy Meeting, 22 June 2008. Concern had also been expressed at the NOC-IOC Forum in March 2009, where participants noted that "the high average age of personnel in the industry and how to attract young graduates is a source of concern" and that "long-term considerations should prevail as more skilled staff will be needed to meet future global oil and gas requirements." Concluding Statement, NOC-IOC Forum, Kuwait City, 30-31 March 2009.
[140] Press Release, IEF Human Resources Symposium, 13-14 April 2009, Doha, Qatar.
[141] Concluding Statement, IEF Human Resources Symposium, 13-14 April 2009, Doha, Qatar.
[142] The Economist (2006). "National Oil Companies: Really Big Oil", August 10.

increase their production. Of total global oil and gas reserves, only 14 percent are fully open to IOC competition. The rest are held by governments and NOCs; IOCs can have some equity access (11 percent do) or no equity access (58 percent).[143] As markets have tightened and transitioned from a buyer's to a seller's market, the terms and conditions demanded by the owners have been hardening over time. These trends will be further reinforced by growing long-term demand for oil and gas, and by decreasing opportunities open to IOCs.

Although both NOCs and IOCs operate within the same industry, they have different objectives and face different challenges. While IOCs are mainly concerned with profitability, share prices and risk management, NOCs have to deal with government bureaucracy, local politics and optimising the life of reserves across generations. Many consider that such differences can act as grounds for cooperation between IOCs, which seek attractive investment opportunities in below-ground resources, and NOCs, which seek above-ground resources, namely technology, capital and managerial skills for dealing with large projects provided by IOCs. However, technology and capital are no longer the main drivers of IOC-NOC relationships. With the support of service companies, NOCs are now able to tackle tasks that were not feasible in the past. Furthermore, the rise in oil prices means that governments are no longer starving for capital. Some IOCs have not fully recognised this change of circumstances and have not adequately explored new forms of engagement with some of the stronger NOCs.

IOCs have also been facing tough competition from other players in the industry. In recent years, many oil importers, such as China and India, have been keen to further develop their NOCs. These NOCs are eager to increase their international investments and acquire assets to secure new sources of oil supply. They hence compete fiercely with IOCs in acquiring overseas assets. Since, unlike other oil companies, they are not driven by the objective of maximising shareholder value, they are likely to be flexible in negotiating contracts with NOCs in oil-exporting countries and with their governments. Furthermore, these NOCs may benefit from state-to-state connections and thus gain better access on the basis of a more general agreement between the two states.

As in other periods of the industry's history, smaller oil companies (known as independents) in search of a new identity vis-à-vis the established club of majors are competing with IOCs for a share in the oil business. These independents are willing to explore smaller areas with low hydrocarbon deposits, to pick up concession blocks abandoned by majors and to create 'niche' advantages. The technology brought in by these independents has been playing an important role in reviving the oil sector in many countries. Oil service companies also work directly with resource-rich NOCs, providing them with the necessary technology on a fee-based system. These service companies can sometimes engage in managing projects, blurring the differences between them and IOCs.

It is important to note that although these players compete with IOCs, there is also a symbiotic relationship between the various players. When large and complex discoveries are made, independents often rely on IOCs for the financing and development of these basins. Both IOCs and independents rely in turn on service companies for services such as drilling, geophysical services, reservoir characterisation and interpretation and well-testing. In fact, IOCs and

[143] Zanoyan, V. (2004). "The Oil Investment Climate", MEES, Vol. XLVII, No. 26.

independents constitute a major source of revenue for oil service companies. The latter thus actively seek to establish good working relationships with their clients. Finally, NOCs and IOCs can enter in strategic alliances, implement joint projects, and make joint bids for energy assets. Recent examples include the joint bid by BP and China National Petroleum Corporation (CNPC) for the development of the Rumaila field in Iraq in 2009; Shell's and CNPC's plans to jointly develop and produce natural gas in China's Sichuan basin in 2010; and BP's share swap and Arctic exploration deal with Russia's Rosneft in 2011.

Under the pressure of shareholders and financial investors, there has been a shift in IOCs' strategy towards maximising shareholder value. This has meant a shift in IOCs' financial and investment strategies. Rather than using the bulk of cash flow for investment in exploration, development and production, IOCs have pursued a strategy of returning large cash flows to shareholders through buy-back schemes or through issuing dividends. Many IOCs have also engaged in a wave of mergers and acquisitions in an attempt to improve their profitability through cutting costs. Another important motive behind the merger strategy was to improve IOCs' reserve to production ratios by purchasing other companies' booked reserves. This was viewed as an alternative to investment in the relatively expensive and risky business of exploration and development. Maximising shareholder value also meant a shift from the vertically integrated structure which characterised the oil industry in the 1960s and 1970s. Instead, the various parts of the supply chain are being treated as independent profit centres: rather than treating upstream and downstream as parts of the same supply chain, investment is diverted away from relatively low profit centres such as refining or marketing, towards more profitable segments such as upstream.

The IOC-NOC and Producer-Consumer Dialogue

The need for investment, skilled human resources and experience in long-term and unconventional oil and gas development has led to many calls for enhanced cooperation between NOCs and IOCs to pull on a single strand within the industry. Consumer nations' concern over resource access for their own multinational super majors is an additional motive. Proponents of greater NOC-IOC cooperation argue in favour of the capital investment IOCs are able to provide, their human resources and proven experience with the management of long-term and complex projects, as well as their technical know-how. The producer-consumer dialogue was brought into play in this context as a forum facilitating dialogue not only between governments but also between industry players themselves, especially between NOCs and IOCs.

The IOC-NOC relationship increasingly became a subject of discussion at IEF meetings throughout the decade. Ministers at the 11th IEF in April 2008, for instance, called for "increased cooperation between IOCs, NOCs and service companies as a major opportunity in coping with the increasing costs, complexity and risks of large investment projects". Similar calls were later made at the Jeddah Energy Meeting in June, 2008, and at the IEF-

IGU Symposium in November, 2008.[144] Participants at the IEF-IFP Technology Symposium in December concluded that "partnership between NOCs and IOCs in technological development and implementation is a win-win situation" and called for "a renewed collaboration and a strengthened cooperation".[145]

In March 2009, the IEF, in cooperation with the Government of Kuwait, organised the first of what is intended to be a regular forum between IOCs and NOCs. Held under the title "NOCs-IOCs Cooperation and Partnership to Enhance Energy Security", the forum was hosted and sponsored by Kuwait Petroleum Corporation (KPC). Primarily targeted at industry representatives, the forum was designed to promote regular dialogue between NOCs and IOCs and to demonstrate ways to improve their cooperation. It is evident that the principle function of this forum, given it was the first of its kind, was to send messages rather than to come up with solutions. In consequence, many of the forums' conclusions aimed at highlighting industry needs move along general guidelines: a call to governments to set clear and stable policy frameworks, the need for overall investment along the value-chain and for political stability, and the message to the industry that it should avoid giving in to short-term pressures and to further cut expenditure on jobs, capital and technology. At a time of great uncertainty within the oil industry, NOCs and IOCs agreed on a wish list, including the steady emphasis, clarity and stability of energy policy frameworks, as well as fiscal, legal and economic regulation. The forum furthermore grasped the opportunity to call on itself to refrain from responding to the current economic pressures by job cutting and capital spending.[146] The meeting could not – and would not – move beyond general support for greater NOC-IOC partnership all along the value chain.[147]

Technology and the Climate Change Challenge

Since the early 2000s, the concept of sustainability has moved increasingly into the limelight of the industry's focus and has become one of the key themes of the producer-consumer dialogue. Factors rendering sustainability crucial to the 2000s dialogue include both old and new sources of uncertainty for the industry: the issue of price volatility that hamper long-term demand stability for oil as well as natural gas; prospects of the decline of low-cost reserves and the cost rise for the development of new reserves; and the impact of the climate change debate and resulting carbon-reduction policies by consuming countries. New technology, both needed to recover oil and gas reserves, and to respond to a global trend towards cleaner energy along the entire value chain, has become the subject of much of the focus of intra-industry dialogue, while the social and environmental responsibility of producers and consumers of energy alike

[144] Ministers at the Jeddah Energy Meeting in June 2008 concluded:
> That co-operation is enhanced among international, national and service companies from all producing and consuming countries in investment, technology and human resource development. (Joint Statement)

And the IEF-IGU Symposium in November 2008:
> encouraged NOCs and IOCs to enhance cooperation and partnership to develop human resources and encourage R & D efforts in pursuit of efficiency and cost improvements through technological advances. (Concluding Statement)

[145] Concluding Statement by IEF Secretariat and IFP, IEF – IFP Symposium "Enhancing Global Energy Security, Role of Technology in the Petroleum Sector", 15 December 2008, Riyadh, Saudi Arabia

[146] IEF Newsletter, May 2009, Issue 13, p. 11.

[147] Concluding Statement, NOC-IOC Forum, 30-31 March 2009.

challenges the traditional orientation of the business. Risk management is also increasingly coming to the fore as an important issue.

The 11th IEF Ministerial in Rome in April 2008 specifically addressed the challenges of a sustainable energy future, which requires "efficiency improvements, technological advances in both production and consumption of fossil fuels, and development of alternative low-carbon energy sources".[148] Ministers at the 11th IEF had also expressed a more constructive approach towards energy efficiency, while highlighting for the first time a shared understanding that CCS technology had moved into the focus of the industry. In the Closing Statement, Ministers affirmed the mutual benefits: "Improving energy efficiency through action plans, sectoral approaches and sharing of best practices in energy production, transportation and consumption is cost-effective" since this enhances "energy market stability, environmental sustainability and economic development". The forum also emphasised the importance of carbon capture and storage (CCS) as one of the options to reduce greenhouse gas emissions from fossil fuels. The participants expressed themselves clearly, noting that "CCS development and deployment will play a crucial role in delivering a sustainable energy future. Inclusion of CCS in the Clean Development Mechanisms should be enacted as soon as possible (...)."[149]

Trying to tackle the technology challenge has made the IEF and many of its activities also a forum for debate over technology – both between industry participants over technological options, and between consumers and producers over the prospects for different sets of technology and their impact on consumption patterns on the consumer side and recovery rates on the producer side. The relevance of technology in this regard has been emphasised throughout the industry. There is clear recognition that "meeting expanding energy needs – while tackling carbon emissions – will require delivering technology at an unprecedented scale and pace".[150] Many of the surrounding concerns and questions were taken a step further at a specialised symposium in December 2008. The IEF-IFP Technology Symposium was co-organised by the IEF and the French Institut du Pétrole, with participation from oil and gas companies, technology and service providers and representatives of a number of IEF member states. Pragmatically, the symposium was promoted as "a symposium on the role of technology in the petroleum sector in enhancing global energy security"[151] – a conscious choice against reference to carbon-cutting motives behind this technological change. The focus at the Technology Symposium was directed primarily at how technological advances were able to enhance oil and gas recovery rates, as well as at efficiency gains through technological improvements. Lip service was paid to environmental motives behind technology: CCS technology remained the only topic with direct relevance to climate change, but the debate once more remained focused on CCS and improving recovery rates, with general scepticism as to CCS technology's ability to effectively reduce CO_2 emissions.

[148] 11th International Energy Forum, Rome, 20-22 April 2008, Closing Statement by host Italy and co-hosting countries India and Mexico.
[149] ibid
[150] WPA, XXXVI:7, 13 February 2006, p. 1.
[151] Concluding Statement by IEF Secretariat and IFP, IEF – IFP Symposium "Enhancing Global Energy Security: the Role of Technology in the Petroleum Sector", 15 December 2008, Riyadh, Saudi Arabia.

The first CCS Symposium, co-organised by the IEF and Australia's Global CCS Institute, followed the IEF-IFP Symposium in September 2009, having a greater focus on CCS technology. The symposium was held under the title "Challenges and the Way Forward in Accelerating CCS Development and Deployment, in Particular in Oil and Gas Producing Countries" and distinguished itself by being driven by very specific objectives. The event was remarkable not only because it consciously put greater weight on CCS technology itself, but also because it was hosted by China's National Development Reform Council, an important sign of the even more active role which the new large energy consumers such as China are hoped to play in the coming decade. In this forum CCS technology was once again placed in the context of energy security but found remarkably more conciliatory words with regards to climate change:

> In a carbon-constrained world, the issue of global energy security is of utmost importance, given the level of projected long-term energy demand and continuing dominance of fossil fuel in the future energy mix. The sustainability of fossil fuel production and consumption, especially with regard to the environmental footprint, is an issue of common concern and global importance.[152]

With a focus on CCS technology, the advantage of the forum was clear in that it was able to address its topic in its agenda and its discussions in far greater depth, and with clearer outcomes than many of the larger forums with much broader agendas. This framework also allowed for greater justice to be done to the question of CCS technology's potential to make a positive impact in participating countries' aims of reducing their CO_2 output. The importance of CCS technology has also been highlighted by its regular inclusion into IEF Ministerial closing statements:

> Ministers affirmed that fossil fuels will still provide the lion's share of the energy supply for decades to come, although renewable energy will have to play an increasing role in the energy mix. Since there is an urgent need to mitigate climate change, it is inescapable [that it will be necessary] to also radically improve the environmental sustainability of fossil fuels. Carbon capture and storage (CCS) is one of the key technologies to achieve this. The progress of CCS has been encouraging, but cost, knowledge sharing and the necessary regulatory infrastructure remain as significant obstacles. Where CCS can be deployed in conjunction with Enhanced Oil Recovery (EOR), it may prove to be a catalyst and stepping stone to commercial deployment of CCS.[153]

Energy efficiency has been a second area of agreement, and one which became the starting point for many later IEF activities focused on technological development. Given that oil and natural gas are exhaustible resources and that these resources will remain important in world energy consumption for years to come, the Ministers emphasised in the 8th IEF the importance of the long-term efficient use of oil and natural gas. They also recognised that cleaner and more efficient fuel technologies, such as fuel cells and GTL, would have a contributing role

[152] Concluding Statement by IEF Secretariat and Global CCS Institute, IEF- Global CCS Institute Symposium, 27-28 September 2009, Beijing, China.

[153] Concluding Statement by host country Mexico and co-hosting countries Germany and Kuwait, 12th International Energy Forum 4th International Energy Business Forum Cancun, 30-31 March 2010.

in the future. They called for participants to explore policies to encourage the development and deployment of such technologies.[154] The Jeddah Energy Meeting went one step further and emphasised that energy efficiency should be "promoted in all sectors through passing on market price signals, technology transfer and the sharing of best practices in energy production and consumption".[155]

Energy Poverty

Energy Poverty in many developing countries has been recognised as a lamentable aspect of overall poverty. It is widely known that the lack of access to modern forms of energy such as petroleum products and electricity inhibits economic and social development and increases poverty. Poverty and energy poverty often go hand in hand. Many characteristics of the poor such as low and irregular income, lack of basic education and limited access to social and public services imply that the options available to the poor in terms of energy sources are also quite limited. Furthermore, such characteristics imply that poor households exhibit a strong preference for freely available but inefficient and dirty fuels such as firewood. Thus, transitioning to clean and modern fuels constitutes a key objective for many developing countries.

The lack of access to modern fuels affects economic and social development through many channels. As households transition to more modern forms of fuel, the fuel becomes more efficient. For instance, in terms of cook-stoves, most traditional biomass stoves are very inefficient and use much more energy than non-biomass-burning stoves. Research has also shown that modern fuels are cleaner and safer. Although biomass fuels have few contaminants such as sulphur or metal, poor households do not allow enough airflow into the stove, resulting in indoor air pollution and serious health risks. Given that women are most closely associated with the combustion of biomass, they have the highest exposure to health risks of all members of the household. It is estimated that indoor air pollution kills 2 million women and children every year. Half this number live in China and India. Other studies find that good health has a positive, sizable and statistically significant effect on aggregate output. Thus, at the macro level, negative health consequences due to use of traditional forms of energy have a negative impact on economic growth and development. Furthermore, collecting fuel wood is a time-consuming activity which means that less time is available for productive activities and investment in human capital. This impacts women and children the most, since they have the primary responsibility for collecting firewood. Evidence suggests that the use of biomass is higher for those households where more women and children (i.e. labour resources) are available. Many studies find that changes in the *quality* of energy services enhances economic productivity, even after accounting for the physical availability of energy *per se*. Specifically, the increased use of more flexible energy forms such as liquid fuels and electricity enhances productivity by enhancing "the discovery, development, and use of new processes, new equipment, new systems of production, and new industrial locations".[156]

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[154] Summary by the host and the co-hosts of the 8th International Energy Forum in Osaka, September 21-23, 2002.

[155] Joint Statement, Jeddah Energy Meeting, 22 June 2008.

[156] Schur, S.H. (1984). "Energy Use, Technological Change, and Productive Efficiency: An Economic-Historical Approach", *Annual Review of Energy*, Vol. 9, 409-425., p. 415.

The energy poverty topic has filtered into the dialogue, and both producers and consumers are keen to be seen tackling the energy poverty challenge. The 11th IEF in Rome in 2008 recognised the scale of the energy poverty, noting:

> Yet over two billions of people do not yet have access to modern energy services. This perpetuates the poverty cycle and inhibits economic development, availability of clean water and food, while preventing training and acceptable health standards.[157]

During the period of sustained oil price increases from 2002-2008, energy poverty became a topic of more widespread concern, given that high oil prices naturally hit least developed countries the hardest – similarly to the 1970s, when the first oil price shocks began to be associated with greater energy poverty and help funds such as OPEC's OFID were introduced for the poorest nations. The Jeddah Energy Meeting in June 2008 commented that "oil price rises and the underlying volatility, will have an impact on the economies of the consuming and producing countries alike, especially in the least-developed countries" and recommended that "development assistance from national, regional and international finance and aid institutions be intensified to alleviate the consequences of higher oil prices on the least-developed countries".[158] In the Jeddah Energy Meeting, King of Saudi Arabia Abdullah Ibn Abdulaziz Al-Saud proposed an energy-for-poor initiative with the aim to help developing countries cope with the high oil prices. King Abdullah allocated $1 billion for an OPEC Fund and offered $500 million in soft loans through the Saudi Fund for Development to finance projects in developing countries to alleviate energy poverty.

In December 2009, the IEF organised a special Energy Poverty Symposium in Johannesburg, where representatives from a number of large non-governmental organisations such as the IEA, the New Partnership for Africa's Development (NEPAD), OPEC, the OPEC Fund for International Development (OFID), the World Economic Forum (WEF) and the World Bank met with industry representatives to debate the current state of energy poverty and its potential remedies. The forum was thus also hoped to make a contribution beyond industry borders and towards the wider goal of human development as advocated by the UN Millennium Goals.[159]

Natural Gas and the Producer-Consumer Dialogue

The 2000s were not only an eventful time for the global oil market but also witnessed the rapidly increasing importance of natural gas on international energy markets. Natural gas continuously raised its profile in global energy markets in recent years, aided by fast-growing supplies of Liquefied Natural Gas (LNG) and multi-decade demand growth both within and outside OECD.[160] Many of the members of the IEF are today both major oil *and* gas producers

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[157] Closing Statement by host Italy and co-hosting countries India and Mexico, 11th International Energy Forum, Rome, 20-22 April 2008.

[158] Joint Statement, Jeddah Energy Meeting, 22 June 2008.

[159] Concluding Statement by IEF Secretariat and South Africa Ministry of Energy, IEF Symposium on Energy Poverty, 8-9 December 2009, Johannesburg, South Africa.

[160] The share of natural gas within the global primary energy mix stands now at over 23%, compared to 34% for oil, with prospects for faster demand growth than for oil in the mid-term future. Total gas demand declined in 2009 due primarily to the global recession but is predicted to grow according to the IEA Reference Scenario. IEA, World Energy Outlook 2009, p.366; BP Statistical Review 2010.

and consumers, so it was clearly only a question of time until natural gas market issues would also enter the agenda of the producer-consumer dialogue.[161]

Beginning in the early 2000s, references to energy markets and the industry throughout a wide range of publications have increasingly been made no longer only in terms of oil but with reference to gas as well. IEF publications such as Ministerial Statements and Chair Summaries of IEF Ministerials, in addition to other documents, have regularly referred since 2000 to the oil and gas industries and underscore the importance of gas in global energy consumption.[162] At the first IEBF in Amsterdam, the President of the International Gas Union (IGU) participated alongside oil industry leaders. Many of the topics discussed at meetings such as IEF Ministerials, but also at G-8 summits such as the St. Petersburg summit organised by Russia, the world's largest gas producer, dealt with energy matters of equal interest to the gas industry, including access to resources, data transparency, energy market regulation and climate change debates. Similarly, the 11th IEF in 2008 explicitly stated the rising importance of gas in the producer-consumer dialogue:

> The Forum noted the growing reliance of consuming countries on natural gas imports. It was said that large gas projects tend to be capital intensive while requiring long lead times before they become operational. In addition, gas transport and transits may affect several countries. Better co-ordination between governments and companies and special regional agreements need to be promoted according to Ministers.[163]

The discussion of gas-market issues gained greater breadth throughout the decade and began to include themes such as the increased import dependence of consumer states, the need for greater investment by the industry shared by the gas and oil industries, and the enhanced role of natural gas in view of climate change policies.[164] In parallel to the producer-consumer dialogue on the oil front, the participants emphasised the importance of the multilateral approach and

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[161] IEF members include all major producers and consumers of natural gas. Many of the companies present at fora such as the IEBFs are by now also major producers of natural gas, including both national and international energy companies. Shell, for instance, is expected to make half of its new production in 2010 in gas, which already contributes 40% of the company's total production and making it the leading gas company among the super-majors. Companies such as StatoilHydro, Gazprom, ExxonMobil, ConocoPhillips and Total, among others, have made substantial investments in natural gas in recent years as well. WPA, XXXVIII: 3, 21 January 2008, p.1.

[162] The Summary of the 7th IEF in 2000, for instance, reads: "The Forum underscored the role of energy prices and energy availability in world economic prosperity, and the central role that oil and gas play in energy consumption." 7th International Energy Forum in Riyadh, November 17-19, 2000, Summary by the host and the co-hosts.

[163] Closing Statement by host Italy and co-hosting countries India and Mexico, 11th International Energy Forum, Rome, 20-22 April 2008.

[164] For instance, Ministers at the 11th International Energy Forum in Rome in April 2008 noted in their Closing Statement:

> 5. The Forum noted the growing reliance of consuming countries on natural gas imports.
> 6. The Forum stressed that bringing available resources to the market requires adequate and timely investment in the entire oil and gas chain.

The Chair's Summary at the 3rd Asian Ministerial Energy Roundtable on 26 April 2009 concluded:

> Participants recognised that natural gas plays an increasing and essential role in enhancing energy security and mitigating climate change.

intergovernmental solutions which are needed "to bring forward new infrastructure, to jointly explore and exploit new gas reserves, and to help establish robust and secure markets to the benefit of all parties". Such efforts require "long term cooperation between gas producers and consumers, and transit countries".

Discussion about greater transparency of gas markets led to calls at various IEF fora to expand JODI, the international oil database, to include gas market data.[165] The first IEF/IGU (International Gas Union) Ministerial in Vienna in 2008 was a testimony to the growing importance of natural gas in the producer-consumer dialogue. The IGU brings both governments and companies to the natural gas table, and IGU supported the data transparency efforts of IEF. The proposal was later embraced at the 12th IEF in Cancun and has led to first test runs with individual countries to gather gas-related data for JODI.

In November 2008, the IEF organised a first Ministerial forum focused entirely on dialogue over gas markets. The forum was organised in collaboration with the International Gas Union (IGU), a multinational association of gas producing states and industries, in an attempt to provide an arena to the world's gas market protagonists. Under the title of "The World Gas Markets Going from Regional to Global", the aim was to debate current dynamics in the gas industry and to identify key challenges facing the industry today. The wider objective of increasing mutual understanding between gas market participants was outlined in the forum's summary statement:

> The shared understanding is that through an enhanced and sustained dialogue natural gas stakeholders can better address key challenges facing the gas industry such as market transparency, investment, interdependence, transit and contractual frameworks.[166]

The meeting had both practical and impractical implications. The need for gas markets participants to communicate and debate being self-evident, the principal benefit of fora such as the IEF-IGU Ministerial lies in its ability to sponsor focused dialogue between all sides. Many of the challenges identified and discussed in Vienna mirrored oil market problems, such as security of demand and supply concerns, investment all along the value chain, the impact of environmental regulation, the need for skilled human resources, and access to resources.[167] Future fora that focus more on specifically gas-related issues and that avoid replicating other ongoing fora such as the IEF Ministerials might further contribute to the debate. Possible topics include gas pricing and price harmonisation and cross-border trade and the greater interconnectedness of regional markets.

The 2nd IEF-IGU Ministerial Gas Forum was held in Doha, Qatar, on 30 November 2010 under the title "The Role of Natural Gas in a Sustainable Energy Future". In this meeting, the discussion

[165] The first such call was formally made at the 11th IEF in Rome. Similar calls for the inclusion of gas data to JODI were made at other international forums, for instance at the G-8 Summit in July 2009, which declared: "We believe that greater transparency in gas markets is required. We therefore call upon the IEF to examine the possibility of extending JODI-type activities to natural gas." G-8 Leaders Summit Declaration, *Responsible Leadership for a Sustainable Future,* L'Aquila, 8 July 2009.

[166] IEF-IGU 1st Ministerial Gas Forum, Joint IEF-IGU Summary Statement.

[167] ibid

focused on the key challenges facing the natural gas industry and explored potential sustainable measures to the climate change challenge. The participants reemphasised the environmental qualities and advances in technology which render natural gas to be an "essential part of the global solution to climate change" where "the natural gas industry has the scale, technology, and resources to reduce CO_2 emissions". Interestingly, the participants expressed optimism about the future of gas, emphasising:

> Due to a number of political, technical, economic and market related factors, the expected period leading to a substantial renewable energy base will be lengthy and will require significant subsidies. Natural gas can be an "enabling fuel". It can play a role of a "dual" fuel to renewables by enabling increased deployment of energy supply from intermittent renewable technologies. Natural gas is abundant, affordable and environmentally acceptable. Hence, towards a sustainable energy future, natural gas is more than a bridge, it's a destination fuel.

The participants, however, recognised the investment challenge and urged the industry to adopt a long-term view and increase investment in the gas value chain even in an environment of increasing uncertainty and weak market conditions characterised by a gas glut and relatively low prices. The participants further emphasised that the convergence of the interests of NOCs and IOCs is likely to be higher in the natural gas business, stating that "stronger partnerships, multifaceted cooperation and innovative arrangements between NOCs, IOCs and service companies will be needed, particularly for the challenges of developing remote and difficult gas resources". In this meeting, the participants also announced that the IEF, in cooperation with its JODI partner organisations and GECF, are considering the launch of the Gas-JODI Database in 2011 which will provide more accurate assessment of market conditions and hence benefit gas market players.

Conclusion

The first decade of the 21st century was a positive decade for the producer-consumer dialogue. It ventured into a new set of themes of mutual interest which helped increase further the awareness of interdependence between the two parties. While issues of security of demand and supply continued to underlie the dialogue, these issues were given more content, as reflected in the debate on investment which was approached from a much wider perspective to include issues of policy uncertainty, data transparency, human capital shortages, the IOC-NOC relationship and the role of technology. Similarly, although the climate change issue was not directly addressed in the various IEF meetings, there was some consensus on the importance of sustainable development, energy efficiency and the role that technologies such as Carbon capture and storage (CCS) can play in addressing environmental concerns. Such consensus can create the basis for future cooperation or even coordination of policies. In contrast to the 1990s, issues such as taxation of petroleum products, green taxes, how to maintain an effective level of spare capacity in the system and the exploration of ways to stabilise the oil price took a back seat in the dialogue. This by no means implies that these issues have been solved or have become less important. But it seems that both parties wanted to avoid confrontational topics and focus more on themes that can bring them closer together. Furthermore, some of the key parties may not yet be ready to deal with such contentious issues. While this approach is effective in building confidence, in the long run, there is a risk that key issues that lie at the

heart of consumers' and producers' concerns will become marginalised, leading to a loss of interest in the dialogue. Furthermore, while the dialogue in the 2000s was able to identify the main challenges and bottlenecks facing the energy industry, it came short of formulating concrete initiatives to resolve some of these bottlenecks. This reflects that while consumers and producers have become more aware of the challenges facing the oil market and are more conscious of the other party's concerns, there is still wide divergence of interests that prevent both parties from taking the dialogue to a higher level.

Chapter 7: Oil Market Developments in 2008, The Year of Two Halves

Introduction

If developments in oil prices prior to 2008 were considered eventful, then those of 2008 are spectacular in comparison. The remarkable developments in both the financial and oil markets made 2008 one of the most exciting years of the producer-consumer dialogue. The first half of the year saw a sharp rise in the oil price which increased from less than $100 per barrel in the beginning of 2008 to more than 143 dollars/barrel on the 11th of July (See Figure 7.1). The 11th International Energy Forum held in Rome from 20-22 April, preceded by the 3rd IEBF, unsurprisingly became a forum dominated by price developments. The Forum noted that "oil prices should be at levels that are acceptable to producers and consumers to ensure global economic growth, particularly in developing countries".[168] Driven by concerns about the possible de-coupling of oil prices from industry fundamentals, the Forum noted:

> The availability of oil and gas resources is sufficient to meet world needs over the next decades. However, public and market perceptions are not in line with the geological oil and gas realities. IEF countries were invited to work together to re-align public and market perceptions with market fundamentals.

One of the central questions had become which factors had led to the current oil market situation.[169] Some observers in the oil industry and in academic institutions attributed the behaviour of prices to structural transformations in the oil market. According to this view, the boom in oil prices can be explained in terms of tightened market fundamentals, rigidities in the oil industry due to long periods of underinvestment, and structural changes in the behaviour of key players such as non-OPEC suppliers, OPEC members and non-OECD consumers.[170] On the other hand, other observers considered that the changes in fundamentals, or even changes in expectations, have not been sufficiently dramatic to justify the sharp rise in oil

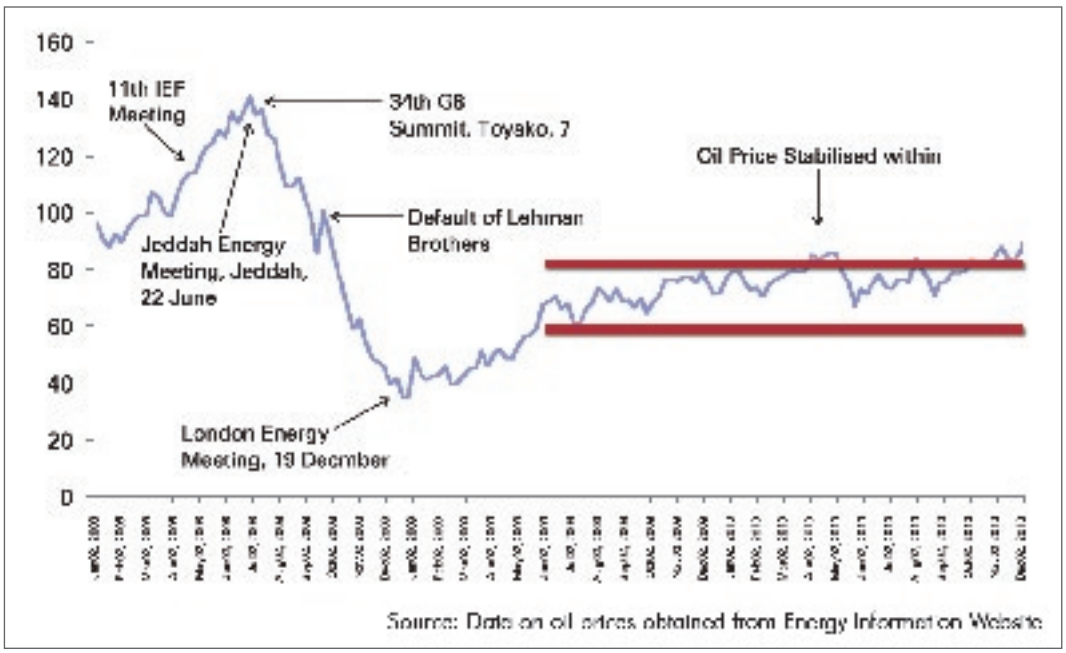
[168] 11th International Energy Forum, Rome, 20-22 April 2008, Closing Statement by host Italy and co-hosting countries India and Mexico.

[169] For a comprehensive overview, see Fattouh, B (2009). Oil Market Dynamics through the Lens of the 2002-2009 Price Cycle. OIES, WPM39 ; Jesse, Jan-Hein and Coby van der Linde. (2008) "Oil Turbulence in the Next Decade", CIEP, 2008/03, June 2008, at http://www.clingendael.nl/publications/2008/20080700_ciep_energy_jesse.pdf.

[170] See for instance, IMF (2008), World Economic Outlook (October), Washington: International Monetary Fund; Commodity Futures Trading Commission (2008), Interagency Task Force on Commodity Markets Interim Report on Crude Oil; Kilian, L. and Murphy, D. (2010). "The Role of Inventories and Speculative Trading in the Global Market for Crude Oil", CEPR Discussion Paper No. DP7753.

prices. Instead, the oil market was seen as having been distorted by substantial and volatile speculative flows of financial investments in deregulated or poorly regulated crude oil derivatives instruments.[171] This latter view was shared by many observers and organisations, including OPEC. In December 2007, the OPEC Secretary General Abdullah al-Badri argued that "the market at this time is not controlled by fundamentals; it is controlled by speculation and speculators. Until this phenomenon is out of the market, we will see volatility in the market day after day and month after month".[172]

Figure 7.1: Europe Brent Spot Price FOB (Dollars per Barrel)



The Jeddah Energy Meeting

The market, unimpressed by the meeting in Rome, continued to see ever-increasing prices of oil, reaching levels above $134 per barrels on June 20. By now, some of Saudi Arabia's close allies started publicly expressing their dissatisfaction with oil price behaviour. Malaysia requested that the issue of fuel price top the agenda at the meeting of the Organization of the Islamic Conference (OIC), with the Foreign Minister Rais Yatim stating that Islamic countries must address the issue immediately because oil is produced largely by them. Some producing countries also expressed their dissatisfaction about oil price behaviour, blaming a combination of speculation and the low dollar for the sharp rise in the oil price. None of these reasons could conceal what increasing numbers of commentators at this stage saw as a principal incapability – rather than unwillingness

[171] See, for instance, the Testimony of Michael Greenberger before the Commodity Futures Trading Commission on Excessive Speculation: Position Limits and Exemptions, 5 August 2009. Greenberger provides an extensive list of studies that are in favour of the speculation view.

[172] WPA, Vol. XXXVII: 49, 10 December 2007, p. 7.

– by producing countries, including OPEC, to actively influence prices. On 9 June 2008, Saudi Arabia took an unprecedented action by calling for an emergency meeting between core producers and consumers, with the aim to identify the causes of the current high oil prices and the threat this poses to global economic growth.[173] The Jeddah Energy Meeting was held on June 22, 2008 upon the personal backing and invitation by Saudi Arabia's King Abdullah Ibn Abdulaziz Al-Saud and attended by political heavyweights, such as UK Prime Minister Gordon Brown and Chinese Deputy President Xi Jinping with 36 nations and the main IOCs being represented at the Meeting. Perhaps for the first time since the 1990s, both producers and consumers genuinely shared the opinion that current oil prices were too high and that the current volatility of the oil price had become detrimental to both consuming and producing countries. This was reflected in the agreement on a Joint Statement by the Kingdom of Saudi Arabia, the IEA, OPEC and the IEF Secretariats at the end of the meeting.[174] Issues agreed upon in the Joint Statement mark in many ways a milestone in the producer-consumer dialogue. They included a call for "immediate collaboration" between the IEA, OPEC and the IEF, the stated recognition of the importance of spare capacity for the stability of global oil markets and the need for appropriate investment in the oil supply chain. For the first time, the idea was raised to initiate annual data collection on investment plans in crude oil and refining capacity. Finally, energy efficiency was embraced universally as desirable by all sectors of the industry. A discussion that surfaced just prior to the Jeddah meeting was the impact of fossil fuel subsidies for end-consumers, which stimulated demand, and was widely seen as a potential source of energy security issues in a situation of limited supplies. At the time, subsidies in China and India, and also the Middle East, were seen as a source of the rapid increase of demand.

More importantly, during the Jeddah Energy Meeting, Saudi Arabia sent a strong signal to the market that it was deeply concerned about sharp rises in oil prices and the impacts these oil price may have on growth and demand. Despite the fact that the market was well supplied, the Kingdom announced that it would bring additional supply to the market. Saudi Arabia's declaration that it would increase output to 9.7 mb/d, followed later by market confirmation of that increase, played a key role in convincing the market to price in a more elastic supply curve. Some of the thrust behind rising prices had come from a perception that key producers were unwilling, or even unable, to increase production to limit oil price rises. That position became untenable when a key producer announced, and then delivered, significant increases in output.

[173] Thirty-eight countries were invited to attend the Jeddah Meeting: USA, UK, France, Germany, Italy, Russia, Japan, Brazil, Canada, Mexico, Norway, India, South Africa, Australia, The Netherlands, Korea, Bahrain, Oman, China, Spain, Kazakhstan, Azerbaijan, UAE, Qatar, Kuwait, Libya, Algeria, Iraq, Venezuela, Angola, Nigeria, Iran, Ecuador, Poland, Egypt, Turkey, Austria, Indonesia. International organisations invited included OPEC, IEA, IMF, European Commission, International Energy Forum, and the Word Bank. The Organizers also sent separate invitations to a large host of national and international oil companies and refineries which included Aramco, ExxonMobil, Japan Oil Company, Shell, BP, Total, ENI Spa., Reliance, Mitsubishi, Petronas, Pedrovas, SK, Sinopec, NIOC, Adnoc, Nippon, Sonatrach, Iraq Oil, Kuwait Petroleum Company (KPC), Oman Oil, Qatar Petroleum, Repsol, StatoilHydro, Conoco Philips, Chevron, Marathon, Sonangol, Petrobras, PEMEX, CNPC, BABCO.

[174] Joint Statement by the Kingdom of Saudi Arabia and the Secretariats of the International Energy Agency, the International Energy Forum and the Organization of Petroleum Exporting Countries. Jeddah Energy Meeting, 22 June 2008. The IEF's Secretary General, Noé van Hulst, called this Joint Statement "a historical event in many ways." Noé van Hulst, in International Energy Forum Secretariat Newsletter, November 2008, Issue 12, p.7

Saudi Arabia's announcement to increase output did not have an immediate effect, however, and prices continued to rise, reaching a peak of over $143 per barrel on the 11th of July. By then, concerns about the high oil prices and their impact on the global economy were further amplified. This was reflected in the 34th G-8 Summit held in Toyako, Japan between the 7th and 9th of July, at which the G-8 leaders expressed "strong concerns about the sharp rise in oil prices, which poses risks to the global economy". The leaders called for concerted efforts "to address the underlying causes for the benefit of all... reconfirming the shared interest and responsibility of energy producing and consuming countries in promoting global energy security" which requires enhancing further the dialogue and partnership.[175] In hindsight, this shows that the economic problems that harshly surfaced in the fall of 2008 were largely undiagnosed in international gatherings[176], perhaps in the hope that the signals about stresses and strains in the US economy would remain a domestic problem. However, with the dollar as a main transmitting mechanism and the large balance-of-payment imbalances in the world, these hopes were nothing more than wishful thinking. The linkage between oil and financial market developments had again presented itself at the core of international economic relations, which may take years to address.

The Financial Crisis, the Oil Price Collapse and the London Energy Meeting

The collapse of the oil price in the second half of 2008 soon proved to be more spectacular than first thought to be. As a result of supply-side responses following Jeddah, but also due to mounting evidence that OECD demand had weakened more than initial expectations had suggested, oil prices fell from a peak of more than $143 for Europe Brent Spot price on 11 July to $124 at the end of the month, to $108 by mid-August, $105 by the start of September and to $95 on 12 September – the last trading day before the Lehman bankruptcy. The default of Lehman Brothers on 15 September 2008 marked a drastic reversal in demand expectations for global oil markets, as a consequence of increasing expectations of a global recession and the spreading of the US subprime crisis into global financial markets. One could argue that the sharp reversal in oil prices from July 2008 to December 2008 came in two distinct phases (See Figure 7.1). The first was a cooling off in prices from their peaks, brought on primarily by the combination of a supply-side response from the key marginal producer following the Jeddah meeting in June 2008, and by mounting evidence in the rear-view mirror that OECD demand had weakened far more than initial expectations and provisional data flows had suggested. The second phase was more directly associated with the intensification of the global financial crisis and the associated decline in expectations of future global economic growth in the aftermath of Lehman Brothers' collapse.

In mid-September 2008, just as Lehman Brothers was entering into bankruptcy, the Wall Street consensus of expectations for US growth in 2009 stood at 2.5%. By the end of October,

[175] G-8 Hokkaido Toyako Summit Leaders Declaration, Hokkaido Toyako, 8 July 2008. Available at http://www.mofa.go.jp/policy/economy/summit/2008/doc/doc080714__en.html.

[176] This was later confirmed in the G-20 Meeting in Washington where the leaders admitted that "policy-makers, regulators and supervisors, in some advanced countries, did not adequately appreciate and address the risks building up in financial markets, keep pace with financial innovation, or take into account the systemic ramifications of domestic regulatory actions". Declaration of the Summit on Financial Markets and the World Economy, Washington DC, November 15, 2008, Paragraph 3.

consensus expectations had shrunk to zero growth, and by the end of February 2009 they had fallen further to a decline of 2.5%. Over just five months, the forecast for US economic growth fell by five percentage points. In terms of the oil market repercussions, there were two effects simultaneously at work in the months that followed the Lehman bankruptcy. The first was the parallel impact of sharply reduced economic prospects on the expectation for oil demand growth. The second was the implication of a rush to liquidity and away from risk in markets. The truncation of, and re-pricing in, credit markets brought about a sudden desire for far greater liquidity within most financial markets. Activity across riskier markets in particular was severely curtailed, while asset holders sought safer instruments for retaining value. The reduction in the amount of gearing available to investors also brought about a fairly rapid unwinding of positions, with any given capital base now being deemed capable of covering a substantially lower amount of market risk. The former was enough to create the momentum for a sharp retrenchment in prices, and the latter caused the rapid liquidation of positions and sharp increase in risk aversion, which in turn created the conditions for an undershoot in oil prices.

The root causes of the financial crisis and the actions that governments should take to avoid future crises became the main focus of the G-20 meeting held in Washington on the 15th of November. The G-20 leaders emphasised the importance of strengthening financial markets and designing new regulatory regimes. While there was recognition that enhancing sound regulation is first and foremost the responsibility of individual countries, given the globalisation of financial markets there was emphasis on intensifying international cooperation among regulators to strengthen international standards, to enhance transparency, to promote integrity in financial markets and to reform international financial institutions. As discussed below, such reform efforts had significant spill-overs on commodities markets and on the content of the producer-consumer dialogue.

Against this background, the London Energy Meeting was held on the 19th of December 2008. The meeting had been originally planned as a second-step meeting following Jeddah to deepen the dialogue about the heightened oil price. Following the collapse of oil prices, the meeting assumed a distinctively different character from the Jeddah Energy Meeting. Nevertheless, the London Energy Meeting was an important step in the producer-consumer dialogue. It reaffirmed the support of key consuming countries to the dialogue even in an environment of low oil prices, which was a very important signal compared to those given in earlier periods. The meeting called for the establishment of an Expert Group under the supervision of a High-Level Steering Group to make recommendations and propose measures to mitigate oil price volatility.[177] It also provided a forum for the exchange of views about the current economic climate and explored ways to promote rapid economic recovery at a time when expectations about the impact and length of the recession in different parts of the world were rapidly deteriorating. Efforts by the UK Government in gathering a wide support for the London Energy Meeting played a key role in maintaining the momentum behind the dialogue, at times when many consuming countries began to lose interest as a result of lower oil prices.

No joint Statement was produced at the London Energy Meeting, but the Chair's summary reflects some insights into the concerns raised by participants. The key long-term concern

[177] London Energy Meeting, 19 December 2008, UK Chair's Report.

became price instability: the sharp swings which the oil price had shown in 2008 and its impact on long-term investment were major concerns shared by producers and consumers, and there was enough common ground to make the London meeting meaningful despite the reoccurring dichotomization of producers and consumers vis-à-vis the lowered oil price. The participants "reaffirmed the priority of reducing volatility in the oil market" and called for the better functioning of oil markets which would provide "more consistent price signals to enable producer and consumer countries to have greater confidence in making investment and purchasing decisions".

Financial Crisis and the Content of the Producer-Consumer Dialogue

The financial crisis and the debate surrounding it had an immense spill-over effect on the content of the producer-consumer dialogue, by drawing the attention of global discussants to two main areas: the linkages between financial markets and oil markets and the regulation of commodity derivatives; and the impact of the crisis on investment in the oil sector and the implications for long-term oil supplies.

Financial Markets and Oil Price Behaviour

The sharp swings in oil prices and the marked increase in volatility during the 2008-2009 price cycle polarized views about the underlying causes of oil price drivers. The policy and academic debate became strongly dominated by the dichotomy between fundamentals versus speculation, with the empirical evidence providing limited concrete evidence in support of one explanation or the other.

The involvement of financial players in the oil market is nothing new. Investment banks have been one of the largest traders of crude oil and petroleum products since 1985. However, these banks have become more involved in bridging the gaps between producers and a more diverse set of financial players. These financial players can be divided into three broad categories. First, there are the hedge funds, which also come in different varieties. There are the macro hedge funds that trade in a range of markets, not just commodities and have a top-down approach and take a view on macroeconomic issues. There are the specialist commodity hedge funds that are more bottom-up, use large quantities of data and take a strong view of fundamentals of supply and demand. There are also "black box" hedge funds that have a view of the oil price based on calculations known only to them. Second, there are institutional investors that primarily consist of pension funds, sovereign wealth funds and insurance companies. They typically put a small share of their funds into commodities for the sake of portfolio diversification. They tend to sell when prices are high and buy when they are low, stabilising the market, owing to price-weighted limits in their portfolios. Finally, there are retail investors, which include private investors and high net worth individuals. Retail investment in commodity markets has been one of the fastest growing categories via the easy-to-access Exchange Traded Products (ETPs).

Many reasons have been suggested as to why these financial players have increased their participation in commodities markets. The historically low correlation between commodities' returns in general and financial assets' returns, such as stocks or bonds, has increased the attractiveness of holding commodities for portfolio diversification purposes for some

institutional investors, such as pension funds and insurance companies. Expectations that commodities will have relatively higher returns in investment than financial assets, due to the perception of tightened market fundamentals stimulated by China's quick ascent as a commodity importer and continued disappointing performance of non-OPEC supply, have motivated many investors to enter the oil market. Because commodity returns are positively correlated with inflation, many investors have entered the commodities market to hedge against inflation risk and a weak dollar. Financial innovation has also provided an easy and a cheap way for various participants – both institutional and retail investors – to gain exposure to commodities.

Initially, the institutional players' exposure to oil was through commodity indices. A commodity index swap is simply a financial instrument that allows for the exchange of financial flows between the buyer and the seller based on the value of a specified index. In the case of most swaps, that index will be the price or price strip of a single commodity. A 'swap dealer', usually a bank or broker-dealer, offers investors a swap whose value is linked to the value of a specified commodity index. These swaps are sold 'over the counter' (OTC). Swap dealers who are short in the OTC market may choose to hedge their risk in the futures market by taking an offsetting position; they may find a natural hedge within their existing overall book; or they may choose to add that risk to their book. Thus, index investments tend to be long only, and a significant proportion of their transactions will ultimately pass through the futures market in some form. Greater maturity in the market has led away from reliance on passive indices and towards a more active, bespoken and focused approach. Another way to gain exposure to commodities is through exchange-traded products (ETPs). ETPs are comprised of exchange-traded funds (ETFs) and exchange traded notes (ETNs). Like commodity swaps, ETPs allow investors to gain exposure to commodity indices or particular commodities. Unlike commodity swaps, ETPs are constructed as funds whose share can be traded on the stock exchange like any other share, and the ETPs themselves can be structured as being long or short. Commodity-based ETPs have grown rapidly in recent years, as they seem to offer a simple and a cheap way for investors to gain exposure to commodities.

Despite fulfilling the key roles of liquidity provision, the widespread entry of new financial players, their trading strategies and the leverage supporting such strategies, and the large flows of funds in and out of the paper oil market have raised serious concerns about the impact of financial layers on the oil price formation process. Some observers hold the view that the new players trade on noise and sentiment rather than on fundamentals, with adverse effects on the functioning of oil markets. Others argue that financial investors have the tendency to herd, as these investors tend to follow the apparent trading strategies of other investors. Herding undermines the role of price discovery, may induce higher volatility and, under certain circumstances, can lead to sharp price swings. Some argue that crude oil has acquired the characteristics of financial assets such as stocks or bonds. Many empirical papers examine whether the price behaviour of commodities mimics that of financial assets and whether commodity and equity prices have become increasingly correlated. One important aspect of the 'financialisation' often highlighted is the increasing role that expectations play in the pricing of crude oil. In the case of equities, pricing is based on expectations of a firm's future earnings. In the oil market, expectations of future market fundamentals have increasingly been playing an important role in oil pricing. If there is large uncertainty as to what the long-term oil market fundamentals are, or if perceptions of these fundamentals are highly exaggerated

and inflated, then the oil price in the futures market can diverge away from its true underlying fundamental value, causing an oil price bubble.

Empirical studies on the impact of financial players on oil prices have been thin. Due to data limitations, the diversity of players in the market, and the difficulty of identifying the motive behind trading decisions, the empirical literature has struggled to offer much in the way of firm conclusions. Consequently, at present there is a broad diversity of views about the role of financial markets in price formation. Nevertheless, the 2008 oil price cycle has brought the issues of 'excessive' speculation and the regulation of commodity derivatives markets to the fore. In the Third Asian Ministerial Energy Roundtable meeting in Tokyo in April 2009, the Chair's summary noted:

> Participants recognised that excessive fluctuations in oil prices are undesirable for both energy producers and consumers, and that financial markets have an impact on oil price formation. Participants were made aware of the discussions under the G-20 on strengthening financial supervision and regulation. Regarding transparency of commodity markets and supervision on over-the-counter markets, participants appreciated national authorities' efforts and called for further harmonised actions such as the introduction of position limits.[178]

During the *Sixth EU-OPEC Energy Dialogue* in Vienna in June 2009, the forum warned that "the speculation issue had not been resolved yet and that the 2008 bubble could be repeated if adequate regulatory reforms, including greater transparency, were not made to be part of an overall reshaping of the global financial sector". The 12th IEF Declaration in Cancun in 2010, however, was more cautious, stating that "given concerns about the lack of conclusive data, the IEF should not advocate any particular form of regulation". Instead, Ministers recognised the potential impact of regulating derivatives market on the functioning of the oil market and hence recommended:

> Where authorities are considering additional regulation and to help create efficient and effective market conditions, it is proposed for the consideration of the relevant authorities that any regulation should (i) promote market transparency; (ii) retain necessary market liquidity; and (iii) be implemented in a practical fashion, avoiding a disorderly unwinding of positions affected by any new regulation.

The Cancun Ministerial Declaration was also clear about the IEF's role in any future regulatory efforts stating that while the "Secretariat should catalogue *regulatory efforts* in major energy derivatives markets[179], it should play no regulatory role, "leaving direct market oversight responsibility to states".

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[178] Chair's Summary, The Third Asian Ministerial Energy Roundtable, Tokyo, Japan April 26, 2009.

[179] To this end and in order to promote greater coordination among regulators, the IEF, in cooperation with the IEA and OPEC, organised a round table for regulators in November 2010. The round table discussed regulatory proposals from all over the world and examined their potential impacts on the oil market.

The Investment Issue

As the global financial crisis persisted, attention was diverted to the long-term dynamics of oil supply and the impact of the financial crisis on investment in the oil industry. The powerful shocks on global oil demand and expectations of its growth were counteracted by a powerful supply response from OPEC and expectations of further weaknesses in non-OPEC supply. Long-term uncertainty about demand and oil prices affects the incentive to invest in new productive capacity, while low oil prices can lower exploration and development activity and render some of the existing projects unviable. Furthermore, the high cost of funding and the lower availability of credit can prevent some oil companies from undertaking new investments or even completing existing ones. As one market observer puts it at that time:

> With the backdrop of a hail of recent announcements on capital expenditure reductions for both conventional and non-conventional oil, together with the continuing move away from investment in alternative energy, we believe that the sharp fall in industry confidence is likely to have a more lasting effect on the health of the supply side. Indeed, for that not to represent a severe problem over the course of the following decade, the weakness in global oil demand would have to become fairly prolonged. It tends to be a far longer process to reinstate projects than it is to mothball or cancel them, and the scale of the current industry freeze and confidence loss seems likely to severely affect non-OPEC production. Further, given how much of expenditure in mature areas is directed at trying to contain decline rates, we suspect that those decline rates might now be set for another step up.[180]

High uncertainty about prospects of long-term demand has also affected investment plans in OPEC countries. In its 2009 World Oil Outlook, OPEC announced that its members have delayed or even postponed over 35 projects until after 2013, with total crude oil and NGL capacity hovering around 5 mb/d. The report claimed that "the surge in investment plans in OPEC Member Countries that were aimed at addressing perceived market tightness, particularly in 2007 and the first half of 2008, would in actuality have turned out, at least partially, to be for unneeded capacity. All of this underscores again the genuine concerns over security of demand". In terms of investments, OPEC members have planned to reduce their upstream investment requirement for the medium term over the period 2009-2013 from $165 billion to around $110-120 billion.

Thus, while the investment issue has always dominated the producer-consumer dialogue, it was elevated during the financial crisis with concerns that lack of investment due to low oil prices, uncertainty and credit constraint could create the grounds for tight oil market conditions and higher prices once oil demand starts to recover.

The Years 2009-2010: Recovery and Stabilisation

Oil price behaviour in 2009 can be divided into two distinct phases. The first is the recovery phase which saw Brent spot price rise from a very low base of $33.73 on 26 December 2008 to almost $78 on 31 December 2009, an increase of more than 160%. The second is the

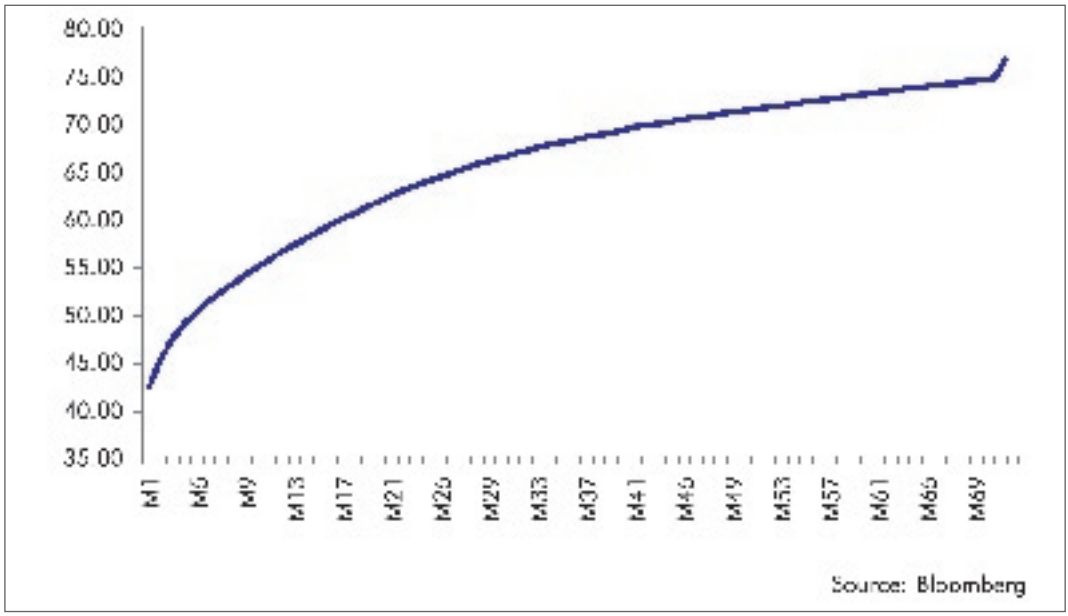
[180] Barclays' Capital, *Oil Market Weekly*, January 2009.

stabilisation phase, which saw the oil price oscillate within a relatively narrow price band between $60 and $70 between the months of July and September and then between $70 and $90 in the rest of 2009 and most of 2010 (See Figure 7.1).

The negative dynamics unleashed by the financial crisis caused oil prices to undershoot in December 2008. As in asset markets, oil prices were bound to recover to some extent, as many investors realised that the fall in oil prices had gone too far by the end of 2008. Just as the move toward price lows had been accompanied by a rapid reduction in both GDP growth and oil demand expectations, the recovery in prices accompanied a period of improving growth expectations and a particularly marked rebound in oil demand expectations following a flow of stronger than expected global demand data. In line with the stabilisation of expectations about the global economy and oil demand, there were also concerns at the height of the financial crisis that credit constraints, the high degree of uncertainty and the low price environment would limit investment flows into the oil sector, with negative consequences on future non-OPEC and OPEC supply growth. There was (and still is) a strong sentiment that the oil industry can no longer function in a relatively low price environment.

Thus, to avert an oil crisis in the medium term, prices needed to be adjusted upward from their lows in December 2008. Concerns about long-term fundamentals placed a limit on how much market players were willing to discount the price at the front end relative to the price at the back end of the futures curve. On the one hand, the oil price was relatively high given current market fundamentals. On the other hand, the oil price was relatively low compared to perceived long-term fundamentals (see Figure 7.2). Thus, the oil market reached a point at which either the longer-term future price had to adjust downward or the front end the futures curve had to adjust upwards. In the recovery phase, it was the front part of the curve that moved up. This implies that in the first months of 2009 market expectations of future fundamentals became the dominant factor in the price formation process. While oil market fundamentals (as indicated by the demand supply balance) remained weak in 2009, participants attached little weight to these bearish signals and oil prices continued to rise.

Figure 7.2: WTI Term Price Structure (December 2008, Monthly Average)



Once the process of price recovery was complete, the market entered the stabilisation phase. In the last few months of 2009 and for most of 2010, oil prices oscillated within the range of $60-$80, though the upper end of the range has been broken a few times. In effect, the oil market operated within an implicit band. This is remarkable given the highly volatile expectations about the prospects of the global economy and the large uncertainty about oil market fundamentals at the time.

The 2008-2009 Oil Price Cycle and the Producer-Consumer Dialogue

The 2008-2009 oil price cycle proved to be an important turning point in the producer-consumer dialogue. Extraordinary price instability and heightened levels of uncertainty pushed both producers and consumers to intensify their cooperation and explore ways to face these common challenges. The year 2008 witnessed two extraordinary meetings (the Jeddah Energy Meeting and the London Energy Meeting) of the producers and consumers outside formal schedules. Provocative remarks from both producing and consuming states which often exacerbated market volatility were replaced by provocative announcements from larger producing and consuming countries.

Due to the severity of the price cycle, there was a realisation among consumers and producers that no one was served by oil prices that were either too low (the oil price in December 2008) or too high (the oil price in July 2008). On the one hand, low oil prices constrain the flow of investment required by the industry to ensure stable oil supplies. On the other hand, high and volatile oil prices can damage prospects for global growth, can result in oil demand destruction and create worldwide imbalances with destabilising consequences. These signals originated from both consuming and producing countries. The French President Nicolas Sarkozy and the

then UK Prime Minister Gordon Brown urged "oil producers to agree a target price range, based on a clearer understanding of the long-term fundamentals... that are not so high as to destroy the prospects of economic growth but not so low as to lead to a slump in investment, as happened in the 1990s".[181] Similar signals have also emerged from key oil exporters. In a rare precedent, King Abdullah of Saudi Arabia said in a newspaper interview that he considers $75 to be a 'fair' price for a barrel of crude oil. He reiterated his position in December 2009 arguing that "we [the Saudis] expected at the start of the year oil prices between $75 and $80 a barrel and this is a fair price...Oil prices are heading towards stability".[182] The Saudi Oil Minister, Ali Al-Naimi, justified the target price as the "price that marginal producers need to maintain investments sufficient to provide adequate supplies for future oil consumption needs".[183] In the OPEC meeting in September 2009, Mr Al-Naimi announced that the current price "is good for everybody, consumers and producers". He reiterated his position in December 2009, arguing that "the market is stable right now, volatility is at minimum, everybody is happy with the price, it is in the right range".[184]

While the market expected prices to adjust from the very low levels reached in December 2008, there was uncertainty as to the price or price range that would stabilise market expectations. There is a wide range of prices at which the market can clear. The issue then is: how does the market converge to one price range and not another? In an environment of high uncertainty, public information or signals may take a leading role in moving the market, even if these public signals do not necessarily reflect large changes in underlying fundamentals or provide new information to the market. It has long been recognised that when individuals are confronted with large uncertainty, focal points may in some instances play an important role in providing a point of convergence for individual expectations.[185] Some focal points may be *a priori* more reasonable or more prominent and noticeable than others. It remains unclear whether the various signals from consumers and producers stabilised expectations and were in part responsible for the oil price oscillating within a relatively narrow implicit band. However, there is little doubt that the signals have much stronger effects on market sentiment when governments of different countries agree and communicate their views to the market. This creates a further role for the producer-consumer dialogue. The Cancun Ministerial Declaration capitalised on the dynamics of the convergence of views between consumers and producers about a preferred oil price range, with the IEF showing more willingness to interact with the market and repositioning itself in the global map, stating:

> The unique composition of the IEF (covering both producer and consumer countries including major producers outside OPEC and major consumers outside IEA) and its neutral status position the IEF Secretariat for an enhanced role in providing improved and expanded relevant market data and compiling/pulling together relevant analytical reports with respect to both the physical and paper oil market. This with the objective

[181] Gordon Brown and Nicolas Sarkozy. "We Must Address Oil-Market Volatility". *The Wall Street Journal*, 8 July 2009.
[182] Reuters (2009). "Oil Price Might Rise 'Reasonably' – Saudi King in Paper". 26 December.
[183] Reuters (2008). "Low Oil Prices Mean Less Future Supply – Saudi". 19 December.
[184] Daya, Ayesha and Maher Chmaytelli (2009). "Saudi Arabia's Al-Naimi Says Oil Price Is Perfect", Bloomberg, December 5.
[185] Schelling,T. (1963). The Strategy of Conflict. Oxford University Press, New York.

> to achieve a more constructive and focused producer-consumer dialogue, based on a greater degree of trust and openness, that could promote confidence-building measures among producers and consumers and send strong market signals to help stabilise long-term expectations.

One of the major features that characterised the oil market during the 1980s and the 1990s was the stability of expectations about the long-term oil price. The stability in long-term expectations establishes a relationship between the spot oil price and expected change in prices. A sustained increase or decrease in the oil price (a feature of price swings) cannot be maintained, as expectations of supply and demand responses would put a floor and a ceiling on the price, and thus prices oscillated within a narrow band. In the Cancun Ministerial Declaration in Mexico in March 2010, producers and consumers noted for the first time the importance of stabilising expectations, recommending that the IEF should:

> disseminate key information related to marginal cost, investment levels, and alternative energy sources that could help stabilise short and long-term expectations.

Another innovation in the Cancun Ministerial Declaration is the indication of the willingness of consumers and producers to communicate with the market, recommending that the IEF should:

> act as the forum through which a better mutual understanding of views is communicated to the market.

Conclusion

The IEF's emphasis on expectations and the role that signals from producers and consumers can play in stabilising expectations – and hence, prices – can be considered to be a breakthrough in the producer-consumer dialogue. It was the first time that producers and consumers showed a willingness to interact and to send signals to market participants with the aim of stabilising expectations. In this respect, the Jeddah Energy Meeting proved to be a game changer. If anticipated feedbacks are slow, or are perceived to be absent on either the demand or supply side, the market is likely to drift upward until these feedbacks kick in. If market perceptions are wrong about the extent and the timing of feedbacks (for instance, if the market believes that there are no feasible instruments while in fact these exist), then the dialogue can play a role in preventing sharp price movements by increasing the visibility of these feedbacks and policy responses. The London Energy Meeting was also important as it reaffirmed the support of key consuming countries to the dialogue in an environment of low oil prices. It would be interesting to monitor how the producer-consumer dialogue would respond to the next oil price cycle, which many analysts predict that has already started. The events of 2008, the further institutionalisation of the IEF, and creation of a new charter indicate that the producer-consumer dialogue will only intensify, especially as oil prices reach critical thresholds that are considered to be harmful for both consumers' and producers' interests. However, it remains to be seen whether core members from both sides will show the willingness and have the capability to take concrete measures and send credible signals that could influence and stabilise market participants' expectations. The success or failure in doing so will play an important role in shaping producer-consumer relations.

Chapter 8: The Road Ahead for the Producer-Consumer Dialogue

In its relatively short history, the producer-consumer dialogue can already look back at many important achievements. Many of these achievements have come about in the past ten years. Yet without the confidence building of the early years, none of the achievements would have happened. The dialogue has been nurtured by various countries and has survived because no one party has or has been allowed to claim the dialogue as its own or become a vehicle for special interests. Every country that at one time or another has nurtured the dialogue can still be considered a core country today, willing to nudge the dialogue along if needed. In 2008 Saudi Arabia's King Abdullah Ibn Abdulaziz Al-Saud called on these core countries to signal the market about the supply and demand realities, while they also provided much needed stability during the aftermath of the financial market crisis later that year.

In the future, new countries will need to come along to extend the dialogue further. With the dialogue now entering its third decade, the emphasis on the traditional producing and consuming countries is changing to include new consumers and producers, bringing new dimensions and challenges to the dialogue.

Twenty years after the first meeting in Paris, the IEF has evolved into one of the most inclusive platforms for dialogue in which consumers and producers meet on a regular basis to discuss issues of common interest pertaining to the global energy scene. At present, the IEF member countries account for more than 90% of global oil and gas consumption and production. Such a broad and diverse base of constituents, however, does not in itself guarantee a successful and constructive dialogue. After all, these member countries have very diverse interests which are often very difficult to reconcile. A necessary condition for a successful dialogue is that despite their diverse interests, there is recognition among member countries of shared aims and an awareness of the common challenges facing producers and consumers.

Perhaps the main achievement of the dialogue of the past twenty years is its success in increasing the awareness of the high degree of energy interdependence between consuming and producing countries, which most likely will increase in the foreseeable future. Rather than treating it as a source of tension and conflict, the IEF has been calling upon both consumers and producers over the years to embrace interdependence "for its potential as a cohesive force underpinning healthy growth of the world economy, fair energy trade, and international cooperation".[186] Such statements are a far cry from the tense relations between oil producers and consumers that prevailed in the 1970s and 1980s and reflect how much has changed for the better in the relationship.

[186] Closing Statement by host Italy and co-hosting countries India and Mexico, 11th International Energy Forum, Rome, 20-22 April 2008.

To a large extent, the dialogue has also succeeded in bringing closer the two main consumer and producer organisations: OPEC and the IEA. The following excerpt from a recent interview with Dr Alirio A Parra, a former Energy and Mines Minister of Venezuela between 1992 and 1994, sheds some light on the extent to which these energy relations have changed:

> In the early days, when the IEA was set up, it was probably with the intent of trying to destroy OPEC. These two Organizations simply did not talk. The heads of OPEC and the IEA would not even be seen in each other's company. You could not get the Executive Director of the IEA to come to Vienna. In fact, the first time he came, he arrived secretly and had lunch with the then Secretary General, privately in a Viennese restaurant. Today, things are totally different. You see the OPEC Secretary General and the IEA Executive Director at seminars, on panels, they meet together, they are on different committees. They may have their own points of view, but they talk, they discuss, and they cooperate when cooperation is necessary. They differ when differences are important, but things have changed dramatically.[187]

Another visible and concrete example of success in the producer-consumer dialogue is the establishment of the Joint Oil Data Initiative (JODI).[188] The Secretariat has consistently promoted JODI as representing "the single most important collaborative effort to address the issue of market data transparency". The promotion of greater transparency in energy markets has been a recurring key message in most international gatherings and is considered crucial to achieving security of both supply and demand. There are still critical problems that have challenged the achievement of JODI's objectives of providing timely and reliable data on all IEF member states. Yet JODI remains the single most comprehensive attempt to collect data of such magnitude. Another important achievement of JODI is that it has raised awareness of the technical difficulties involved in improving the quality and reliability of energy data and its timeliness. This has induced the Secretariat and its partners to play a more active role in improving data collection methods in different countries through providing advice, organising workshops and conducting training sessions.

The IEF has also achieved a certain degree of institutionalisation, which has helped to give the dialogue more structure. This institutionalisation, however, has not induced any shift towards creating a global energy organisation with binding global energy governance, nor has it affected the informality of the dialogue. The twenty-year history of the IEF shows very clearly that the parties concerned are strongly attached to the idea of the informality of the dialogue. This is expected, as energy issues involve quite complex political, economic and social dimensions which are difficult to reconcile. Changing the IEF into a forum with powers to make binding decisions would dampen the interest of both producers and consumers and could limit the scope for an open and frank dialogue.

In the early years, the agenda for the Ministerial meetings was set in an ad-hoc manner without much thought going into defining the issues for discussion or analysis supporting the

[187] OPEC Bulletin, September 2010, p.50.

[188] IEF Secretariat, Programme of Work and Budget for 2005, February 2005, p.11, and reflected in various IEF publications. In 2004, IEF Secretary General Arne Walther described JODI as a future "flagship for our activity of promoting producer-consumer dialogue." WPA, 25 October 2004, p. 5.

dialogue. Since the 2000s, the producer-consumer dialogue has become more organised, in large part due to the efforts of the Secretariat. Nevertheless, the agenda remains very broad; the dialogue has covered a large number of topics over the years, as seen in previous chapters. Such a broad agenda has had the effect of diluting the debate at times. There is also a feeling that the agenda is often driven by the volatile market events with no sense of continuity. A constructive dialogue should be supported by relevant and accurate data, statistics and other qualitative information. It should also be informed by independent, in-depth and rigorous theoretical and empirical analyses and studies. This would require the IEF to collect research in key areas that impact the oil and other energy markets, in addition to the expert papers that it has always had prepared for Ministerial meetings. In this function it can rely on the research strengths of existing institutions so as to avoid any duplication of effort. While producing and consuming governments may decide not to subscribe to the recommendations coming out from the various research projects, these analytical studies remain essential, as they inform and enhance the productivity of the dialogue.

Although the biennial Ministerial meetings are at the apex of the producer-consumer dialogue, cooperation should not be reduced to this high-level event. The dialogue should be perceived as an ongoing process[189] incorporating a wide range of actors and manifested in a number of activities, the most of important of which are: the provision of timely data and information; providing technical assistance for the improvement of data collection methods; conducting in depth and analytical studies; and engaging actively with market players, international organisations and research centres.

The past twenty years have shown that the intensity and breadth of the dialogue have been driven largely by key market events. Of these events, oil price instability has been the main impetus behind the intensification of dialogue in recent years. It is interesting to note, though, that while the parties' main concerns are about the level and volatility of the oil price, neither consumers nor producers have an interest in managing the price level. There is an implicit agreement that the determination of the oil price should be left to market forces. This does not imply that prices are not discussed in Ministerial meetings. But the closing statements are very general. They often call to "reduce price volatility in the interests of producers and consumers" because volatility "complicates the interpretation of market signals and may adversely affect investment". Other statements call on "both producer and consumer countries...to take action to reach sustainable price levels" without describing what these actions might be. Similarly, in the 2004-2008 price cycle, concluding statements expressed concerns about the level of oil prices, noting that "oil prices should be at levels that are acceptable to producers and consumers to ensure global economic growth, particularly in developing countries" without any indication of what these levels should be.

Historically, producers and consumers have had very divergent interests: producers tend to favour higher prices while consumers favour lower prices, depending on the stage in the oil price cycle at which importers and exporters find themselves. Recently, there has been a realisation that too low or too high oil prices serve none of the groups. On the one

[189] As noted by one interviewee, one limitation of the producer-consumer dialogue is that it gains intensity and momentum and is taken seriously by ministers during crisis times. However, in normal times, the dialogue is not given the same attention.

hand, low oil prices will constrain the flow of investment required by the industry to ensure stable oil supplies. On the other hand, high and volatile oil prices can damage prospects of global growth and create worldwide imbalances with destabilising consequences. The mere convergence of interests and views, however, is not enough to stabilise expectations in the long term or to ensure a relatively stable behaviour of oil prices. Thus, if one of the key objectives of the dialogue is to prevent oil price instability and to mitigate the costs associated with such instability, then the question confronting consumers and producers is: What could the dialogue achieve in the event of price shocks?

In the event of an oil price collapse, the response from producers is predictable. Through the auspices of OPEC, producers would implement output cuts to prevent prices from falling below a given floor deemed unacceptable for producers. If OPEC is able to generate the expectations of such a response, then it might not even need to implement the cut. However, the market may wish to see whether appropriate cuts could be implemented in practice - in which case it could take some time before OPEC succeeds in reversing the price decline. While producers' actions are predictable in a falling market, the same cannot be said for consumers. In theory, there might be some options available for importing governments. For instance, non-OPEC suppliers could support OPEC policy by announcing output cuts, as happened in 1998, in which case the most relevant dialogue would be between producers from both sides. Leaders in consuming countries could send clear signals that low oil prices are damaging, provide public support for OPEC cuts and support the cooperation between OPEC and non-OPEC countries. Alternatively, importing countries could show a willingness to support the price by creating artificial demand – for instance through building up their stocks and strategic petroleum reserves in times of slack markets. It is clear that these and other similar options require far-reaching changes in policy which, so far, no consuming government seems willing or even capable of implementing.

In the event of a sharp rise in oil prices, one potential response would be for OPEC to increase production and manage the price ceiling. However, the response from OPEC in a rising market is not straightforward. The key function of OPEC is not to impose a ceiling on oil prices but to ensure that the market is well supplied – i.e., that supply disruptions are avoided. Unlike a central bank that can increase interest rates to bring inflation down, OPEC does not have a mechanism or an agreed set of tools to lower oil prices. Moreover, OPEC is concerned that increasing production without any coordination with consuming governments on the issue of stock release could result in an uncontrollable decline in prices. The events of 1991 showed the importance of the implicit coordination between OPEC and the IEA on the release of stocks. Due to geological and policy constraints, the short-term response of consuming countries is rather muted in tight market conditions. On the supply side, some governments might encourage the exploration and development of their oil reserves, but in the past such a policy proved to be ineffective in producing fast enough feedback on the supply side, given the limited size of reserves and the time lags involved in bringing production to the market. On the demand side, the impact of high prices remains muted, given that oil demand in the short run is highly inelastic. Of course, high oil prices would eventually have their impact on demand, but the feedback is perceived to be too slow and gradual. Policy announcement of the introduction of efficiency measures can have only a long-term impact but are unlikely to play an important role in influencing market players' short-term expectations.

The above discussion reveals two features that have shaped the content of the dialogue to date. First, any policy to counter oil price shocks would not be credible if managed by parties with very divergent interests. In a rising market, producers lose interest in policing the upper boundary and, when prices fall, consumers lose interest in policing the lower boundary. The producer-consumer dialogue has not matured enough to deal with such complex issues or to suggest potential ways to manage oil price instability. Second, there is a clear power asymmetry in the short term. While producers have options in both falling and rising markets, consumers are much more constrained in their policies in the short term. In the long term, however, the balance of power tends to shift in favour consumers who can pursue oil substitution policies, implement efficiency measures, raise taxes on petroleum products, and encourage the development of alternatives energy sources which have the effect of reducing long-term oil demand and the share of oil in the energy mix. Thus, an important role for the producer-consumer dialogue is to bridge the gap between the long term and short term interests of consumers and producers in order to create a more predictable and stable oil market.

Does the failure to bargain about price levels or to manage the price level within bounds mean that the producer-consumer dialogue has failed? The answer is no. Since both sides agree that the oil price should be set by market forces, the producer-consumer dialogue has aimed at improving the functioning of the market. Recent events reveal that both sides have been advocating policies that enhance the price-determining role of the oil market. One of the major concerns has been the influence of financial markets on the level and volatility of the oil price and, in relation to this, whether the large-scale entry of financial players has had the effect of shifting the price away from underlying market fundamentals. Efforts are currently being made to understand the links between the financial and physical layers of the oil market and whether regulation is needed to improve market transparency.

The IEF has also been showing a willingness to engage with the issue of stabilising short- and long-term expectations through better mutual understanding of oil market conditions and communicating to the market. Since the price can oscillate within a wide band due to market structure, such communications or signals can play an important role in influencing oil price behaviour. The convergence of views of key players about a preferred oil price range in 2009 has helped stabilise market expectations in the oil market. This current convergence, however, is unlikely to be sustained if not supported by coordinated efforts between producers and consumers. The IEF has therefore been calling for better information dissemination about key variables such as costs, investment flows and the demand-supply balance so as to avoid the development of a large divergence of opinion between consumers and producers. When key players have different beliefs regarding oil market fundamentals due to limited and imperfect information about market fundamentals and uncertainty about the behaviour of these players in different market circumstances, it is not possible to sustain convergence of views.

In the past, supply disruptions proved to be decisive for the producer-consumer dialogue, as they increased the awareness of common interests among parties and revealed the usefulness of coordinating actions in key areas such as the use of stocks and spare capacity. During the 1990s, disruptions did not feature prominently in the dialogue. The availability of large spare capacity and the willingness of OPEC to fill the gap in the case of physical disruptions meant that concerns about disruptions received little priority in the policy agendas of consuming

countries. The rapid rise in demand in the mid-2000s and the various supply shocks in producing countries such as Iraq, Venezuela, and Nigeria brought back to the fore the issue of spare capacity and its role in dampening price volatility. Despite its rise in importance on the policy agenda, producers and consumers shied away from the issue for a long time. It was not until the Jeddah meeting in 2008 that specific calls were made for the expansion of spare capacity:

> The existence of spare capacity throughout the oil supply chain is important for the stability of the global oil market. Hence an appropriate increase in investment, both upstream and downstream, is necessary to ensure that the markets are supplied in a timely and adequate manner. Predictable energy and investment policies, as well as better access to technology, are necessary to this end. [190]

The above statement highlights an important dimension, as it acknowledges that maintaining spare capacity is the responsibility of both producers and consumers; it should be extended to the entire supply chain and not to upstream players only. However, the statement is general and does not address the complexity of the issues surrounding spare capacity: Does spare capacity constitute a public good? If it does, should all parties share the cost of maintaining spare capacity? If spare capacity is to be held in producing countries, can consuming countries find acceptable mechanisms to compensate producing countries? In such a system, who makes the decision to release the supply from existing capacity? These and other questions have not yet been the subject of frank discussion and debate. Currently, policies concerning whether to maintain spare capacity and at what levels are solely set by individual governments with no coordination even between producing countries.

Rather than focusing on geopolitically-induced disruptions, the dialogue has shifted towards potential disruptions caused by the lack of investment in the oil supply chain. The investment issue has been a recurring theme in most Ministerial meetings. One of the important achievements of the dialogue in this area has been the increasing awareness that investment is a shared responsibility between producers and consumers, as bringing available resources to the market requires adequate investment and timely investment in the entire oil and gas chain. Nevertheless, the fact remains that the decision to develop reserves in producing countries is mainly in the hand of their governments and the NOCs, and none of the producers wish to relinquish this sovereign decision either through discussion or agreements between producing countries or between producing and consuming countries. As a result of the wave of mergers in the 1990s, investments in upstream and in refining are now in the hands of privately owned oil companies in many consuming countries where governments' influence is mainly in the area of regulation. Recognising this asymmetry, the producer-consumer dialogue has never attempted to coordinate investment plans. Instead, it has explored ways to remove impediments to investment in the oil sector. The basic message of the dialogue has been the importance of adequate investment, aided by "favourable energy, fiscal, investment and environmental relations" which "are needed for freer and expanded trade in oil and gas and for sustainable world economic growth".[191] The IEF agenda has broadened to discuss

[190] Joint Statement, Jeddah Energy Meeting, 22 June 2008.

[191] Summary by the host and the co-hosts, 7th International Energy Forum in Riyadh, November 17 -19, 2000.

specific measures that can induce investment in the energy sector, such as reducing long-term uncertainty through increasing transparency and improving information flows on investment plans, energy security and climate change policies and their potential impact on demand, enhancing the corporation between NOCs, IOCs and Service Companies, and broadening cooperation and exchanges in the fields of human capital and technology advancement and many other measures. The dialogue between producing and consuming countries and among industry participants has resulted in greater understanding of the nature of the investment problem and appreciation of the individual sides' point of view. However, concrete initiatives and proposals to alleviate the investment problem have remained limited.

During the past two decades increased environmental consciousness has been translated in many parts of the world into concrete policy responses. One of the key frameworks for this policy response has been the UN Framework Convention on Climate Change (UNFCC). In 2005, the Kyoto Protocol came into force, an important cornerstone underlying many states' national legislation to curb greenhouse gas emissions, and mainly from conventional forms of energy in the form of coal and oil. The Climate Change Agenda has become a top priority in policy agendas. In 2009, G-8 Leaders stated in very clear words that:

> Climate change is one of the greatest challenges of our time. As leaders of the world's major economies, both developed and developing, we intend to respond vigorously to this challenge, being convinced that climate change poses a clear danger requiring an extraordinary global response, that the response should respect the priority of economic and social development of developing countries, that moving to a low-carbon economy is an opportunity to promote continued economic growth and sustainable development, that the need for and deployment of transformational clean energy technologies at lowest possible cost are urgent, and that the response must involve balanced attention to mitigation and adaptation.[192]

By contrast, climate change as an issue has played a subordinate role in the producer-consumer dialogue. One of the few occasions of climate change being mentioned in a closing statement of an IEF Ministerial was in 2008, where ministers stated that "co-operation and effective dialogue through the IEF is an imperative for granting energy security and defining coordinated energy strategies to confront the global climate change challenge".[193] Because of the complexities surrounding climate change debates and the fact that there are other international forums in which climate changes issues are currently being addressed at a global level, an important theme is left out the IEF agenda. As in the case of prices, the producer-consumer dialogue touches on the climate change agenda but in an indirect way. For instance, over the years, the dialogue has referred to wide-ranging issues such as the development of alternative energies, the development of carbon-friendly technology including Carbon Capture and Storage (CCS) and the enhancement of energy efficiency. The 11th IEF Ministerial concluded that a sustainable energy future implies efficiency improvements, technological advances in both production and consumption of fossil fuels, and development of alternative low-carbon

[192] G-8 Summit, Declaration of the Leaders, The Major Economies Forum on Energy and Climate, L'Aquila, 9 July 2009.

[193] Closing Statement by host Italy and co-hosting countries India and Mexico, 11th International Energy Forum, Rome, 20-22 April 2008.

energy sources.[194] Previous IEF Ministerials had agreed on the need to accelerate alternative energies but also noted that the development of fossil fuels resources will continue to be relied upon to meet the expected energy demand.[195] The IEF has also advocated the need for energy efficiency to be "promoted in all sectors through passing on market price signals, technology transfer and the sharing of best practices in energy production and consumption".[196] Thus, while producers and consumers have so far averted discussing the issue of climate change in a direct way, they have been willing to explore policies that can have direct impact on the environment and sustainable development without placing these policies in the general context of the climate change agenda.

The above examples show that in the last decade both parties have avoided confrontational topics such as green taxes and the financing of spare capacity and have focused more on themes that can bring them closer together. Furthermore, they also reveal that many key players are not yet ready to deal with such contentious issues. This approach has been effective in building confidence and promoting trust among the parties. However, there is a risk that in the long run the key issues that lie at the heart of consumers' and producers' concerns will become marginalised, leading to a loss of interest in the dialogue. Furthermore, while the dialogue in the 2000s was able to identify the main challenges and bottlenecks facing the energy industry, it came short of coming up with concrete initiatives to resolve some of these bottlenecks. This reflects that while consumers and producers have become more aware of challenges facing the oil market and more conscious of other party's concerns, there is still wide divergence of interests and even unwillingness by some parties to take the dialogue to the next stage where more concrete initiatives could be implemented.

Many of the events that have shaped the producer-consumer dialogue will continue to play an important role in the years to come. While every effort can be made to improve the quality of the dialogue through supporting it by a focused agenda, reliable data and information and sound analyses, the fact remains that a dialogue is successful and useful only if it is able to tackle issues that are of common concerns for both parties. Of these concerns, the degree of uncertainty engulfing energy markets and its impact on investment will continue to dominate the dialogue. While the high degree of uncertainty has been the predominant feature of the industry since its establishment, policy uncertainty, especially in relation to climate change policies, will become a dominant factor. In this regard, the IEF can provide a forum for the exchange of information about the nature of these policies, the timing of their implementation and their short- and long-term impacts. Another aspect of uncertainty concerns the investment policies and plans of producing countries. Since investment decisions are in the hands of producing countries, the IEF is likely to play a limited role in removing investment barriers and improving market access. Nevertheless, the IEF can play an important role in the regular exchange of information about producing countries' investment plans and their long term oil policies.

[194] Closing Statement by host Italy and co-hosting countries India and Mexico, 11th International Energy Forum, Rome, 20-22 April 2008.

[195] Conclusions by host and co-host of the International Energy Forum, 10th International Energy Forum, 2nd International Energy Business Forum, Doha, Qatar, 22-24 April 2006.

[196] Joint Statement, Jeddah Energy Meeting, 22 June 2008

With rising geo-political tensions, one cannot exclude the possibility that political shocks which disrupt oil or gas supplies could occur. In such events, the IEF should be at the heart of coordination efforts between countries with surplus capacity and countries with strategic stocks. But the bottom line remains that for interest in the producer-consumer dialogue to persist in the long run, it should be able to deal with a key concern that lies at the heart of producers' and consumers' interests: the price level that is acceptable to both parties. There have been many calls to establish a price band with an oil stabilisation fund designed to keep prices within reasonable bounds. However, as discussed above, a fundamental weakness of these proposals is that such a system would have to be managed by parties with very divergent interests. Furthermore, it would be difficult to design the institutional mechanisms that could generate feedback to prevent the price from straying outside the band, let alone to find agreement on such a scheme among the member states.

Given these factors, it is unlikely that the IEF will evolve into a forum in which consumers and producers try to manage the oil price. Instead, the IEF can aim for a softer kind of mediation, based on its role of championing transparency. Given the role expectations play in the process of oil price formation, one of the main objectives of both oil-importing and -exporting governments should be to stabilise market participants' longer-term expectations about a range of oil prices which both parties consider acceptable. Furthermore, if anticipated government responses are slow, or are perceived to be absent on either the demand or supply side, the market is likely to drift away from the preferred price range. This creates a reason for cooperation and dialogue between consumers and producers. For example, if the market believes that spare capacity is thin, while in reality supplies are abundant and key governments are willing to bring these supplies to the market, then the IEF could play an important role in stabilising expectations by increasing the visibility of these policy responses, like what happened in the Jeddah Energy Meeting.

In part, expectations are formed on the basis of data and information and on analysis surrounding these data. Poor data contribute to the volatility of oil markets, both through allowing inaccurate information to filter into investors' expectations and by increasing speculation on crucial data. Although the coverage and quality of information about crude oil market fundamentals have improved in recent years, there are still some major data problems. On the demand side, data on oil consumption, even those for OECD countries, are not standardised, are subject to major revisions and are published with a considerable time lag. This problem is becoming more acute as many countries and regions in the non-OECD, such as China, India and the Middle East, have become a major source of demand growth in recent years. In many of these countries, there are serious statistical shortcomings in the areas of data on consumption and on the pricing policies of petroleum products, including the size of subsidies and taxes imposed on these products. Regarding data on inventories, OECD data on crude oil and product stocks are published monthly and with considerable delay. Data on non-OECD stocks are not available on a regular basis and are subject to a great deal of speculation. For instance, in the context of China, it would be difficult to gauge whether the growth in imports is due to an increase in actual demand or an increase in the desire to stockpile. In addition to lagging indicators of supply and demand, it is important to explore the possibility of increasing the availability and transparency of data that can help us better understand future market fundamentals. For instance, on the supply side, detailed data on investment plans in the oil sector and in alternative energy can affect expectations about medium-term

and future market fundamentals. On the demand side, information on energy policies and their potential implications for long-term demand would also alter long-term expectations. In fact, the provision of better data and information and independent and credible analysis of how the market fundamentals may evolve in the future may reduce the degree of uncertainty. Such analysis may also help dilute some of the extreme views and signals that in some instances dominate the market psyche and drive coordinated financial flows. It is in these areas that the IEF should be able to carve itself a role in global energy markets.

While all the issues pertaining to creating transparency on the supply, processing and demand sides remain important, the rise of new consuming countries with their own organisational model will introduce a new set of discussions to the dialogue: consumer-consumer dialogues. Already during the Jeddah conference, energy subsidies were an important topic. Energy subsidies can place pressure on prices in tight markets, send false signals about supply needs and redistribute energy flows among countries according to ability to afford subsidies. Discussions can also arise from the fact that consumer countries deploy different organisational models in their energy industries and support investments along the value chain to generate energy flows for their national economies rather than the international market. These new types of consumer dialogue, also important for producing countries, cannot easily be discussed within the traditional energy organisations where membership is limited, but they can be covered in the IEF.

The same is true for new dimensions in the producer side of the dialogue. As new fuels enter the mix they compete with the conventional fossil fuels and complicate security of demand issues. With the growing complexity of the global energy markets, the core countries of the early days of the dialogue will find themselves more and more engaged with new countries and new issues, essentially looking for the same trust over and over again. Also with the advance of new energy-related organisations such as the Gas Exporting Countries Forum (GECF) and the International Renewable Energy Agency (IRENA), it is important for the IEF to continue to bring all these separate discussions to a constructive platform.

Importantly, the dialogue should hope to have the sort of supporters that made the dialogue a success in the first twenty years. Although the dialogue is mainly about notables acting on behalf of their countries and organisations, it is clear that the maintenance and development of personal contacts, also at this level of international politics, are very important in order for governance to function well. In many countries, politicians change every few years, which can make it more difficult to develop personal contacts. These contacts are often prized at the administrative level. Many of the meetings were prepared and communication channels kept open by a group of assiduous representatives of these same countries and organisations, without which the IEF would not have succeeded. Although not mentioned specifically in this overview of the producer-consumer relations, the importance of their work is nonetheless noteworthy.

In its short history, the dialogue has already crossed many milestones. Consumers and producers have overcome some of their past myths, fears and suspicions and have become more aware of a number of common challenges related to energy markets. The institutional structure supporting the dialogue continues to strengthen; the structure and quality of the dialogue have also improved over the years. The 2000s were the time in which the IEF emerged

as an institutionalised forum with its own permanent infrastructure and a new charter. With all this in mind, the evident conclusion must be that the past twenty years have been positive for the producer-consumer dialogue. Nevertheless, many challenges remain and many others are likely to emerge in the future. This requires that producers and consumers continue their efforts of cooperation with the intention to protect their long-term common interests. They must also continue to actively attempt to gain better understanding of each other's positions. The way in which producers and consumers express their interests, to what extent they are willing to engage in issues that lie at the heart of their energy concerns, and whether they succeed in relating these energy issues to the wider context of political, economic and social security and the climate change challenge will define the future path of the dialogue.

1st IEF Secretary General,
Arne Walther

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